

# TWO-YEAR ASSOCIATE DEGREE (AD)

2020



## UNIVERSITY OF MALAKAND

- **Prof. Dr. Gul Zaman**  
Vice Chancellor  
University of Malakand
- **Dr. Nasir Rashid**  
Coordinator  
Affiliated Colleges  
University of Malakand

## Contents

PREFACE .....	4
INTRODUCTION.....	5
BACKGROUND.....	5
Eligibility Criteria and Duration.....	5
Program Learning Outcomes (PLOs) and Degree Completion Requirements.....	6
Options for Further Studies .....	6
Framework Schematic Representation .....	7
Program Structure .....	8
Model Layout of the Courses .....	9
General Education Courses with Course Codes.....	10
Courses Distribution.....	11
Semester Break up- Standardized Template .....	12
Associate Degree in Science (Mathematics).....	13
Associate Degree in Science (Computer Science) .....	14
Associate Degree in Science (Physics) .....	15
Associate Degree in Science (Chemistry).....	16
Associate Degree in Science (Zoology) .....	17
Associate Degree in Arts (English).....	18
Associate Degree in Arts (Political Science) .....	19
Associate Degree in Arts (Urdu).....	20
Associate Degree in Social Sciences (Sociology) .....	21
Associate Degree in Social Sciences (Psychology) .....	22
Associate Degree in Social Sciences (Social Work).....	23
Associate Degree in Science (Physics, Computer Science).....	24
Associate Degree in Science (Mathematics, Physics).....	25
Associate Degree in Science (Botany, Zoology).....	26
Associate Degree in Science (Botany, Chemistry).....	27
Associate Degree in Arts (English, Urdu).....	28
Associate Degree in Arts (Urdu, Arabic) .....	29
Associate Degree in Arts (Pashto, Arabic).....	30
Associate Degree in Social Sciences (Sociology, Psychology) .....	31
Associate Degree in Social Sciences (Sociology, Social Work).....	32
Action plan for implementation .....	33
Admissions.....	33

## TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

---

Teaching Methodology .....	34
Attendance.....	34
Course load for a Semester.....	34
Repeating Courses.....	34
Assessment and Evaluation.....	35
Maximum Duration of the Degree .....	35
Promotion.....	36
Grading System.....	36
Award of Degree .....	36
APPENDIX-A.....	37
General Courses .....	37
Expository Writing.....	37
Quantitative Reasoning .....	41
Civilizational .....	43
Arts and Humanities.....	45
Social Sciences.....	56
Natural Sciences.....	67
Disciplinary/Subject-Specific Courses.....	75
MATHEMATICS.....	75
COMPUTER SCIENCE .....	83
CHEMISTRY .....	87
ZOOLOGY.....	98
BOTANY .....	112
STATISTICS.....	123
BIO-CHEMISTRY.....	128
GEOLOGY.....	138
PHYSICS .....	149
COMMERCE.....	154
ELECTRONICS.....	164
GEOGRAPHY .....	169
HEALTH AND PHYSICAL EDUCATION.....	175
LIBRARY AND INFORMATION SCIENCE.....	189
FOOD SCIENCE AND TECHNOLOGY .....	193
HUMAN NUTRITION AND DIETETICS.....	198
ENGLISH.....	204

## TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

---

POLITICAL SCIENCE.....	208
SOCIOLOGY.....	215
PSYCHOLOGY.....	227
SOCIAL WORK.....	237
TOURISM AND HOTEL MANAGEMENT.....	246
ISLAMIC STUDIES.....	254
URDU.....	266
JOURNALISM & MASS COMMUNICATION.....	272
PASHTO.....	280
ARCHEOLOGY.....	294
ECONOMICS.....	301
EDUCATION.....	311
Arts & Design.....	312
PAK STUDY.....	315
APPENDIX-B.....	321
ACRONYMS.....	323



## **PREFACE**

This document provides a practical layout for the Two-Year Associate Degree (AD) program, designed according to the HEC Undergraduate Policy 2020.

The current document has been designed by the University of Malakand with the coordination of the Vice Chancellors of all public sector universities of Khyber Pakhtunkhwa, or their representatives, principals of affiliated colleges from the province, Director Colleges, and members of HED and HEC, and endorsed by them in a meeting held at the University of Malakand on October 20, 2020 on the plea that it has been designed in line with the HEC Undergraduate Policy 2020. Also, they agreed to implement the same for the first semester of the AD program to save the precious time of the respective students. It was also suggested to present the designed curriculum to the HEC for further necessary review and approval. Detailed minutes of this meeting can be located on *Appendix-B*

In this regard Prof. Dr. Gul Zaman, Vice Chancellor, University of Malakand along with Prof. Dr. Muhammad Jamal Khan, Vice Chancellor, University of Swat, Dr. Nasir Rashid, coordinator affiliated colleges, University of Malakand and Muhammad Roz, Additional Director HED attended a meeting with Dr. Zulfiqar Gilani and Dr. Nasir Shah, academic sections, HEC on October 27, 2020, who appreciated and duly recommended the proposed layout for the AD program, developed by University of Malakand with necessary modifications and suggested to submit the same for the approval of the Honorable Chairman HEC Prof. Dr. Tariq Banuri.

Furthermore, Prof. Dr. Gul Zaman, Vice Chancellor, University of Malakand along with Prof. Dr. Zulfiqar Gilani, consultant academics HEC, attended a meeting on October 29, 2020 with the Honorable Chairman HEC and after detailed discussion the Honorable Chairman approved the AD program designed by the University of Malakand for its implementation in Khyber Pakhtunkhwa from Fall Semester 2020, followed by the HEC notification regarding its approval and implementation through an email on November 6, 2020 to all Vice Chancellors of Khyber Pakhtunkhwa by Prof. Dr. Zulfiqar Gilani.

## **INTRODUCTION**

Associate Degree is Two-Year (4 semesters) program, to be offered after intermediate (12 years) or equivalent education, at the affiliated colleges and within the constituents' departments/institutes/colleges of the University of Malakand, where there is no BS program, as directed by the HEC.

This program will provide an alternate option to the students of BA/BSc and shall be an integrated program among the relevant departments/institutes/colleges under one faculty or a number of faculties.

## **BACKGROUND**

According to the decision taken by the Higher Education Commission (HEC), the old two-year BA/BSc degree (equivalent to 14 years of education) will no longer be offered by Pakistani Universities/HEIs after Academic Year 2018. Instead of Two-Year BA/BSc, universities will now be able to offer Two-Year Associate Degree in recognized campuses or constituent colleges in market-driven subjects, after necessary approval from concerned bodies of the affiliating universities.

The AD model offers high quality education with technical expertise at a low cost to produce skillful and employable graduates. It has been implemented with great success in the developed world. These degrees offered in a wide array of subjects are divided into Associate Degree in Arts and Humanities, Associate Degree in Sciences and Social Sciences. The AD programs prepare students for future-oriented career or to transfer into a bachelor's degree program offered at university level.

The students enrolled on the basis of Associate Degree in 5<sup>th</sup> semester will be awarded with a BS Two-Year (4 Semesters) degree with a minimum of 60 credit hours.

### **Eligibility Criteria and Duration**

University of Malakand offers Associate Degree Program in all major disciplines in accordance with Higher Education Commission (HEC) Undergraduate Policy 2020. A candidate seeking admission into AD Program requires at least 45% marks in FA/F.Sc. or equivalent. AD is Two-Year full time study program spread over four semesters. Each semester has 15-18 weeks duration for teaching and evaluation. The Two-Year AD program is

equivalent to the Bachelor Degree (BA/B.Sc.), i.e. 14 years of study.

### **Program Learning Outcomes (PLOs) and Degree Completion Requirements**

The main goal of AD program is to deliver market oriented and professional graduates to contribute to the overall development and economy of the country. Therefore, the AD program is designed to provide students with theoretical knowledge and practical skills that will increase their workplace competence and practical approach in respective discipline.

In all subjects, including General Education (Gen Ed) courses, students are expected to advance beyond their secondary school level, and mature and deepen their competences, including in writing, communication, mathematics, languages, analytical and intellectual discipline.

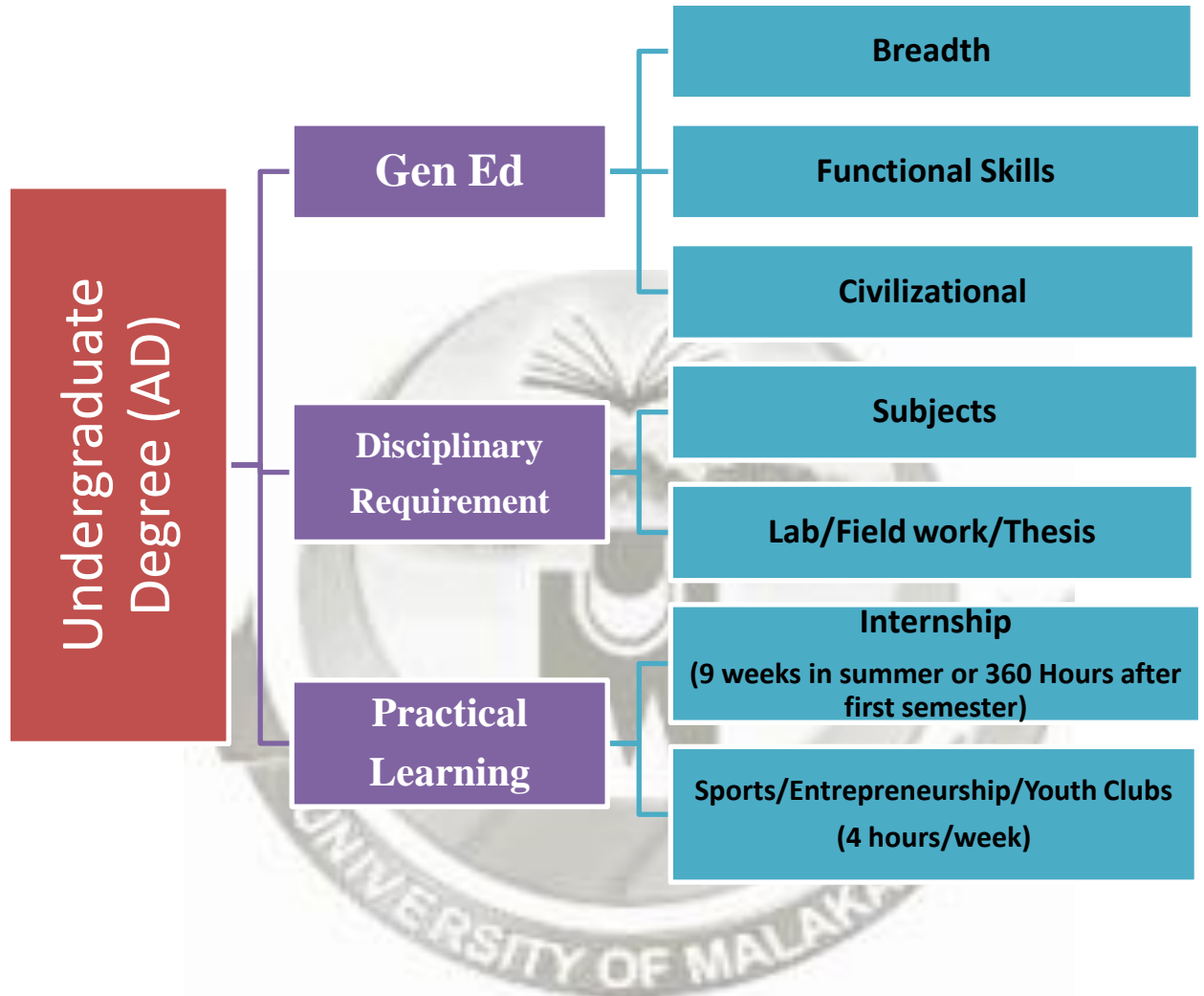
To be eligible for the award of Associate Degree candidates are required to complete 60 credit hours course work/project program by attending minimum 4-Semesters with at least Cumulative Grade Point Average of 2.5 out of 4.

### **Options for Further Studies**

There will be two possibilities for students after the completion of Associate Degree.

- (1) They may be admitted in the University or affiliated Colleges in 5<sup>th</sup> semester with BS students directly or after a bridging semester of not more than 18 credit hours, if required according to the subjects.
- (2) They may be admitted in the University or colleges in Two-Year program (BS 2 years) separately, if the University starts a Two-Year program for them.

## Framework Schematic Representation





## Program Structure

Every undergraduate student will have to complete minimum 60 credits (60 Courses) in Gen Ed (13 courses with 39 credit hours) and subject-specific courses (07 courses with 21 credit hours).

Gen Ed is divided into:

- a. **Breadth Courses** in the three domains of knowledge i.e. Arts and Humanities, Social Sciences, and Natural Sciences.
- b. **Functional Skills courses** in Expository writing and quantitative reasoning
- c. **Civilizational courses** in Pakistan Studies and Islamiat.

<b>Breadth Courses</b>	Arts and humanities	2 Courses
	Social Sciences	2 Courses
	Natural Sciences	2 Courses
<b>Functional Skills Courses</b>	Expository writing	3 Courses
	Quantitative Reasoning	2 Courses
<b>Civilizational Courses</b>	Pakistan Studies	1 course
	Islamiat	1 course
	<b>Total</b>	13 Courses 39 Credit Hours

## Disciplinary/Subject-Specific Courses Requirements

Disciplinary/ Subject-Specific Courses + Thesis/Internship/Project/Entrepreneurship	07 Courses	Minimum 21 Credit hours
---	------------	----------------------------

**Model Layout of the Courses**

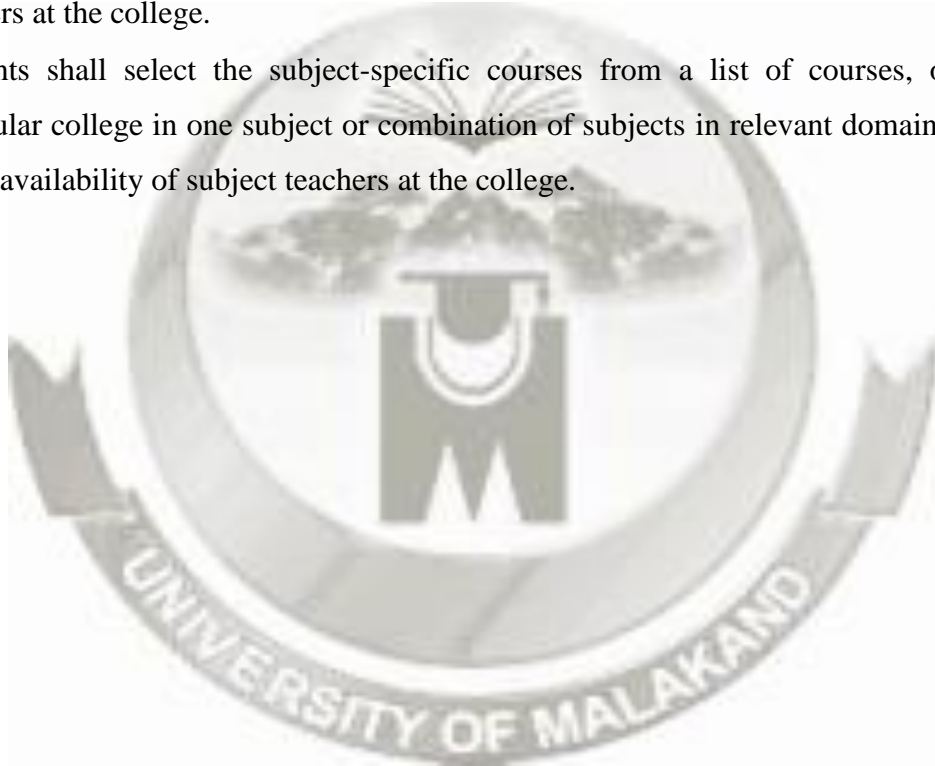
	<b>General Education (Compulsory Courses for all associate degree programs)</b>	<b>Major Courses Discipline Specific (Including Project/Internship Report)</b>		
	14 Courses	07 courses		
	43 Credit hours	21 Credit hours		
	<b>Subjects</b>	<b>Cr Hr</b>	<b>Subjects</b>	
			<b>Cr Hr.</b>	
<b>Expository Writing (EW)</b>	English – I	3	Subject-I	3
	English-II	3	Subject-II	3
	English-III	3	Subject-III	3
<b>Arts and Humanities (AH)</b>	Islamic History OR Islamic Morals Pashto/ Home Economics/Civic Education/ Urdu/Arabic/ Constitutional Law	6 (2 courses)	Subject-IV	3
<b>Quantitative Reasoning (QR)</b>	Information and Communication Technologies-ICT Mathematics-I/Discrete Structure Introductory Statistics/Mathematic-II	6 (2 courses)	Subject-V	3
<b>Civilizational</b>	Pakistan Studies	3	Subject-VI	3
	Islamiat	3	Subject- VII/Project/ Internship/ Entrepreneurship etc.	3
<b>Social Sciences- (SS)</b>	Sociology/Economics/ political Science/Psychology/Philosophy Journalism/Tourism and Hospitality/Principles of Management/Social work/Health and Physical education	6 (2 courses)		
<b>Natural Sciences (NS)</b>	Physics/Chemistry/Biology Geology/Environmental Sciences/Geography	6 (2 Courses)		
	<b>Total</b>	<b>13</b>		<b>07</b>

**General Education Courses with Course Codes**

General Education (Compulsory Courses for all associate degree programs)							
Arts and Humanities	Course	Course Code	AH-1	Natural Science	Course	Course Code	NS-I
		Islamic History			AH211		
	Islamic Morals	AH212			Chemistry	NS212	
	Pashto	AH213			Biology	NS213	
	Home Economics	AH214			Geology	NS221	NS-II
	Civic Education	AH221			Environmental Science	NS222	
	Urdu	AH222	AH-2		Geography	NS223	
	Arabic	AH223					
	Constitutional Law	AH224					
Social Sciences	Sociology	SS211	SS-I	Expository Writing	English-1	EW211	EW-I
	Economics	SS212			English-II	EW221	EW-II
	Political Science	SS213			English-III	EW231	EW-III
	Psychology	SS214					
	Philosophy	SS215					
	Journalism	SS221	SS-II	Quantitative Reasoning	Information and Communication Technologies (ICT)	QR211	QR-I
	Tourism and Hospitality	SS222			Introductory Statistics	QR221	QR-II
	Principles of Management	SS223			Mathematic-I	QR222	
	Social work	SS224					
Health and Physical education	SS225						
Civilizational	Islamiat				CV231		
	Pak Studies				CV232		

### **Courses Distribution**

- The Associate Degree will include 13 courses i.e. 39 Credit Hours from General Education Category, distributed across the first two semesters, to be offered according to the availability of subject teachers at the college, within the domains described in the Undergraduate Education Policy 2020.
- There will be 7 disciplinary/subject-specific courses i.e. 21 Credit Hours distributed across the last 2 semesters (3<sup>rd</sup> and 4<sup>th</sup>), to be offered according to the availability of the subject teachers at the college.
- Students shall select the subject-specific courses from a list of courses, offered at a particular college in one subject or combination of subjects in relevant domains, according to the availability of subject teachers at the college.



**Semester Break up- Standardized Template**

Year	Semester	Course Code	Course Title	Cr.Hr	
First Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-1	3	
		*	SS-1	3	
		QR-I	Information and Communication Technologies	3 ( 2+1)	
		*	AH-I	3	
		<b>Total Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
		*	AH-II	3	
		<b>Total Credit Hours</b>			<b>15</b>
	Second Year	3 <sup>rd</sup>	EW231	English III	3
			CV232	Pakistan Studies	3
CV231			Islamiat	3	
**			Subject	3	
**			Subject	3	
<b>Total Credit Hours</b>			<b>15</b>		
4 <sup>th</sup>		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		<b>Total Credit Hours</b>			<b>15</b>
<b>Total Credit Hours</b>				<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\*Subject-specific course to be selected from a list of offered courses at the college

**Subject:** The word ‘subject’ represents all the different disciplines that are offered in a College, and which have been approved by the affiliating university.

Note: All General Education and subject-specific courses are available at *Appendix-A*

**NOTE:** The following semester break-up/layout for subject-specific and combination of subjects provide only a standard template. More such subject-specific and combination of subjects AD programs could be designed and offered at the colleges that have been approved by the academic bodies of the affiliating university.

### Associate Degree in Science (Mathematics)

Year	Semester	Course Code	Course Title	Cr.Hr
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3
		*	NS-I	3
		*	SS-I	3
		QR211	Information and communication Technologies (QR-I)	3 (2+1)
		*	AH-I	3
		<b>Credit Hours</b>		
	2 <sup>nd</sup>	EW221	English – II	3
		*	NS-II	3
		*	SS-II	3
		*	QR-II	3
		*	AH-II	3
<b>Credit Hours</b>			<b>15</b>	
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
		CV232	Pakistan Studies	3
		CV231	Islamic Studies	3
		**	Subject	3
		**	Subject	3
		<b>Credit Hours</b>		
	4 <sup>th</sup>	**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
<b>Credit Hours</b>			<b>15</b>	
<b>Total Credit Hours</b>			<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Mathematics** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Science (Computer Science)

Year	Semester	Course Code	Course Title	Cr.Hr	
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-I	3	
		*	SS-I	3	
		QR211	Information and communication Technologies (QR-I)	3 (2+1)	
		*	AH-I	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
		*	AH-II	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
			CV232	Pakistan Studies	3
CV231			Islamic Studies	3	
**			Subject	3	
**			Subject	3	
<b>Credit Hours</b>			<b>15</b>		
4 <sup>th</sup>		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
<b>Credit Hours</b>			<b>15</b>		
<b>Total Credit Hours</b>			<b>60</b>		

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Computer Science** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Science (Physics)

Year	Semester	Course Code	Course Title	Cr.Hr
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3
		*	NS-I	3
		*	SS-I	3
		QR211	Information and communication Technologies (QR-I)	3 (2+1)
		*	AH-I	3
		<b>Credit Hours</b>		
	2 <sup>nd</sup>	EW221	English – II	3
		*	NS-II	3
		*	SS-II	3
		*	QR-II	3
		*	AH-II	3
		<b>Credit Hours</b>		
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
		CV232	Pakistan Studies	3
		CV231	Islamic Studies	3
		**	Subject	3
		**	Subject	3
		<b>Credit Hours</b>		
	4 <sup>th</sup>	**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		<b>Credit Hours</b>		
<b>Total Credit Hours</b>				<b>60</b>

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Physics** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*



## Associate Degree in Science (Chemistry)

Year	Semester	Course Code	Course Title	Cr.Hr
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3
		*	NS-I	3
		*	SS-I	3
		QR211	Information and communication Technologies (QR-I)	3 (2+1)
		*	AH-I	3
		<b>Credit Hours</b>		
	2 <sup>nd</sup>	EW221	English – II	3
		*	NS-II	3
		*	SS-II	3
		*	QR-II	3
		*	AH-II	3
		<b>Credit Hours</b>		
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
		CV232	Pakistan Studies	3
		CV231	Islamic Studies	3
		**	Subject	3
		**	Subject	3
		<b>Credit Hours</b>		
	4 <sup>th</sup>	**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		<b>Credit Hours</b>		
<b>Total Credit Hours</b>				<b>60</b>

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Chemistry** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

**Associate Degree in Science (Zoology)**

Year	Semester	Course Code	Course Title	Cr.Hr
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3
		*	NS-I	3
		*	SS-I	3
		QR211	Information and communication Technologies (QR-I)	3 (2+1)
		*	AH-I	3
	<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3
		*	NS-II	3
		*	SS-II	3
		*	QR-II	3
		*	AH-II	3
<b>Credit Hours</b>			<b>15</b>	
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
		CV232	Pakistan Studies	3
		CV231	Islamic Studies	3
		**	Subject	3
		**	Subject	3
	<b>Credit Hours</b>			<b>15</b>
	4 <sup>th</sup>	**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
<b>Credit Hours</b>			<b>15</b>	
<b>Total Credit Hours</b>			<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Zoology** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Arts (English)

Year	Semester	Course Code	Course Title	Cr.Hr
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3
		*	NS-I	3
		*	SS-I	3
		QR211	Information and communication Technologies (QR-I)	3 (2+1)
		*	AH-I	3
	<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3
		*	NS-II	3
		*	SS-II	3
		*	QR-II	3
*		AH-II	3	
<b>Credit Hours</b>			<b>15</b>	
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
		CV232	Pakistan Studies	3
		CV231	Islamic Studies	3
		**	Subject	3
		**	Subject	3
	<b>Credit Hours</b>			<b>15</b>
	4 <sup>th</sup>	**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
**		Subject	3	
<b>Credit Hours</b>			<b>15</b>	
<b>Total Credit Hours</b>			<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word 'subject' represents all the subject –specific courses of **English** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Arts (Political Science)

Year	Semester	Course Code	Course Title	Cr.Hr
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3
		*	NS-I	3
		*	SS-I	3
		QR211	Information and communication Technologies (QR-I)	3 (2+1)
		*	AH-I	3
	<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3
		*	NS-II	3
		*	SS-II	3
		*	QR-II	3
*		AH-II	3	
<b>Credit Hours</b>			<b>15</b>	
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
		CV232	Pakistan Studies	3
		CV231	Islamic Studies	3
		**	Subject	3
		**	Subject	3
	<b>Credit Hours</b>			<b>15</b>
	4 <sup>th</sup>	**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
**		Subject	3	
<b>Credit Hours</b>			<b>15</b>	
<b>Total Credit Hours</b>			<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Political Science** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Arts (Urdu)

Year	Semester	Course Code	Course Title	Cr.Hr
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3
		*	NS-I	3
		*	SS-I	3
		QR211	Information and communication Technologies (QR-I)	3 (2+1)
		*	AH-I	3
		<b>Credit Hours</b>		
	2 <sup>nd</sup>	EW221	English – II	3
		*	NS-II	3
		*	SS-II	3
		*	QR-II	3
		*	AH-II	3
		<b>Credit Hours</b>		
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
		CV232	Pakistan Studies	3
		CV231	Islamic Studies	3
		**	Subject	3
		**	Subject	3
		<b>Credit Hours</b>		
	4 <sup>th</sup>	**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
<b>Credit Hours</b>			<b>15</b>	
<b>Total Credit Hours</b>			<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **URDU** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Social Sciences (Sociology)

Year	Semester	Course Code	Course Title	Cr.Hr	
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-I	3	
		*	SS-I	3	
		QR211	Information and communication Technologies (QR-I)	3 (2+1)	
		*	AH-I	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
		*	AH-II	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
			CV232	Pakistan Studies	3
CV231			Islamic Studies	3	
**			Subject	3	
**			Subject	3	
<b>Credit Hours</b>			<b>15</b>		
4 <sup>th</sup>		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
	**	Subject	3		
<b>Credit Hours</b>			<b>15</b>		
<b>Total Credit Hours</b>			<b>60</b>		

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Sociology** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Social Sciences (Psychology)

Year	Semester	Course Code	Course Title	Cr.Hr	
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-I	3	
		*	SS-I	3	
		QR211	Information and communication Technologies (QR-I)	3 (2+1)	
		*	AH-I	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
		*	AH-II	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
			CV232	Pakistan Studies	3
CV231			Islamic Studies	3	
**			Subject	3	
**			Subject	3	
<b>Credit Hours</b>			<b>15</b>		
4 <sup>th</sup>		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
<b>Credit Hours</b>			<b>15</b>		
<b>Total Credit Hours</b>			<b>60</b>		

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Psychology** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Social Sciences (Social Work)

Year	Semester	Course Code	Course Title	Cr.Hr	
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-I	3	
		*	SS-I	3	
		QR211	Information and communication Technologies (QR-I)	3 (2+1)	
		*	AH-I	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
		*	AH-II	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
			CV232	Pakistan Studies	3
CV231			Islamic Studies	3	
**			Subject	3	
**			Subject	3	
<b>Credit Hours</b>			<b>15</b>		
4 <sup>th</sup>		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
	**	Subject	3		
<b>Credit Hours</b>			<b>15</b>		
<b>Total Credit Hours</b>			<b>60</b>		

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Social Work** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*



**Associate Degree in Science (Physics, Computer Science)**

Year	Semester	Course Code	Course Title	Cr.Hr	
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-I	3	
		*	SS-I	3	
		QR211	Information and communication Technologies (QR-I)	3 (2+1)	
		*	AH-I	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
		*	AH-II	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
			CV232	Pakistan Studies	3
CV231			Islamic Studies	3	
**			Subject	3	
**			Subject	3	
<b>Credit Hours</b>			<b>15</b>		
4 <sup>th</sup>		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
	**	Subject	3		
<b>Credit Hours</b>			<b>15</b>		
<b>Total Credit Hours</b>			<b>60</b>		

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Physics and Computer Science** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Science (Mathematics, Physics)

Year	Semester	Course Code	Course Title	Cr.Hr	
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-I	3	
		*	SS-I	3	
		QR211	Information and communication Technologies (QR-I)	3 (2+1)	
		*	AH-I	3	
	<b>Credit Hours</b>				<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
*		AH-II	3		
<b>Credit Hours</b>				<b>15</b>	
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3	
		CV232	Pakistan Studies	3	
		CV231	Islamic Studies	3	
		**	Subject	3	
		**	Subject	3	
	<b>Credit Hours</b>				<b>15</b>
	4 <sup>th</sup>	**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
**		Subject	3		
<b>Credit Hours</b>				<b>15</b>	
<b>Total Credit Hours</b>				<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word 'subject' represents all the subject –specific courses of **Mathematics and Physics** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Science (Botany, Zoology)

Year	Semester	Course Code	Course Title	Cr.Hr	
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-I	3	
		*	SS-I	3	
		QR211	Information and communication Technologies (QR-I)	3 (2+1)	
		*	AH-I	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
		*	AH-II	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
			CV232	Pakistan Studies	3
CV231			Islamic Studies	3	
**			Subject	3	
**			Subject	3	
<b>Credit Hours</b>			<b>15</b>		
4 <sup>th</sup>		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
<b>Credit Hours</b>			<b>15</b>		
<b>Total Credit Hours</b>			<b>60</b>		

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject–specific courses of **Botany and Zoology** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

## Associate Degree in Science (Botany, Chemistry)

Year	Semester	Course Code	Course Title	Cr.Hr	
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-I	3	
		*	SS-I	3	
		QR211	Information and communication Technologies (QR-I)	3 (2+1)	
		*	AH-I	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
		*	AH-II	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
			CV232	Pakistan Studies	3
CV231			Islamic Studies	3	
**			Subject	3	
**			Subject	3	
<b>Credit Hours</b>			<b>15</b>		
4 <sup>th</sup>		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
	**	Subject	3		
<b>Credit Hours</b>			<b>15</b>		
<b>Total Credit Hours</b>			<b>60</b>		

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Botany and Chemistry** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at **Appendix-A**

## Associate Degree in Arts (English, Urdu)

Year	Semester	Course Code	Course Title	Cr.Hr
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3
		*	NS-I	3
		*	SS-I	3
		QR211	Information and communication Technologies (QR-I)	3 (2+1)
		*	AH-I	3
		<b>Credit Hours</b>		
	2 <sup>nd</sup>	EW221	English – II	3
		*	NS-II	3
		*	SS-II	3
		*	QR-II	3
		*	AH-II	3
		<b>Credit Hours</b>		
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
		CV232	Pakistan Studies	3
		CV231	Islamic Studies	3
		**	Subject	3
		**	Subject	3
		<b>Credit Hours</b>		
	4 <sup>th</sup>	**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
<b>Credit Hours</b>			<b>15</b>	
<b>Total Credit Hours</b>			<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **English and Urdu** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at **Appendix-A**

## Associate Degree in Arts (Urdu, Arabic)

Year	Semester	Course Code	Course Title	Cr.Hr
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3
		*	NS-I	3
		*	SS-I	3
		QR211	Information and communication Technologies (QR-I)	3 (2+1)
		*	AH-I	3
		<b>Credit Hours</b>		
	2 <sup>nd</sup>	EW221	English – II	3
		*	NS-II	3
		*	SS-II	3
		*	QR-II	3
		*	AH-II	3
		<b>Credit Hours</b>		
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
		CV232	Pakistan Studies	3
		CV231	Islamic Studies	3
		**	Subject	3
		**	Subject	3
		<b>Credit Hours</b>		
	4 <sup>th</sup>	**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		<b>Credit Hours</b>		
<b>Total Credit Hours</b>			<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Urdu and Arabic** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at **Appendix-A**

## Associate Degree in Arts (Pashto, Arabic)

Year	Semester	Course Code	Course Title	Cr.Hr
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3
		*	NS-I	3
		*	SS-I	3
		QR211	Information and communication Technologies (QR-I)	3 (2+1)
		*	AH-I	3
		<b>Credit Hours</b>		
	2 <sup>nd</sup>	EW221	English – II	3
		*	NS-II	3
		*	SS-II	3
		*	QR-II	3
		*	AH-II	3
<b>Credit Hours</b>			<b>15</b>	
2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
		CV232	Pakistan Studies	3
		CV231	Islamic Studies	3
		**	Subject	3
		**	Subject	3
		<b>Credit Hours</b>		
	4 <sup>th</sup>	**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
		**	Subject	3
<b>Credit Hours</b>			<b>15</b>	
<b>Total Credit Hours</b>			<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Pashto and Arabic** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

**Associate Degree in Social Sciences (Sociology, Psychology)**

Year	Semester	Course Code	Course Title	Cr.Hr	
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-I	3	
		*	SS-I	3	
		QR211	Information and communication Technologies (QR-I)	3 (2+1)	
		*	AH-I	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
		*	AH-II	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
			CV232	Pakistan Studies	3
CV231			Islamic Studies	3	
**			Subject	3	
**			Subject	3	
<b>Credit Hours</b>			<b>15</b>		
4 <sup>th</sup>		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
<b>Credit Hours</b>			<b>15</b>		
<b>Total Credit Hours</b>			<b>60</b>		

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject–specific courses of **Sociology and Psychology** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*



**Associate Degree in Social Sciences (Sociology, Social Work)**

Year	Semester	Course Code	Course Title	Cr.Hr	
1 <sup>st</sup> Year	1 <sup>st</sup>	EW211	English – I	3	
		*	NS-I	3	
		*	SS-I	3	
		QR211	Information and communication Technologies (QR-I)	3 (2+1)	
		*	AH-I	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup>	EW221	English – II	3	
		*	NS-II	3	
		*	SS-II	3	
		*	QR-II	3	
		*	AH-II	3	
		<b>Credit Hours</b>			<b>15</b>
	2 <sup>nd</sup> year	3 <sup>rd</sup>	EW231	English-III	3
			CV232	Pakistan Studies	3
CV231			Islamic Studies	3	
**			Subject	3	
**			Subject	3	
<b>Credit Hours</b>			<b>15</b>		
4 <sup>th</sup>		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		**	Subject	3	
		<b>Credit Hours</b>			<b>15</b>
<b>Total Credit Hours</b>				<b>60</b>	

\*Respective course shall be selected from a particular set of courses from GenEd category

\*\***Subject:** The word ‘subject’ represents all the subject –specific courses of **Sociology and Social Work** that are offered in a College, and which have been approved by the affiliating university.

**Note:** All General Education and Subject-Specific courses are available at *Appendix-A*

### **Action plan for implementation**

The University of Malakand follows the HEC and has a comprehensive course of action to guide students at all levels. However, Associate Degree program is recently implemented, and the eligible students mostly come from public and private sector higher secondary educational institutions where Annual System is in vogue. Thus, they would require ready information to accommodate themselves to the semester-wise scheme of studies and to avoid failure, drop-out and/or leaving the degree incomplete. It must also be acknowledged that national and international standards of semester system may prove harsh and thus counter-productive, in which case, it is the responsibility of the University's management to revisit and revise standards without compromising the quality of education. Here are some basic guidelines drafted by the University of Malakand for wide publicity and circulation to the affiliated colleges to make the task on implementing the semester-based AD degree easier.

**In case where these provisions are silent, the university of Malakand Semester rules for undergraduate programs shall apply.**

#### **1. Associate Degree Requirements and Study / Course**

- A. Total numbers of Credit hours: 60
- B. Minimum Duration of Associate Degree 2 years (4 Semesters)
- C. Semester duration 16-18 weeks with two weeks for mid and final exam.
- D. Course Load per Semester 16-18 Cr Hrs.
- E. Average number of courses per semester 4-6 (not more than 3 lab/practical courses/semester)
- F. If teaching is suspended due to some exigency, the time lost shall be covered by offering additional teaching/contact hours per week during the remaining part of the semester. A semester, however, will be considered as valid if 80% of the lectures in each subject have been delivered.

### **Admissions**

Admissions shall be offered in Fall semester only. The admission process shall commence within one week of the declaration of result of HSSC or equivalent by concerned board.

The admission and eligibility criteria for the AD shall be governed by the affiliating university rules and regulations.

### **Teaching Methodology**

- i. Teaching at the University shall be conducted through lectures, discussions, case studies and practical work in laboratories, demonstrations, field work, seminars, tutorials, audiovisual aids, video conferencing, and study tours.
- ii. Teaching shall be conducted by a faculty member of the college or such other persons as may be declared to be a faculty member under the relevant rules
- iii. Medium of instruction for teaching will be English except for programs in other languages and disciplines such as Islamic Studies and Pakistan Studies unless provided for otherwise.

### **Attendance**

- i. Every student is required to maintain at least 75% of the attendance in each course.
- ii. A student who fails to meet the minimum requirements of attendance will not be allowed to sit in the final examination and shall be awarded "F" grade in that course.
- iii. In courses with Lab, every student studying such course is required to maintain at least 75% of the attendance in lab and 75% in classroom, separately. A student who fails to meet the minimum requirements of attendance, either in Lab or in classroom, he/she shall not be allowed to take final examination for that course.
- iv. The 25% (out of 100%) margin of absence from the classes is reserved for an illness case or other unavoidable circumstances falling under the Acts of Allah/Force Majeure.
- v. Attendance in academic events, such as seminar, conference, workshop or a skills development program, may be counted towards attendance in a given course.
- vi. The attendance shall be recoded on monthly basis and the same shall be displayed.
- vii. Students must ensure to coordinate with course teacher/semester coordinator to keep his/herself about his/her percentage of attendance for each course.

### **Course load for a Semester**

Associate degree program of instruction shall include 15-18 credit hours course-load in a regular semester. The required course load for a full time undergraduate is minimum of 15 credit hours per semester. In case any student who's CGPA is at less than 2.0 wishes to enroll for one more course beyond 18 credit hours s/he may be allowed by the Semester Coordinator if the student needs the course to graduate in time.

### **Repeating Courses**

- i. If a student is not allowed to take the examination of any course due to shortage of attendance or on failing a course, he/she shall be required to re-register himself/herself in that course whenever offered again.
- ii. The credit hours of repeating course(s) shall be considered for the purpose of calculating maximum semester workload (18 credit hours) of the student.
- iii. In case a student repeats the course, which has already been taken, the better grade will be reflected in the transcript.

**Assessment and Evaluation**

S. No.	Item	Weightage	
<b>1</b>	<b>Sessional Work</b> (by concerned institution / teacher) <b>40%</b>	<b>Course without Practical</b>	<b>Course with Practical</b>
		<b>20%: Mid-Semester Examination</b> <b>20%: Quizzes/Assignments /Presentation</b>	<b>20%: Mid-Semester Examination</b> <b>10%: Practical/Lab /Viva Voce</b> <b>10%: Quizzes / Assignments / Presentation</b>
The midterm paper shall consist of Four questions carrying equal weightage. Question 1 shall be compulsory (short notes/definitions/MCQS/True False/Fill in the blanks) Question 2-4 shall be subjective depending upon the nature of the course taught. Viva Voce/Practical/Lab examination will be evaluated by the concerned teacher and the result shall be submitted to the Controller of Examination duly signed by the HOD concerned. The Quiz/Assignment/Presentation assessment shall apply to the whole semester and shall be submitted to the University through the HOD/Principal before the end of final term exam.			
<b>2</b>	<b>Final Term Exam 60%</b> (centralized exam conducted by the University)	<b>Course without Practical</b>	<b>Course with Practical</b>
		The paper shall cover whole syllabus of the respective course.	The paper (45% weightage) shall cover whole syllabus of the respective course. Practical/Viva/Lab Examination (15% weightage): The practical shall cover whole syllabus of the respective course.
The final term paper shall consist of Five questions carrying equal weightage out of which four shall be attempted. Question 1 (short notes/definitions) shall be compulsory Question 2-5 shall be subjective (minimum of 3 questions must be attempted out of 4) The controller of examinations university of Malakand shall select the practical examiners for a course from the panel of three not from the same institution sent by the department concerned/institution/college.			

**Maximum Duration of the Degree**

1. A student who fails to complete the degree in the minimum of 4 semesters (2 Years) shall be allowed to complete the requirements in an additional period of 3 semesters i.e. the total duration shall not exceed 7 semesters.

2. A student who fails to complete the requirements of the degree in the time allowed as stated above will lose all the credits earned and shall have to apply afresh for the degree.

### **Promotion**

The pathway for promoting from one to another semester shall be as follows:

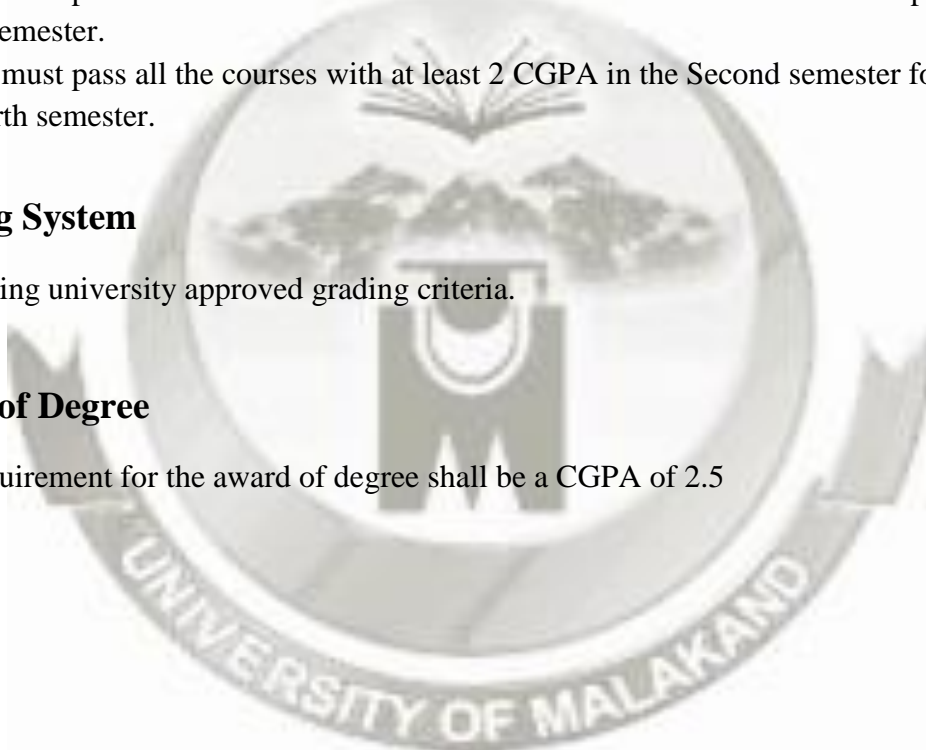
1. A student must pass at least 50% courses in each semester for promotion to the next semester.
2. A student must pass all the courses with at least 2 CGPA in the first semester for promotion to the third semester.
3. A student must pass all the courses with at least 2 CGPA in the Second semester for promotion to the fourth semester.

### **Grading System**

As per affiliating university approved grading criteria.

### **Award of Degree**

Minimum requirement for the award of degree shall be a CGPA of 2.5



## APPENDIX-A

### General Courses

#### Expository Writing

##### English-I

###### Course Description

The course introduces students to the basic concepts of grammar such as parts of speech, sentence, voice and narration in practical contexts. Basic English grammar is an important aspect of written and verbal communication. It is valued in not only in academics but also in jobs and professional life. Therefore, communicating in a proper manner helps in increasing self-confidence, good grades and increased skill level. Students, at this level, are not able to understand and differentiate the different parts of speech. They are also not proficient in making meaningful sentences and using voices and narration purposively.

###### Course Objectives

###### Successful completion of the course will enable students to:

- Describe and recognize nouns
- Use prepositions properly
- Describe and recognize verbs
- Demonstrate proper use of adverbs and adjectives
- Learn and use parts of speech in the meaningful construction of sentences
- Properly uses contextualized sentences
- Use voice and narration purposively

###### Course Contents

1. Sentence
  - Subject and predicate
  - Kinds of sentence
  - The phrase and the clause
2. Noun: kinds of nouns
  - Noun: gender
  - Noun: number
  - Noun: case
3. Adjective
  - Comparison of adjectives
  - Adjectives used as nouns
  - Position of the adjectives
  - The correct use of some adjectives
4. Articles
5. Personal pronouns
  - Reflexive and emphatic pronouns
  - Demonstrative, indefinite and distributive pronouns
  - Relative pronouns
  - Interrogative pronouns
6. The verb
  - Verbs of incomplete predication

7. Active and passive voice
8. Mood
9. Tenses: introduction
  - The uses of the present and past tenses
  - The future
10. The verb: person and number
  - The infinitive
  - The participle
  - The gerund
  - Irregular verbs
  - Auxiliaries and modals
11. The adverb
  - Comparison of adverbs
  - Formation of adverbs
  - Position of adverbs
12. The preposition
  - Words followed by prepositions
13. The conjunction
14. Direct and Indirect Narration

**Note:** Teachers need to include practice activities, exercises and worksheets on the provided topics.

### Recommended Readings

- Howe, D. H, Kirkpatrick, T. A., & Kirkpatrick, D. L. (2004). *Oxford English for undergraduates*. Karachi: Oxford University Press.
- Eastwood, J. (2004). *English Practice Grammar* (New edition with tests and answers). Karachi: Oxford University Press.
- Murphy, R. (2003). *Grammar in use*. Cambridge: Cambridge University Press.

## ENGLISH-II

### Course Description

The course focuses on the basic strategies of composition and writing skills. Good writing skills not only help students obtain good grades but also optimize their chances to excel in professional life. The course includes modes of collecting information and arranging it in appropriate manner i.e. chronological order, cause and effect, compare and contrast, general to specific etc. It would enable the students to write, edit, rewrite, redraft and proofread their own documents for writing effective compositions. Because of the use of a significant amount of written communication on daily basis, sharp writing skills have always been valued highly in academic as well as professional spheres.

### Course Objectives

This course aims to:

- assist students identify the audience, message, and the purpose of writing
- develop rhetorical knowledge and critical thinking
- enable them to express themselves in a variety of writing styles
- help students write well organized academic texts including examination answers with topic/thesis statement and supporting details.
- make students write argumentative essays and course assignments

### Course outcome

By the end of the course, students are expected to:

- use different mechanics of writing to produce various types of compositions effectively keeping in view the purpose and the audience
- demonstrate rhetorical knowledge
- demonstrate critical thinking in well-organized forms of academic texts
- properly use punctuation marks
- write well organized and coherent compositions
- organize paragraph to make longer compositions

### Course Contents

1. Writing Process
  - Invention
  - Generating Ideas (collecting information in various forms such as mind maps, tables, lists, charts etc)
  - Identifying Audience, Purpose, and Message
  - Ordering Information
  - Chronology for a narrative
  - Stages of a process
  - From general to specific and vice versa
  - From most important to least important
  - Advantages and disadvantages
  - Comparison and contrast
  - Problem solution pattern
  - Drafting
  - Free Writing
  - Revising
  - Editing
2. Paraphrasing
3. Cohesion and Coherence
  - Cohesive Devices
  - Paragraph unity
4. Summary and Précis Writing
5. Creative Writing
6. Essay Writing
  - developing a thesis statement
  - organizing an essay
  - writing effective introduction and conclusion
  - different types of essays
  - use of various rhetorical modes including exposition, argumentation and analysis
7. Reading Comprehension

### Recommended Books

- Goatly, A. (2000). *Critical Reading and Writing: An Introductory Course*. London: Taylor & Francis
- Hacker, D. (1992). *A Writer's Reference*. 2<sup>nd</sup> ed. Boston: St. Martin's
- Hamp-Lyons, L. & Heasley, B. (1987). *Study writing: A course in written English for academic and professional purposes*. Cambridge: Cambridge University Press.
- Howe, D. H, Kirkpatrick, T. A., & Kirkpatrick, D. L. (2004). *Oxford English for Undergraduates*. Karachi: Oxford University Press.
- Kirszner, L.G & Mandell, S.R. (1989). *Patterns for College Writing*: Fourth Edition. USA: St. Martin's Press,



- Inc.
- Smazler, W. R. (1996). *Write to be Read: Reading, Reflection and Writing*. Cambridge: Cambridge University Press.

### **English III**

#### **Course Description**

For professional growth and future development, effective presentation and interpersonal communicative skills are very important. This course offers methods, techniques, and drills which are significant and useful in optimizing communication and presentation skills of the learners, enabling them to face divergent groups of audience with poise and confidence. The course has been divided into modules relating to the essentials, contents, gestures, technology, and variety associated with communication and presentations skills. The section on presentation skills focuses on preparing students for long-life skill of preparing and giving presentations. Communication is a vital part of our daily routine. The section on communication skills focuses on developing good communication skills among students.

#### **Course Objectives**

The course aims to:

- help students identify essential components of a presentation
- develop the awareness, knowledge, skills and attitudes required to deliver effective academic presentations and communicate clearly
- help students learn various presentation and communication styles and techniques
- provide techniques to facilitate effective interpersonal and interactive communication
- guide how to build stronger relationships through powerful communication
- Develop communication skills of students
- Cultivate poise and confidence in students

#### **Course Contents**

1. Communication Skills: Introduction
  - Understanding the purpose of Communication
  - Analyze the Audience
  - Communicating with words as well as with body language
  - Writing with a Purpose
  - Process of communication
  - Barriers in Communications
  - Types of Communications
  - Job Interviews and Communicating Skills
  - Communication in a Team
2. Presentation skills
  - Delivering your presentation
  - Speaking with Confidence
  - Basic concepts, fazes of speech preparation
  - Effective presentation structure – introduction and conclusion
  - Expert presentation core structure
  - Verbal aspect of a presentation

- Linguistic tools
- Auditory aspect of a presentation
- Non-verbal aspect of a presentation – body language
- Speech visualization, effective presentation techniques basics
- Expert presentation specifications
- Q&A – preparation for an expert discussion
- Stress management during a presentation

**Recommended Readings:**

Andrew Bradbury (2000). *Successful Presentation Skills* (2nd edition)

- Carnegie, Dale. ( ). *How to Win Friends & Influence People*.
- Giblin, Les. *Skill with People*.
- Newton, Paul. *How to communicate effectively*.
- Tracy, Brian. *Speak to Win*.

## Quantitative Reasoning

### Information and Communication Technologies-ICT

**Credit Hours:** 3(2+1)

**Course Outline:** Basic Definitions & Concepts, Hardware: Computer Systems & Components, Storage Devices, Number Systems, Software: Operating Systems, Programming and Application Software, Introduction to Programming, Databases and Information Systems, Networks, Data Communication, The Internet: Email, Collaborative Computing and Social Networking, E Commerce, IT Security and other issues, Project Week, Review Week. Basics of Window Operating System, Microsoft Office (Word, Excel and Power Point), Internet and WWW.

**Reference Materials:**

1. Introduction to Computers and ICT by Dr. Rahman Ali and Asmat Ali. 1<sup>st</sup>/2<sup>nd</sup> Edition. Ilmi publishers, Peshawar.
2. Using Information Technology: A Practical Introduction to Computer & Communications, Latest Edition. Williams, S. McGraw-Hills.
3. Fundamentals of Information Technology, Alexis L Mathewsleon Leon Press.

### Mathematics- I

**Credit Hours:** 3

**Course Outline:**

Complex Numbers, Matrices and Determinants, Vectors, Sequences, Miscellaneous Series, Permutation, Combination, Probability, Mathematical Induction and Binomial Theorem, Functions and Graphs, Linear Programming, Trigonometric Identities, Application of Trigonometry, Graph of Trigonometric and Inverse Trigonometric Functions and Solutions of Trigonometric Equations

**Reference Materials:**

A Textbook of Mathematics for Grade XI by Prof Dr. Gulzar Ali Khan and Prof Dr. Islam Noor

**INTRODUCTORY STATISTICS**

**Cr. Hr. 03**

**Course Contents:**

**Introduction:** What is Statistics? Descriptive and Inferential Statistics, Introduction to basic terms, Measurability and Variability, Data and Data types (grouped and ungrouped data), Variables and Variable types, Measurement scales (Nominal, Ordinal, Interval, and Ratio)

**Graphic Presentation of Data:** what is Graphs? Pareto Diagram, Stem and Leaf Displays, Bar-Graph, Histograms, Pie-Chart, Box and Whisker Plots and their Interpretation.

**Numerical Descriptive Statistics:** Measure of Central Tendency (Arithmetic Mean, Geometric Mean, Harmonic Mean, Median and Mode), Measure of Position (Quartiles and Percentiles), Measure of Dispersion (Range, Quartile Deviation, Mean Deviation, Variance and Std. Deviation), Skewness and Kurtosis

**Probability:** Nature of Probability, Probability of Events, Simple Sample Spaces, Rules of Probability, Mutually Exclusive Events, and Addition Rule, Independence, the Multiplication Rule, and Conditional Probability, Bayes' Rule

**Books Recommended**

- i. Johnson, R and Kuby, P. (2004) "Elementary Statistics" 9<sup>th</sup> Edition Brooks/Cole, a division of Thomson Learning, Inc. USA
- ii. Walpole, R.E., Myers, R.H and Myers, S.L. (1998), "Probability and Statistics for Engineers and Scientist" 6<sup>th</sup> edition, Prentice Hall, NY.
- iii. Chaudhry, S.M.and Kamal, S. (1996), "Introduction to Statistical Theory" Parts I & II, 6<sup>th</sup> ed, Ilmi Kitab Khana, Lahore, Pakistan.

## Civilizational

### Islamiat

**Credit Hours: 3**

**Course Outline:**

Introduction to Quranic Studies: Basic Concepts of Quran, History of Quran, Uloom-ul-Quran.

Study of Selected Text of Holly Quran: Verses of Surah Al-Baqra Related to Faith(Verse No-284-286), Verses of Surah Al-Hujrat Related to Adab Al-Nabi(Verse No-1-18), Verses of Surah Al-Mumanoon Related to Characteristics of faithful (Verse No-1-11), Verses of Surah al-Furqan Related to Social Ethics (Verse No.63-77), Verses of Surah Al-Inam Related to Ihkam(Verse No-152-154).

Study of Selected Text of Holly Quran: Verses of Surah Al-Ihzab Related to Adab al-Nabi (Verse No.6,21,40,56,57,58.), Verses of Surah Al-Hashar (18,19,20) Related to thinking, Day of Judgment, Verses of Surah Al-Saf Related to Tafakar, Tadabar (Verse No-1,14)

Seerat of Holy Prophet (S.A.W) I: Life of Muhammad Bin Abdullah ( Before Prophet Hood), Life of Holy Prophet (S.A.W) in Makkah, Important Lessons Derived from the life of Holy Prophet in Makkah

Seerat of Holy Prophet (S.A.W) I: Life of Holy Prophet (S.A.W) in Madina, Important Events of Life Holy Prophet in Madina, Important Lessons Derived from the life of Holy Prophet in Madina

Introduction To Sunnah: Basic Concepts of Hadith, History of Hadith, Kinds of Hadith, Uloom –ul-Hadith, Sunnah& Hadith, Legal Position of Sunnah, Selected Study from Text of Hadith

Introduction To Islamic Law & Jurisprudence: Basic Concepts of Islamic Law & Jurisprudence, History & Importance of Islamic Law & Jurisprudence, Sources of Islamic Law & Jurisprudence, Nature of Differences in Islamic Law, Islam and Sectarianism Islamic Culture & Civilization: Basic Concepts of Islamic Culture & Civilization, Historical Development of Islamic Culture & Civilization, Characteristics of Islamic Culture & Civilization, Islamic Culture & Civilization and Contemporary Issues: Islam & Science:Basic Concepts of Islam & Science, Contributions of Muslims in the Development of Science, Quranic& Science. Islamic Economic System: Basic Concepts of Islamic Economic System, Means of Distribution of wealth in Islamic Economics, Islamic Concept of Riba, Islamic Ways of Trade & Commerce.

Political System of Islam: Basic Concepts of Islamic Political System, Islamic Concept of Sovereignty, Basic Institutions of Govt. in Islam.

Islamic History: Period of Khlaft-E-Rashida, Period of Ummayyads, Period of Abbasids.

Social System of Islam: Basic Concepts of Social System of Islam, Elements of Family, Ethical Values of Islam.

**Reference Books:**

- Hameedullah Muhammad, “Emergence of Islam”, IRI, Islamabad, Latest Edition.
- Hameedullah Muhammad, “Muslim Conduct of State”, Latest Edition.
- Hameedullah Muhammad, ‘Introduction to Islam’, Latest Edition.

**Pakistan Studies**

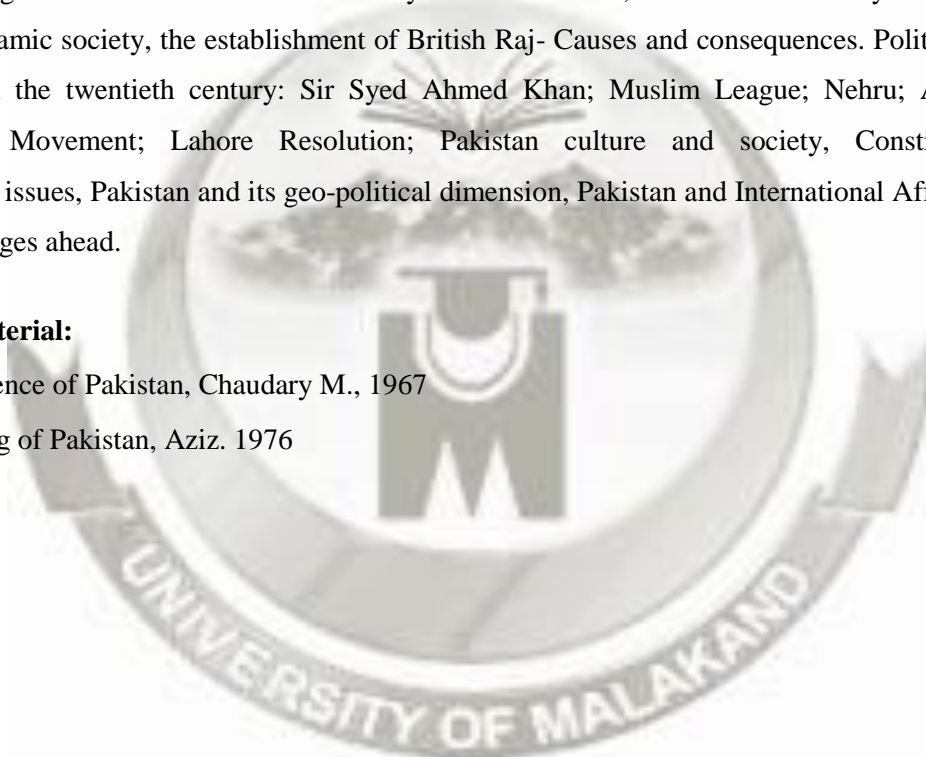
**Credit Hours: 3**

**Course Outline:**

Historical background of Pakistan: Muslim society in Indo-Pakistan, the movement led by the societies, the downfall of Islamic society, the establishment of British Raj- Causes and consequences. Political evolution of Muslims in the twentieth century: Sir Syed Ahmed Khan; Muslim League; Nehru; Allama Iqbal: Independence Movement; Lahore Resolution; Pakistan culture and society, Constitutional and Administrative issues, Pakistan and its geo-political dimension, Pakistan and International Affairs, Pakistan and the challenges ahead.

**Reference Material:**

1. The Emergence of Pakistan, Chaudary M., 1967
2. The making of Pakistan, Aziz. 1976



## Arts and Humanities

### Islamic History

Title	Description
Nature of Course	Compulsory
No. of C.Hrs.	03
Total Teaching weeks	16
Objectives of the Course	<p>۱. طلباء کو مطالعہ تاریخ و سیرۃ طیبہ کی ضرورت و اہمیت سے آگاہ کرنا</p> <p>۲. تعمیر شخصیت میں مطالعہ تاریخ و سیرۃ طیبہ کے کردار کو واضح کرنا</p> <p>۳. خلفاء راشدین کی تاریخی کارناموں سے آگاہ کرنا</p> <p>۴. رسول اکرم صلی اللہ علیہ وسلم کی مکی اور مدنی زندگی کا اس طرح مطالعہ کروانا کہ طلباء ان واقعات سے نتائج کا استنباط کر سکیں</p> <p>۵. طلباء کو بنو امیہ اور بنو عباس جیسی عظیم اسلامی تاریخی واقعات سے آگاہ کرنا</p>

### Course Description

Weeks	Title	Description
1	سیرۃ النبی صلی اللہ علیہ وسلم: تعارف و اہمیت	<p>۱. سیرۃ کا لغوی اور اصطلاحی مفہوم</p> <p>۲. سیرۃ النبی کی ضرورت و اہمیت</p> <p>۳. قبل از اسلام عربوں کی معاشی، معاشرتی اور اخلاقی تاریخ</p>
2	سیرۃ النبی صلی اللہ علیہ وسلم: ولادت سے نبوت تک	<p>۱. ولادت باسعادت، بچپن کے واقعات</p> <p>۲. نبوت سے قبل سیرت النبی ﷺ کے اہم واقعات</p> <p>۳. بدء الوحی، تباشیر نبوت اور بعثت/اعلان نبوت</p>
3	سیرۃ النبی صلی اللہ علیہ وسلم: نبوت کے بعد/مکی دور کے واقعات	<p>۱. ابتدائی نو مسلموں کے مشکلات / تعذیبِ مسلمین</p> <p>۲. ہجرت حبشہ، شعب ابی طالب، سفر طائف</p> <p>۳. بیعت عقبیٰ اولیٰ و ثانیہ</p>
4	سیرۃ النبی صلی اللہ علیہ وسلم: رسول اللہ صلی اللہ علیہ وسلم کے داخلی سیاسی اقدامات/ رسول اللہ صلی اللہ علیہ وسلم کے خارجی تعلقات	<p>۱. ہجرت کے واقعات</p> <p>۲. مسجد قباء اور مسجد نبوی کی تعمیر</p> <p>۳. مواخاۃ / میثاق مدینہ</p>
5	سیرۃ النبی صلی اللہ علیہ وسلم: غزوات نبوی	<p>۱. غزوہ بدر</p> <p>۲. غزوہ احد</p> <p>۳. صلح حدیبیہ</p>
6	سیرۃ النبی صلی اللہ علیہ وسلم: مدنی دور کے واقعات	<p>۱. فتح مکہ</p> <p>۲. حجۃ الوداع</p> <p>۳. واقعہ وفات</p>
7	تاریخ خلفائے راشدین: حضرت ابوبکر صدیقؓ	<p>۱. نام و نسب اور قبل از اسلام زندگی (حضرت ابوبکر صدیقؓ)</p> <p>۲. داخلہ اسلام اور ابتدائی مشکلات</p> <p>۳. غزوات میں شرکت</p>

TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

8	تاریخ خلفائے راشدین: ابوبکر صدیقؓ / عمر فاروقؓ	۱۔ خلافتِ صدیقی کی اہم واقعات (وفات النبی ﷺ سے قبل اور بعد) ۲۔ نام و نسب اور قبل از اسلام زندگی (حضرت عمر فاروقؓ) ۳۔ اسلام لانے کا واقعہ اور ابتدائی مشکلات
9	تاریخ خلفائے راشدین: حضرت عمر فاروقؓ	۱۔ غزوات میں شرکت ۲۔ فتوحات/ جنگی واقعات ۳۔ نظام سلطنت / طرز حکومت
10	تاریخ خلفائے راشدین: حضرت عثمان غنیؓ	۱۔ نام و نسب / خاندان ۲۔ خلافت اور فتوحات ۳۔ مختلف فتنوں کا ظہور اور اس کا سد باب
11	تاریخ خلفائے راشدین: حضرت عثمان غنیؓ / حضرت علیؓ	۱۔ شہادت عثمانؓ کا واقعہ ۲۔ نام و نسب اور تربیت ۳۔ خلافت کے مشہور واقعات
12	تاریخ خلفائے راشدین: حضرت علیؓ	۱۔ مختلف فتنوں کا ظہور ۲۔ جنگ جمل اور جنگ صفین کے واقعات ۳۔ شہادت اور حسنین کریمین / واقعہ کربلا
13	خلافت بنو امیہ : (تاریخ)	۱۔ دور بنو امیہ کا تعارف ۲۔ خلفائے بنو امیہ کا تعارف و سیرت/اموی خلفاء کی تفصیل ۳۔ دور بنو امیہ کی مذہبی تحریکیں
14	خلافت بنو امیہ: (تاریخ)	۱۔ دور بنو امیہ کے تہذیبی ترقی کے اسباب ۲۔ طرز حکمرانی ۳۔ بنو امیہ کا زوال اور اسباب زوال
15	خلافت بنو عباس: (تاریخ)	۱۔ بنو عباس کا تعارف/ عباسی تہذیب کا آغاز ۲۔ خلفائے بنو عباس کا تفصیلی تعارف ۳۔ دور بنو امیہ میں اندرونی خلفشار
16	خلافت بنو عباس: (تاریخ)	۱۔ دور بنو امیہ میں علمی، معاشرتی ترقی اور طرز حکومت ۲۔ صلیبی جنگیں ۳۔ عباسیوں کے زوال کے اسباب

نصابی کتب

نمبر شمار	نام کتاب	نام مصنف
1	السیرة النبویہ	ابن ہشام
2	طبقات ابن سعد	ابن سعد
3	سیرت النبی ﷺ	علامہ شبلی نعمانی/سید سلیمان ندوی
4	رحمت عالم	سید سلیمان ندوی
5	خلفاء راشدین	شاہ معین الدین ندوی

## TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

پروفیسر محمد رضا اکبر شاہ نجیب آبادی	تاریخ مسلمانان عالم تاریخ اسلام	6 7
---	------------------------------------	--------

### ISLAMIC MORALS

#### علم الاخلاق

Title	Description
Nature of Course	Compulsory
No. of C.Hrs.	03
Total Teaching weeks	16
Objectives of the Course	<p>۱۔ طلباء کو اخلاق کے مفہوم سے آگاہ کرنا</p> <p>۲۔ طلباء میں اسلامی اخلاق کی ترویج کرنا</p> <p>۳۔ طلباء کو عملی زندگی میں پیشہ ورانہ اسلامی اخلاقیات سے آگاہ کرنا</p>

#### Course Description

Weeks	Title	Description
1	اخلاق کا تعارف	<p>۱۔ اخلاق کا لغوی مفہوم</p> <p>۲۔ اخلاق کا اصطلاحی مفہوم</p> <p>۳۔ اخلاق کی ضرورت و اہمیت</p>
2	حسن اخلاق قرآن کی روشنی میں	<p>۱۔ سورۃ الحجرات مکمل</p> <p>۲۔ والدین کے ساتھ حسن سلوک (قرآن کی روشنی میں)</p> <p>۳۔ اخلاق کے متعلق قرآن کریم میں منتخب آیات</p> <p>سورۃ آل عمران آیت 159، سورۃ المائدۃ 54، سورۃ الشعراء 215، سورۃ القلم 4، سورۃ المجادلۃ 9 و 11</p>
3	حسن اخلاق کی تاریخی پس منظر	<p>۱۔ منتخب انبیاء علیہم السلام کے اخلاق کے واقعات (حضرت نوحؑ، حضرت ابراہیمؑ، حضرت موسیٰؑ، حضرت عیسیٰؑ)</p> <p>۲۔ خلفائے راشدین کے اخلاقیات کے متعلق واقعات</p> <p>۳۔ ائمہ اربعہ کے اخلاقیات کے متعلق واقعات</p>
4	حضور ﷺ کے اخلاق حسنہ کے اہم پہلو	<p>۱۔ تحمل بردباری، عفو و درگزر</p> <p>۲۔ شفقت و محبت، شرم و حیا</p> <p>۳۔ مسئولیت (ذمہ داری)، مزاح</p>
5	اسلامی تصور اخلاق	<p>۱۔ اسلامی اخلاق کی اُسس</p> <p>۲۔ اسلامی اخلاق کے مقاصد</p> <p>۳۔ اسلامی اخلاق کے عناصر</p>



TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

6	فضائل اخلاق	۱۔ فضائل اخلاق کا محرک ۲۔ فضائل اخلاق کا معیار ۳۔ فضائل اخلاق میں نمونہ کمال
7	ردائل اخلاق	۱۔ ردائل اخلاق کا محرک ۲۔ ردائل اخلاق کے اثرات ۳۔ ردائل اخلاق سے اجتناب
8	حسن اخلاق کے درجات	۱۔ خلق حسن ۲۔ خلق کریم ۳۔ خلق عظیم
9	مسلمانوں کے اخلاق سے متعلقہ نظریات i۔	۱۔ ابن مسکویہ کا نظریہ اخلاق ۲۔ امام غزالی کا نظریہ اخلاق ۳۔ نصیر الدین طوسی کا نظریہ اخلاق
10	مسلمانوں کے اخلاق سے متعلقہ نظریات ii۔	۱۔ جلال الدین دوزنی کا نظریہ اخلاق ۲۔ ابن سینا کا نظریہ اخلاق
11	حسن اخلاق کے انسانی زندگی پر اثرات I۔	۱۔ حسن اخلاق کے حیات انسانی پر نفسیاتی اثرات ۲۔ حسن اخلاق کے حیات انسانی پر معاشرتی اثرات ۳۔ حسن اخلاق کے حیات انسانی پر معاشرتی اثرات
12	حسن اخلاق کے انسانی زندگی پر اثرات II۔	۱۔ حسن اخلاق کے انسانی زندگی پر سیاسی اثرات ۲۔ حسن اخلاق کے انسانی رویوں پر اثرات ۳۔ حسن اخلاق اور عملی زندگی کے درمیان تعلق
13	پیشہ ورانہ اسلامی اخلاقیات	۱۔ طبی اخلاقیات اسلامی شریعت کی روشنی میں ۲۔ تجارتی اخلاقیات اسلامی شریعت کی روشنی میں ۳۔ ذرائع ابلاغ کے اخلاقیات اسلامی شریعت کی روشنی میں
14	سماوی مذاہب میں اخلاقیات کا تصور	۱۔ یہودی مذہب میں اخلاق کا تصور ۲۔ عیسائی مذہب میں اخلاق کا تصور ۳۔ یہودیت، عیسائیت اور اسلام میں اخلاقیات کے تصور کا تقابلی جائزہ
15	منتخب غیر سماوی مذاہب میں اخلاقیات کا تصور	۱۔ بدھ مت میں اخلاق کا تصور ۲۔ کنفیوشس ازم میں اخلاق کا تصور ۳۔ ہندو مت میں اخلاق کا تصور
16	تعلیمی ادارے اور اخلاقیات	۱۔ تعلیمی اداروں میں اخلاقی زوال ۲۔ نصابِ تعلیم میں اخلاقیات کی ضرورت ۳۔ تعلیمی اداروں میں طلباء کو اخلاقیات کی فروغ

نصابی کتب

نمبر شمار	نام مصنف	نام کتاب
1	امام الغزالی	إحياء علوم الدين

## TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

سیرت النبی	سید سلیمان ندوی	2
اخلاق اور فلسفہ اخلاق	حفظ الرحمن سیوہاروی	3
الرسائل القشیریة	امام قشیری	4

### معاون کتب

نام کتاب	نام مصنف	نمبر شمار
المنفذ من الضلال	امام الغزالی	2
كشف المحجوب	سید علی ہجویری	6
فصوص الحکم	ابن عربی	7
مکتوبات امام ربانی	شیخ احمد سرہندی	8

## ARABIC

Title	Description
Nature of Course	Compulsory
No. of C.Hrs.	03
Teaching weeks	16
Objectives of the Course	1- طلباء کو علوم اسلامی میں عربی زبان کی اہمیت سے آگاہ کرنا 2- طلباء کو علم صرف اور نحو کے بنیادی قواعد سے آگاہ کرنا تاکہ عربی زبان پڑھنے اور سمجھنے کی استعداد پیدا ہو۔

### Course Description

S.No	Topic	Description
1	کلمہ و کلام، اسم، فعل اور حرف کی علامات، معرب، مبنی	1- علم النحو، کلمہ و کلام کی تعریف، اقسام اور مثالیں 2- علامات اسم، علامات فعل و حرف اور مثالیں 3- معرب و مبنی کی تعریفات، اقسام، اسم غیر متمکن (1 تا 4) کی اقسام
2	اسم غیر متمکن، اسم منسوب، اسم تصغیر و غیرہ کاتعارف	1- اسم غیر متمکن (5 تا 8) کی اقسام 2- اسم منسوب، اسم تصغیر کاتعارف اور مثالیں 3- معرفہ و نکرہ، مذکر و مؤنث کاتعارف اور مثالیں
3	منصرف غیر منصرف، مرفوعات کاتعارف	1- واحد، تثنیہ اور جمع کاتعارف اور مثالیں 2- منصرف و غیر منصرف کاتعارف اور مثالیں 3- مرفوعات (1 تا 4) کاتعارف اور مثالیں

TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

4	بقیہ مرفوعات اور منصوبات کاتعارف	1- مرفوعات(5تا8) کاتعارف اور مثالیں 2- منصوبات (1تا6) کاتعارف اور مثالیں 3- منصوبات (7تا12) کاتعارف اور مثالیں
5	مجرورات، اسم متمکن، اور توابع کاتعارف	1-مجرورات کاتعارف اقسام مثالیں 2-اسم متمکن کاتعارف اقسام اور مثالیں 3-توابع کاتعارف اقسام اور مثالیں
6	فعل ماضی کا تعارف ، اقسام اور گردانیں	1-علم الصرف کاتعارف، فعل ماضی معروف کاتعارف، بنانے کا طریقہ اور گردان 2-فعل ماضی مجہول کا تعارف، بنانے کا طریقہ اور گردان 3-فعل ماضی منفی کا تعارف ، بنانے کا طریقہ اور گردانیں
7	فعل مضارع کا تعارف ، اقسام اور گردانیں	1-فعل مضارع معروف کاتعارف، بنانے کا طریقہ اور گردان 2-فعل مضارع مجہول کا تعارف، بنانے کا طریقہ اور گردان 3-فعل مضارع منفی کاتعارف، بنانے کا طریقہ اور گردانیں
8	فعل امر اور نہی کا تعارف، اقسام اور گردانیں	1-فعل امر حاضر کاتعارف، بنانے کا طریقہ، اقسام اور گردانیں 2-فعل امر غائب کاتعارف، بنانے کا طریقہ، اقسام اور گردانیں 3-فعل نہی کاتعارف، بنانے کا طریقہ، اقسام اور گردانیں
9	اسمائے مشتقہ کاتعارف، اقسام اور گردانیں	1-اسم فاعل اور اسم مفعول کاتعارف، بنانے کا طریقہ اور گردانیں 2-اسم تفضیل کاتعارف، بنانے کا طریقہ اور گردان 3-اسم ظرف اور اسم آلہ کاتعارف، اقسام اور گردانیں
10	ثلاثی مجرد و مزید فیہ ، اور یفت اقسام کاتعارف	1-فعل ثلاثی مجرد اور ثلاثی مزید فیہ کاتعارف اور مثالیں 2-صحیح، مثال، مضاعف اور لفیف کاتعارف و مثالیں 3-ناقص، مہموز اور اجوف کاتعارف اور مثالیں
11	القرآۃ الراشدہ (ج-1) سے منتخب اسباق	1- صفحہ 11، 12 2- صفحہ 13 تا 15 3- صفحہ 16 تا 21
12	القرآۃ الراشدہ (ج-1) سے منتخب اسباق	1- صفحہ 22 تا 26 2- صفحہ 27 تا 29 3- صفحہ 30 تا 33
13	القرآۃ الراشدہ س (ج-1) سے منتخب اسباق	1- صفحہ 34 تا 37 2- صفحہ 38 تا 42 3- صفحہ 43 صفحہ تا 48
14	القرآۃ الراشدہ (ج-1) سے منتخب اسباق	1- صفحہ 49 تا 53 2- صفحہ 54 تا 59 3- صفحہ 60 تا 65

15	القرارة الراشده (ج-1) سے منتخب اسباق	1- صفحہ 66 تا 71 2- صفحہ 72 تا 75 3- صفحہ 76 تا 81
16	القرارة الراشده (ج-1) سے منتخب اسباق	1- صفحہ 82 تا 85 2- صفحہ 86 تا 90 3- صفحہ 91 تا 93

نصابی کتب

نمبر شمار	نام مصنف	نام کتاب
1	معین اللہ ندوی	تمرین الصرف
2	مولانا مشتاق احمد چرٹھالی	علم النحو
3	مولانا عبدالماجد ندوی	معلم الانشاء
4	مولانا ابو الحسن ندوی	القرارة الراشده

حوالہ جاتی کتب

نمبر شمار	نام مصنف	نام کتاب
1	علی جارم	النحو الواضح
2	نعیم الرحمن	اساس عربی
3	رشید الشریطوی	مبادئ العربية في الصرف و النحو
4	عبدالرحمن امرتسری	کتاب النحو
5	محمد مصطفیٰ ندوی	تمرین النحو
6	عبدالرحمن طاہر	قواعد القرآن
7	جامعۃ الملک السعود، ریاض	اللغة العربية لغير الناطقين بها
8	ڈاکٹر ابرہیم سورتی	قرآن عبرتیک

URDU

(تخصیصی کورس ، کریڈٹ آورز: ۳)

مقاصد:

- i. لسانیات کو بحیثیت ایک علم سمجھنے کی صلاحیت پیدا کرنا
  - ii. لسانیات کی مختلف اقسام کو ان کی مبادیات کے تحت سمجھنے کی کوشش کرنا
  - iii. زبانوں کے خاندان اور اردو میں علم لسانیات کی تاریخ اور ارتقاء کو سمجھنا
- (الف) لسانیات اور اس کی اقسام:
- عمومی لسانیات ، تاریخی لسانیات ، سماجی لسانیات ، اطلاقی لسانیات
- (ب) عمومی لسانیات:
- ۱- صوتیات
  - ۲- مارفیمیات
  - ۳- نحویات
  - ۴- معنیات
- (ج) تاریخی لسانیات:

- ۱۔ زبانوں کے خاندان
- ۲۔ اردو میں لسانیات کی تاریخ اور ارتقا

مجوزہ کتب:

- اقتدار حسین، 'لسانیات کے بنیادی اصول' لکھنؤ: فخر الدین علی احمد میموریل کمیٹی، ۱۹۸۵ء  
خلیل احمد بیگ، 'اردو کی لسانی تشکیل' علی گڑھ: ایجوکیشنل بک ہاؤس، ۲۰۰۰ء  
خلیل صدیقی، 'زبان کیا ہے؟'، ملتان: بیکن بکس، ۲۰۰۱ء  
سہیل بخاری، 'اردو زبان کا صوتی نظام اور تقابلی جائزہ' اسلام آباد: مقتدرہ قومی زبان، ۱۹۹۱ء  
عبدالسلام، 'عمومی لسانیات: ایک تعارف' کراچی: رائل بک کمپنی، ۱۹۹۳ء  
محبوب عالم، 'اردو کا صوتی نظام' اسلام آباد: مقتدرہ قومی زبان، ۱۹۹۷ء  
میمن عبدالمجید سندھی، 'لسانیات پاکستان' اسلام آباد: مقتدرہ قومی زبان، ۱۹۹۲ء



Course Title: د پښتو ژبې او پښتنو د تاريخ مطالعه

<b>Title</b>	<b>Description</b>
<b>Course</b>	<b>Compulsory Course For All Associate Degree Program</b>
<b>Nature of Course</b>	<b>Major</b>
<b>No. of Credit Hours</b>	<b>03 C.H.</b>
<b>Total Teaching Weeks</b>	<b>18</b>
<b>Objectives of the Course</b>	<p>(۱) طالب علمان د پښتو ژبې د تاريخ، د پښتو ژبې په بابله د بېلابېلو نظريو نه خبرول -</p> <p>(۲) طالب علمان د پښتون قام د تاريخ، او په مختلفو تاريخي دورو كښې د دوي د كردار نه خبرول -</p> <p>(۳) په دور جديد كښې په راپېښو مسئلو باندې د پښتو طالب علمان خبرول او ورته مئنت رول په گوته كول -</p>

**Course Contents:**

S.No	Title	Description
01	ژبه څه ته وائي؟	(۱) د ژبې تعريف (۲) د ژبې او لهجي فرق
02	د ژبې د ابتداء په حقله نظريات	(۱) اوله نظريه (۲) دوېمه نظريه (۳) درېمه نظريه
03	د ژبو خاندانونه	(۱) د ژبو عالمي تقسيم (۲) د ژبو صوري تقسيم (۳) د ژبو جينيائي تقسيم
04	د پښتو ژبې په بابله مختلفي نظريي	(۱) سامي نظريه (۲) په سامي نظريي تنقيد
05		(۱) آريائي نظريه (۲) د آريائي نظريي بنيادي مباحث
06	افغان قوميت	(۱) پښتون (۲) پټهان (۳) روهيله
07	سکندر اعظم او پښتانه	(۱) د پښتنو د سکندر اعظم سره مشهور جنگونه
08	مغل او پښتانه	(۱) د مغلو او پښتنو تعلقات (۲) د مغلو او پښتنو جنگونه
09	سیکان او پښتانه	(۱) د سیکانو دوره (۲) د سیکانو خلاف غزاګانې او لامونه
10	انګرېزان او پښتانه	(۱) د انګرېزانو دوره (۲) د انګرېزانو د غلامۍ نه د آزادی تحریک او پښتانه
11	افغان جنگونه	(۱) ورومې افغان جنگ (۲) دوېم افغان جنگ (۳) درېم افغان جنگ

12	لويه لوبه او پښتانه	(۱) د تيراه، وزيرستان، باجور، مومند، سوات لويه لوبه او پښتانه
13	روسي يلغار	(۱) روسي يلغار (۲) روسي يلغار او پښتانه
14	ترهي گري	(۱) ترهه گري (۲) ترهه گري او پښتون وطن
15	په پښتنو د يولسم ستمبر (۹/۱۱) اثرات	(۱) د يولسم ستمبر تاريخي واقعه (۲) په پښتنو د يولسم ستمبر اثرات

**مجزوه کتابونه : Recommended Books**

1. د پښتو ادبياتو تاريخ (اول ټوك)، عبدالحی حبيبي
2. پښتانه د تاريخ په رڼا كښي، سيد بهادر شاه ظفر كاكاخېل
3. پټهان، اولف كېرو
4. د پښتنو تاريخ، قاضي عطاالله
5. پښتانه د تاريخ په رڼا كښي، سيد بهادر شاه ظفر كاكاخېل
6. تاريخ خان جهان و مخزن افغاني (اردو ترجمه)، نعمت الله هروي
7. تواريخ حافظ رحمت خاني، پير معظم شاه
8. يوسفزئی قوم کی سرگزشت، خان روشن خان
9. تذکره، خان روشن خان
10. طالب نه تر مهاجره، ډاکټر فضل رحيم مروت
11. په پښتو ادب د يولسم ستمبر اثرات، ډاکټر مظهر احمد

## CONSTITUTIONAL LAW

The course will examine the remarkable unwritten constitution of the UK, the Separation of Powers, Rule of Law, Parliamentary Supremacy and the Independence of Judiciary under the British constitutional conventions. Course contents shall include the Nature and Development of the British Constitution, the Conventions of the Constitution and will look at the Institution of Government; the Monarchy, the Legislature and the Executive.

**Recommended Reading:**

1. Allen, Michael and Thomson, Brian. Cases and Materials: Constitutional and Administrative Law. Oxford: OUP, 2005.
2. Bagehot, Walter & Taylor, Miles. The English Constitution (Oxford World Classics). Oxford: OUP, 2009.
3. Barnet, Hilaire. Constitutional and Administrative Law, 8th edn. Oxon: Routledge, 2011.
4. Cownie, Fiona et al, English Legal System in Context, 4th edn. Oxford: OUP, 2007. 5. Dicey, A.V. Introduction to the Study of the Law of Constitution, 10th edn. Delhi: Universal, 2003 (4th I rpt.).

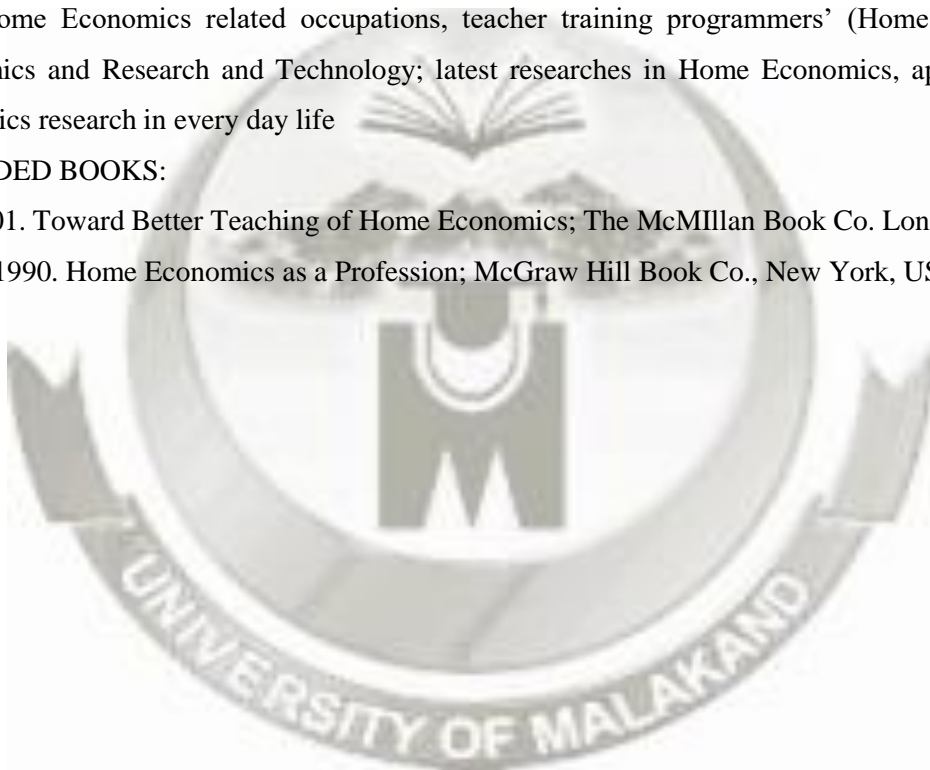
## **INTRODUCTION TO HOME ECONOMICS**

Credit Hours: 3(3-0)

Aims and Objectives: To introduce the students with 5 majors of home economics and make them understand their role both in the society and to help the students to know about the various courses related with each major. THEORY: Introduction of Home Economics; definition and scope, objectives of Home Economics, importance of Home Economics, mission of Home Economics. Home Economics Education Major; Areas of Home Economics, Food and Nutrition Apparel And Textiles, Child Development And Family Studies, Art and Design, Consumer Studies and Honoring to Interior Design. Career in Home Economics; Home Economics related occupations, teacher training programmers' (Home Economics). Home Economics and Research and Technology; latest researches in Home Economics, application OF Home Economics research in every day life

### **RECOMMENDED BOOKS:**

1. Fleck, H.2001. Toward Better Teaching of Home Economics; The McMillan Book Co. London, UK.
2. Throw, M. 1990. Home Economics as a Profession; McGraw Hill Book Co., New York, USA





## Social Sciences

### Introduction to Psychology

Credit Hours: 03

#### Course Objectives

This course will help to describe Psychology with major areas in the field, and identify the parameters of this discipline. It will help to distinguish between the major perspectives on human thought and behavior.

#### Course Outcome:

It helps to gain insight into human behavior and into one's own personality or personal relationships. Explore the ways that psychological theories are used to describe, understand, predict, and control or modify behavior.

#### Introduction to Psychology

- Introduction, Meaning and definition of Psychology
- Nature and Scope of Psychology
- History of Psychology
- Different Schools in Psychology
- Application of Psychology with special reference to Pakistan

#### 1. Research in Methods of Psychology

- Observation
- Case History Method
- Experimental Method
- Survey Method
- Interviewing Techniques

#### 2. Biological Basis of Behavior

- Neuron: Structure and Functions
- Central Nervous System and Peripheral Nervous System
- Endocrine Glands

#### 3. Sensation, Perception and Attention

- Sensations : Characteristics and Major Functions of Different Sensations
- Vision: Structure and functions of the Eye.
- Audition: Structure and functions of the Ear.

#### 4. Perceptions : Nature of Perception

- Factors of Perception: Subjective, Objective and Social
- Kinds of Perception:
- Spatial Perception (Perception of Depth and Distance)
- Temporal Perception; Auditory Perception.
- Attention : Factors, Subjective and Objective
- Span of Attention
- Fluctuation of Attention
- Distraction of Attention (Causes and Control)

#### 5. Motives

- Definition and Nature
  - Classification of Motives (Primary (Biogenic) Motives: Hunger, Thirst, Defecation and Urination, Fatigue, Sleep, Pain, Temperature, Regulation, Maternal Behavior, Sex, Secondary (Sociogenic) Motives: Play and Manipulation, Exploration and Curiosity, Affiliation, Achievement and Power, Competition, Cooperation, Social Approval and Self Actualization)
- 6. Emotions**
- Definition and Nature
  - Physiological changes during Emotions (Neural, Cardial, Visceral, Glandular), Galvanic Skin Response; Pupillometrics
  - Theories of Emotion (James Lange Theory; Cannon-Bard Theory, Schachter –Singer Theory)
- 7. Learning**
- Definition of Learning
  - Types of Learning: Classical and Operant Conditioning: Trial and Error, Learning by Insight; Observational Learning, Methods of Learning
- 8. Memory**
- Definition and Nature
  - Memory Processes: Retention, Recall and Recognition
  - Forgetting: Nature and Causes
- 9. Thinking**
- Definition and Nature
  - Tools of Thinking: Imagery; Language; Concepts
  - Kinds of Thinking (Problem Solving; Decision Making; Reasoning)
- 10. Individual differences**
- Definition of Individual Differences and conceptual Framework
  - Intelligence, personality, aptitude, achievement

**Recommended books:**

1. Atkinson R. C., & Smith E. E. (2000). Introduction to psychology (13th Ed.). San Diego, California, USA Harcourt Brace College Publishers.
2. Fernald, L. D., & Fernald, P. S. (2005). Introduction to psychology. USA: WMC Brown Publishers.
3. Ormord, J. E. (1995). Educational Psychology: Developing learners. New York, USA: Prentice Hall.
4. Thomson., & Lahey, B-B. (2004). Psychology: An Introduction (8th Ed.). New York, USA : McGraw-Hill Companies, Inc.

### **Fundamentals of Economics**

The objective of this course is to provide students with a basic introduction to micro and macro economics. It aims to create an intuitive understanding of the central principles of the subject without the application of the more complex tools of economics. The most important purpose of this course is to help students learn the economist's way of thinking.

**Introduction**

Nature, scope and importance of Economics, Microeconomics vs. Macroeconomics, Scarcity and choice, Opportunity cost, Factors of production, Production possibility frontier.

**Demand, Supply and Equilibrium**

Concepts of demand and supply, Laws of demand and supply, Market equilibrium, Shifts in demand and supply curves, and market equilibrium.

**Elasticity**

Concept of elasticity, Price elasticity of demand, Income elasticity of demand, Cross Elasticity of Demand, Price elasticity of supply, Application of elasticity.

**Utility Theory**

Consumer behavior, Preferences, Utility function, Laws of Increasing and diminishing marginal utility, Law of Equi-marginal utility.

**Theory of Firm**

Factors of production and their rewards, Total, average, and marginal products, Laws of returns, Cost of production, Total, average, and marginal costs, Total, average, and marginal revenue. Concept of profit maximization/Cost minimization.

**Market Structure**

Perfect competition & imperfect competition: assumptions and Price/Output determination in short run and long run. Monopoly, Short-Run and Long-Run Equilibrium of Monopoly, Regulation of Monopoly.

**National Income**

Concepts of national income, GDP & GNP, Real vs. nominal GNP, NNP, NI, PDY, Saving and Personal Consumption.

**Macroeconomic Issues**

Concept of inflation, unemployment, Balance of payment, Exchange rate and Business cycles. Monetary Policy and Fiscal Policy and their role in the economy.

**Core Readings**

1. Michel Parkin. 2004. Economics, 5th Ed., Addison Wesley.
2. Paul A. Samuelson and W.D. Nordhaus. 2004. Economics, 18th Ed., McGraw Hills, Inc.
3. John Sloman, Economics (Latest edition).
4. Lipsey and Crystal, Economics, (Latest edition).

**Introduction to social work**

Social Work: An Introduction, Social Work History and Evolution, Social Work Methods: Primary Methods, Social Work Methods: Secondary Methods, Important Fields of Social Work Practice, Social Work Theories, Approaches and Perspectives for Social Work Practice, The Intervention Process and Techniques in Social Work, Social Issue and Social Legislation in Pakistan, Social Work/Welfare Agencies in Pakistan, Stereotypes about Masculinity

**Recommended books:**

Introduction to Social Work by Lambert K Engelbrech

Social Work by Martin Davies

## **HEALTH AND PHYSICAL EDUCATION**

**(3+0 Cr. Hr)**

### **OBJECTIVES OF COURSE:**

This course is designed to acquaint students with the objectives to make them understand the basic concepts of physical education and its relation to Health Education, and provide preliminary awareness about physical, mental and social developments; interpretation of biological, psychological effects on physical activities.

### **COURSE CONTENTS:**

#### **i. INTRODUCTION**

- a. Historical background of Physical Education
- b. Definition and scope of Physical Education
- c. Aims and objectives of Physical Education

#### **ii. PHILOSOPHY AND PHYSICAL EDUCATION**

- a. Definition
- b. Components of Philosophy
- c. Relationship of Physical Education with Naturalism, Idealism, Realism, Pragmatism, Extencialism

#### **iii. PHYSICAL EDUCATION AS DISCIPLINE**

- a. Physical Education, an academic discipline
- b. Physical Education and Islam
- c. Physical Education as a profession

#### **iv. SCIENTIFIC FOUNDATION OF PHYSICAL EDUCATION**

- a. Biological interpretation of Physical Education
- b. Psychological interpretation of Physical Education
- c. Sociological interpretation of Physical Education

#### **v. PHYSICAL EDUCATION AND RECREATION**

- a. Definition of Recreation
- b. Types of Recreation
- c. Principles of Liesure
- d. Outdoor pursuits

#### **vi. LEADERSHIP IN PHYSICAL EDUCATION**

- a. Definition and kinds of leadership
- b. Selection criteria of leader
- c. Qualities of a good leader
- d. Challenges in Physical Education profession

### **BOOKS RECOMMENDED**

1. Dr. A. Waheed Mughal, Health & Physical Education.

2. Shamshad Ahmed. *Education in Physical Education*. New Delhi: Isha Books, 2005.
3. Syal, Meenu. *Physical Education Sports and Games*. New Delhi: Sports Publication, 2005.
4. Davis, M.B. *Physical Training in School*. New Delhi: Sport Publication, 2004.
5. Shekar, C.K. *Foundation of Physical Education and Sports*. New Delhi: Khel Sahitya Kendra, 2004.
6. Jain, Anoop. *Physical Education Foundation*. New Delhi: Sports Publication, 2003.
7. Jain, D. *Physical Education for Secondary School Children*. New Delhi: Khel Sahitya Kendra, 2003.

## **Introduction to Sociology**

Credit Hours: 03

Course Objectives:

The course is designed to introduce the students with sociological concepts and the discipline. The focus of the course shall be on significant concepts like social systems and structures, socio-economic changes and social processes. The course will provide due foundation for further studies in the field of sociology.

Course Outline:

Introduction

Definition, Scope, and Subject Matter

Sociology as a Science

Historical background of Sociology

Basic Concepts

Group, Community, Society

Associations

Non-Voluntary

Voluntary

Organization

Informal

Formal

Social Interaction

Levels of Social Interaction

Process of Social Interaction

Cooperation

Competition

Conflict

Accommodation

Acculturation and diffusion

Assimilation

Amalgamation

Social Groups

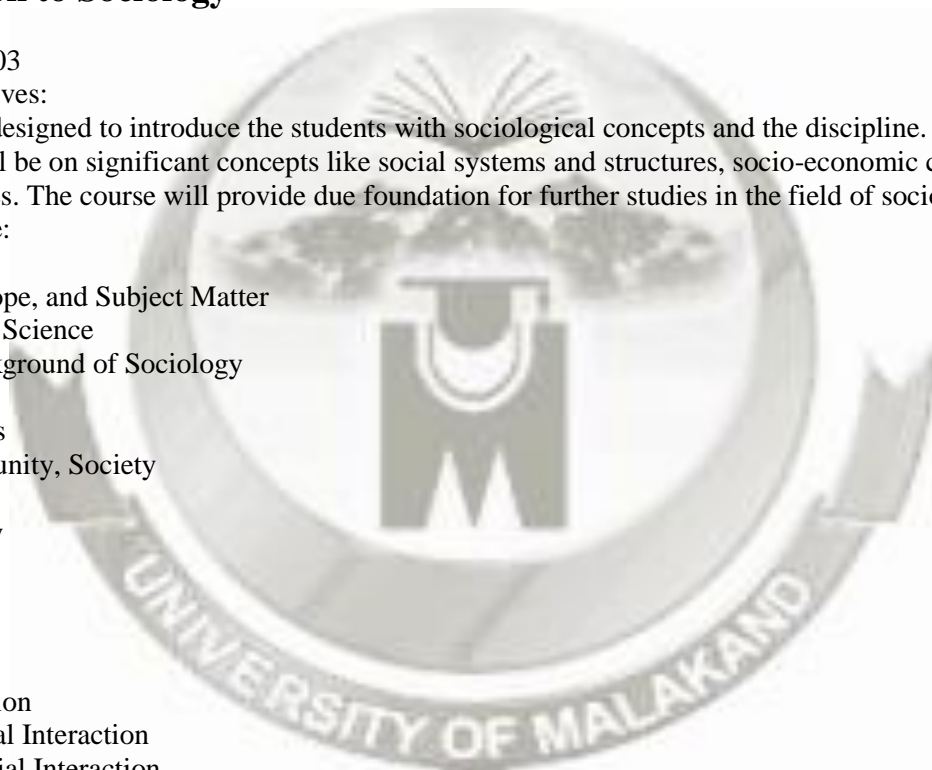
Definition & Functions

Types of social groups

In and out groups

Primary and Secondary group

Reference groups



Informal and Formal groups  
Pressure groups

Culture  
Definition, aspects and characteristics of Culture  
Material and non-material culture  
Ideal and real culture  
Elements of culture  
Beliefs  
Values  
Norms and social sanctions  
Organizations of culture  
Traits  
Complexes  
Patterns  
Ethos  
Theme  
Other related concepts  
Cultural Relativism  
Subcultures  
Ethnocentrism and Xenocentrism  
Cultural lag

Socialization & Personality  
Personality, Factors in Personality Formation  
Socialization, Agencies of Socialization  
Role & Status

Deviance and Social Control  
Deviance and its types  
Social control and its need  
Forms of Social control  
Methods & Agencies of Social control

Collective Behavior  
Collective behavior, its types  
Crowd behavior  
Public opinion  
Propaganda  
Social movements  
Leadership

**Suggested Readings:**

- Brown, K. (2004). *Sociology*. UK: Polity Press  
Frank, N. M. (2003). *International Encyclopedia of Sociology*. U.S.A: Fitzroy Dearborn Publishers  
Giddens, A. (2002). *Introduction to Sociology*. UK: Polity Press.  
Henslin, J. M. (2004). *Sociology: A Down to Earth Approach*. Toronto: Allen and Bacon.  
Kerbo, H. R. (1989). *Sociology: Social Structure and Social Conflict*. New York: Macmillan Publishing Company.  
Koenig, S. (1957). *Sociology: An Introduction to the Science of Society*. New York: Barnes and Nobel.

- Leslie, G. et al. (1973). *Order and Change: Introductory Sociology* Toronto: Oxford University Press.  
Macionis, J. J. (2005). *Sociology* (10<sup>th</sup> ed.) South Asia: Pearson Education  
Macionis, J. J. (2006). *Sociology*. (10<sup>th</sup> ed.) New Jersey: Prentice-Hall  
Tischler, H. L. (2002). *Introduction to Sociology* (7<sup>th</sup> ed.) New York: The Harcourt Press.

## Fundamentals of Political Science

### Course Introduction:

Fundamental of Political Science provides an introduction to the scientific study of politics. It offers the basic tools necessary for beginners to become both critical consumers and beginning producers of scientific research on politics. It further deals with the basic concepts and terminologies used in Political science which are necessary for the students in advanced learning in the subject of Political Science.

### Learning Objectives:

The course is designed in order to introduce students with the fundamentals of the subject and prepare them for advance studies in coming semesters. The objective of the course is to make the students familiar with the basic concepts and terminologies used in Political Science.

### Contents

#### Unit 1

##### Definitions, Scope, Nature and Significance of Political Science

#### Unit 2

##### Evolution of the Discipline of Political Science

#### Unit 3

##### Approaches to the Study of Political Science,

- Traditional
- Modern
- Post-modern

#### Unit 4

##### Relations of Political Science with other Social Sciences

- (An interdisciplinary approach)
- History, Economics, Geography, Law, Logic, Sociology, Anthropology and Psychology

#### Unit 5

##### Basic concepts of Political Science

- Power, Authority and Legitimacy
- Nation and Sovereignty
- Law, Liberty, Rights and Duties
- Public opinion and Propaganda.

#### Unit 6

##### Emerging Political Concepts and Terminologies in Political Science:

- Globalization, governance, terrorism

- Power sharing

**Recommended Books**

1. Sarwar, M. (1996). *Introduction to Political Science*. Lahore: Ilmi Kutub Khana.
2. Haq, M. U. (1996). *Theory and Practice in Political Science*, Lahore: Book land.

## **Introduction to journalism and mass communication**

### **CH 3**

#### **Course Objectives:**

This course is aimed at introducing the students with basic concept of Communication and mass Communication. This course further enables the students to understand the Communication process and Distinguish among various mass media

#### **Course Contents**

Definitions, types and significance. Process of Communication: source; message; channel; noise; Destination; encoding; decoding; and

##### ➤ **Communication**

Feedback. Barriers in communication .Essentials of effective communication. Dimensions of mass communication: mass media, advertising, public relations, blogging, new media etc. and Functions of mass communication. (Information, Education, Opinion Formation, Entertainment and Development.)

##### ➤ **Media of Mass Communication**

Print Media: newspapers, magazines, periodicals, books, pamphlets, etc. Broadcast media: Radio, TV, film. New Media: (Internet)–On-line journalism. Traditional/Folk-Media. Comparative study of mass media, their components, functions and effects.

#### **Recommended Books:**

1. Dominick, J.R.(2006).Dynamics of Mass Communication(8<sup>th</sup> Ed.)New York. McGraw-Hill
2. Merrill, J.C., Lee, J., Friedlander, E.J., (1994). Modern Mass (2<sup>nd</sup> Ed). New York. Harper Collins College Publishers
3. Straubhaar, Larose. (2002). Media Now: Communication Media Information Age (3<sup>rd</sup> Ed.)

## **Tourism concepts & Principles**

**Cr. Hrs-3+01**

### **Unit-1**

#### **Introduction**

Introduction, Types and Forms, Components of Tourism, Economic Importance, Benefits and costs of Tourism, Basis of Tourism

### **Unit-2**

#### **Classification of tourists**

Inbound outbound, national, internal, domestic tourists, Purpose of travel, types of tourists, importance of tourist classifications, factors that motivates tourists to travel.

### **Unit-3**

**Tourist behavior models, Plogs model, cohen, smith, global travel survey model, lieper,s model, push and pull factors, whole tourism system.**

### **Unit-4**



### **Impacts of Tourism**

positive and negative impacts, Economic, environmental, social, cultural impacts.

### **Unit-5**

#### **Tourism Marketing**

What is marketing, market segments (target market), marketing mix, Market research

### **Unit-6**

#### **Tourism Policy and Planning**

International policy, Pakistan policy and planning, role of Government and other organizations, Case study of an International Touristic destination , the 5 As of tourist destination,

### **Unit-7**

#### **Practical case studies**

International Tourist destination, Domestic Tourist Destination, visit to different local Tourist sites.

- Visits to tourist destinations

### **Recommended books:**

[Charles R. Goeldner](#) and J. R. Brent Ritchie (2011) [Tourism: Principles, Practices, Philosophies](#) 12<sup>th</sup> edition, John Wiley & Sons.

- Walker, John. (2002) *Introduction to Hospitality* 3<sup>rd</sup> edition. Upper Saddle River, NJ : Prentice Hall.
- Beaver , Allan (2006) .*A Dictionary of Travel and Tourism Terminology* . Oxfordshire, UK: CABI Publishing.
- Boniface, Brian G. and Chris Cooper (2001). *Worldwide Destinations: The Geography of Travel and Tourism*, 3rd edition. Oxford, UK: Butterworth – Heinemann.

Cooper , C. , J. Fletcher , D. Gilbert , and R. Shepherd , (1998), *Tourism: Principles and Practice* . Essex, UK:

## **Principles of Management**

Credit Hours	:	03
Total Weeks	:	16
Total Hours	:	48

### **Course Objectives:**

This course is designed to give an overview of the theory and practice of management. The concept of management is presented as a discipline as well as a process. The course will cover the evolution of management, its history, and the development of important concepts. It will cover the basic functions of management: planning, organizing, leading, and controlling.

The objectives of this course are

- 1- To expose students to the theories of management, organizational theory, and the practice of management in contemporary organizations from a conceptual, analytical, and pragmatic perspective.
- 2- The course will also allow students to develop their own framework for analyzing and understanding management as well as exploring and developing their own personal philosophy of management.
- 3- The students would be able to communicate effectively, develop people, solve problems and making decisions, organize themselves and also would be able to work in team.

### **Week 1: Management, managerial roles and competencies:**

- a. Definition of management
- b. Four Functions of Management
- a. Minzbergs' Managerial Roles
- b. Managerial Skills

**Week 2 & 3: Foundation/Evolution of Management Thinking:**

- a. Classical Approach
  - i. Scientific Management (Frederick Taylor, Lenien&Gilberth and Henery Gantt contribution)
  - ii. Administrative Approach (Henery Fayol contribution and principles, Max Weber theory of Bureaucracy)
- b. Behavioral Approach (Hawthorne Studies and Human Relations Movement)
- c. Quantitative Approach ( Management Science thought and Total Quality Management thought)
- d. Contemporary Approach (System Theory, Contingency theory and Learning organization theory)

**Week 4: Planning & Strategic Management:**

- a. An overview of planning fundamentals
- b. Level/types of planning
- c. Organizational Goals (Definition, purposes, kinds and characteristics)
- d. Planning process
- e. Strategic Management Process

**Week 5: Decision Making and the Escalation of Commitment:**

- a. Decision making and its characteristics
- b. Stages of decision making
- c. Factors affecting rational decision making
- d. What is escalation of commitment
- e. Why does escalation of commitment occurs
- f. How to avoid escalation of commitment

**Week 6: Organization and Structure:**

- a. Meaning of Organization and organization structure
- b. Forms of organizational structure
  - i. Centralization and decentralization
  - ii. Formalization
  - iii. Hierarchal Structure (Tall and Flat structure)
  - iv. Departmentalization (Functional, product and geographical)
  - v. Mechanistic vs organic structure
  - vi. Contemporary organization structures (Matrix structure, boundary less organization and learning organization)

**Week 7 & 8: Leadership & Leader's styles:**

- a. Leadership defined
- b. Meaning of effective leadership
- c. Leader versus manager
- d. Theories/approached of effective leadership:
  - i. Trait theory
  - ii. Behavioral theories (University of Low studies, The Ohio State University studies, University of Michigan studies, Managerial Grid)
  - iii. Contingency theories (Fiedler's contingency Model, Path-Goal theory)

- iv. Power Influence
- v. Transformational Leadership

**Week 9: Mid-Semester Examination**

**Week 10: Controlling:**

- a. What is organizational control
- b. Importance of control system
- c. Controlling process/control system
- d. Methods of control

**Week 11: Human Resource Management:**

- a. Human resource management defined
- b. The importance of HRM
- c. The Human resource management process

**Week 12: Communicating:**

- a. Meaning of Communication
- b. Communication process
- c. Types of organizational communication (verbal, non-verbal, formal, informal, upward, downward and horizontal )
- d. Barriers to effective communication

**Week 13: Personality and Human Behavior:**

- a. Definition of personality
- b. Theories of personality:
  - i. Trait Theory of Personality
  - ii. Myer Briggs Type Indicator (MBTI)
  - iii. Big-Five Personality Model
  - iv. Type A and Type B personality

**Week 14 & 15: Motivation: Theories and Styles:**

- a. Meaning of Motivation
- b. Goal Setting theory
- c. Reinforcement theory
- d. Need theories (Maslow's Hierarchy of need theory, Alferd's ERG theory, Mcllelland need theory)
- e. Theory X and Theory Y
- f. Equity Theory
- g. Herzberg two factor theory
- h. Job Characteristics Model
- i. Vroom's expectancy theory

**Week 16: Assessment (Quiz, assignment and presentation)**

**Recommended Texts:**

Hill, W. L. C., & McShane, S. (2006). *Principles of Management*. PA, USA: McGraw-Hill Professional.

- Carpenter, M. (2009). *Principles of Management*. Flat World Knowledge, Inc.
- Certo, C. S., & Certo, T. S. (2015). *Modern Management: Concepts and Skills*. NJ, USA: Prentice- Hall.
- Robbins, P. S., De Cenzo, A. D., & Coulter, M. (2014). *Fundamentals of Management: Essential Concepts and Applications*. NJ, USA: Prentice- Hall.
- Hannagan, T. (2009). *Management: Concepts & Practices*. NJ, USA: Prentice- Hall.
- Mejia, Balkin, & Cardy. (2006). *Management*, (3<sup>rd</sup> Edition). McGraw-Hill.
- Morden, T. (2004). *Principles of Management*, (2<sup>nd</sup> Edition). Ashgate.
- Bateman, S. (2002). *Management Competing in New Era*, (5<sup>th</sup> Edition). McGraw-Hill.



## **Natural Sciences**

### **Introduction to Biology**

1. Introduction to biology, Characteristics of living things, scientific method.

2. Viruses (RNA and DNA types) with special reference to TMV
3. Bacteria and Cyanobacteria (Nostoc, Anabaena, Oscillatoria) occurrence, shape, structure and importance
4. Cell: Ultrastructure of plant cell with a brief description and functions of its organelles
5. Cell division: Cell cycle, Mitosis, Cytokinesis and Meiosis
6. Chromosomes: ultrastructure and morphology of chromosomes, karyotype analysis
7. Macromolecules: Carbohydrates, Lipids, Proteins and Nucleic Acids (DNA and RNA structure, and differences among them).
8. An introduction to ecology and an understanding of how different life forms, including humans, interact with each other and with the physical, chemical and biological world around them.
9. Evolution

### Books Recommended

- Campbell, N.A. 2002. *Biology* Sixth Edition. Menlo Park, California:
- Maclean, D. G. (1969). *Introduction to biology*.
- Mauseth, J. D. (2014). *Botany: an introduction to plant biology*. Jones & Bartlett Publishers.
- Eger, E. (2003). *Concepts in Biology'2007 Ed*. Rex Bookstore, Inc..

### Fundamentals of Physics

Cr.Hrs: 3

#### Course Objectives:

Successful completion of this course will enable students to understand and appreciate the role of **physics** in the life sciences and in the advanced technological world. Students will be able to use mathematical and scientific methods of inquiry and strategies to investigate and understand how everything works.

#### Contents:

The building blocks of Matter, Dimensional analysis, Coordinate systems, Displacement, Velocity, Acceleration, Free falling objects, Vectors and their properties, components of vectors, Motion in two dimension, Forces, Newton's laws, Applications of Newton laws, Momentum and Impulse, Conservation of Momentum, Angular speed and angular acceleration, Centripetal acceleration, Newton gravitation, Torque, The center of gravity, States of Matter, The deformation of solids, Density and pressure, Variation of pressure with depth, Pressure measurement, Buoyant Forces and Archimedes's principle, fluid in motion, hook's law, Motion of a pendulum, Waves,

Properties of electric charges, Insulators and conductors, Coulomb's law, The electric field, the nature of light, Reflection and Refraction, the laws of reflection, Early models of the atom, Atomic Spectra, The Bohr Model, Radioactivity.

**Text Book:** Essentials of college Physics by: Raymond A. Serway and Chris Vuille  
Thomson Brooks/COLE USA, 2007.

---

**CHEMISTRY: OCCUPATIONAL SAFETY & ENVIRONMENTAL HEALTH**

---

**Credit Hours: 3**

---

**Course Objectives:**

The course will make the students able to understand basic concepts occupational safety and environmental health.

**Course Contents:**

**History and Importance of Safety and health in Laboratory**

- Introduction to Occupational safety and environmental health (OSEH)
- Different Types of Hazards and risk in Laboratory
- Moral, Legal and Financial Reasons
- Importance of Safety and Security, Responsibility and Accounting for Safety

**Housekeeping and Good Laboratory Practice (GLP): Use of Appropriate Personal Protection Equipments (PPEs)**

- Potential Health Hazards
- Choosing Environmentally-safer chemicals/tolls
- Personal Protection Equipments; Aprons, Gloves Face, Eye and Foot Protection, Respiratory Protection
- Contaminated Work Environment
- Preventing Ergonomic Injuries
- Worker Training and Employer Responsibilities

**Hazard Identification, Management and Control**

- Introduction to Hazard Recognition and Evaluation
- Unrecognized hazards and their Consequences; Slips, Trips & Falls Hazards

- Understanding the safety Data Sheet (SDS) and Pictogram Communications
- Hazard Warning Signs, Labeling & Tagging System
- Hazard Communication Standard (HCS) and Globally Harmonized System (GHS)
- Ways of Protection and Control to Reduce Hazards Toxic Effects
- Examples of Hazards at the Work Place
- Hazards Reporting Procedures

### **Waste Management and Disposal**

- Waste Management System for Laboratories
- Identification, Classification and Segregation of Laboratory Waste
- Storage of Laboratory Waste
- Recovery, Recycling and Reuse of Laboratory Chemicals/tools
- Disposal of wastes in the Sanitary Sewer System
- Procedures for Laboratory Destruction of Chemical Waste
- Transportation of Hazardous materials
- Incineration of Hazardous materials
- Disposal of Hazardous materials
- Disposal of Hazardous materials in Landfill
- Disposal of Chemically Contaminated Waste from Life-Science Laboratories

### **Managing Chemicals**

- Introduction
- Green Chemistry for Every Laboratory
- Purchasing Chemicals
- Inventory and Tracking of Chemicals
- Storage of Chemicals
- Transfer, Transport and Shipment of Chemicals

### **Recommended Books:**

1. Fanning, Fred E. (2003). Basic Safety Administration: A Handbook for the New Safety Specialist, Chicago: American Society of Safety Engineers

2. Stephen K. Hall “Chemical Safety in the Laboratory” CRC Press
3. Anthony Fuscaldo, “Laboratory Safety Theory and Practice” Elsevier Science
4. Jay A. Young, “Improving Safety in the Chemical Laboratory: A Practical Guide”, Wiley, 1991
5. Brinton Marshall Miller, “Laboratory safety: principles and practices”, American Society for Microbiology, 1986
6. Stephen R. Rayburn The Foundations of Laboratory Safety: A Guide for the Biomedical Laboratory, Springer 1991.

## INTRODUCTION TO ENVIRONMENTAL SCIENCE

**Course Objectives:** The general objectives of this course are to expose students to:

- How science and the scientific method address environment systems and issues.
- The Earth’s major natural systems, how these systems function, and how they are affected by human activity.
- The sustainability, and unsustainability, of various interactions between human society and the Earth’s natural systems (ie. energy use and generation, resource consumption and economics, food production).

**Course Learning Outcomes:** Upon successful completion of course classroom, assignment

and exam requirements, students will:

Course and Program Level Skills

- Define the principles of science, stewardship and sustainability, and recognize their role in evaluating and establishing a viable human society within Earth’s systems.
- Apply the scientific method, and recognize that with its use science provides a reliable, rigorous and unbiased way to gain knowledge of the natural world.
- Recognize, describe, and quantitatively describe Earth systems, including the land, water, sea, and atmosphere, and how these function collectively to support life on Earth.
- Describe ecosystems in terms of how they vary, are structured, and function both internally and as part of the larger biosphere.
- Describe human population characteristics and growth, and recognize the impacts of human society on Earth’s systems and resources
- Recognize the purpose and assess the effectiveness and feasibility of governmental environmental policy in defining and regulating the role and impacts of human society on Earth.



**Recommended Readings:**

1. Essential Environment: The Science Behind the Stories, ISBN: 9780134714882
2. Environmental Science for a Changing World, 1st Edition (2013) or 2nd Edition (2014) or 3rd

edition (2018), by Houtman, Karr, and Interlandi, published by W.H. Freeman.

**Fundamentals of Geography**

Credit Hours: 2+1 (3)

Learning objectives: To make the student understand about the subject of Geography

Course outline

- Introduction and Definitions of Geography
  - o Scope of the subject
  - o Roots of the discipline and basic geographic concepts
  - o The evolution of geography from ancient to modern period
  - o Branches of Geography and its relations with other disciplines.
- Five Major Themes of Geography
  - o Location: Absolute and relative
  - o Place: Physical and anthropogenic characteristics
  - o Interaction of different processes
  - o Movement
  - o Region
- Earth as a planet its celestial positions, shape and size.
  - o Rotation and revolution and related phenomena
  - o Earth's Satellite Moon
  - o Lunar and Solar Eclipses
- Positions on Map and Globe,
  - o Geographical coordinates and its characteristics,
  - o World time zones standard and local time
- A glance at the Globe: distribution of land and water
- Introduction of Lithosphere, Hydrosphere, Atmosphere and Biosphere

Lab. Work: Study of maps, atlases and different types of models to understand various Geographical Phenomena.

Field Visit: to show the characteristics of places and man-environment interaction.

**Books Recommended**

Christopherson, R.W. (2000), Geo-systems, Prentice-Hall, Inc, USA.

- De Blij, H. J and Muller, P.O. (1996), Physical Geography of the Global Environment, USA, John Wiley and Sons Inc.
- Fraser, C. (1993) Unlocking the five themes of Geography. Globe Book Company, New Jersey.
- Gabler, R.E, Sager, R.J and Wise, D.L. (1997), Essentials of Physical Geography, Saunders College Publishing, New York
- Mcliveen, J.F.R. (1992), Fundamentals of Weather and Climate, Prentice Hall New Jersey
- Strahlar, A.N., Strahlar, A.H. (2004), Physical Environment, John Wiley. New York
- Stringer, E.T. (2004), Modern Physical Geography, New York: John Wiley.
- Taylor, J. (1993), Integral Physical Geography, London Longman
- Thompson, R.D. et al. (1986), Process in Physical Geography, London, Longman.
- Thurman, H.V. & Mexrill (1996), Essentials of Oceanography, Menson, London

## **Fundamentals of Geology**

### **OBJECTIVES**

This course is designed to acquire the knowledge about the basic concepts of Geology. This will help the students to get knowledge about various types of rocks and minerals and the processes of their formation.

### **COURSE CONTENTS**

#### **1. INTRODUCTION TO GEOLOGY**

##### **A. SCOPE OF GEOLOGY**

##### **B. ORIGIN OF EARTH**

##### **C. AGE OF EARTH**

- (i) Methods of age determination
- (ii) Geological time scale

##### **D. INTERIOR OF EARTH**

- (i) Internal structure of earth
- (ii) Physical properties of earth interior
- (iii) The Crust
- (iv) The Mantle
- (v) The Core
- (vi) Gravity and Isostasy

#### **2. INTRODUCTION TO MINERALS**

- A. Definition
- B. Physical properties
- C. Example of minerals

#### **3. INTRODUCTION TO ROCKS**

##### **A. IGNEOUS ROCKS**

- (i) Crystallization of Magma
- (ii) Igneous textures
- (iii) Classification of igneous rocks
- (iv) Description of common igneous rocks
- (v) Volcanic activity

**B. SEDIMENTARY ROCKS**

- (i) Classification of sedimentary rocks
- (ii) Changing sediments into sedimentary rocks
- (iii) Sedimentary structures
- (iv) Sedimentary environments
- (v) Description of common sedimentary rocks

**C. METAMORPHIC ROCKS**

- (i) Metamorphism
- (ii) Agents of metamorphism
- (iii) Types of metamorphism
- (iv) Structures of metamorphic rocks
- (v) Texture and mineralogical changes in metamorphic rocks
- (vi) Description of common metamorphic rocks

**D. GEOLOGICAL STRUCTURES**

- (i) Dip and strike
- (ii) Folds
- (iii) Faults
- (iv) Unconformity
- (v) Joints
- (vi) Mountain building

**E. WEATHERING AND SOIL**

- (i) Weathering
- (ii) Types of weathering
- (iii) Soil
- (iv) Types of soil
- (v) Soil profile

**F. MASS WASTING AND GRAVITY PROCESSES**

- (i) Mass wasting
- (ii) Classification of mass wasting processes
- (iii) Permafrost and solifluction

**LAB WORK**

- A. Study of relief features with the help of models and topographic maps.
- B. Identification of common rocks
- C. Identification of common minerals.
- D. Use of brunton/silva compass
- E. Use of GPS.

**BOOKS RECOMMENDED**

Physical Geology by Plummer, McGeay & Carlson, 2005.

Principles of Physical Geology by Holmes, A., 1978, Nelson.

Lab Manual for Physical Geology by Jones, Norris. W., Johnes, Charles E., 2005, McGraw-Hill.

How Does Earth Work: Physical Geology and Process of Science by Smith, G. and Pun, A., 2006, Prentice Hall.

The Mapping of Geological Structures by McClay, K.R., 1987, Open University Press.

Foster, R. J., General Geology. Merill, Columbus.

Tarbuck, E. J. and Lutgens, F. K., 1987. The Earth. Merill, Columbus.



**Disciplinary/Subject-Specific Courses**

**MATHEMATICS**

**MATH-121 Calculus-I**

**Specific Objectives of course:** Calculus serves as the foundation of advanced subjects in all areas of mathematics. This is the first course of Calculus. The objective of this course is to introduce students to the fundamental concepts of limit, continuity, differential and integral calculus of functions of one variable.

**Course Outline:**

**Equations and inequalities:** Solving linear and quadratic equations, linear inequalities. Division of polynomials, synthetic division. Roots of a polynomial, rational roots; Viète Relations. Descartes rule of signs. Solutions of equations with absolute value sign. Solution of linear and non-linear inequalities with absolute value sign.

**Functions and graphs:** Domain and range of a function. Examples: polynomial, rational, piecewise defined functions, absolute value. Functions, and evaluation of such functions. Operations with functions: sum, product, quotient and composition. Graphs of functions: linear, quadratic, piecewise defined functions.

**Lines and systems of equations:** Equation of a straight line, slope and intercept of a line, parallel and perpendicular lines. Systems of linear equations, solution of system of linear equations. ×Nonlinear systems: at least one quadratic equation.

**Limits and continuity:** Functions, limit of a function. Graphical approach. Properties of limits. Theorems of limits. Limits of polynomials, rational and transcendental functions. Limits at infinity, infinite limits, one-sided limits. Continuity.

**Derivatives:** Definition, techniques of differentiation. Derivatives of polynomials and rational, exponential, logarithmic and trigonometric functions. The chain rule. Implicit differentiation. Rates of change in natural and social sciences. Related rates. Linear approximations and differentials. Higher derivatives, Leibnitz's theorem.

**Applications of derivatives:** Increasing and decreasing functions. Relative extrema and optimization. First derivative test for relative extrema. Convexity and point of inflection. The second derivative test for extrema. Curve sketching. Mean value theorems. Indeterminate forms and L'Hopitals rule. Inverse functions and their derivatives.

**Integration:** Anti derivatives and integrals. Riemann sums and the definite integral. Properties of Integral. The fundamental theorem of calculus. The substitution rule.

**Recommended Books:**

1. Thomas, Calculus, 11th Edition. Addison Wesley Publishing Company, 2005

2. H. Anton, I. Bevens, S. Davis, Calculus, 8th Edition, John Wiley & Sons, Inc. 2005
3. Hughes-Hallett, Gleason, McCallum, et al, Calculus Single and Multivariable, 3rd Edition. John Wiley & Sons, Inc. 2002.
4. Frank A. Jr, Elliott Mendelson, Calculus, Schaum's outlines series, 4th Edition, 1999
5. C.H. Edward and E.D Penney, Calculus and Analytics Geometry, Prentice Hall, Inc. 1988
6. E. W. Swokowski, Calculus with Analytic Geometry, PWS Publishers, Boston, Massachusetts, 1983.
7. M. Liebeck, A Concise introduction to pure Mathematics, CRC Press, 2011.
8. A. Kaseberg, Intermediate Algebra, Thomson Brooks/cole, 2004.
9. Z.Haq, Calculus and analytic geometry, Carwan Book House, Lahore

### **MATH -104 Elements of Set Theory and Mathematical Logic**

**Credit Hours:** 3+0

**Specific Objectives of course:** Everything mathematicians do can be reduced to statements about sets, equality and membership which are basics of set theory. This course introduces these basic concepts. The course aims at familiarizing the students with cardinals, relations and fundamentals of propositional and predicate logics.

**Course Outline:** Set theory: Sets, subsets, operations with sets: union, intersection, difference, symmetric difference, Cartesian product and disjoint union.

**Functions:** Graph of a function. Composition; injections, surjections, bijections, inverse function.

**Computing cardinals:** Cardinality of Cartesian product, union. Cardinality of all functions from a set to another set. Cardinality of all injective, surjective and bijective functions from a set to another set. Infinite sets, finite sets. Countable sets, properties, examples ( $Z$ ,  $Q$ ).  $R$  is not countable.  $R$ ,  $R \times R$ ,  $R \times R \times R$  have the same cardinal. Operations with cardinal numbers. Cantor-Bernstein theorem.

**Relations:** Equivalence relations, partitions, quotient set; examples, parallelism, similarity of triangles. Order relations, min, max, inf, sup; linear order. Examples:  $N$ ,  $Z$ ,  $R$ ,  $P(A)$ . Well ordered sets and induction. Inductively ordered sets and Zorn's lemma.

**Mathematical logic:** Propositional Calculus. Truth tables. Predicate Calculus.

**Recommended Books:**

1. M. Liebeck, A Concise Introduction to Pure Mathematics, CRC Press, 2011.
2. N. L. Biggs, Discrete Mathematics, Oxford University Press, 2002.
3. R. Garnier, J. Taylor, Discrete Mathematics, Chapters 1,3,4,5, CRC Press, 2010.
4. A.A. Fraenkal, Abstract Set Theory, North-Holland Publishing Company, 1966.
5. P. Suppes, Axiomatic Set Theory, Dover Publication, 1972.
6. P.R. Halmos, Naive Set Theory, New York, Van Nostrand, 1950.
7. B. Rotman, G.T. Kneebone, The Theory of sets and Transfinite Numbers, Oldbourne London, 1968.
8. D. Smith, M. Eggen, R.St. Andre, A Transition to Advanced Mathematics, Brooks/Cole, 2001.

**MATH-105 Discrete Mathematics**

**Credit Hours:** 3+0

**Specific Objectives of the Course:**

This course shall assume background in number theory. It lays a strong emphasis on understanding and utilizing various strategies for composing mathematical proof.

**Course outline:**

**Counting methods:** Basic methods: product, inclusion-exclusion formulae. Permutations and combinations. Recurrence relations and their solutions. Generating functions. Double counting. Applications. Pigeonhole principle, applications.

**Relations:** Binary relations, n-ary Relations. Closures of relations. Composition of relations, inverse relation.

**Graphs:** Graph terminology. Representation of graphs. Graphs isomorphism.

**Algebraic methods:** the incidence matrix. Connectivity, Eulerian and Hamiltonian paths. Shortest path problem. Trees and spanning trees. Complete graphs and bivalent graphs.

**Recommended Books:**

1. B. Bollobas, Graph Theory, Springer Verlag, New York, 1979.
2. K.R. Parthasarathy, Basic Graph Theory, McGraw-Hill, 1994

3. K.H. Rosen, Discrete Mathematics and its Application, McGraw-Hill, 6th edition, 2007.
4. B. Kolman, R.C. Busby, S.C. Ross, Discrete Mathematical Structures, Prentice-Hall of India, New Delhi, 5th edition, 2008.
5. A. Tucker, Applied Combinatorics, John Wiley and Sons, Inc New York, 2002.
6. R. Diestel, Graph Theory, 4th edition, Springer- Verlag, New York, 2010.
7. N.L. Briggs, Discrete Mathematics, Oxford University Press, 2003
8. K.A. Ross, C.R.B. Wright, Discrete Mathematics, Prentice Hall, New Jersey, 2003.
9. K.D.Rosen, 4<sup>th</sup> Edition, Distrete Mathematics and its applications.

### **MATH-122 Calculus-II**

**Credit Hours:** 3+0

**Specific Objectives of course:** This is second course of Calculus. As continuation of Calculus I, it focuses on techniques of integration and applications of integrals. The course also aims at introducing the students to infinite series, parametric curves and polar coordinates.

#### **Course Outline:**

**Techniques of integration:** Integrals of elementary, hyperbolic, trigonometric, logarithmic and exponential functions. Integration by parts, substitution and partial fractions. Approximate integration. Improper integrals. Gamma functions.

**Applications of integrals:** Area between curves, average value. Volumes. Arc length. Area of a surface of revolution. Applications to Economics, Physics, Engineering and Biology.

**Infinite series:** Sequences and series. Convergence and absolute convergence.

**Tests for convergence:** divergence test, integral test, p- series test, comparison test, limit comparison test, alternating series test, ratio test, root test. Power series. Convergence of power series. Representation of functions as power series. Differentiation and integration of power series. Taylor and McLaurin series. Approximations by Taylor polynomials.

**Conic section, parameterized curves and polar coordinates:** Curves defined by parametric



equations.

**Calculus with parametric curves:** tangents, areas, arc length. Polar coordinates. Polar curves, tangents to polar curves. Areas and arc length in polar coordinates.

**Recommended Books:**

1. G.B. Thomas, Calculus, 11th Edition. Addison Wesley Publishing Company, 2005
2. H. Anton, I. Bevens, S. Davis, Calculus, 8th Edition, John Wiley & Sons, Inc. 2005
3. Hughes-Hallett, Gleason, McCallum, et al, Calculus Single and Multivariable, 3rd Edition. John Wiley & Sons, Inc. 2002.
4. Frank A. Jr, Elliott Mendelson, Calculus, Schaum's outlines series, 4th Edition, 1999
5. C.H. Edward and E.D Penney, Calculus and Analytic Geometry, Prentice Hall, Inc. 1988
6. E. W. Swokowski, Calculus with Analytic Geometry, PWS Publishers, Boston, Massachusetts, 1983.
7. M. Liebeck, A Concise introduction to pure Mathematics, CRC Press, 2011.
8. A. Kaseberg, Intermediate Algebra, Thomson Brooks/COLE, 2004. J. Stewart, *Calculus* (5<sup>th</sup> edition or latest edition), Brooks/ Cole, 2002.
9. J. Stewart, Calculus early transcendentals, 7th Edition, Brooks/COLE, 2008.
10. Z.Haq, Calculus and analytic geometry, Carwan Book House, Lahore

**MATH-223 Algebra-I (Group Theory)**

**Credit Hours:** 3

**Specific Objectives of course:** This course introduces basic concepts of groups and their homomorphisms. The main objective of this course is to prepare students for courses which require a good back ground in group theory like Rings and Modules, Linear Algebra, Group Representation, Galois Theory etc.

**Course Outline:**

**Groups:** Definition of a group, subgroup, subgroup generated by a set. The cyclic groups, cosets and Lagrange's theorem. Normalizer centralizer. The center of a group. Equivalence relation in a group, conjugacy classes. Normal subgroups, quotient group.

**Group homomorphisms:** Homomorphisms and isomorphism and Automorphism. Kernel and image of homomorphism. Isomorphism theorems. Permutation groups. The cyclic decomposition

of a permutation group. Cayley's theorem. Direct product of two groups and examples.

**Recommended Books:**

1. J. Rose, A Course on Group Theory, Cambridge University Press, 1978.
2. I. N. Herstein, Topics in Algebra, Xerox Publishing Company, 1964.
3. P. M. Cohn, Algebra, John Wiley and Sons, London, 1974.
4. P. B. Bhattacharya, S. K. Jain and S. R. Nagpaul, Basic Abstract Algebra, Cambridge University Press, 1986.
5. J. B. Fraleigh, A First Course in Abstract Algebra, Addison- Wesley Publishing Company, 2002.
6. . Vivek Sahai and Vikas Bist, Algebra, Narosa Publishing House, 1999.
7. D. S. Dummit and R. M. Foote, Abstract Algebra, 3rd Edition, Addison-Wesley Publishing Company, 2004.
8. A. Majeed, *Group Theory*, Ilmi kitab Khana, 2005.
9. J. B. Farleigh, *A First Course in Abstract Algebra* (7<sup>th</sup> edition), Addison-Wesley, 2000.
10. K. H. Dar, Abstract Algebra, Ilmi Kitab Khana Lahore, 2000.
11. KH Dar Haq M. A.Jajja, *Mathematical Techniques*, Caravan Book House, Lahore

**MATH-224      Calculus-III**

**Credit Hours:** 4+0

**Specific Objectives of the Course:**

Multivariate calculus is serving as the foundation of advanced subjects in all areas of mathematics. The sequence, equally, emphasizes the basic concepts and skills needed for mathematical manipulation. The main focus will be on the study of functions having two, three or more variables.

**Course Outline:** Vectors and analytic geometry in space: Coordinate system. Rectangular, cylindrical and spherical coordinates. The dot product, the cross product. Equations of lines and planes. Quadric surfaces.

**Vector-valued functions:** Vector-valued functions and space curves. Derivatives and integrals of vector valued functions. Arc length. Curvature, normal and binormal vectors.

**Multivariable functions and partial derivatives:** Functions of several variables. Limits and

Continuity. Partial derivatives, Composition and chain rule. Directional derivatives and the gradient vector. Implicit function theorem for several variables. Maximum and minimum values. Optimization problems. Lagrange Multipliers.

**Multiple integrals:** Double integrals over rectangular domains and iterated integrals. Non-rectangular domains. Double integrals in polar coordinates. Triple integrals in rectangular, cylindrical and spherical coordinates. Applications of double and triple integrals. Change of variables in multiple integrals. Vector calculus: Vector fields. Line integrals. Green's theorem. Curl and divergence. Surface integrals over scalar and vector fields. Divergence theorem. Stokes' theorem.

**Recommended Books:**

1. Thomas, Calculus, 11th Edition. Addison Wesley Publishing Company, 2005
2. . H. Anton, I. Bevens, S. Davis, Calculus, 8th Edition, John Wiley & Sons, Inc. 2005
3. Hughes-Hallett, Gleason, McCallum, et al, Calculus Single and Multivariable, 3 rd Edition. John Wiley & Sons, Inc. 2002.
4. Frank A. Jr, Elliott Mendelson, Calculus, Schaum's outlines series, 4 th Edition, 1999
5. C.H. Edward and E.D Penney, Calculus and Analytics Geometry, Prentice Hall, Inc. 1988
6. E. W. Swokowski, Calculus with Analytic Geometry, PWS Publishers, Boston, Massachusetts, 1983.
7. M. Liebeck, A Concise introduction to pure Mathematics, CRC Press, 2011.
8. A. Kaseberg, Intermediate Algebra, Thomson Brooks/COLE, 2004.
9. J. Stewart, Calculus early transcendentals, 7th Edition, Brooks/COLE, 2008.
10. Z.Haq, Calculus and analytic geometry, Carwan Book House, Lahore

**MATH-241 Number Theory**

**Credit Hours:** 3+0

**Specific Objectives of course:** The focus of the course is on study of the fundamental properties of integers and develops ability to prove basic theorems. The specific objectives include study of division

algorithm, prime numbers and their distributions, Diophantine equations, and the theory of congruences.

**Course Outline:**

**Preliminaries:** Well-ordering principle. Principle of finite induction.

**Divisibility theory:** The division algorithms. Basis representation theorem. Prime and composite numbers. Canonical decomposition. The greatest common divisor. The Euclidean algorithm. The fundamental theorem of arithmetic. Least common multiple.

**Linear Diophantine equations:** Congruences. Linear congruences. System of linear congruences. The Chinese remainder theorem. Divisibility tests. Solving polynomial congruences. Fermat's and Euler's theorems. Wilson's theorem.

**Arithmetic functions:** Euler's phi-function. The functions of  $J$  and  $\sigma$ . The Mobius function. The sieve of Eratosthenes. Perfect numbers. Fermat and Mersenne primes.

**Primitive Roots and Indices:** The order of an integer mod  $n$ , Primitive roots for primes. Composite numbers having primitive roots.

**Quadratic residues:** Legendre symbols and its properties. The quadratic reciprocity law. Quadratic congruences with composite moduli. Pythagorean triples. Representing numbers as sum of two squares.

**Recommended Books:**

1. D.M. Burton, *Elementary Number Theory*, McGraw-Hill, 2007.
2. W.J. Leveque, *Topics in Number Theory*, vols. I and II, Addison- Wesley, 1956.
3. S.B. Malik , *Basic Number Theory*, Vikas Publishing house, 1995.
4. K.H. Rosen, *Elementary Number Theory and its Applications*, 5th edition, Addison- Wesley, 2005.
5. I. Niven, H.S. Zuckerman, H.L. Montgomery, *An Introduction to the theory of Numbers*, John Wiley and Sons, 1991.
6. A. Adler, J.E. Coury, *The Theory of Numbers*, Jones and Bartlett Publishers, 1995.
7. S.M. Hussain, *Elementary Theory of Numbers*, Caravan Book House, Lahore, Pakistan

## COMPUTER SCIENCE

**Course Name: Programming Fundamentals**

**Credit Hours:** 3 (2+1)

**Course Outline:** Overview of Computer Programming, Principles of Structured and Modular Programming, Overview of Structured Programming Languages, Algorithms and Problem Solving,

Program Development: Analyzing Problem, Designing Algorithm/Solution, Testing Designed Solution, Translating Algorithms into Programs, Fundamental Programming Constructs, Data Types; Basics of Input and Output, Selection and Decision (If, If-Else, Nested If-Else, Switch Statement and Condition Operator), Repetition (While and For Loop, Do-While Loops), Break Statement, Continue Statement, Control Structures, Functions, Arrays, Pointers, Records, Files (InputOutput), Testing & Debugging.

**Reference Materials:** 1. C How to Program, Paul Deitel and Harvey Deitel, Prentice Hall, Latest Edition 2. Programming in C, Stephen G. Kochan, Addison-Wesley Professional, Latest Edition 3. C++ How to Program, Paul Deitel and Harvey Deitel, Prentice Hall, Latest Edition

**Course Name:** Data Structures and Algorithms

**Credit Hours:** 3

**Course Outline:** Introduction to Data Structures and Algorithms , Array, Stacks, Queues, and Priority Queue, Linked Lists: Singly Linked Lists, Doubly Linked Lists, Circular List; Recursion: Function call and Recursion Implementation, Trees: Binary Trees, Binary Heap, Binary Search tree. Tree Traversal, Insertion, Deletion, and Balancing a Tree; Graphs: Representation, Graph Traversal Algorithms; Hashing, Algorithm Complexity Analysis; Linear Search, Binary Search , Insertion Sort, Merge Sort, Radix Sort.

**Reference Materials:**

1. Data Structures and Algorithm Analysis, Mark Allen Weiss, Florida International University, Addison-Wesley (latest Edition) 2. Algorithms, Robert Sedgewick, Princeton 3. Schaum Series, Data Structures and Algorithms , Latest Edition

**Course Name:** Digital Logic Design

**Credit Hours:** 3

**Course Outline:** Number Systems, Logic Gates, Boolean Algebra, Simplification Methods: K-Maps, Quinne, McCluskey, Flip Flops and Latches, Combination logic circuits and designs, Asynchronous and Synchronous circuits, Counters, Triggered devices & its types. Binary Arithmetic and Arithmetic Circuits, Memory Elements, State Machines. Introduction Programmable Logic Devices (CPLD, FPGA); Lab Assignments using tools such as Verilog HDL/VHDL, MultiSim, etc.

**Reference Materials: 1.**

Digital Design With An Introduction to the Verilog HDL by M.Morris Mano, Latest Edition.

2. Digital Fundamentals by Floyd, Latest Edition.

3. Fundamental of Digital Logic with Verilog Design, Stephen Brown, Latest Edition.

**Course Name:** Operating Systems

**Credit Hours: 3**

**Course Outline:** Introduction to Operating Systems (OS), Types of OS, Functions of OS, Process management (creation, synchronization, and communication); Multi-Threading, processor scheduling; deadlock prevention, avoidance, and recovery; main-memory management; virtual memory management (swapping, paging, segmentation and page-replacement algorithms); control of disks and other input/output devices; file-system structure and implementation; and protection and security. Lab assignments involving different single and multithreaded OS algorithms.

**Reference Materials:**

1. Operating System Concepts, Silberschatz A., Peterson, J. L., & Galvin P. C., Latest Edition.
2. Modern Operating System, Andrew S. Tanenbaum, Latest Edition.

**Course Name:** Database Systems

Credit Hours: 3(2+1)

**Course Outline:** Basic database concepts, Database Architecture, Schema Architecture, Relational data model, Relational Algebra, Relational Calculus, Integrity Constraints, DB Design Life Cycle, Conceptual, Logical and Physical database design, Entity Relationship diagram (ERD), Enhanced ERD, mapping ERD to relational model, Functional dependencies and Normalization, Transaction processing, Concurrency Control and Recovery techniques, Query Optimization concepts, Database Security.

**Reference Material:**

1. Database Systems A Practical Approach to Design, Implementation, and Management, Thomas Connolly, Carolyn Begg, Addison Wesley, Latest Edition.
2. Modern Database Management by Fred McFadden, Jeffrey Hoofer, Mary Prescott, Prentice Hall; Latest Edition

**Course Name:** Computer Networks

**Credit Hours:** 3

**Course Outline:** Basic concepts of networking, network topologies, Types of Networks, networking devices, OSI/TCP IP Model, Serial and parallel transmission, Multiplexing, multiple access techniques (FDMA,TDMA,CDMA), circuit switching and packet switching, network layer protocols (IPv4 and IPv6), sub netting, CIDR, routing protocols (OSPF,RIP), transport layer protocols (TCP,UDP) application layer protocols(HTTP), latest trends in computer networks, wireless networks.

**Reference Materials:**

1. Computer Networking: A Top-Down Approach Featuring the Internet by James F. Kurose and Keith W.

Ross, Latest Edition

2. Computer Networks by Andrew S. Tanenbaum, Latest Edition

3. Data Communication and Computer Networks, Latest Edition by Behrouz A. Forouzan

**Course Name:** Web Technologies

**Credit Hours:** 3 (2+1)

**Course Outline:** Introduction to Web Applications, TCP/IP Application Services. Web Servers: Basic Operation, Virtual hosting, Chunked transfers, Caching support, Extensibility. SGML, HTML5, CSS3. XML Languages and Applications: Core XML, XHTML, XHTML MP. Web Service: SOAP, REST, WML, XSL. Web Services: Operations, Processing HTTP Requests, Processing HTTP Responses, Cookie Coordination, Privacy and P3P, Complex HTTP Interactions, Dynamic Content Delivery. Server Configuration. Server Security, Web Browsers Architecture and Processes, Active Browser Pages: JavaScript, DHTML, AJAX. JSON.

**Reference Materials:**

1. Web Application Architecture: Principles, protocols and practices by Leon Shklar and Richard Rosen, Wiley, Latest Edition
2. Web Technologies: A Computer Science Perspective by Jeffrey C. Jackson, Prentice Hall, Latest Edition.



## CHEMISTRY

**Course Title: Physical Chemistry-I**

**Course Code: CHEM-III**

**Course Objectives:**

Students will acquire knowledge to enable themselves to understand the fundamental principles and laws of thermodynamics and chemical equilibria and to investigate the physical properties of ideal/non-ideal binary solutions. Students will also be able to study the rates of reactions and perform related calculations.

**Chemical Thermodynamics:** Equation of states, ideal and real gases, the virial equation and the van der Waals equation for real gases, critical phenomena and critical constants, four laws of thermodynamics and their applications, thermochemistry, calorimetry, heat capacities and their dependence on temperature, pressure and volume, reversible and non-reversible processes, spontaneous and non-spontaneous processes, relations of entropy and Gibbs free energy with equilibrium constant, Gibbs Helmholtz equation, fugacity and activity.

**Chemical Equilibrium:** General equilibrium expressions, reaction quotients, examples of equilibrium reactions in solid, liquid and gas phases, extent of reactions and equilibrium constants, Gibbs energies of formation and calculations of equilibrium constants, effect of temperature and pressure on the equilibrium constants/compositions, van't Hoff equation, Le-Chatelier's principle.

**Solution Chemistry:** Physical properties of liquids, surface tension, viscosity, refractive index, dipole moment etc. and their applications, brief account of interactions among the molecules in liquids, ideal and non-ideal solutions, Raoult's law and its applications, lowering of vapor pressure, elevation of boiling point, depression of freezing point, osmotic pressure, vapor pressure of non-ideal solutions and Henry's law, abnormal colligative properties, degrees of association and dissociation of solutes, osmotic pressure and its measurement, fractional distillation and concept of azeotropic mixtures.

**Chemical Kinetics:** The rates of reactions, zero, first, second and third order reactions with same and different initial concentrations, half-lives of reactions, experimental techniques for rate determination and methods for determination of order of reaction (integration, half-life, initial rate, and graphical methods), Arrhenius equation.



**Lab. Work**

Determination of viscosity and refractive index of liquids.

Determination of percent composition of liquid solutions viscometrically.

Determination of refractive index and molar refractivity.

Determination of percent composition of liquid solutions by refractive index measurements.

Determination of molecular weight of a compound by elevation of boiling point (ebullioscopic method).

Determination of molecular weight of a compound by lowering of freezing point (cryoscopic method).

Determination of heat of solution by solubility method.

Determination of heat of neutralization of an acid with a base.

Kinetic study of acid catalyzed hydrolysis of ethyl acetate.

Determination of partition coefficient of a substance between two immiscible liquids.

**Recommended Books:**

1. McQuarrie, D. A. and Simon, J. D., Physical Chemistry – A Molecular Approach, 1st ed., University Science Books (1997).
2. Atkins, P. and Paula, J. D., Atkins's Physical Chemistry, 9th ed., Oxford University Press, (2010).
3. Shoemaker, D., Experiments in Physical Chemistry, 8th ed., McGraw Hill Publishing Company Limited, (2003).
4. Silbey, R., Alberty, R. and Bawendi, M., Physical Chemistry, 4th ed. (2005).
5. Glasstone, S., Textbook of Physical Chemistry, Macmillan London (1960).
6. James, A. M., Prichard, F. E., Practical Physical Chemistry, 3rd ed., Longman Group Limited, New York, (1974).
7. Chaudhary, S. U., Ilmi Textbook of Physical Chemistry, 2nd ed., Ilmi Kitab Khana, Lahore, 2013).

**Course Title: Organic Chemistry-I**

**Course Objectives:**

Students will acquire knowledge about basic concepts of organic chemistry, chemistry of hydrocarbons and functional groups and the mechanism of organic reactions. Such information will be useful for qualitative analysis and synthesis of organic compounds.

**Course Content:**

**Basic Concepts of Organic Chemistry:** Bonding and hybridization, localized and delocalized bonding, structure- aromaticity, inductive effect, dipole moment, resonance and its rules, hyperconjugation, classification and nomenclature of organic compounds including IUPAC system, types of organic reactions (an overview).

**Chemistry of Hydrocarbons:** Saturated, unsaturated and aromatic hydrocarbons with emphasis on synthesis and free radical, electrophilic addition and electrophilic substitution reactions.

**Chemistry of Functional Groups:** Hydroxyl, ether and amino groups, preparation and properties of alcohols, phenols, ethers, and amines with focus on reaction mechanism and applications, carbonyl compounds, preparations and reaction mechanism of aldehydes and ketones and their applications, carboxylic acids and their derivatives, acidity of carboxylic acids and effect of substituents on their acidity, preparation and reactions of carboxylic acids and their derivatives including esters, amides, acid halides and acid anhydrides.

**Lab. Work:**

Qualitative analysis of compounds with different functional groups, synthesis of organic compounds using as a tool for understanding techniques like reflux, distillation, filtration, recrystallization and yield calculation, organic syntheses may include preparation of benzanilide from benzoyl chloride, succinic anhydride from succinic acid, phthalimide from phthalic anhydride, oximes and hydrazones from carbonyl compounds, and an ester from a carboxylic acid and alcohol etc.

**Recommended Books:**

1. Brown, W. and Poon, T., Introduction to Organic Chemistry, 3rd ed., John- Wiley & Sons, Inc., (2005).
2. John, E. M. Organic Chemistry, 8th ed., Brooks/Cole Publishing Co, USA, (2012).
3. Robert, T. M. and Robert, N. B., Organic Chemistry, 6th ed., Prentice Hall, New Jersey, (1992).

4. Younus, M., A Textbook of Organic Chemistry, Ilmi Kitab Khana, Urdu Bazar, Lahore, Pakistan, (2006).
5. Sykes, P., A Guide Book to Mechanism in Organic Chemistry, 6th ed., Pearson Education Limited, England, (1986).

**Course Title: Inorganic Chemistry-I**

**Course Objectives:**

Students will acquire knowledge about the key introductory concepts of chemical bonding, acid-base chemistry, and properties of p-block elements as well as using this knowledge for qualitative and quantitative analysis of inorganic compounds during laboratory work.

**Course Content:**

**Chemical Bonding:** Types of chemical bonding, ionic and covalent bonding, localized bond approach, theories of chemical bonding, valence bond theory (VBT), hybridization and resonance, prediction of molecular shapes using Valence Shell Electron Pair Repulsion (VSEPR) model, molecular orbital theory (MOT) applied to diatomic molecules, delocalized approach to bonding, bonding in electron deficient compounds, hydrogen bonding.

**Acids and Bases:** Brief concepts of chemical equilibrium, acids and bases including soft and hard acids and bases (SHAB), concept of relative strength of acids and bases, significance of pH,  $pK_a$ ,  $pK_b$  and buffer solutions, theory of indicators, solubility, solubility product, common ion effect and their industrial applications.

**p-Block Elements:** Physical and chemical properties of p-block elements with emphasis on some representative compounds, inter-halogens, pseudo-halogens and polyhalides.

**Lab. Work:**

Lab safety and good laboratory practices, knowledge about material safety data sheets (MSD), disposal of chemical waste and first-aid practices, qualitative analysis of salt mixtures, quantitative analysis, acid- base titrations, preparation and standardization of acid and alkali solutions, redox titrations, preparation and standardization of potassium permanganate solution and its use for the determination of purity of commercial potassium oxalate or oxalic acid, preparation and standardization of sodium thiosulfate solution and its use in determination of copper in a given sample, gravimetric analysis, determination of barium in a given sample, determination of

chloride in a given solution.

**Recommended Books:**

1. Shriver, D. F., Atkins, P. W., Langford, C. H., *Inorganic Chemistry*, 2nd ed., Oxford University Press, (1994).
2. Cotton, F. A. and Wilkinson, G., *Advanced Inorganic Chemistry*, 6th ed., John-Wiley & Sons, New York, (2007).
3. Huheey, J. E., *Inorganic Chemistry: Principles of Structure and Reactivity*, 3rd ed., Harper International SI Edition, (2006).
4. House, J. E., *Inorganic Chemistry*, Academic Press. USA, (2008).
5. Lee, J. D., *Concise Inorganic Chemistry*, 5th ed., Chapman and Hall, (1996).
6. Miessler, G. L., Tarr, D. A., *Inorganic Chemistry*, 3rd ed., Pearson Education, India, (2008).
7. Huheey, J. E., Keiter E. A., Keiter L. R., *Inorganic Chemistry: Principles of Structure and Reactivity*, 4th ed., Benjamin-Cummings Pub Co., (1993).
8. Sharpe, A. G., *Inorganic chemistry*, 3rd ed., Pearson Education India, (1981).
9. Chaudhary S. U., *Ilmi Textbook of Inorganic Chemistry*, Ilmi Kitab Khana, Lahore, (2013).
10. Catherine E. House crdft, Alan G. Sharpe, *Inorganic Chemistry*, 3rd ed., Prentice Hall, (2008).
11. Kathleen A. H., James E. H., *Descriptive Inorganic Chemistry*, 2nd ed., Brooks Cole, (2010).
12. Wulfsberg G., *Principles of Descriptive Inorganic Chemistry*, 1st ed., University Science Books, (1991).
13. Hill, R. H. JR and Fister, D. C., *Laboratory Safety for Chemistry Students*, John-Wiley & Sons, Inc., (2010).
14. Mendham, J., Denny, R. C., Barnes, J. D., Thomas, M. and Sivasankar, B., *Vogel's Textbook of Quantitative Chemical Analysis*, 6th ed., Pearson Education, Ltd., (2000).  
Svehla, G., *Vogel's Qualitative Inorganic Analysis*, 7th ed., (7th imp.), Pearson Education, Ltd., (2009).

**Course Title: Analytical Chemistry-I**

**Course Objectives:**

Students will acquire knowledge about sampling, sample handling and preparation and results calculation and data reporting. In addition, they will learn and develop understanding about the

classical techniques of analytical chemistry and quality control and quality assurance

**Course Contents:**

**Chemometrics:**

Sampling, significant figures, stoichiometric calculations, measurement errors, analysis of variance (ANOVA), arithmetic mean, median, mode, standard deviation/relative standard deviation, confidence limits, Gaussian distribution, least square method, tests for significance, outliers

**Quality Control and Quality Assurance:**

Definitions, seven tools for quality control, the concept of quality assurance, quality assurance techniques, validations based on design qualification (DQ), installation qualification (IQ), operational qualification (OQ) and performance qualification (PQ), calibrations, monitoring and quality reviews, periodical trainings, six sigma concepts, ISO standards.

**Classical Analytical Methods:**

Acid-base, complexometric and redox titrations, gravimetric analysis.

**CHEM-241 Lab.**

1. Calibration of volumetric glassware, electronic and analytical equipment
2. Statistical evaluation of analytical data including linear regression analysis,
3. Constructing a calibration curve from a given analytical data using spread sheet software
4. Determination of hardness of water using EDTA
5. Determination of chloride in tap water sample
6. Estimation of copper, arsenic, hydrogen peroxide and vitamin C using iodometry
7. Gravimetric analysis, determination of barium in barium nitrate
8. Determination of nickel in a given steel sample
9. Determination of bicarbonates in a clinical sample using back-titration Determination of cation in a mixture by complexometric titration
10. Studying the effect of common ions on solubility of sparingly soluble salts (e. g. AgCl / PbSO<sub>4</sub>).

**Recommended Books:**

1. Skoog, D. A., West, P. M., Holler, F. J., Crouch, S. R., Fundamentals of Analytical Chemistry, 9th ed., Brooks Cole Publishing Company, (2013).
2. Christian, G. D., Analytical Chemistry. 6th ed., John-Wiley & Sons, New York, (2006).

3. Harris, D. C., Quantitative Chemical Analysis, 8th ed., W. H. Freeman and Company, New York, USA, (2011).
4. Kealey, D. and Haines, P. J, Instant Notes., Analytical Chemistry, Bios Scientific Publishers Limited, Oxford, UK, (2002).
5. Matthios, Otto, CHEMOMETRICS-Statistics and Computed applications in Analytical Chemistry, 2nd ed., Wiley-VCH, Germany, (2007).
6. Mitra A., Fundamentals of Quality Control and Improvement, 3rd ed., John- Wiley & Sons, (2008).
7. Miller, J. and Miller, J., Statistics and Chemometrics for Analytical Chemistry, 5th ed., Prentice Hall, (2005).

**Course Title: Fuel chemistry-I**

**Course Objectives**

After completing the course, the students will acquire knowledge about the chemistry of fossil fuels like coal, petroleum and natural gas and their conversion processes to get useful chemical products

**Course Contents**

Introduction and classification of fuels. Origin of coal, petroleum and natural gas. Constituents of coal, petroleum and natural gas. Varieties of crude oils. Coal ranks. Distillation of crude petroleum in to marketable products. Uses and properties of naphtha, gasoline, kerosene, diesel, gas oil and furnace oil. Lubricants from petroleum. Producer and water gas from coal. Petrochemicals from natural gas.

**CHEM-355 Lab**

Determination of moisture contents of coal mined in different parts of Pakistan. Determination of Ash contents of coal mined in different parts of Pakistan.

Determination of Volatile matter of coal. Determination of fixed carbon contents of coal.

Determination of hydrogen and nitrogen contents of the coal. Determination of chlorine and oxygen in coal.

Determination of various forms of sulfur in coal.

Determination of specific and API gravity of petroleum fractions. Estimation of carbon residue in petroleum products (Conradson method). Determination of ash content in petroleum products.

Determination of sulfated ash in lube oil.

Estimation of water, sediments and oil in crude oil by centrifuge method. Determination of cloud and pour point of Lube-oil.

Estimation of asphalt in road samples

**Recommended Books:**

1. Gynge, E.S. "Applied Chemistry for Engineers". Edward Arnold Publisher, Ltd. London. (1989).
2. Harker, J.H. and Backurst, J.R. "Fuel and Energy" Academic Press, London and New York (1988).

**Supplementary Reading Materials:**

1. Wilson, P.J. and Wells, J.H. "Coal Coke and Coal Chemicals" McGraw-Hill Book Company, London, (1980).
2. Hobson, G.D. "Modern petroleum technology" part-I. John Wiley & Sons, Toronto, (1984).

**Course Title: Applied Chemistry-I**

**Course Objectives:**

The objectives of the course are to educate the students about the fundamentals of chemical industry, raw materials, manufacturing and industrial processes.

**Course Contents:**

**Fundamentals of Chemical Industry:**

Basic principles and parameters for industrial plant unit operations and unit processes.

**Chemical Industries:**

Raw materials, flow sheet diagrams and unit operations and unit processes of sulphuric acid, nitric acid, hydrochloric acid, oxalic acid, formic acid, caustic soda and washing soda, cement industry, petroleum, textile, polymer and fuel industries, applications of these industries.

**CHEM-352 Lab**

Measurement of water hardness with EDTA Titrations. Estimation of total solids in water.

Estimation of chloride in water.

Estimation of Ferrous and Ferric ions in drinking water by redox titration. Extraction of capsaicin oil (soxhlet extraction).

Extraction of clove oil from cloves. Preparation of liquid detergents.

Study of the kinetics of dissolution of Magnesium metal in dilute HCl. Estimation of Manganese in Steel.

Estimation of Ferric Iron in Cement.

**Recommended Books:**

1. Kent, J. A., Riegel's Handbook of Industrial Chemistry, 10th ed., Kluwer Academic/Plenum Publishers, (2003).
2. Vermani, O. P. and Narula, A. K., Applied Chemistry; Theory and Practice, New Age International Pvt. Ltd. Publishers, (2008).
3. Hede, P. D., Bier. S.P., Inorganic and Applied Chemistry, Ventus publishing app., (2007).
4. Sharma, J., Ndi., Applied Industrial Chemistry, Arise publishers & Distributors, (2012).
5. Heaton, A., An introduction to Industrial Chemistry, 3rd ed., Chapman & Hall, (1996).

**Course Title: BioChemistry-I**

**Course Objectives:**

Students will gain knowledge about fundamental concepts of biochemistry as well as be able to learn about the structures, properties and functions of amino acids, proteins, carbohydrates, lipids and nucleic acids.

**Course Contents:**

**Introduction to Biochemistry:** Brief introduction to the scope and history of Biochemistry, molecular logic of the living organism, cell structures and their functions, origin and nature of biomolecules.

**Carbohydrates, Lipids and Proteins:** Definition and classification, chemistry, physical and chemical properties of various classes of carbohydrates, biological functions of starch, glycogen, cellulose, and cell wall polysaccharides, acid mucopolysaccharides and proteoglycans.

Definition and classification of lipids, chemistry and biological importance of fatty acids, waxes, glycerides, phospholipids, sphingolipids, glycolipids, sterols and prostaglandins.

Significance of lipids in biological membranes and transport mechanism.

Chemistry and classification of amino acids, physical and chemical properties of amino acids, biological significance of amino acids, peptides, proteins, their classification, properties and biological significance, primary, secondary tertiary and quaternary structure of proteins,



denaturation of proteins.

**Nucleic Acids:** Chemical composition of nucleic acids, structure and biological significance of nucleic acids, chemical synthesis of oligonucleotides, nucleic acids hydrolysis, isolation and separation of nucleic acids, introduction to recombinant DNA technology.

**CHEM-243 Lab.**

Qualitative and quantitative analysis of carbohydrates, lipids and proteins. Laboratory work illustrating topics covered in the lecture of Chem.131, Determination of pH, Preparation of buffers.

Enzyme catalysis, Progress curve for enzyme catalyzed reactions, Determination of  $K_m$  values. To study the effect of different factors on the rate of enzyme catalyzed reactions.

**Recommended Books:**

1. R. C. Alkire, D. M. Kolb, J. Lipkowski, Bioelectro chemistry, volume 13, 13th ed., Publisher: Wiley-VCH Verlag GmbH & Co. ISSN: 0938-5193.
2. Nelson, D.L., Lehninger's Principles of Biochemistry, 6th ed., Publisher: Macmillan Higher Education, (2008). ISBN: 149222638, 9781429222631.
3. Voet, D. and Voet, J.D., Biochemistry, 4th ed., illustrated. Publisher: John- Wiley & Sons Canada, Limited, (2011). ISBN: 0470917458, 9780470917459.
4. Murray, R.M. and Harper, H.A., Harper's Biochemistry, 25th ed., Publisher: Appleton & Lange, (2000). ISBN: 0838536840, 9780838536841.
5. Zubay, G. L., Biochemistry, 4th ed., illustrated, Publisher W. M. C. Brown Publishers, (1998), Digitized (2008). ISBN: 0697219003, 9780697219008.
6. Guyton, A. C. & Hall, J. E., Guyton & Hall Textbook of Medical Physiology, 12th ed., Publishers: Saunders Elsevier, (2011). ISBN: 978-1-4160-4574-8.
7. Harvey, R. A., Ferrier, DR, Karandish S., Lippincott's illustrated Reviews: Biochemistry, 5th ed., and Biochemistry Map (Med maps) Bundle. Publisher: Lippincott Williams & Wilkins, (2010). ISBN: 1451116314, 9781451116311.

**Course Title: Environmental Chemistry-I**

**Course Objectives:**

This course will enable the students to understand various types of energy sources and the types of air pollution. They will also understand the soil and mineral resources.

**Course Contents:**

1. Fossil Fuels and Energy Sources:

Origin and development of coals: Origin and reserves of petroleum and natural gas, composition and classification of petroleum, refining, environmental problems associated with petroleum, nuclear fission reactors, solar energy, power synthesis, tidal and geothermal energy, synthetic chemical fuels, the H economy, electrochemical energy conversion, conversion of free energy, the energy balance of the earth.

2. The Atmosphere and Air Pollution:

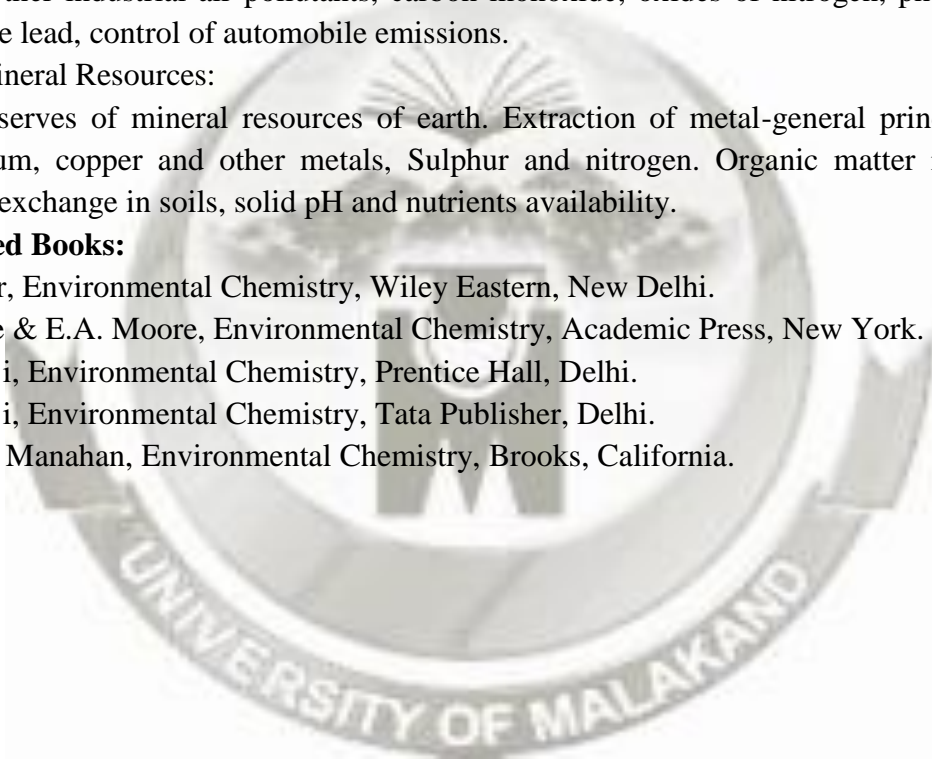
Structure and properties of the atmosphere, temperature inversion and air pollution, atmospheric photochemistry, possible depletion of stratospheric ozone, natural Vs. polluted air, particulate matter, analysis and control of particulates, Sulphur oxides, effects of Sulphur oxides and particulates, other industrial air pollutants, carbon monoxide, oxides of nitrogen, photochemical smog, airborne lead, control of automobile emissions.

3. Soil and Mineral Resources:

Estimating reserves of mineral resources of earth. Extraction of metal-general principles, iron, steel, aluminum, copper and other metals, Sulphur and nitrogen. Organic matter in soil, soil nutrients, ion exchange in soils, solid pH and nutrients availability.

**Recommended Books:**

1. Anil Kumar, Environmental Chemistry, Wiley Eastern, New Delhi.
2. J.W. Moore & E.A. Moore, Environmental Chemistry, Academic Press, New York.
3. S.K. Banerji, Environmental Chemistry, Prentice Hall, Delhi.
4. S.K. Banerji, Environmental Chemistry, Tata Publisher, Delhi.
5. Staneley E. Manahan, Environmental Chemistry, Brooks, California.



## ZOOLOGY

### PRINCIPLES OF ANIMAL LIFE – I

**Course Code: ZOOL 111**

**Credit Hour: 4 (3+1)**

#### Objectives

- The concept and status of Zoology in life sciences and the common processes of life through its biochemical and molecular processes.
- The structure and function of cell organelles and how common animal cell diversified in various tissues, organs and organ systems.
- Biochemical mechanisms eventually generating energy for animal work.
- Animals and their relationship with their environment.

#### Theory

**Scope of Zoology:** Introduction; significance and applications of Zoology; animal diversity; the scientific method; environment and world resources.

**The Chemical Basis of Animal Life:** Brief introduction to biomolecules; carbohydrates, lipids, proteins, and nucleic acids.

**Cellular Organization:** Structure of animal cells, cell membrane, cytoplasm and its organelles: ribosomes, endoplasmic reticulum, Golgi apparatus, lysosomes, mitochondria, cytoskeleton, cilia and flagella, centrioles and microtubules, vacuoles; the nucleus: nuclear envelope, chromosomes and nucleolus.

**Animal tissues:** Types: epithelial, connective, muscle and nervous tissue; organs and organ systems.

**Enzymes:** Structure, types; function and factors affecting their activity; cofactors and coenzymes.

**Energy Harvesting:** Aerobic and anaerobic respiration: glycolysis, citric acid cycle and electron transport chain; fermentation, the major source of ATP.

**Reproduction and Development:** Types; asexual and sexual, gametogenesis, fertilization, metamorphosis, zygote and early development.

**Ecological Concepts:** Ecosystem, types, homeostasis, biomes, food chain, food web, energy flow and thermodynamics; biogeochemical cycles, and limiting factors, populations and communities, human population growth, pollution, resource depletion and biodiversity.

#### Lab work

1. Tests for different carbohydrates, proteins and lipids.  
Note: Emphasis on the concept that tests materials have been ultimately obtained from living organisms and constituted their body.
2. Study of the prepared slides of epithelial tissue (squamous, cuboidal, columnar), connective tissue (adipose, cartilage, bone, blood), nervous tissue and muscle tissue (skeletal, smooth and cardiac).  
Note: Prepared microscopic and/or projection slides and/or CD ROM computer projections must be used.
3. Plasmolysis and deplasmolysis in blood. Preparation of blood smears.
4. Protein digestion by pepsin.
5. Ecological notes on animals of a few model habitats.
6. Field observation and report writing on animals in their ecosystem (a terrestrial and an

aquatic ecosystem study).

### **Books Recommended**

1. Miller, S.A. and Harley, J.B. 2005. Zoology, 6th Ed. (International), Singapore: McGraw-Hill.
2. Molles, M.C. 2005. Ecology: Concepts and Applications. 6th Ed. McGraw Hill, New York, USA.
3. Hickman, C.P., Roberts, L.S. and Larson, A. 2004. Integrated Principles of Zoology, 12th Ed. (International), Singapore: McGraw Hill.
4. Campbell, N.A. 2002. Biology. 6th Ed. Menlo Park, California: Benjamin/Cummings Publishing Company, Inc.
5. Miller, S.A. 2002. General Zoology Laboratory Manual. 5th Ed. (International), Singapore: McGraw Hill.
6. Hickman, C.P. and Kats, H.L. 2000. Laboratory Studies in Integrated Principles of Zoology. Singapore: McGraw Hill.
7. Odum, E. P. 1994. Fundamentals of Ecology. 3rd Ed. W.B. Saunders. Philadelphia.

## **ZOOGEOGRAPHY & PALEONTOLOGY**

**Course Code: ZOOL 121**

**Credit Hour: 3 (2+1)**

### **Objectives**

- Provide information on the distribution of animals and their associations in the past and to rationalize their relationship in the present time.
- Impart knowledge and concepts of evolution mainly on the basis of fossil record.
- Give understanding that fossil records also provide information about the distribution of animals in the past eras.

Course Contents

Theory

### **(i) Zoogeography**

**Branches of Zoogeography:** descriptive, chorology, faunistics, systematic, biocoenotic, causal, ecological, historical, experimental and applied Zoogeography.

**Animal distribution:** cosmopolitan distribution, discontinuous distribution, isolation distribution, bipolar distribution and endemic distribution, barriers and dispersal.

**Zoogeographical regions:** Zoogeographic division and boundaries, geographic ranges, physical features, climates, faunas and affinities of Palaearctic, Nearctic regions, Oriental, Ethiopian, Australian, and Neotropical Regions, insular fauna

**Paleogeography:** Theories of continental drift and plate tectonics; Pangea.

Zoogeography of Pakistan:

### **(ii) Paleontology**

**The Planet Earth:** History, age, shells of earth; atmosphere, hydrosphere, biosphere and lithosphere.

**Rocks:** types; Igneous rocks, sedimentary rocks and metamorphic rocks. Fossil types and uses of fossils, nature of fossils.

**Fossilization:** Geological time scale. Pre-Cambrian life. Post Cambrian life, Palaeozoic life, Mesozoic life, Cenozoic life.

**Geochronometry:** Uranium/Lead dating, radiocarbon dating, methods, index fossils; evolutionary history of man, elephant, horse and camel, Paleoecology, Paleomagnetism.

### Lab work

1. Study of fauna of various Zoogeographical regions.
2. Study of mould, cast, pseudomorph, coprolite, petrified fossils of plants and animals.
3. Study of invertebrate fossils of coelenterates, trilobites, ammonite, brachiopods, molluscs and echinoderms.
4. Study of vertebrate fossils e.g. horse/elephant/camel/bovids.
5. Study and identification of Igneous, Sedimentary and Metamorphic rocks
6. Map work for identification of various Zoogeographical regions of the World.

### Books Recommended

#### Zoogeography

1. Beddard, F. E. 2008. A text book of Zoogeography. Bibliobazar, LLC.
2. Tiwari, S.K. 2006. Fundamentals of world Zoogeography. Wedams eBooks Ltd (India) Sarup & Sons. Delhi.
3. Ali, S.S. 1999. Paleontology, Zoogeography and Wildlife Management. Nasim Book Depot, Hyderabad, India.
4. Darlington, P. J. Jr. 1963. Zoogeography, John Wiley and Sons.

#### Paleontology

1. Michael, J. B. David, A and Haper, T. 2009. Paleobiology and the fossil record. 3<sup>rd</sup> Ed. Wiley Black, UK.
2. Foote, M and Millar, A. I. 2007. Principles of paleontology. 3<sup>rd</sup> Ed. W. H. Freeman & Co. USA.
3. Ali, S.S. 1999. Paleontology, Zoogeography and Wildlife Management. Nasim Book Depot, Hyderabad, India.
4. Brouwer, A. 1977. General Paleontology, Oliver and Boyed, London.

### RINCIPILES OF ANIMAL LIFE–II

**Course Code: ZOOL 122**

**Credit Hour: 4 (3+1)**

#### Objectives

- Cell division and its significance in cell cycle.
- Concepts and mechanisms of inheritance pattern, chromosome and gene linkage and molecular basics of genetics.
- Animal behavior and communication.

- Theories of evolution, gene flow and mechanism of evolution with reference to animal diversity.

### Course Contents

#### Theory

**Cell Division:** Cell cycles: Mitosis and meiosis; control of the cell cycle.

**Inheritance Patterns:** Mendelian genetics; inheritance patterns; gene, structure, chemical composition and types.

**Chromosomes and Gene Linkage:** Eukaryotic chromosomes; linkage and crossing over; chromosomal aberrations.

**Cellular Control: DNA:** the genetic material; DNA replication in prokaryotes and eukaryotes; control of gene expression in eukaryotes; gene mutation; recombinant DNA technologies and their applications.

**Animal Behavior:** Behavior and its types, proximate and ultimate causes; anthropomorphism; development of behavior; learning; factors controlling animal behavior; communication; behavioral ecology; social behavior.

**Evolution: A Historical Perspective:** Theories of evolution: Natural selection Lamarckism and neo Lamarckism, Darwinism and neo Darwinian.

**Evolution and Gene Frequencies:** Hardy-Weinberg principle; evolutionary mechanisms: population size, genetic drift, gene flow, de Vries mutation theory and rates of evolution, polymorphism; species and speciation; molecular evolution; mosaic evolution.

#### Lab work

1. Study of mitosis in onion root tip.
2. Study of meiosis in grasshopper testis (students should prepare the slide).
3. Problem based study of Mendelian ratio in animals.
4. Multiple alleles study in blood groups.
5. Survey study of a genetic factor in population and its frequency.
6. Study of karyotypes of Drosophila, mosquito.
7. Study of cytochemical detection of DNA in protozoa and avian blood cell.
8. Study to demonstrate nervous or endocrine basis of behaviour (conditioned reflex or aggression or parental behavior).
9. Study to demonstrate social behavior (documentary film be shown, honey bee, monkey group in a Zool).

Note for 1-2: Prepared microscopic and/or projection slides and/or CD ROM computer projections must be used).

#### Books Recommended

1. Pechenik, J.A. 2012. Biology of Invertebrates, 4th Edition (International), Singapore: McGraw Hill.
2. Hickman, C.P., Roberts, L.S., Larson, A. 2004. Integrated Principles of Zoology, 11th Edition (International). Singapore: McGraw Hill.
3. Miller, S.A., Harley, J.B. 2002. Zoology, 5th Edition (International), Singapore: McGraw Hill.
4. Miller, S.A. 2002. General Zoology Laboratory Manual. 5th Ed. (International). Singapore: McGraw Hill.
5. Campbell, N.A. 2002. Biology. 6th Edition. Menlo Park, California: Benjamin/Cummings Publishing Company, Inc.

6. Kent, G.C., Miller, S. 2000. Comparative Anatomy of Vertebrates. New York: McGraw Hill.
7. Hickman, C.P., Kats, H.L. 2000. Laboratory Studies in Integrated Principles of Zoology. Singapore: McGraw Hill.

### **ANIMAL DIVERSITY-I**

**Course Code: ZOOL 232**

**Credit Hour: 4 (3+1)**

#### **Objectives**

- Taxonomic characteristics and classification of each phylum
- Concepts of evolutionary relationship of animal kingdom
- Knowledge about animal kingdom, emphasizing their phylogenetic relationships and simple to complex mode of animal life

#### **Course Contents**

##### **Theory**

**Introduction:** Architectural pattern of an animal, taxonomy and phylogeny, major subdivisions of animal kingdom with evolutionary perspective.

**Animal-Like Protists:** The Protozoa; life within a single plasma membrane; symbiotic life-styles. Protozoan taxonomy: (up to phyla, subphyla and super classes, wherever applicable). Pseudopodia and amoeboid locomotion; cilia and other pellicular structures; nutrition; genetic control and reproduction; symbiotic ciliates; further phylogenetic considerations.

**Multicellular and Tissue Levels of Organization:** origins of multicellularity; animal origins.

**Phylum porifera:** cell types, body wall, and skeletons; water currents and body forms; maintenance functions; reproduction. Phylum Cnidaria (coelenterata) the body wall and nematocysts; alternation of generations; maintenance functions; reproduction and classification up to class. Phylum Ctenophora; further phylogenetic considerations.

**Triploblastics and Acoelomate Body Plan: Phylum Platyhelminthes:** classification up to class; the free-living flatworms and the tapeworms; Phylum Nemertea; Phylum Gastrotricha; further phylogenetic considerations.

**Pseudocoelomate Body Plan:** Aschelminths: general characteristics; classification up to phyla with external features; feeding and the digestive system; other organ systems; reproduction and development of Phylum Rotifera and Phylum Nematoda; Phylum Kinorhyncha. Some important nematode parasites of humans; further phylogenetic considerations.

**Molluscan Success:** relationships to other animals; origin of the coelom; molluscan characteristics; classification up to class. The characteristics of shell and associated structures, feeding, digestion, gas exchange, locomotion, reproduction and development, other maintenance functions and diversity in gastropods, bivalves and cephalopods; further phylogenetic considerations.

**Annelida:** The Metameric Body Form: relationship to other animals, metamerism and tagmatization; External structure and locomotion, feeding and the digestive system, gas exchange and circulation, nervous and sensory functions, excretion, regeneration, reproduction and development in different classes; further phylogenetic considerations.

**Arthropods: Blueprint for Success:** classification and relationships to other animals; metamerism and tagmatization; the exoskeleton; metamorphosis; classification up to class; further phylogenetic considerations; phylogeny and adaptive diversification.

**Echinoderms:** relationships to other animals; echinoderm characteristics; classification up to class. Maintenance functions, regeneration, reproduction, and development; further phylogenetic considerations.

**Lesser Invertebrates:** The lophophorates, entoprocts, cycliophores, and chaetognaths.

#### **Lab work**

Museum study of representative Phyla, Permanent slide preparations

1. Study of Euglena, Amoeba, Entamoeba, Plasmodium, Trypanosoma, Paramecium as representative of animal like protists. (Prepared slides).
2. Study of sponges and their various body forms.
3. Study of principal representative classes of Phylum Cnidaria.
4. Study of principal representative classes of Phylum Platyhelminthes.
5. Study of representative of Phylum Rotifera, Phylum Nematoda.
6. Study of principal representative classes of Phylum Mollusca.
7. Study of principal representative classes of Phylum Annelida.
8. Study of principal representative classes of groups of Phylum Arthropoda.
9. Brief notes on medical/economic importance of the following:  
Plasmodium, Entamoeba histolitica, Leishmania, Liverfluke, Tapeworm, Earthworm, Silkworm, Citrus butterfly.



### Books Recommended

1. Hickman, C.P., Roberts, L.S., Larson, A. 2011. Integrated Principles of Zoology, 15th Ed. (International). Singapore: McGraw Hill.
2. Miller, S.A., Harley, J.B. 2011. Zoology, 8th Ed. (International), Singapore: McGraw Hill.
3. Pechenik, J.A. 2010. Biology of Invertebrates, 4th Ed. (International), Singapore: McGraw Hill.
4. Campbell, N.A. 2002. Biology, 6th Ed. Menlo Park, California: Benjamin/Cummings Publishing Company, Inc.
5. Miller, S.A., 2002. General Zoology Laboratory Manual. 5th Ed. (International). Singapore: McGraw Hill.
6. Hickman, C.P., Kats, H.L. 2000. Laboratory Studies in Integrated Principles of Zoology. Singapore: McGraw Hill.
7. Ali Muhammad (2016). Invertebrate Biology. Islamia Publications, Qisa Khwani Bazar, Peshawar.

### ANIMAL DIVERSITY-II

**Course Code: ZOOL 242**

**Credit Hour: 4 (3+1)**

#### Objectives

- Provide understanding about taxonomic characteristics and classification of each phylum
- Develop concepts of evolutionary relationship of animal kingdom
- Provide knowledge and understanding about the different animal groups with special emphasis on their phylogenetic relationships

#### Course Contents

##### Theory

**Protochordates:** Structure, anatomy and organ systems; reproduction; life histories and metamorphosis; phylogenetic relationships; further phylogenetic considerations.

**Fishes:** Vertebrate Success in Water: phylogenetic relationships; Agnatha and Gnathostomata: locomotory adaptations, nutrition and the digestive system, circulation, gas exchange,

nervous and sensory functions, excretion and osmoregulation, reproduction and development; further phylogenetic considerations.

**Amphibians:** The first terrestrial vertebrates: phylogenetic relationships; Caudata, Gymnophiona, and Anura; Structure and locomotory adaptations, nutrition and the digestive system, circulation, gas exchange, temperature regulation, nervous and sensory functions, excretion and osmoregulation, reproduction, development, and metamorphosis; further phylogenetic considerations.

**Reptiles:** The First Amniotes: cladistic interpretation of the amniotic lineage; Testudines or Chelonia, Rhynchocephalia, Squamata, and Crocodilia; adaptations in external structure and locomotion, nutrition and the digestive system, circulation, gas exchange, and temperature regulation, nervous and sensory functions, excretion and osmoregulation, reproduction and development; further phylogenetic considerations.

**Birds:** Feathers, flight and endothermy: phylogenetic relationships; ancient birds and the evolution of flight; diversity of modern birds; adaptation in external structure and locomotion, nutrition and the digestive system, circulation, gas exchange, and regulation, nervous and sensory systems, excretion and osmoregulation, reproduction and development; migration and navigation.

**Mammals:** Specialized teeth, endothermy, hair and viviparity; diversity of mammals; adaptations in external structure and locomotion, nutrition and the digestive system, circulation, gas exchange, and temperature regulation, nervous and sensory functions, excretion and osmoregulation, behavior, reproduction and development.

### Lab work

Museum study of:

1. Protochordates
2. Pisces
3. Amphibia
4. Reptilia
5. Aves
6. Mammalia
7. Field trips to study animal diversity in an ecosystem.

Note: Preserved specimen and/or colored projection slide and/or CD ROM projection of computer

must be used.

**Books Recommended**

1. Hickman, C.P., Roberts, L.S., Larson, A. 2011. Integrated Principles of Zoology, 15th Ed. (International). Singapore: McGraw Hill.
2. Campbell, N.A. Biology, 9th Ed. 2011. Menlo Park, California: Benjamin/Cummings Publishing Company, Inc.
3. Miller, S.A. and Harley, J.B. 2010. Zoology, 8th Edition (International) Singapore: McGraw Hill.
4. Miller, S.A. 2002. General Zoology Laboratory Manual. 5th Ed. (International), Singapore: McGraw Hill.
5. Kent, G.C., Miller, S. 2001. Comparative Anatomy of Vertebrates. Latest edition New York: McGraw Hill.
6. Hickman, C.P., Kats, H.L. 2000. Laboratory Studies in Integrated Principles of Zoology. Singapore: McGraw Hill.
7. Ali Muhammad (2016). Chordate Biology. Islamia Publications, Qisa Khwani Bazar, Peshawar.
8. Ali Muhammad (2016). Vertebrate Body (Comparative Anatomy). Islamia Publications, Qisa Khwani Bazar, Peshawar.

**ANIMAL FORM AND FUNCTION–I**

**Course Code: ZOOL 243**

**Credit Hour: (4) 3+1**

(A COMPARATIVE PERSPECTIVE)

**Objectives**

- Animals diversity adapted in different ways for their functions through modifications in body parts.
- The diversity in integumentary, skeletal, muscular, nervous and sensory, endocrine, circulatory, respiratory, nutritive, excretory, osmoregulatory and reproductive systems according to strategies to survive in their specific conditions.
- Organ systems, their specialization and coordination with each other and constantly changing internal and external environment, inside and outside the animal's body.

- The basic structure of each system that determines its particular function.

## Course Contents

### Theory

**Protection, Support, and Movement:** Protection: the integumentary system of invertebrates and vertebrates; movement and support: the skeletal system of invertebrates and vertebrates; movement: non-muscular movement; an introduction to animal muscles; the muscular system of invertebrates and vertebrates.

**Communication I:** Nerves: Neurons: structure and function; neuron-neuron communication: introductory accounts of resting membrane potential, action potential (nerve impulse) and transmission of the action potential between cells; invertebrate and vertebrate nervous systems: the ventral nerve cord and ganglia, the vertebrate brain, the spinal cord, cranial and spinal nerves; autonomic nervous system.

**Communication II:** Senses: Sensory reception: baroreceptors, chemoreceptors, georeceptors, hygroreceptors, phonoreceptors, photoreceptors, proprioceptors, tactile receptors, and thermoreceptors of invertebrates; lateral line system and electrical sensing, lateral-line system and mechanoreception, hearing and equilibrium in air and water, skin sensors of mechanical stimuli, sonar, smell, taste and vision in vertebrates.

**Communication III:** The Endocrine System and Chemical Messengers: Chemical messengers: hormones chemistry; and their feedback systems; mechanisms of hormone action; some hormones of porifera, cnidarians, platyhelminthes, nemertean, nematodes, molluscs, annelids, arthropods, and echinoderms invertebrates; an overview of the vertebrate endocrine system; endocrine systems of vertebrates, endocrine systems of birds and mammals.

**Circulation, Immunity, and Gas Exchange:** Internal transport and circulatory systems in invertebrates: characteristics of invertebrate coelomic fluid, hemolymph, and blood cells; transport systems in vertebrates; characteristics of vertebrate blood, blood cells and vessels; the hearts and circulatory systems of bony fishes, amphibians, reptiles, birds and mammals; the human heart: blood pressure and the lymphatic system; immunity: nonspecific defenses, the immune response; gas exchange: respiratory surfaces; invertebrate and vertebrate respiratory systems: cutaneous exchange, gills, lungs, and lung ventilation;

human respiratory system: gas transport.

**Lab work**

1. Study of insect chitin, fish scale, amphibian skin, reptilian scales, feathers and mammalian skin.
2. Study and notes of skeleton of Labeo, Rana tigrina, Varanus, fowl and rabbit.  
Note: Exercises of notes on the adaptations of skeletons to their function must be done.
3. Earthworm or leech; cockroach, freshwater mussel, Channa or Catla catla or Labeo or any other local fish, frog, pigeon and rat or mouse and rabbits are representative animals for study in dissections.
4. Study of models or preserved brains of representative animals and notes on adaptations.
5. Study of nervous system of earthworm and a fish.
6. Study of endocrine system in an insect and a rabbit.
7. Study of different types of blood cells in blood smear of rabbit.
8. Study of heart, principal arteries and veins in a representative vertebrate (dissection of representative fish/mammals).
9. Study of respiratory system in cockroach or locust and a vertebrate representative (Model).

**Books recommended**

1. Pechenik, J.A. 2013. Biology of Invertebrates, 4th Ed. (International), Singapore: McGraw Hill.
2. Hickman, C.P., Roberts, L.S., Larson, A. 2004. Integrated Principles of Zoology, 11th Ed. (International), Singapore: McGraw Hill.
3. Miller, S.A. and Harley, J.B. 2002. Zoology, 5th Ed. (International), Singapore: McGraw Hill.
4. Campbell, N.A. 2002. Biology, 6th Ed. Menlo Park, California: Benjamin/Cummings Publishing Company, Inc.
5. Miller, S.A. 2002. General Zoology Laboratory Manual. 5th Ed. (International), Singapore: McGraw Hill.
6. Kent, G.C., Miller, S. 2001. Comparative Anatomy of Vertebrates. New York: McGraw Hill.
7. Hickman, C.P., Kats, H.L. 2000. Laboratory Studies in Integrated Principles of Zoology. Singapore: McGraw Hill.

## ANIMAL FORM AND FUNCTION–II

**Course Code: ZOOL 244**

**Credit Hour: 4 (3+1)**

(A COMPARATIVE PERSPECTIVE)

### Objectives

- provides understanding of the basis of structure and functions of animal nutrition, digestion, homeostasis and temperature regulation.
- introduce the basic concepts in reproduction and development in animal kingdom.
- impart knowledge about the development of chordate body plan and fate of germinal layers.

### Course Contents

#### Theory

**Nutrition and Digestion:** Evolution of nutrition; the metabolic fates of nutrients in heterotrophs; digestion; animal strategies for getting and using food, diversity in digestive structures of invertebrates and vertebrates; the mammalian digestive system: gastrointestinal motility and its control, oral cavity, pharynx and esophagus, stomach, small intestine: main site of digestion; large intestine; role of the pancreas in digestion; and role of the liver and gallbladder in digestion.

**Temperature and Body Fluid Regulation:** Homeostasis and Temperature Regulation; The Impact of Temperature on Animal Life; Heat Gains and Losses; Some Solutions to Temperature Fluctuations; Temperature Regulation in Invertebrates, Fishes, Amphibians, Reptiles, Birds and Mammals; Heat Production in Birds and Mammals; Control of Water and Solutes (Osmoregulation and Excretion); Invertebrate and Vertebrate Excretory Systems; How Vertebrates Achieve Osmoregulation; Vertebrate Kidney Variations; Mechanism in Metanephric Kidney Functions.

**Reproduction and Development:** Asexual reproduction in invertebrates; advantages and disadvantages of asexual reproduction; sexual reproduction in invertebrates; advantages and disadvantages of sexual reproduction; sexual reproduction in vertebrates; reproductive

strategies; examples of reproduction among various vertebrate classes; the human male reproductive system: spermatogenesis, transport and hormonal control, reproductive function; the human female reproductive system: folliculogenesis, transport and hormonal control, reproductive function; hormonal regulation in gestation; prenatal development and birth: the placenta; milk production and lactation.

**Descriptive Embryology:** Fertilization; embryonic development: cleavage, and egg types; the primary germ layers and their derivatives; echinoderm embryology; vertebrate embryology: the chordate body plan, amphibian embryology, development in terrestrial environments, avian embryology and fate of mesoderm.

### Lab work

1. Study of excretory system in an invertebrate and a vertebrate representative (Model).
2. Study of nutritive canal in an invertebrate and a vertebrate representative (Dissection).
3. Study of male reproductive system in an invertebrate and a vertebrate representative (Dissection).
4. Study of female reproductive system in an invertebrate and a vertebrate representative (Dissection).
5. Study of hormonal influence of a reproductive function (Model).
6. Study of preserved advanced stages of avian and mammalian development for amniotic membranes and placenta (Model).
7. Study of stages in the development of an Echinoderm.
8. Study of early stages in the development of a frog, chick and a mammal.

Note: Prepared slides and preserved specimen and/or projection slides and/or CD ROM computer projections may be used.

### Books Recommended

1. Pechenik, J.A. 2013. Biology of Invertebrates, 4th Ed. (International), Singapore: McGraw Hill.
2. Hickman, C.P., Roberts, L.S., Larson, A. 2004. Integrated Principles of Zoology, 11th Ed. (International), Singapore: McGraw Hill.
3. Miller, S.A., Harley, J.B. 2002. Zoology, 5th Ed. (International), Singapore: McGraw Hill.
4. Campbell, N.A. 2002. Biology, 6th Ed. Menlo Park, California: Benjamin/Cummings Publishing Company, Inc.

5. Miller, S.A. 2002. General Zoology Laboratory Manual. 5th Ed. (International), Singapore: McGraw Hill.
6. Kent, G.C., Miller, S. 2001. Comparative Anatomy of Vertebrates. New York: McGraw Hill.
7. Hickman, C.P., Kats, H.L. 2000. Laboratory Studies in Integrated Principles of Zoology. Singapore: McGraw Hill.
8. Ali Muhammad (2016). Vertebrate Body (Comparative Anatomy). Islamia Publications, Qisa Khwani Bazar, Peshawar.





## BOTANY

**Course Title: Diversity of Plants**

**Course Code: BOT 111**

**Credit Hours: (3+1)4 Marks: 125**

### Theory

Comparative study of life form, structure, reproduction and economic significance of:

- a) Viruses (RNA and DNA types) with special reference to TMV;
- b) Bacteria and Cyanobacteria (Nostoc, Anabaena, Oscillatoria) with specific reference to bio-fertilizers, pathogenicity and industrial importance;
- c) Algae (Chlamydomonas, Spirogyra, Chara, Vaucheria, Pinnularia, Ectocarpus, Polysiphonia)
- d) Fungi (Mucor, Penicillium, Phyllactinia, Ustilago, Puccinia, Agaricus), their implication on crop production and industrial applications.
- e) Lichens (Physcia)
- f) Bryophytes
  - i. Riccia
  - ii. Anthoceros
  - iii. Funaria
- g). Pteridophytes.
  - i. Fossils and fossilization
  - ii. Psilopsida (Psilotum)
  - iii. Lycopsida (Selaginella)
  - iv. Sphenopsida (Equisetum)
  - v. Pteropsida (Marsilea)
  - vi. Seed Habit
- h). Gymnosperms Cycas, Pinus, Ephedra.

### Lab Work:

Culturing, maintenance, preservation and staining of microorganisms. Study of morphology and reproductive structures of the types of each subject mentioned in theory. Identification of various types mentioned from prepared slides and fresh collections.

### Recommended Books

1. Agrios, G.N. 2004. Plant pathology. 8th ed. Academic press London.
2. Alexopoulos, C.J., Mims, C.W. and Blackwell, M. 1996. Introductory Mycology. 4th ed. John Wiley and Sons Publishers.
3. Lee, R.E. 1999. Phycology. Cambridge University Press, UK
4. Mauseth, J.D. 2003. Botany: An Introduction to Plant Biology 3rd ed., Jones and Bartlett Pub. UK

5. Prescott, L.M., Harley, J.P. and Klein, A.D. 2004. Microbiology, 3rd ed. W.M. C. Brown Publishers.

**Course Title: Systematics, Anatomy and Development**

**Course Code: BOT 122**

**Credit Hours: 4(3+1) Marks: 125**

**SYSTEMATICS, ANATOMY AND DEVELOPMENT**

**Theory**

**a) Plant Systematics**

1. Introduction to Plant Systematics: aims, objectives and importance.
2. Classification: brief history of various systems of classification with emphasis on Takhtajan.
3. Brief introduction to nomenclature, importance of Latin names and binomial system with an introduction to International Code of Botanical Nomenclature (ICBN). St. Luis code.
4. Morphology: a detailed account of various, morphological characters root, stem, leaf, inflorescence, flower, placentation and fruit types.
5. Diagnostic characters, economic importance and distribution pattern of the following families:
  - i) Ranunculaceae
  - ii) Brassicaceae (Cruciferae)
  - iii) Fabaceae (Leguminosae)
  - iv) Rosaceae
  - v) Euphorbiaceae
  - vi) Cucurbitaceae
  - vii) Solanaceae
  - viii) Lamiaceae (Labiatae)
  - ix) Apiaceae (Umbelliferae)
  - x) Asteraceae (Compositae)
  - xi) Liliaceae (Sen. Lato)
  - xii) Poaceae (Graminae)

**b) Anatomy**

1. Cell wall: structure and chemical composition
2. Concept, structure and function of various tissues like:
  - i. Parenchyma
  - ii. Collenchyma
  - iii. Sclerenchyma
  - iv. Epidermis (including stomata and trichomes)
  - v. Xylem
  - vi. Phloem
3. Meristem: types, stem and root apices

4. Vascular cambium
5. Structure and development of root, stem and leaf. Primary and secondary growth of dicot stem, periderm
6. Characteristics of wood: diffuse porous and ring –porous, sap and heart wood, soft and hard wood, annual rings.

**c) Development / Embryology.**

1. Early development of plant body: *Capsella bursa-pastoris*
2. Structure and development of Anther
  - Microsporogenesis
  - Microgametophyte
3. Structure of Ovule
  - Megasporogenesis
  - Megagametophyte
4. Endosperm formation
5. Parthenocarpy
6. Polyembryony

**Lab Work:**

**Anatomy**

1. Study of stomata, epidermis,
2. Tissues of primary body of plant
3. Study of xylem 3-dimensional plane of wood,.
4. T.S of angiosperm stem and leaf .

**Taxonomy**

1. Identification of families given in syllabus with the help of keys.
2. Technical description of common flowering plants belonging to families mentioned in theory syllabus.
3. Field trips shall be undertaken to study and collect local plants. Students shall submit 40 fully identified herbarium specimens.

**Books Recommended**

1. Esau, K. 1960. Anatomy of Seed Plants. John Wiley, New York.
2. Fahn, A. 1990. Plant Anatomy. Pergamon Press, Oxford.
3. Lawrence, G.H.M. 1951 Taxonomy of Vascular Plants. MacMillan & Co. New York.
4. Maheshwari, P.1971. Embryology of Angiosperms, McGraw Hill. New York.
5. Mauseth, J.D. 1998. An Introduction to Plant Biology: Multimedia Enhanced. Jones and Bartlett Pub. UK.
6. Moore, R.C., W.D. Clarke and Vodopich, D.S. 1998. Botany. McGraw Hill Company, U.S.A.
7. Panday, B.P. 2004. A textbook of Botany (Angiosperms). S. Chand and Co. New Delhi.
8. Raven, P.H., Evert, R.E. and Eichhorn, S.E. 1999. Biology of Plants. W.H. Freeman and Company Worth Publishers.

9. Raymond E, S. E. Eichhorn. 2005. Esau's Plant Anatomy. Meristems cells and tissues of the plant body, 3rd ed. John Wiley & Sons. Inc.
10. Stuessy, T.F. 1990. Plant Taxonomy. Columbia University Press, USA.

**Course Title: Environmental Science**

**Course Code: BOT 121**

**Credit Hours: 3(2+1) Marks: 100**

**ENVIRONMENTAL SCIENCE**

**Theory**

**Introduction:** Definitions, History, Environmental systems and factors: Atmosphere and its layers, Lithosphere and its zones, hydrosphere and its classification and Biosphere and limits of life.

**Ecosystem:** Structure (Biotic and Abiotic factors) and Functions (Materials and Energy Flow) of ecosystem

**Environmental sustainability:** Ecosystem evolution (Hydroseres and Xeroseres)

**Pollution:** Definition, types (Material and non-material), sources, causes, effects.

Air Pollution and its consequences (Global warming, Greenhouse effect, Acid rain, Ozone layer depletion).

Water Pollution: Sources and effects of water pollution on living organisms

Soil Pollution: Sources and effects of Soil pollution on living organisms

**Resources:** Renewable and Non Renewable resources (Land, Agriculture, Fisheries, Forests and Energy resources)

**Lab Work:**

Testing water for different pollutants (Coliform bacteria, Chloride, Carbonate ions and Nitrate ions)

Design for material recycling and reuse

Test for Ozone

Algae as Biofuel

Wind, Solar and Hydal energy

Design to observe Effect of Pollutant on Plant Growth

Primary, Secondary and Tertiary treatment of water

**Recommended books**

1. Botkin, D. & Keller, E. Environmental Sciences; Earth as a Living Planet. 8<sup>th</sup> ed. John Wiley and Sons, Inc. (2000).
2. Cunningham, W.P, & Saigo, B.W. Environmental Sciences 6<sup>th</sup> ed. McGraw-Hill (2001).
3. Enger, E.D. & Smith, B.F. Environmental Science: A study of Interrelationship. McGraw-Hill, (1997).
4. Kupchella, C.E. & Hyland. M.C. Environmental Science; Living within the System of Nature. Prentice Hall, (1986).
5. Nebel, B.J. & Wright, R.T. Environmental Sciences, 6<sup>th</sup> ed. Prentice Hall. New Jersey, (1999).
6. Zia-ul-Haq, Calculas and Analytic Geometry, 1998. The Caravan Book House, Lahore.
7. Ervin Kreyszig. Advanced Engineering Mathematics (Latest edition), Lhon Willy and Sons.
8. Zill D, G, Cullen MR, 1997. Differential Equations with Boundary- value Problems PWS Publishing Co. 3.

9. Herstein I, N. Topics in Algebra Jhon Wiley, New York 2.
10. Iqbal M, 1998. An introduction to Numerical Analysis. Ilmi Kitab Khana, Kabeer Street Urdu Bazar, Lahore.
11. Ruel V, Churchill 1990. Complex Variable and Applications. Mcgraw-Hill 5.

**Course Title: CELL BIOLOGY, GENETICS AND EVOLUTION**

**Course Code: BOT 231**

**Credit Hours: 4(3+1) Marks: 125**

**BOT 231**

**CELL BIOLOGY, GENETICS AND EVOLUTION**

**Theory**

**b) Cell Biology**

1. Structures and Functions of Bio-molecules
  - i. Carbohydrates
  - ii. Lipids
  - iii. Proteins
  - iv. Nucleic Acids
2. Cell: Physico-chemical nature of plasma membrane and cytoplasm.
3. Ultrastructure of plant cell with a brief description and functions of the following organelles
  - i. Endoplasmic reticulum
  - ii. Plastids
  - iii. Mitochondria
  - iv. Ribosomes
  - v. Dictyosomes
  - vi. Vacuole
  - vii. Microbodies (Glyoxysomes and Peroxisomes)
4. Nucleus: Nuclear membrane, nucleolus, ultrastructure and morphology of chromosomes, karyotype analysis
5. Reproduction in somatic and embryogenic cell, mitosis and meiosis, cell cycle
6. Chromosomal aberrations; Changes in the number of chromosomes. Aneuploidy and euploidy. Changes in the structure of chromosomes, deficiency, duplication, inversion and translocation.

**b) Genetics**

1. Introduction, scope and brief history of genetics. Mendelian inheritance; Laws of segregation and independent assortment, back cross, test cross, dominance and incomplete dominance.
2. Sex linked inheritance, sex linkage in Drosophila and man (colour blindness), XO, XY, WZ mechanisms, sex limited and sex linked characters, sex determination.

3. Linkage and crossing over: definition, linkage groups, construction of linkage maps, detection of linkage.
4. Molecular genetics; DNA replication. Nature of gene, genetic code, transcription, translation, protein synthesis, regulation of gene expression (e.g. *lac* operon).
5. Transmission of genetic material in Bacteria: Conjugation and gene recombination in *E.coli*, transduction and transformation.
6. Principles of genetic engineering / biotechnology; Basic genetic engineering techniques.
7. Application of genetics in plant improvement: Induction of genetic variability (gene mutation, recombination), physical and chemical mutagens, selection, hybridization and plant breeding techniques. Development and release of new varieties.
8. Introduction to germplasm conservation
9. Evolution,

**Lab Work:**

**Cell Biology**

1. Study of cell structure using compound microscope and elucidation of ultrastructure from electron microphotographs
2. Measurement of cell size.
3. Study of mitosis and meiosis by smear/squash method and from prepared slides.
4. Study of chromosome morphology and variation in chromosome number.
5. Extraction and estimation of carbohydrate, protein, RNA and DNA from plant sources.

**Genetics**

1. Genetical problems related to transmission and distribution of genetic material.
2. Identification of DNA in plant material. Carmine/orcein staining.
3. Study of salivary gland chromosomes of *Drosophila*.

**Books Recommended**

1. Carroll, S.B., Grenier, J.K. and Welnerbee, S.d. 2001. From DNA to Diversity - Molecular Genetics and the Evolution of Animal Design. Blackwell Science.
2. Dyonsager, V.R. (1986). Cytology and Genetics. Tata and McGraw Hill Publication Co. Ltd., New Delhi.
3. Hoelzel, A. R. 2001. Conservation Genetics. Kluwer Academic Publishers.
4. Lewin, R, 1997. Principles of Human Evolution. Blackwell Science.
5. Lodish, H. 2001. Molecular Cell Biology. W. H. Freeman and Co.
6. Sinha, U. and Sinha, S. (1988). Cytogenesis Plant Breeding and Evolution, Vini Educational Books, New Delhi.
7. Strickberger, M.V. (1988), Genetics, MacMillan Press Ltd., London.

**Course Title: Plant Physiology and Ecology**

**Course Code: BOT 241**

**Credit Hours: 4(3+1) Marks: 125**

**SEMESTER-4**

**BOT 241                      Plant Physiology and Ecology                      4(3+1)**

**Specific objectives of course:**

1. To provide comprehensive knowledge of functioning of organs, organelles and biomolecules,
2. To enable the students to assess the effects of various environmental factors on plant growth and development.

**Course Outline:**

**a) Plant Physiology**

1. Water relations (water potential, osmotic potential, pressure potential, matric potential). Absorption and translocation of water. Stomatal regulation.
2. Mineral nutrition: Soil as a source of minerals. Passive and active transport of nutrients. Essential mineral elements, role and deficiency symptoms of macronutrients.
3. Photosynthesis: Introduction, Oxygenic and non-oxygenic photosynthesis Mechanism: light reactions (electron transport and photophosphorylation) and dark reactions (Calvin cycle). Differences between C<sub>3</sub> and C<sub>4</sub> plants. Factors affecting this process, Products of photosynthesis.
4. Respiration: Definition and respiratory substrates. Mechanism-Glycolysis, Krebs cycle. Electron transport and oxidative phosphorylation. Anaerobic respiration. Energy balance in aerobic and anaerobic respiration, Respiratory quotients.
5. Plant Movements: Classification and Types of Plant movements.

**b) Ecology**

1. Introduction, aims and applications of ecology.
2. Soil: Physical and Chemical properties of soil (soil formation, texture, pH, EC, organism and organic matter etc) and their relationships to plants.
3. Light and Temperature. Quality of light, diurnal and seasonal variations. Ecophysiological responses.
4. Water: Field capacity and soil water holding capacity. Characteristics of xerophytes and hydrophytes. Effect of precipitation on distribution of plants.
5. Wind: Wind as an ecological factor and its importance.
6. Population Ecology: Introduction. A brief description of seed dispersal and seed bank.
7. Community Ecology
  - i. Ecological characteristics of plant community
  - ii. Methods of sampling vegetation (Quadrat and line intercept)
  - iii. Major vegetation types of the local area.
8. Ecosystem Ecology
  - i. Definition, types and components of ecosystem.
  - ii. Food chain and Food web.
9. Applied Ecology: Causes, effects and control of water logging and salinity with respect to Pakistan

**Lab Work:**

**a) Plant Physiology**

1. Preparation of solutions of specific normality of acids/bases, salts, sugars, molal and molar solutions and their standardization.
2. Determination of uptake of water by swelling seeds when placed in sodium chloride solution of different concentrations.
3. Measurement of leaf water potential by the dye method.
4. Determination of the temperature at which beet root cells lose their permeability.
5. Determination of the effects of environmental factors on the rate of transpiration of a leafy shoot by means of a porometer/cobalt chloride paper method.
6. Extraction of chlorophyll from the leaves and separation of component pigments on a paper chromatogram. Study of absorption spectra using spectrophotometer.
7. Estimation of oxygen utilized by a respiring plant by Winkler's method.

**b) Ecology**

1. Determination of physical and chemical characteristics of soil.
2. Measurements of various population variables
3. Measurement of vegetation by Quadrat and line intercept methods.
4. Field trips to ecologically diverse habitats.
5. Measurements of wind velocity.
8. Measurement of light and temperature.
9. Effect of light and temperature on seed germination.

**Recommended Books:**

1. Ihsan, I. 1995. Plant Physiology, Biochemical Processes in Plants, UGC Press.
2. Witham and Devlin. 1986 Exercises in Plant Physiology, AWS Publishers, Boston.
3. Taiz, L. and Zeiger, E. 2006. Plant Physiology. 4th. Ed. Sinauers Publ. Co. Inc. Calif.
4. Salisbury F. B. and Ross C. B. 1992. Plant Physiology. 5th Edition. Wadsworth Publishing Co. Belmont CA.
5. Hopkins, W. B. 1999. Introduction to Plant Physiology. 2nd Ed. John Wiley and Sons. New York
6. Schultz, J. C. 2005. Plant Ecology. Springer-Verlag, Berlin.23
7. Ricklefs, R. E. 2000. Ecology. W. H. Freeman and Co., UK.
8. Ricklefs, R. E. 2001. The Economy of Nature. W. H. Freeman and Co., UK.
9. Barbour, M. G., J. H. Burke and W. D. Pitts. 1999. Terrestrial Plant Ecology, The Benjamin, Cumming Publishing Co. Palo Alto, California, USA.
10. Chapman, J. L. and Reiss, M. J. 1995. Ecology: Principles and Applications. Cambridge University Press.
11. Hussain F. 1989. Field and Laboratory Manual of Plant Ecology. National Academy of Higher Education, Islamabad.
12. Hussain, S. S. 1989. Pakistan Manual of Plant Ecology; National Book Foundation, Islamabad.



**Course Title: Introduction to Biostatistics**

**Course Code: STAT 218**

**Credit Hours: 3(2+1) Marks: 100**

**Introduction to Biostatistics**

**Theory**

1. Introduction and scope: definition; characteristics, importance and limitations, population and samples.
2. Frequency distribution and probabilities: Formation of frequency table from raw data, histograms. Applications of probabilities to simple events.
3. Measures of central tendencies and dispersion: Arithmetic mean, median, mode, range, variance, standard deviation, standard error of the mean, mean deviation, semi interquartile range.
4. Standard distributions: Binomial, Poisson and normal distributions, properties and applications. Normality.
5. Tests of significance: Introduction:
  - i) t-test: Basic idea, confidence limits of means, significant difference of means.
  - ii) Chi square test: Basic idea, testing goodness of fit to a ratio, testing association (contingency table).
  - iii) F-test: Introduction and application in analysis of variance.
  - iv) LSD test, Duncan's New Multiple Range test (for comparison of individual means). Bonferroni test.

Design of experiment: Concept of design, principles of experiment, planning of an experiment, replication and randomization, field plot technique, layout and analysis of completely randomized design, randomized complete block design, Latin square, factorial design, treatment comparison.

6. Brief account of correlation and linear regression.

**Lab work:**

1. Probability of simple events.
2. Data collection, arrangement of data in frequency table.
3. Calculation of mean from grouped and ungrouped data.
4. Calculation of variance and standard deviation from grouped and ungrouped data.
5. Binomial distribution.
6. T-test.
7. Poisson distribution,
8. Chi square test.
9. Analysis of variance - one factor design
10. Analysis of variance - two way analysis
11. Analysis of variance - for latin square

12. Analysis of variance - for factorial design.
13. Correlation.
14. Linear Regression.

**Books Recommended**

1. Bailey, N.T.J. 1994. Statistical Methods in Biology, Cambridge University Press.
2. Fernholz L.T, Morgenhaler, S., Stahel, W. 2000. Statistics in Genetics and in Environmental Sciences, Birkhauser Verlag;.
3. Kuzma J.W. and Bohnenblust, S.E. 2001, Basis Statistics for the Health Sciences, McGraw-Hill International Education.
4. Quinn, G. 2002. Experimental Design and Data Analysis for Biologists. Cambridge University Press.
5. Wonnacott, T.H, and Wonnacott. R.J. 1990, Introductory Statistics, John Wiley and Sons.
6. Zar J.H. 1999. Biostatistical Analysis., Pearson Education

**Course Title: Biodiversity and Conservation**

**Course Code: BOT 242**

**Credit Hours: 4(3+1) Marks: 125**

**BOT 242**

**Biodiversity and Conservation**

**Theory**

1. Introduction and importance of biodiversity: Species diversity, Ecological diversity, Genetic diversity, Social diversity
  - Causes and depletion of biodiversity: Habitat loss, Habitat fragmentation, Over-exploitation, Climatic changes, Invasive species, .Seawater intrusion
  - The value of species
  - How species become endangered?
  - Extinction of species, present rate. Theory of mass extinction
  - Inventory and monitoring of biodiversity
  - Importance of red data book
  - *In situ* and *ex situ* conservation of plants
  - Implementation of laws (protection and conservation of various taxa.
  - Sustainable use of biodiversity (plant wealth)
  - Protected areas of Pakistan
  - Criteria for determining different categories of protected areas
  - Baseline study

- Impact assessment
- Management plan for protected area
- IUCN categories for threatened species
- Criteria for recognizing different categories of threatened species
- Gene bank management and operation
- Public awareness strategies.
- Population explosion
- Biodiversity action plan for Pakistan
- Role of herbaria and botanical gardens in conservation.

### Lab Work:

1. Causes of local species extinction.
2. To study the hilly and plane area of Pakistan.
3. Data collection.
4. Preparation of an inventory of the flora of a given region.
5. To carry on base line study of any designated category.

### Book Recommended

1. Bush, M.B. 1997. Ecology of a Changing Planet. Prentice Hall.
2. Cotton, C.M. (1996). Ethnobotany Principle Application. John Wiley & Sons Chichester, UK.
3. Cunnighum, A.B. 2001. Applied ethnobotany: People, wild plant use and conservation. Earthspan Publications.
4. De Klemm, C. (1990) Wild plant conservation, IUCN, Gland.
5. Dyke, F.V. (2003). Conservation Biology. Mc Graw Hill, New York.
6. Grombridge, B. & Jenkins, M. D. (2002). World Atlas of Biodiversity: Earths Living Resources in the 21st. Century, University. California Press, Berkeley.
7. Heywood, V.H. 1995. Global Biodiversity Assessment. Cambridge University Press and UNEP.
8. Krishnamurthy, K.V. 2003. A Textbook of biodiversity Science publishers Inc. Enfield, NH, USA.
9. Levine, D.A. 2000. The origin, expansion and demise of plant species. Oxford University Press.
10. Ministry of Environment, IUCN, WWF. 1998. Biodiversity Action Plan for Pakistan.
11. Primack, R.B. 1998. Essentials of conservation Biology. Sinaur Association Pub. Mass. USA.
12. Virchow, D. (1998). Conservation of Genetic Resources. Springer-Verlag, Berlin

## STATISTICS

### INTRODUCTION TO PROBABILITY DISTRIBUTIONS STAT 112 Cr. Hr. 03

#### Course Contents:

**Introduction:** Random Variables (Discrete and Continuous), Probability mass and density functions, Distribution function, Joint, marginal and conditional probability Distribution. Mathematical Expectations. Mean and Variance of a random variable.

**Discrete Probability Distribution:** Bernoulli trials. Applications and fitting of Binomial, Poisson, hypergeometric, Negative Binomial and Geometric distributions.

**Continuous Probability Distribution:** Normal Distribution, Standard Normal Curve, Normal approximation to binomial and Poisson distributions.

#### Books Recommended

- i. Spiegel, M.R., Schiller, J.L. and Sirinivasan, R.L. (2000) "Probability and Statistics", 2<sup>nd</sup> ed. Schaums Outlines Series. McGraw Hill. NY.
- ii. Walpole, R.E., Myers, R.H and Myers, S.L. (1998), "Probability and Statistics for Engineers and Scientist" 6<sup>th</sup> edition, Prentice Hall, NY.
- iii. Chaudhry, S.M.and Kamal, S. (1996), "Introduction to Statistical Theory" Parts I & II, 6<sup>th</sup> ed, Ilmi Kitab Khana, Lahore, Pakistan.

### BASIC STATISTICAL INFERENCE STAT 213 Cr. Hr. 03

#### Course Contents:

**Introduction:** Inferential Statistics, Estimation and Testing of Hypothesis,

**Estimation:** Types of Estimation (Point and Interval), Properties of a Good Estimator, Interval Estimation of population mean and proportion (large and small samples). Interval estimation for the differences of two population means and proportions (for independent and dependent samples). Interval estimation for population variance. Sample size estimation to estimate population mean and proportion.

**Hypothesis Testing:** Nature of Hypothesis Testing, Types of errors. General Procedure for Testing Hypothesis. Power of Test. Hypothesis Testing for Population Mean, Proportion (Large and small samples). Testing hypothesis for the differences of two population means and proportions (for independent and dependent samples).

**Chi-Square Tests:** Chi-Square distribution, Testing population variance, Goodness of fit test, test of association of two categorical variables.

**Books Recommended**

- i. \*Johnson, R and Kubly, P. (2004) “Elementary Statistics” 9<sup>th</sup> Edition Brooks/Cole, a division of Thomson Learning, Inc. USA
- ii. Spiegel, M.R., Schiller, J.L. and Sirinivasan, R.L. (2000) “Probability and Statistics”, 2<sup>nd</sup> ed. Schaums Outlines Series. McGraw Hill. NY.
- iii. Walpole, R.E., Myers, R.H. and Myers, S.L. (1998), “Probability and Statistics for Engineers and Scientist” 6<sup>th</sup> edition, Prentice Hall, NY.
- iv. Chaudhry, S.M. and Kamal, S. (1996), “Introduction to Statistical Theory” Part II, 6<sup>th</sup> ed, Ilmi Kitab Khana, Lahore, Pakistan.

**INTRODUCTION TO REGRESSION ANALYSIS AND EXPERIMENTAL DESIGN**

STAT 215

**Cr. Hr. 03**

**Course Contents: Regression and Correlation:** Historical Origin of the Term Regression, The Modern Interpretation, Statistical Versus Deterministic Relationships, Regression Versus Causation, Regression Versus Correlation, The meaning of term ‘linear’. Simple Linear regression, linear correlation: simple, partial and multiple correlation. Inference regarding correlation coefficient. Coefficient of determination.

**Design and Analysis of Experiment:** The concept of Experiment, Basic Principles, Guidelines for Designing Experiments, A brief history of Statistical Design. Basic definitions of terms, Treatment, Experimental Units, Sampling Units, Experimental Error, Yields, Block, Replication, Repetition, Random Assignment. General Concept of ANOVA models, Fixed and Random effect models. One-Way and Two-Way Analysis of Variance (ANOVA)

**Books Recommended**

- i. \*Gujrati, D. (2003). “Basic Econometrics”, 4<sup>th</sup> Edition International Edition McGraw Hill, New York.
- ii. \*Montgomery, D.C. (2007). “Design and Analysis of Experiments”, 5<sup>th</sup> Edition, John Wiley, New York.
- iii. Chaudhry, S.M., and Kamal, S., (1996), “Introduction to Statistical Theory” Part I, II, 6<sup>th</sup> ed, Ilmi Kitab Khana, Lahore, Pakistan.

**APPLIED STATISTICS**

STAT-216

**Cr. Hr. 03**

**Course Contents:**

**Sampling:** Introduction to Applied Statistics, Need for Sampling, Probability and Non-Probability sampling, Simple Random sampling, Stratified, Systematic and Cluster sampling. Census and Sample surveys, Sampling and Non-Sampling Errors.

**Index numbers:** Construction and uses of index numbers, un-weighted index numbers (simple aggregative index, average of relative price index numbers). Weighted index numbers (Laspeyres, Paaches and Fishers ideal index numbers). Consumer price index (CPI) and Sensitive Price Indicators.

**Time Series Analysis:** Brief overview, time plot and components of time series, descriptive analysis of time series data.

**Vital Statistics:** Meaning of vital statistics, registrations of Birth and death in Pakistan. Uses of vital statistics, short comings of vital statistics, rates and ratios (Sex ratio, child women ratio, birth and death ratio, population growth rate, classification of natal rates, death rates or mortality rates, crude death rate, specific death rate, infant mortality rate, case fatality rate, fertility rates, crude birth rate, specific birth rate, standardized death rate, reproduction rates, gross reproduction rate, net reproduction rate, morbidity or sickness rates, marriage rates, divorce rates etc. general; fertility rate, total fertility rate.)

**Books Recommended**

- i. \*Chaudhry, S.M. and S. Kamal, (1996), "Introduction to Statistical Theory" Part I, II, 6<sup>th</sup> Ed, Ilmi Kitab Khana, Lahore, Pakistan.
- ii. Cochran, W.G. "Sampling Techniques".3<sup>rd</sup> Ed.
- iii. \*Pollard, A.H.. Yousuf, F. and Pollard G.M. (1982), "Demographic Techniques", Pergamon Press, Sydney.

**STATISTICAL PACKAGES**

STAT 220

**Cr. Hr. 03**

**Course Contents:**

**Introduction:** Statistical Packages, Usefulness and Shortcomings, SPSS vs Minitab vs R

**SPSS and Minitab:** Data Input, Descriptive Statistics, General Linear Model, Regression and Correlation, Compare Means, Random Number Generation, Variables Transformation, and Graphs in SPSS and Minitab.

**R: Data Input-** Data Types, Importing Data, Keyboard Input, Exporting Data, Viewing Data, Variable Labels, Value Labels, Missing Data, Date Values **Data Management-** Creating New Variables, Operators, Built-in Functions, Control Structures, User-defined Functions, Sorting Data, Merging Data, Aggregating Data, Reshaping Data, Subsetting Data, Data Type Conversion **Statistics-** Descriptive Statistics, Frequencies & Crosstabs, Correlations, t-tests, Regression, ANOVA. **Graphs-** Creating a Graph, Histograms and Density Plots, Dot Plots, Bar Plots, Line Charts, Pie Charts, Boxplots, Scatterplots

**Note:** Use of any other statistical package based upon the availability of the Software.

**Books Recommended**

- i. Ryan, Barbara F.; Joiner, Brian L. and Cryer, Jonathan D.(2005) MINITAB Handbook, 5<sup>th</sup> Edition, Duxbury Press, California.
- ii. Quick R website <https://www.statmethods.net/graphs/index.html>
- iii. Marques de Sá, Joaquim P.( 2003) Applied Statistics using SPSS, STATISTICA and MATLAB

**LINEAR ALGEBRA**

STAT 214

**Cr. Hr. 03**

**Course Contents:**

Algebra of matrices, determinants, matrix of a linear transformation, row and column operations, rank, inverse of matrices, solution of homogeneous and non-homogeneous equations, orthogonal transformation. Vector spaces, subspaces, linear dependence and independence, linear span of a subset of a vector space, bases and dimensions of a vector space, sums and direct sums of subspaces of a finite dimensional vector space, dimension theorem, linear transformation, null space, image space of linear transformation, rank and nullity of a linear transformation, relation between rank, nullity and dimension of the domain of a linear transformation, matrix of linear transformation, change of basis, inner product spaces, orthogonal and orthonormal basis, similar matrices and diagonalization of a matrix, Home (V,W), dimension and basis of Home (V,W), dual space and dual basis, annihilators, Eigen values and Eigen vectors and minimal polynomials. Inner product spaces and its various characteristics. Norms of a vectors and normed spaces.

**Recommended Books:**

- i. S. J. Axle, Linear Algebra Done Right, Undergraduate Texts in Mathematics, 1996, Springer, New York, Schaum's outlines series
- ii. G. Birkhoff, S. Maclane, A Survey of Modern Algebra (4th edition), AKP
- iii. W. L. C. Perry, Elementary Linear Algebra, 1988, McGraw-Hill, New York.

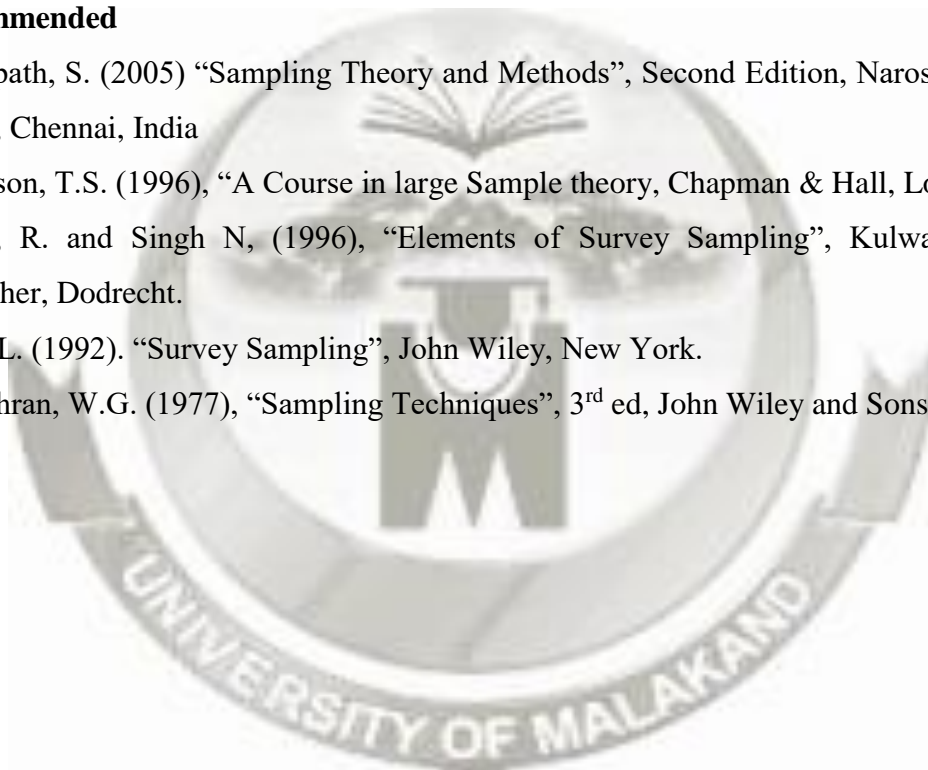
**SAMPLING TECHNIQUES-I**      STAT 221

**Cr. Hr. 3**

**Course Contents:** Basic concepts, bias, sampling and non-sampling errors. Selection and estimation procedures. Description and properties of simple random sampling. Sampling for proportions and percentages. Estimation of variances, standard errors and confidence limits. Sample size determination under different conditions. Description and properties of stratified random sampling. Formation of strata, Different methods of allocation of sample size. Systematic sampling, Ratio sampling, Product sampling, and Regression methods of estimation in simple and stratified random sampling.

**Books Recommended**

- i. \*Sampath, S. (2005) "Sampling Theory and Methods", Second Edition, Narosa Publishing house, Chennai, India
- ii. Ferguson, T.S. (1996), "A Course in large Sample theory, Chapman & Hall, London.
- iii. Singh, R. and Singh N, (1996), "Elements of Survey Sampling", Kulwar Academic Publisher, Dodrecht.
- iv. Kish, L. (1992). "Survey Sampling", John Wiley, New York.
- v. \* Cochran, W.G. (1977), "Sampling Techniques", 3<sup>rd</sup> ed, John Wiley and Sons, New York.





## BIO-CHEMISTRY

### ORGANIC CHEMISTRY

**Course Code: BCH 111**

**Credit Hours: 2+1**

#### *Course Objective*

The specific objectives are as follow;

- To offer basic concepts of organic chemistry
- To develop an understanding of hydrocarbons, reactivity of functional groups and stereochemistry
- To impart practical skills

#### *Learning Outcome*

Students completing this course will be able to;

- 1) Explain basic concepts of organic chemistry
- 2) Understand the mechanistic pathways for synthesis of molecules
- 3) Apply acquired knowledge in the allied fields of chemistry
- 4) Perform any laboratory-related task within the scope of course independently

#### *Course Outline*

Bonding and hybridization localized and delocalized bonding, aromaticity, inductive effect, dipole moment, resonance and its rules, hyper-conjugation, classification and nomenclature of organic compounds. Different types of organic reactions and mechanism. Saturated, unsaturated and aromatic hydrocarbons with emphasis on synthesis and free radical, electrophilic addition and substitution reactions; preparation and properties of alcohols, phenols, ethers, amines, carbonyl compounds; Types of stereoisomers, RS and EZ notation, optical activity, stereo-selectivity and stereo-specificity, conformational analysis.

#### *Practicals*

- Qualitative analysis of compounds with different functional groups.
- Techniques for the synthesis of organic compounds like reflux, distillation, filtration, recrystallization, and yield calculation.
- Preparation of benzanilide from benzoyl chloride, succinic anhydride from succinic acid, phthalimide from phthalic anhydride, oximes and hydrazones from carbonyl compounds, and an ester from a carboxylic acid and alcohol.

### ***Recommended Books***

- 1) Clayden J., Greeves N., Warren S., *Organic Chemistry*. Oxford University Press, (2012).
- 2) John, E. M., *Organic Chemistry*, 8<sup>th</sup> Ed. Brooks/Cole Publishing Co, (2012).
- 3) Younus M., *A Textbook of Organic Chemistry*, Ilmi Kitab Khana, Urdu Bazar, Lahore, (2006).

## **INTRODUCTORY BIOCHEMISTRY**

**Course Code: BCH 102**

**Credit Hours: 2+1**

### ***Course Objective***

This course will provide:

- Fundamental concepts in biochemistry
- Understanding of classification, structures, properties and biological functions of major macromolecules
- Basic laboratory skills

### ***Learning Outcome***

After completing this course students should be able to:

- 1) Understand the scope of biochemistry
- 2) Understand the biochemical basis of life
- 3) Acquire basic knowledge of biomolecules

### ***Course Outline***

A general introduction to the science of biochemistry; Importance and the scope of biochemistry; Prebiotic molecular evolution and rise of living systems; Forms, functions and brief classification of prokaryotes; Cellular architecture and diversity of eukaryotes; Structure, physical properties and importance of water; pH and buffer; Biologically important organic compounds; Composition, properties and functions of proteins, carbohydrates, lipids and nucleic acids; Brief introduction of vitamins, hormones and enzymes

### ***Practicals***

- Safety measures in the laboratory
- Preparation of solutions routinely used in biochemical experiments (e.g., percent, normal and molar solutions)
- pH determination using various methods
- Preparation of buffers

***Recommended Books***

- 1) Rodwell, V. W., Bender, D. A., Botham, K. M., Kennelly, P. J., Weil, P. A., *Harper's Illustrated Biochemistry*, 31<sup>st</sup> Ed. McGraw-Hill Education, (2018).
- 2) Mathews, C. K., Van Holde, K. E., Ahern, K.G. *Biochemistry*. 3<sup>rd</sup> Ed. Prentice Hall (1999).
- 3) Voet, D. J., Voet, G.J. Pratt, C. W., *Fundamentals of Biochemistry: Life at the Molecular Level*. 3<sup>rd</sup> Ed. Wiley & Sons Inc, (2008)

**CARBOHYDRATES AND LIPIDS**

**Course Code: BCH 104**

**Credit Hours: 2+1**

***Course Objective***

- To demonstrate the in-depth knowledge on occurrence, classification, chemical structure, physical properties and biological importance of different types of carbohydrates and lipids
- To impart practical knowledge of different methods for qualitative and quantitative analysis of carbohydrates and lipids

***Learning Outcome***

- 1) Acquire detailed knowledge of structures, properties and involvement of different types of carbohydrates and lipids in different parts of the biological system
- 2) Analyse different types of carbohydrates and lipids
- 3) Use different instruments and equipment for analysis of biomolecules

***Course Outline***

Introduction, occurrence and biological significance of carbohydrates; Nomenclature and classification of carbohydrates; Structures, chemical and physical properties of monosaccharides, oligosaccharides and polysaccharides; Blood groups, Oligo and polysaccharides and their importance in blood transfusion, and tissue/organ transplants; Introduction, classification and biological functions of lipids; Classification, nomenclature, structures and properties of fatty acids; Structure and properties of simple and mixed triglycerides and waxes; Structure, properties and functions of phospholipids, sphingolipids and glycolipids; Lipoprotein system: Chylomicrons, HDL, LDL, IDL and VLDL and their functions; Chemical structures and functions of Prostaglandins, thromboxanes and leukotrienes; Structure and biological significance of cholesterol, bile salts, bile acids and other steroids

***Practicals***

- Qualitative and quantitative analysis of carbohydrates in unknown samples
- Extraction of starch from plant sources and its confirmative tests
- Extraction of lipids from animal and plant sources

- Extraction of Glycogen from animal sources
- Qualitative tests for lipids and fatty acids
- Determination of saponification value, rancidity, acid value, iodine value and Reichert – Meissl number

***Recommended Books***

- 1) Mathews, C. K., Van Holde, K. E., Ahern, K.G., *Biochemistry*. 3<sup>rd</sup> Ed. Prentice Hall (1999).
- 2) Nelson, D. L., Cox, M. M., *Lehninger's Principles of Biochemistry*. 17<sup>th</sup> Ed. W. H. Freeman (2017).
- 3) Voet, D. J., Voet, G.J. Pratt, C. W., *Fundamentals of Biochemistry: Life at the Molecular Level*. 3<sup>rd</sup> Ed. Wiley & Sons Inc, (2008).

**INORGANIC CHEMISTRY**

**Course Code: CHEM 151**

**Credit Hours: 2+1**

***Course Objective***

The specific objectives are:

- To provide an overview of fundamental topics in inorganic chemistry
- To give an understanding of underlying concepts of chemical bonding, acid-base equilibria, p-block elements and stoichiometry
- To galvanize the practical approach against the prescribed content

***Learning Outcome***

Students completing this course will be able to;

- 1) Acquire the basic knowledge of inorganic chemistry
- 2) Identify the scope in related fields
- 3) Take on laboratory tasks relevant to inorganic chemistry

***Course Outline***

**Chemical Bonding**

Types of chemical bonding, ionic, covalent bonding, and localized bond approach; Theories of chemical bonding, valence bond theory (VBT), hybridization and resonance, prediction of molecular shapes using Valence Shell Electron Pair Repulsion (VSEPR) model, molecular orbital theory (MOT) application on diatomic molecules, delocalized approach to bonding, bonding in electron-deficient compounds, hydrogen bonding.

**Acids and Bases**

Brief concepts of chemical equilibrium, acids and bases including soft and hard acids and bases (SHAB); Concept of the relative strength of acids and bases, significance of pH, pKa, pKb and buffer solutions; Theory of indicators, solubility, solubility product, common ion effect and their industrial applications.

### P-Block Elements

Physical and chemical properties of p-block elements (Group V); Halogens, inter-halogens, pseudo-halogens and polyhalides

### Stoichiometry

Atomic masses, mole, molar mass, percentage composition, balancing equations; Determining the formula of a compound, stoichiometric calculations; reactants and products, calculation involving rate-limiting reactant.

### **Practicals**

- Lab safety and good laboratory practices, material safety data sheets (MSDS).
- Disposal of chemical waste and first-aid practices.
- Qualitative analysis of salt mixtures.
- Quantitative analysis through acid-base titrations.
- Preparation and standardization of acid and alkali solutions.
- Redox titrations; preparation and standardization of potassium permanganate solution and its use for the determination of purity of commercial potassium oxalate or oxalic acid, preparation and standardization of sodium thiosulfate solution and its use in the determination of copper in a given sample.
- Gravimetric analysis; determination of barium in a given sample, determination of chloride in a given solution.

### **Recommended Books**

- 1) Cotton, F. A., Wilkinson, G., *Advanced Inorganic Chemistry*, 6<sup>th</sup> Ed. John-Wiley & Sons, (2007).
- 2) House, J. E., *Inorganic Chemistry*, Academic Press, (2008).
- 3) Chaudhary S. U., *Textbook of Inorganic Chemistry*, Ilmi Kitab Khana, Lahore, (2013).

## **PHYSICAL CHEMISTRY**

**Course Code: CHEM 271**

**Credit Hours: 2+1**

### ***Course Objective***

The specific objectives are:

- To understand the basic concepts of physical chemistry
- To strengthen the understanding of principles of kinetics and thermodynamics
- To attire graduates with elementary practical skills

### ***Learning Outcome***

Students completing this course will be able to;

- 1) Elaborate the fundamental principles of physical chemistry
- 2) Analyse physical chemistry-related matters
- 3) Apply the obtained knowledge of physical chemistry in biochemical sciences

### ***Course Outline***

#### **States of Matter & Solution Chemistry**

State function, ideal and real gases, the real gas equation; Physical properties of liquids, surface tension, viscosity, refractive index, dipole moment and their applications; Amorphous and crystalline Solids; Ideal and non-ideal solution, Raoult's law and its applications; Henry's law, osmotic pressure and its measurement

#### **Chemical Thermodynamics & Equilibrium**

Introduction to thermochemistry; Laws of thermodynamics (first, second & third) and their applications, pressure-volume work, reversible and non-reversible processes; Spontaneous and non-spontaneous processes, relations of entropy and Gibbs free energy with the equilibrium constant; General equilibrium expressions, reaction quotients

#### **Chemical Kinetics**

The rates of reactions; Order of reactions; zero, first, second and third-order reactions with same initial concentrations, half-lives of reactions; Experimental techniques for rate determination & order of reaction (integration, half-life, initial rate, and graphical methods), Arrhenius equation.

**Practicals**

- Determination of viscosity and refractive index of liquids.
- Determination of percent composition of liquid solutions viscometrically.
- Determination of refractive index and molar refractivity.
- Determination of percent composition of liquid solutions by refractive index measurements.
- Determination of molecular weight of a compound by elevation of boiling point (ebullioscopic method).
- Determination of molecular weight of a compound by lowering of freezing point (cryoscopic method).
- Determination of heat of solution by solubility method.
- Determination of heat of neutralization of an acid with a base. Kinetic study of acid-catalysed hydrolysis of ethyl acetate.

**Recommended Books**

- 1) Atkins, P., Paula, J. D., *Atkin's Physical Chemistry*, 9<sup>th</sup> Ed. Oxford University Press, (2010).
- 2) Chaudhary, S . U., *Textbook of Physical Chemistry*, 2<sup>nd</sup> Ed., Ilmi Kitab Khana Lahore, (2013).
- 3) Linder, B., *Elementary Physical Chemistry*, World Scientific Publishing Co. Pvt. Ltd., (2011).

**PROTEINS AND NUCLEIC ACIDS**

**Course Code: BCH 203**

**Credit Hours: 2+1**

**Course Objective**

The objectives of this course are:

- To understand the basic concepts related to the structure and functions of amino acids and proteins
- To acquire the knowledge of the chemistry of nucleic acids
- To understand the differences between RNA & DNA

**Learning Outcome**

After studying the course, the students will be able to:

- 1) Describe different levels of protein structure
- 2) Identify the different amino-acids and nucleic acids
- 3) Isolate and analyse the proteins and nucleic acids
- 4) Draw the chemical structure of amino acids and small peptides
- 5) Explain the double helix structure of DNA

### ***Course Outline***

**Proteins:** Introduction to amino acids and classification; Introduction to proteins and its types; Acid-base properties of amino acids; pH-dependent ionization of amino-acids; Identification of amino acids by different methods; Chemical and enzymatic reactions of amino acids; Structural organization of proteins; Protein denaturation and renaturation; Proteins sequencing.

**Nucleic acids:** Brief introduction of nucleic acids; Composition and structure of DNA & RNA; Types of DNA and RNA; Function of the DNA & RNA; Compaction of DNA in the nucleus; Extra-nuclear DNA

### ***Practicals***

- Qualitative tests of proteins & amino acids: Biuret Test; Ninhydrin Test; Xanthoproteic Test; Pauly's Test; Hoplein's Test; Ehrich's Test; Sakaguchi Test; Sodium nitroprusside Test; Sullivan Test; sulphate Test Phosphate Test; Aldehyde Test;
- Extraction of proteins from plant sources and their confirmative tests.
- Separation of Amino Acids using Paper and Thin Layer Chromatography;
- Determination of total proteins by using different methods (Bradford, lowery and biuret methods); Protein estimation by using UV/Visible spectrophotometer
- Isolation of DNA and RNA from plants and blood sample

### ***Recommended Books***

- 1) McCammon, J., Harvey, S., *Dynamics of Proteins and Nucleic Acids*. Cambridge University Press, (1987).
- 2) *Proteins and Nucleic Acids: The Biochemistry of Plants*. Marcus, A. (Editor). Elsevier (2014).
- 3) Rodwell, V.W., Bender, D. A., Botham, K. M., Kennelly, P. J., Weil, P. A., *Harper's Illustrated Biochemistry*, 31<sup>st</sup> Ed. McGraw-Hill Education, (2018).

## **ANALYTICAL CHEMISTRY**

**Course Code: BCH 223**

**Credit Hours: 2+1**

### ***Course Objective***

The specific objectives are:

- To provide basic concepts of analytical chemistry
- To offer knowledge of classical and instrumental techniques for analysis
- To develop expertise in practising chemistry in biochemical laboratories.

### ***Learning Outcomes***



Students completing this course will be able to;

- 1) Explain the fundamentals of analytical chemistry
- 2) Demonstrate an understanding of the working principles of different analytical techniques.
- 3) Analyse the chemical problems through a thought process and come up with the solution
- 4) Apply the learnt techniques in the laboratory for analysis of samples

### ***Course Outline***

#### Separation Methods

Principles of solvent extraction; Analytical separations, multiple batch extraction, counter current distribution, solid-phase extraction and solvent extraction by flow injection method; Principles of chromatography, classification of chromatographic techniques, an overview of the paper, thin layer, column, ion-exchange chromatography and electrophoresis.

#### Analytical Spectrophotometry

Properties of light and its interaction with matter, relation between frequency, velocity and wave number; Lambert-Beer's law and its limitations, single beam and double beam spectrophotometers, lamps and lasers as sources of light, monochromators, detectors, photomultiplier tube, photodiode array, charged coupled device; FT-IR spectroscopy, Fourier analysis, interferometry. Classical Analytical Methods: Acid-base, complexometric and redox titrations, gravimetric analysis.

#### ***Practicals***

- Calibration of volumetric glassware, electronic and analytical equipment.
- Determination of hardness of water using EDTA.
- Determination of chloride in a tap water sample.
- Estimation of copper, arsenic, hydrogen peroxide and vitamin C using iodometry.
- Gravimetric analysis, determination of cation in a mixture by complexometric titration, studying the effect of common ions on the solubility of sparingly soluble salts.
- Separation of sugars using paper chromatography.
- Determination of aspirin and caffeine in a proprietary analgesic by double beam UV-Vis. spectrometer.

#### ***Recommended Books***

- 1) Skoog, D. A., West, P. M., Holler, F. J., Crouch, S. R., *Fundamentals of Analytical Chemistry*, 9<sup>th</sup> Ed., Brooks Cole Publishing Company, (2013).
- 2) Christian, G. D., *Analytical Chemistry*, 6<sup>th</sup> Ed., John Wiley and Sons, (2006).
- 3) Pavia, D. L., Lampman, G. M., Kriz, G. S. and Vyvyan, J. A., *Introduction to spectroscopy*, 4<sup>th</sup> Ed., Cengage Learning, (2008).

## **ENZYMOLGY**

**Course Code: BCH 206**

**Credit Hours: 2+1**

### ***Course Objective***

- To impart knowledge about the nature of enzymes
- To provide an overview of reactions and impact of different factors on their rate
- To introduce the concept of catalysis and catalytic mechanisms

### ***Learning Outcome***

Upon successful completion of the course, the student will be able to:

- 1) Understand the catalytic properties and mechanisms of enzyme action
- 2) Understand and analyse the kinetics of enzyme-catalysed reactions.
- 3) Evaluate the effect of different types of inhibitors on enzyme activity
- 4) Perform enzyme assays

### ***Course Outline***

Introduction to enzymes, nomenclature, classification; and chemical nature of enzymes; Isoenzymes, coenzymes and role of cofactors; active site and regulatory sites; Enzyme specificity and different types; Kinetics of chemical reactions; Michaelis-Menten equation and other models used to understand kinetics; Multi-enzyme system and two substrate reactions; Enzyme Inhibition and types of inhibition; Ribozyme; Enzyme catalysis; catalytic strategies and mechanisms of different enzymes; Regulation of enzyme activity; Effect of various factors on rate of reactions; Immobilization of enzyme; applications of enzymes

### ***Practicals***

- Extraction and estimation of enzymes from plant and animal sources.
- Acid and enzymatic hydrolysis of glycogen and starch
- Effect of Temperature, substrate, enzyme concentration and heat on enzymes activity.

### ***Recommended Books***

- 1) Mathews, C. K., Van Holde, K. E., Ahern, K.G., *Biochemistry*. 3<sup>rd</sup> Ed. Prentice Hall (1999).
- 2) Rodwell, V.W., Bender, D. A., Botham, K. M., Kennelly, P. J., Weil, P. A., *Harper's Illustrated Biochemistry*, 31<sup>st</sup> Ed. McGraw-Hill Education (2018).
- 3) Nelson, D. L., Cox, M. M., *Lehninger's Principles of Biochemistry*. 17<sup>th</sup> Ed. W. H. Freeman, (2017).

## GEOLOGY

### COURSES DETAIL

#### GEOL. 301 GENERAL GEOLOGY

(3 CREDIT HOURS)

#### OBJECTIVES

This course is designed to acquire the knowledge about the basic concepts of Geology. This will help the students to get knowledge about various types of rocks and minerals and the processes of their formation.

#### COURSE CONTENTS

#### 4. INTRODUCTION TO GEOLOGY

##### E. SCOPE OF GEOLOGY

##### F. ORIGIN OF EARTH

##### G. AGE OF EARTH

- (iii) Methods of age determination
- (iv) Geological time scale

##### H. INTERIOR OF EARTH

- (vii) Internal structure of earth
- (viii) Physical properties of earth interior
- (ix) The Crust
- (x) The Mantle
- (xi) The Core
- (xii) Gravity and Isostasy

#### 5. INTRODUCTION TO MINERALS

- D. Definition
- E. Physical properties
- F. Example of minerals

#### 6. INTRODUCTION TO ROCKS

##### G. IGNEOUS ROCKS

- (vi) Crystallization of Magma
- (vii) Igneous textures
- (viii) Classification of igneous rocks
- (ix) Description of common igneous rocks
- (x) Volcanic activity

##### H. SEDIMENTARY ROCKS

- (vi) Classification of sedimentary rocks
- (vii) Changing sediments into sedimentary rocks
- (viii) Sedimentary structures
- (ix) Sedimentary environments
- (x) Description of common sedimentary rocks

**I. METAMORPHIC ROCKS**

- (vii) Metamorphism
- (viii) Agents of metamorphism
- (ix) Types of metamorphism
- (x) Structures of metamorphic rocks
- (xi) Texture and mineralogical changes in metamorphic rocks
- (xii) Description of common metamorphic rocks

**J. GEOLOGICAL STRUCTURES**

- (vii) Dip and strike
- (viii) Folds
- (ix) Faults
- (x) Unconformity
- (xi) Joints
- (xii) Mountain building

**K. WEATHERING AND SOIL**

- (vi) Weathering
- (vii) Types of weathering
- (viii) Soil
- (ix) Types of soil
- (x) Soil profile

**L. MASS WASTING AND GRAVITY PROCESSES**

- (iv) Mass wasting
- (v) Classification of mass wasting processes
- (vi) Permafrost and solifluction

**LAB WORK**

- F. Study of relief features with the help of models and topographic maps.
- G. Identification of common rocks
- H. Identification of common minerals.
- I. Use of brunton/silva compass
- J. Use of GPS.

**BOOKS RECOMMENDED**

- Physical Geology by Plummer, McGeay & Carlson, 2005.  
Principles of Physical Geology by Holmes, A., 1978, Nelson.  
Lab Manual for Physical Geology by Jones, Norris. W., Johnes, Charles E., 2005, McGraw-Hill.  
How Does Earth Work: Physical Geology and Process of Science by Smith, G. and Pun, A., 2006, Prentice Hall.

The Mapping of Geological Structures by McClay, K.R., 1987, Open University Press.  
Foster, R. J., General Geology. Merrill, Columbus.  
Tarbuck, E. J. and Lutgens, F. K., 1987. The Earth. Merrill, Columbus.

**GEOL. 302 GEOMORPHOLOGY**

**(3 CREDIT HOURS)**

**OBJECTIVES**

This course is designed to acquire the knowledge about the formation of various landforms on the surface of the earth. This will help the students to understand the processes by which the various types of structures developed on the earth surface due to erosional and depositional processes.

**COURSE CONTENTS**

- 1. INTRODUCTION TO MAPS**
- 2. INTRODUCTION TO AIREIAL PHOTOGRAPHS AND SATELLITE IMAGERIES**
- 3. EROSIONAL AND DEPOSITIONAL FEATURES OF GLACIERS**
  - A. Formation of glacier
  - B. Movement of glacier
  - C. Glacial erosion
  - D. Landforms created by glacier
- 4. EROSIONAL AND DEPOSITIONAL FEATURES OF SURFACE & SUBSURFACE WATER**
  - A. Stream erosion
  - B. Transport and deposition of sediments by streams
  - C. Stream valleys
  - D. Stages of development
  - E. Drainage pattern
  - F. Stream meandering
  - G. Development of flood plains
  - H. Erosional and depositional work of sea
  - I. Coastal landforms development
  - J. Movement of groundwater
  - K. Geological work of groundwater
  - L. Karst topography
- 5. EROSIONAL AND DEPOSITIONAL FEATURES OF WIND**
  - A. DESERTS**
  - B. GEOLOGICAL WORK OF WIND**
    - (i) Transportation of sediments
    - (ii) Erosion and deposits-landforms

**6. EARTHQUAKE**

- A. Definition
- B. Seismology
- C. Locating source of earthquake
- D. Intensity and magnitude
- E. Destruction by earthquake
- F. Prediction and control
- G. Earthquake belts

**7. PLATE TECTONICS**

- A. Plate tectonics
- B. Evolution of the concept of continental drifting
- C. Sea floor spreading, Paleomagnetism, Earthquakes
- D. Subduction related processes
- E. Rifting
- F. Wilson Cycle
- G. Mountain building

**LAB WORK**

Identification of geo morphological features by using topographic maps.

**BOOKS RECOMMENDED**

Geomorphology of Earth Surface Processes and Form by Aharma, V.K., 1986, McGraw Hill.  
Physical Geology by Plummer, McGeay & Carlson, 2005.  
Foster, R. J., General Geology. Merill, Columbus.  
Geomorphology by Chorley, R.J., 1984, Methuen.  
Image Interpretation in Geology by Drury, S.A., 1986, Allen & Unwin.  
Remote Sensing and Image Interpretation by Lillis, T.M. and Kiefer, R.W., 1987, John Wiley & Sons.  
Principles of Geomorphology by Thornbury, W.D., 1991, John Wiley & Sons.  
Tarbuck, E. J. and Lutgens, F. K., 1987. The Earth. Merill, Columbus.

**OBJECTIVES**

This course is designed to acquire the knowledge about the various types of fossils and their significance. This will help the students to understand various morphological features of fossils; their classification, identification and distribution in geologic time.

**COURSE CONTENTS**

Introduction to fossils and their significance

Modes of fossilization

Study of morphology, range and broad classification of major invertebrate phyla i.e. coelenterata, brachiopoda, mollusca, arthropoda (trilobite) and echinodermata (echinoidea).

Introduction to Paleobotany

Introduction and classification of major vertebrates i.e. mammals, amphibians, aves, reptiles and fishes.

**LAB WORK**

Megascopic identification and description of fossils up to genus level related to phyla studied.

Drawing, Labelling and description of fossil specimens.

**BOOKS RECOMMENDED**

Invertebrate Fossils by Moore, R.C., Lalicker, C.G. & Fischer, A.G., 1952, McGraw Hill.

Principles of Paleontology by Raup, D.M. & Stanley, S.M., 1985, W.H. Freeman & Co.

Vertebrate Paleontology by Romer, A.S., 1966, University Chicago Press.

Understanding Fossils : An Introduction to Invertebrate paleontology by Peter Doyle (Paperback - July 1996)

Invertebrate Paleontology and evolution by Clakson, E.N.K., 1998, Blackwell Publishing.

Genetics, Paleontology, and Macroevolution by Levinton, J.S., 2001, Cambridge University Press

**OBJECTIVES**

The main emphasis of this course is to educate students in  
Concepts of historic geology.  
Basics of Stratigraphy and its use in particular areas through geologic time.  
Stratigraphic set-up of Pakistan from Proterozoic to Carboniferous.

**COURSE CONTENTS**

Definition, evolution and basic principles.  
Geological Time Scale, its evolution and division.  
Classification and nomenclature of stratigraphic units: lithostratigraphic units, biostratigraphic units and chronostratigraphic units Formations, their recognition and nature of their contacts.  
Physiographic and geological division of the Indo-Pakistan subcontinent.  
Study of the basement complex as exposed in Sargodha and Sind.  
The Precambrian stratigraphy of the Salt Range, Attock-Cherat Range and Kashmir-Hazara area.  
The Cambrian and Ordovician stratigraphy and paleontology of Pakistan with special emphasis on the Salt Range.  
Silurian and Devonian stratigraphy and paleontology of Pakistan.  
The Silurian-Devonian Reef complex of Nowshehra, Pirsabak, Akhora Khattak, Tangi and Khyber.

**LAB WORK**

Making vertical stratigraphic columns on the basis of actual measurements of various stratigraphic units in a section and their identification  
Identification of rock samples collected from very well-known and typical stratigraphic units.

**RECOMMENDED BOOKS**

Principles of Stratigraphy by Weller, J.M., 1962, Harper Brothers.  
Stratigraphy of Pakistan by Shah, S.M.I. (Ed), 1977, Rec. Vol. 12, Geological Survey of Pakistan.  
Principles of Sedimentology and Stratigraphy by Boggs, S., 2001, Prentice Hall.  
Stratigraphic Code of Pakistan, Geological Survey of Pakistan, 1962, Memoirs of GSP, V.IV, Part-I.  
The Geology of Stratigraphic Sequences by Miall, A.D., 1997, Springer.  
Applied Stratigraphy by EAM Koutsoukos., 2005. Springer.  
Stratigraphy and historical geology of Pakistan by Kazmi, A.H and Abbasi, I.A., 2008, Graphic Publishers, Karachi, Pakistan.  
Kazmi and Jan 1997. Geology and Tectonics of Pakistan. Graphic Publisher Karachi.  
Kadri, 1995. Petroleum Geology of Pakistan PPL Karachi.  
Wadia, D. N., 1938. Geology of India. St. Martin Press, New York.



**OBJECTIVES**

This course is designed to acquire the knowledge about the structures and optical and textural features of various minerals. This will help the students to identify the minerals using polarizing microscope.

**COURSE CONTENTS**

**INTRODUCTION**

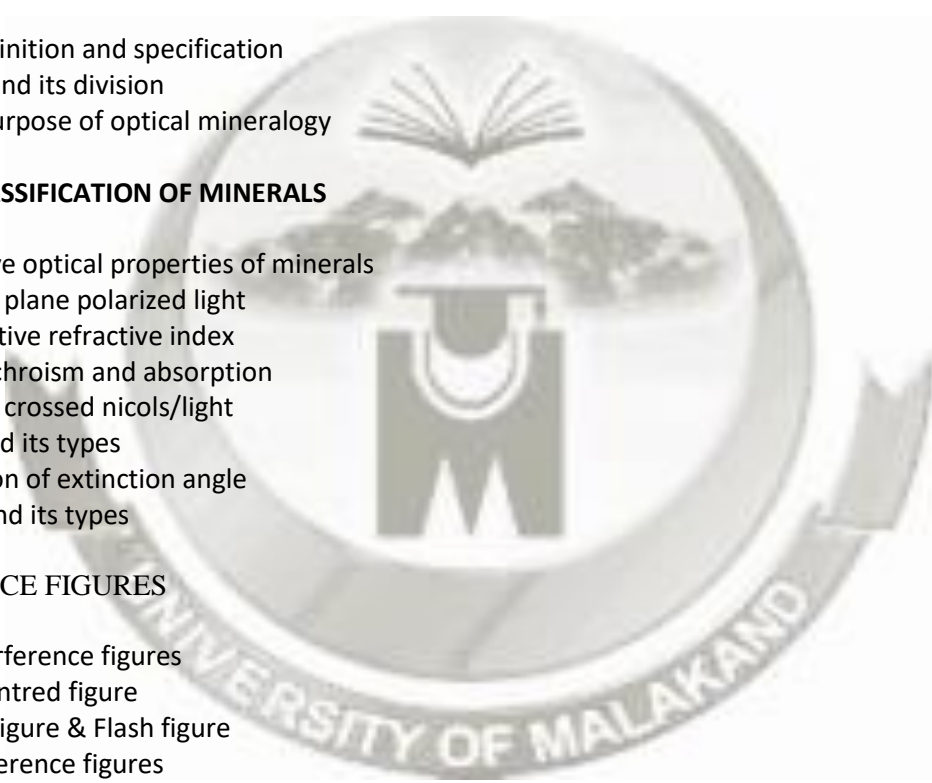
Mineral - definition and specification  
Mineralogy and its division  
Scope and purpose of optical mineralogy

**OPTICAL CLASSIFICATION OF MINERALS**

Determinative optical properties of minerals  
Properties in plane polarized light  
Relief & Relative refractive index  
Colour, pleochroism and absorption  
Properties in crossed nicols/light  
Extinction and its types  
Determination of extinction angle  
Elongation and its types

**INTERFERENCE FIGURES**

Uniaxial interference figures  
Optic axis-centred figure  
Off-centred figure & Flash figure  
Biaxial interference figures  
Acute bisectrix-centred figure  
Optic axis-centred & Off-centred figure  
Determination of optic sign  
Uniaxial & Biaxial minerals  
Optical Indicatrices & Isotropic indicatrix  
Anisotropic indicatrices  
Uniaxial & Biaxial Indicatrices  
Optic axial angle ( $2V$ )  
Dispersion and crystallographic orientation of X, Y and Z



### LAB WORK

The polarizing microscope  
Determination of the optical properties of minerals  
Relief and relative refractive index  
Colour, Pleochroism and absorption  
Pattern of cleavage traces (if any)  
Interference colour, Twinning (if any)  
Types of extinction & extinction angle  
Sign of elongation (determination of slow/fast ray directions in minerals)  
Interference figures, Determination of optic sign  
Recognition of some of the common minerals with the help of their optical properties  
Determination of the plagioclase composition (anorthite content) with the help of extinction angle

### RECOMMENDED BOOKS

Principles of Mineralogy by William. H.B., 1990, Oxford University Press.  
Mineralogy by Perkins, D., 2002, Prentice Hall.  
Optical Mineralogy by Kerr, P.F., 1959, McGraw Hill.  
Minerals and Rocks by Klein, C., 1989, John Wiley & Sons.  
Minerals in Thin Sections by Perkins, D., 2000, Prentice Hall.  
Introduction to Optical Mineralogy by Nesse, W.D., 2003, Oxford University Press.  
An Atlas of Minerals in Thin Section by Schulze, D.J., 2003, CD-RM, Oxford  
Dana, S. E. and Ford, W. E., 1962. A Textbook of Mineralogy. John Wiley & sons, New York.  
Hurlbut, C. S., Jr., 1971. Dana's Manual of Mineralogy. John Wiley & sons, New York.  
Berry, L. G. and Mason, B., 1959. Mineralogy. Freeman, San Francisco.

## GEOL. 406 CRYSTALLOGRAPHY & PETROGRAPHY (3 CREDIT HOURS)

### OBJECTIVES

To acquire the knowledge about the  
Crystal systems of different minerals  
Textures of different rocks

### COURSE CONTENTS

#### CRYSTALLOGRAPHY

Definition of crystals  
Internal structure of crystals  
Properties of crystals

#### 1. THE CONCEPT OF SYMMETRY OF CRYSTALS

Reflection, Rotation, Inversion  
Reflection rotation, Rotary inversion  
Elements of symmetry of crystals Planes

Rotation and rotary inversion axes  
Centre, Crystal notation  
Crystallographic axes  
Space lattices, Axial ratios  
Parameters, Indices, Forms, Crystal habit

**2. STEREOGRAPHIC PROJECTION IN CRYSTALLOGRAPHY**

Combination of symmetry operations

**3. DERIVATION OF ALL POSSIBLE SYMMETRY CLASSES**

Crystal systems and their classes  
Measurement of the angle of crystals  
Compound or twin crystals, Laws of twinning

**A. PETROGRAPHY**

Common textures in igneous rocks and minerals  
Common textures in metamorphic  
Common textures in sedimentary

**LAB WORK**

Study of planes, axes and centre of symmetry classes  
Study of forms, parameters and indices in crystal models  
Study of all possible crystal classes through models  
Measurement of angles of crystals  
Recognition of common rock textures

**RECOMMENDED BOOKS**

Igneous and Metamorphic Petrology by Best, M.G., 1982, W. H. Freeman & Co.  
Petrography of Igneous and Metamorphic Rocks by Philpotts, A.R., 1989, Prentice Hall.  
Crystallography by Gale Rhodes (Paperback - January 15, 2000)  
Petrology (A study of the Igneous, Sedimentary and Metamorphic Rocks) by Loren A Raymond, June 13, 2001).  
Tyrrell, G. W., 1963. The Principles of Petrology. Univ. Press, Aberdeen (UK).  
Bloss, F. D., 1961. An Introduction to the Methods of Optical Crystallography. Holt, Rinehart and Winston, New York.

**OBJECTIVES**

This course is designed to acquire the knowledge about the deformational structures and their kinematics in the crust. This will help in understanding the deformational mechanism of various types of rocks and the mapping of resultant structures.

**COURSE CONTENTS**

**DESCRIPTIVE ANALYSIS**

Introduction - geologic mapping  
Components of a geological map  
Mapping procedures

**KINEMATIC ANALYSIS**

Strain  
Computing changes in length of lines  
Computing changes in angle between lines  
Strain ellipse and ellipsoid  
Rotational and non-rotational strain  
Strain equations and Mohr's circle strain diagram

**DYNAMIC ANALYSIS**

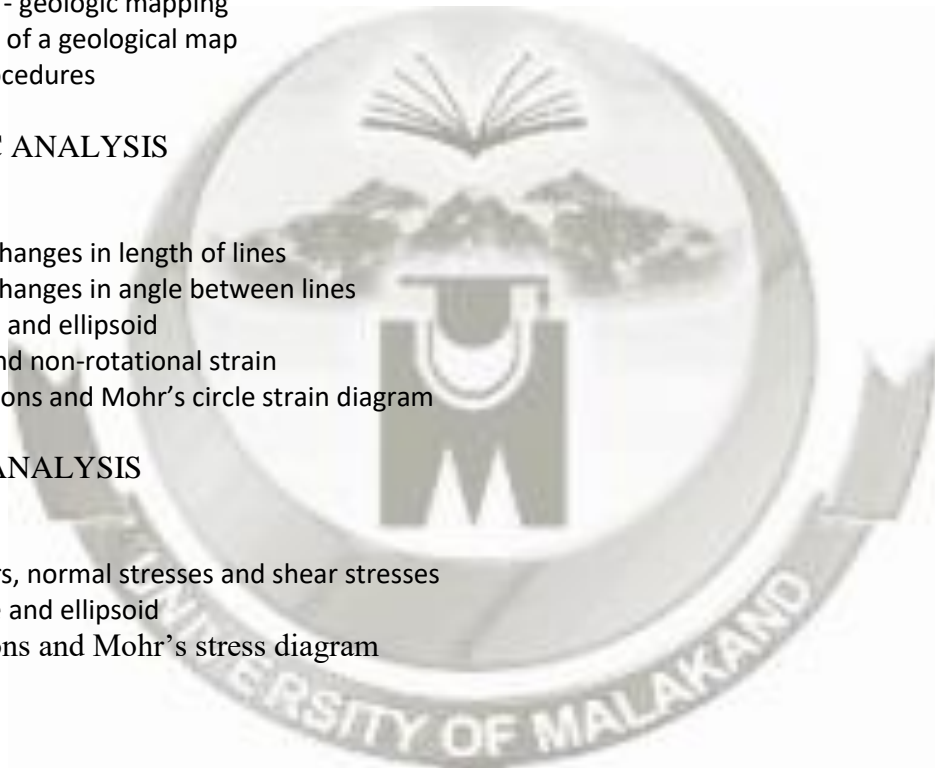
Stress  
Stress vectors, normal stresses and shear stresses  
Stress ellipse and ellipsoid  
Stress equations and Mohr's stress diagram

**FOLDS**

Introduction  
Geometric analysis of folds  
Shape and size of folds  
Fold classification

**FAULTS**

Introduction  
Types of Faults  
Determination of Fault displacement  
Faults in three dimensions



## **JOINTS**

Introduction  
Classification of joints and extension fractures  
Physical characteristics of joint surfaces Joint related surfaces

## **CLEAVAGE, FOLIATION AND LINEATION**

Types of cleavage  
Foliation  
Lineation

## **LAB WORK**

Attitude of planes  
Attitude of lines  
Stereographic projections  
Graphic projections  
Interpretation of topographic maps  
Exercises on geologic maps  
Exercises on stereographic and orthographic projection

## **BOOKS RECOMMENDED**

Foundation of Structural Geology by Park, R.G., 1983, Blackie.  
Structural Geology of Rocks and Regions by Davis, G.H. & Reynolds, S.J., 1996, John Wiley & Sons, Inc. USA.  
Laboratory Exercise Book in Structural Geology by Ghauri, A.A.K., 1989, National Centre of Excellence in Geology, University of Peshawar.  
An Introduction to Geological Structures and Maps by Bennisen, G.M., 1975, Edward Arnold.  
Structural Geology by Twiss, R.J. & Moores, E.M., 1995, W.H. Freeman & Co.  
Ramsay, J. G., Huber, M. I., 1987. The techniques of modern structural geology. Volume 2: Folds and Fractures. Academic Press, London.  
Hobbs, B. E., Means, W. D., Williams, P. F., 1976. An outline of Structural Geology. John Wiley & Sons, New York.  
Marshak, G., Mitra, G., 1988, Basic Methods of Structural Geology. Prentice Hall Englewood Cliffs, New Jersey.

## PHYSICS

### Phys-101 Mechanics

Cr.Hrs: 2

#### Course Objectives:

This course is based on basic concepts of physics that will enable students to understand fundamentals of mechanics. After studying this course students will be able to solve problems related to physics/mechanics.

#### Course Outline:

Motion along a straight line (position, displacement, velocity, acceleration and graphical analysis of motion). Vectors and their components (vectors, unit vectors, vectors addition by components, multiplication of vectors). Motion in two and three dimensions (position, velocity etc. projectile motion, uniform circular motion, relative motion in one and two dimensions). Force and Motion-I (Newton's laws, applying Newton's laws, some particular forces). Force and Motion-II (Friction, Drag force and terminal speed, Uniform circular motion). Kinetic Energy and Work (work done and Kinetic energy, work done by gravitational force, Work done by a spring and variable force, Power). Potential Energy and Conservation of Energy .

**Text Book:** Fundamentals of Physics by Halliday, Resnick and Walker: 8<sup>th</sup> Edition (Text book).

#### Recommended Book:

University Physics with Modern Physics 13<sup>th</sup> Ed. Pearson Education Inc. USA

### Phys-102 Heat and Thermodynamics

Cr.Hrs: 3

**Objective(s):** To understand the fundamentals of heat and thermodynamics

**Basic Concepts and Definitions in Thermodynamics:** Thermodynamic system, Surrounding and Boundaries. Type of systems. Macroscopic and microscopic description of system. Properties and state of the substance: Extensive and Intensive properties, Equilibrium, Mechanical and Thermal Equilibrium. Processes and Cycles: Isothermal, Isobaric and Isochoric. Zeroth Law of Thermodynamics, Consequence of Zeroth law of Thermodynamics. The state of the system at Equilibrium.

**Heat and Temperature:** Work done on an ideal gas, Internal energy of an ideal gas: Equipartition of Energy, Intermolecular forces. The Van der Waals equation of state.

**Thermodynamics:** First law of thermodynamics and its applications to adiabatic, isothermal, cyclic and free expansion. Second law of thermodynamics.

**The Kinetic Theory of Gases:** Temperature, Kinetic theory of ideal gas, Statistical distribution and mean values, Mean free path and microscopic calculations of mean free path. Distribution of Molecular Speeds, Distribution of Energies, Maxwell distribution, Maxwell Boltzmann energy distribution, Internal energy of an ideal gas. Degrees of freedom and molar specific heats. The adiabatic expansion of an ideal gas.

**Entropy and the Second Law of Thermodynamics:** Entropy, The Second law of thermodynamics, Heat engine, Refrigerators, Entropy in the real world engine and refrigerators. Reversible and irreversible processes. Entropy as a state function, Carnot theorem and Carnot engine.. Calculation of efficiency of heat engines. Thermodynamic temperature scale: Absolute zero.

#### Recommended Books:

1. D. Halliday, R. Resnick and K. Krane, "Physics", John Wiley, 5<sup>th</sup> ed. 2002.
2. D. Halliday, R. Resnick and J. Walker, "Fundamentals of Physics", John Wiley, 9<sup>th</sup> ed. 2010.
3. M. W. Zemansky, "Heat and Thermodynamics", Mc Graw Hill, 7<sup>th</sup> ed. 1997.
- 4.

**Phys-103 Electricity and Magnetism**

**Cr.Hrs: 2**

**Electrostatics:** Electric Charge, Quantization and conservation of electric charge, Coulomb's Law, Electric Fields due to a Point Charge and an Electric Dipole, Electric Field due to a Charge Distribution, Electric Dipole in an Electric Field, Electric Flux, Gauss' Law and its Applications in Planar, Spherical and Cylindrical Symmetry

**Electric Potential:** Equipotential Surfaces, Potential due to a Point Charge and a Group of Point Charges, Potential due to an Electric Dipole, Potential due to a continuous Charge Distribution, Relation between Electric Field and Electric Potential Energy,

**Capacitors and Capacitance:** Parallel Plate, Cylindrical and Spherical capacitors, Capacitors in Series and Parallel, Energy Stored in an Electric Field, Dielectrics and Gauss' Law

**DC Circuits:** Electric Current and Current Density, Resistance and Resistivity, Ohm's Law, Power in Electric Circuits, Work, Energy, and EMF, Resistances in Series and Parallel, Single and Multiloop Circuits, Kirchhoff's Rules, RC Circuits, Charging and Discharging of a Capacitor

**Magnetic Field and Magnetic Force:** Crossed Electric and Magnetic Fields and their Applications, Hall Effect, Magnetic Force on a Current Carrying Wire, Torque on a Current Loop, Magnetic Dipole Moment, Magnetic Field Due to a Current, Force between two Parallel Currents, Ampere's Law, Biot-Savart Law: Magnetic Field due to a Current, Long Straight Wire carrying Current.

**Recommended Text Books:**

1. D. Halliday, R. Resnick and J. Walker, "Fundamentals of Physics", John Wiley & Sons, 9<sup>th</sup> ed. 2010.
2. R. A. Serway and J. W. Jewett, "Physics for Scientists and Engineers", Golden Sunburst Series, 8<sup>th</sup> ed. 2010.
3. R. A. Freedman, H. D. Young, and A. L. Ford (Sears and Zemansky), "University Physics with Modern Physics", Addison-Wesley-Longman, 13<sup>th</sup> International ed. 2010

**Phys-201 Waves and Oscillations**

**Cr.Hrs: 3**

**Course Objectives:**

To obtain a sound understanding of oscillations and waves and their mathematical description . To acquire the basic knowledge of EM waves and optical phenomena such as interference, diffraction and polarization

**Course Contents:**

Simple harmonic motion, angular simple harmonic oscillator, simple pendulum and physical pendulum, simple harmonic motion and uniform circular motion, damped simple harmonic motion, forced oscillations and resonance, transverse and longitudinal waves,

waves on a stretched string, energy and power of a wave traveling along a string, the wave equation, interference of waves, phasors, standing waves and resonance, sound waves, speed of sound waves, interference of sound waves, intensity of sound, sound level and the Decibel scale, standing waves in pipes, beats, the Doppler effect.

**Recommended Books:**

1. Fundamentals of Physics by Halliday, Resnick and Walker, 10<sup>th</sup> Edition.
2. Physics Vol. I & II by Resnick, Halliday and Krane, 5th Edition, John Wiley and Sons Inc, New York, 2002.
3. F. Pedrotti, L. S. Pedrotti and L. M. Pedrotti, "Introduction to Optics", Pearson Prentice Hall, 3rd ed. (2007).
4. University Physics 8th Edition by Sears, Zemansky and Young, Addison-Wesley, Reading (MA), USA, 2000.

**Phys-202 Modern Physics-I (Basic Relativity and Quantum Mechanics) Cr.Hrs: 3**

**Course Objectives**

Modern physics is serving the foundation of advanced subjects in physics. The course emphasizes to learn the basic concepts of symmetry of the nature to understand the non-classical aspects of the Physics.

**Course Contents**

Relativity, Particle properties of waves, Wave properties of particles, Atomic Structure, Quantum mechanics, Quantum Theory of Hydrogen Atom, Many Electron Atoms.

**Text Books:**

- (1) Concepts of Modern physics (latest edition) by Arthur Beiser
- (2) Introduction to atomics and Nuclear physics (HENRY SEMAT)
- (3) R.A. Serway, C.J. Moses and C.A. Moyer, "Modern Physics", Brooks Cole, 3rd ed. 2004.
- (4) Paul A. Tipler and Ralph A. Llewellyn, "Modern Physics", W H Freeman and Company 6th ed. 2012.

**Phys-205 Optics**

**Cr. Hrs: 3**

Electromagnetic waves, polarization of EM waves, reflection and refraction of light, total internal reflection, plane mirrors and spherical mirrors, the mirror equation, magnification, thin lenses, the lens maker's equation, light waves, index of refraction, interference of light waves and Young's interference experiment, intensity in double-slit interference, interference from thin films, diffraction of light waves, single-slit diffraction, intensity in single-slit diffraction, diffraction by a circular aperture, double-slit diffraction, diffraction gratings, dispersion and resolving power.

**Recommended Books:**

1. Fundamentals of Physics by Halliday, Resnick and Walker, 10<sup>th</sup> Edition.
2. Physics Vol. I & II by Resnick, Halliday and Krane, 5th Edition, John Wiley and Sons Inc, New York, 2002.
3. F. Pedrotti, L. S. Pedrotti and L. M. Pedrotti, "Introduction to Optics", Pearson Prentice



Hall, 3rd ed. (2007).

4. University Physics 8th Edition by Sears, Zemansky and Young, Addison-Wesley, Reading (MA), USA, 2000.

**Phys-206 Modern Physics-II (Basic Statistical, Solid and Nuclear Physics) Cr.Hrs: 3**

**Course Objectives**

Modern physics is serving the foundation of advanced subjects in physics. The course emphasizes to learn the basic concepts of symmetry of the nature to understand the non-classical aspects of the Physics.

**Contents:**

Molecules, Statistical Mechanics, The Solid state, Nuclear Structure, Nuclear Transformation, Elementary Particles.

**Text Books:**

- (1) Concepts of Modern physics (latest edition) by Arthur Beiser
- (2) Introduction to atomics and Nuclear physics (HENRY SEMAT)
- (3) R.A. Serway, C.J. Moses and C.A. Moyer, "Modern Physics", Brooks Cole, 3rd ed. 2004.
- (4) Paul A. Tipler and Ralph A. Llewellyn, "Modern Physics", W H Freeman and Company 6th ed. 2012.

**Phys-101L Lab-I**

**Cr.Hrs: 1**

**Objectives:**

The purpose of the introductory physics lab is to supply the practical knowledge for understanding of the basics physics experiments.

**Experiments:**

1. Modulus of Rigidity by Static & Dynamic method (Maxwell's needle, Barton's Apparatus).
2. To study the damping features of an oscillating system using simple pendulum of variable mass.
3. Measurement of viscosity of liquid by Stoke's / Poiseulli's method.
4. Surface tension of water by capillary tube method.
5. To determine the value of "g" by compound pendulum / Kater's Pendulum.
6. To study the dependence of Centripetal force on mass, radius, and angular velocity of a body in circular motion.
7. Investigation of phase change with position in traveling wave and measurement of the velocity of sound by C.R.O.
8. Determination of moment of inertia of a solid/hollow cylinder and a sphere etc.
9. To study the conservation of energy (Hook's law).

**Recommended Books:**

1. D. H. Marrow, Selected Experiments in Physical Sciences, Longman.
2. Nelkon and Ogborn, Advanced Level Practical Physics, Heimann Educational Books
3. Nolan and Bigliani, Experiments in Physics, Surjeet Pub Ind.
4. C. K. Bhattacharya, University Practical Physics, CBS Publishing

**Phys-103L Lab-II**

**Cr.Hrs: 1**

1. To determine thermal Emf and plot temperature diagram.
2. Determination of temperature coefficient of resistance of a given wire.
3. Determination of “J” by Callender – Barnis method.
4. The determination of Stefan’s constant.
5. Calibration of thermocouple by potentiometer.
6. To determine frequency of AC supply by CRO.
7. To determine Horizontal/Vertical distance by Sextant.
8. The determination of wavelength of Sodium –D lines by Newton’s Ring.
9. The determination of wavelength of light/laser by Diffraction grating.
10. Determination of wavelength of sodium light by Fresnel’s bi-prism.
11. The determination of resolving power of a diffraction grating.
12. The measurement of specific rotation of sugar by Polarimeter and determination of sugar concentration in a given solution.
13. To study the combinations of harmonic motion (Lissajous figures).
14. To study the parameters of waves (Beats phenomenon).
15. To determine the Thermal conductivity of good and bad conductors using Lee’s and Searl’s apparatus.
16. To study the laws of vibration of stretched string using sonometer.
17. To determine the stopping potential by photo cell.

**Recommended Books:**

1. D. H. Marrow, Selected Experiments in Physical Sciences, Longman.
2. Nelkon and Ogborn, Advanced Level Practical Physics, Heimann Educational Books
3. Nolan and Bigliani, Experiments in Physics, Surjeet Pub Ind.
4. C. K. Bhattacharya, University Practical Physics, CBS Publishing

## COMMERCE

<b>Course Title</b>	<b>:</b>	<b>Fundamentals of Commerce</b>
<b>Course Code</b>	<b>:</b>	<b>COM 101</b>
Credit Hours	:	03
Total Weeks	:	16
Total Hours	:	48

### Course Objectives:

This course will enable the students to understand the nature and importance of business, the formation and the functions of various business organizations.

#### Week 01: Introduction to Business:

- i) Definition of business and its objectives.
- ii) The concept of entrepreneur, its functions and qualities of good entrepreneur.
- iii) Industry, its meanings and types.
- iv) Definition and Scope of Commerce.

#### Week 02: Sole Proprietorship:

- i) Meaning/Definition of Sole Proprietorship
- ii) Features of Sole Proprietorship
- iii) Advantages and Disadvantages of Sole Proprietorship

#### Week 03 & 04: Partnership:

- i) Definition of Partnership
- ii) Features of Partnership
- iii) Merits and Demerits of Partnership
- iv) Kinds of Partnership
- ii) Partnership Agreement: Its contents & Importance
- iii) Registration of Firms and its benefits
- i) Kinds of Partners
- ii) Dissolution of Partnership versus that of a Firm
- iii) Reasons and ways of dissolution of a firm

#### Week 05, 06, 07 & 08: Joint Stock Company (JSC):

- i) Definition of Joint Stock Company
- ii) Features of Joint Stock Company
- iii) Types of Joint Stock Companies.
  - a. Limited Company.
    - a. Public Limited Company.
    - b. Private Limited Company.
  - b. Unlimited Company.
  - b. Guarantee Limited Company.
- iv) Formation of Joint Stock Company.
  - a. Documents to be furnished for Incorporation.
    - i. Memorandum of Association.
    - ii. Articles of Association.
  - b. Certificate of Incorporation.
  - c. Documents to be furnished after Incorporation.
    - i. Prospectus
    - ii. Statement in lieu of Prospectus.
    - iii. Certificate of Commencement of Business.
- iv) Advantages and Disadvantages of Joint Stock Company.
- v) Difference between Partnership and Joint Stock Company.
- vi) Financing of Joint Stock Company.

- a. Types of Capital.
    - i. Fixed Capital.
    - ii. Working Capital.
    - iii. Share Capital.
  - b. Sources of Raising Funds.
    - i. Shares: Definition & Procedure of Allotment.
    - ii. Debentures: Definition & Procedure of Allotment.
    - iii. Lending Institutions (introduction only)
    - iv. Retained Earnings/Un-appropriated profits
  - vii) Dividends.
    - a. Definition.
    - b. Types of Dividends.
    - c. Rules Regarding issuance of dividends.
  - viii) Company Management.
    - a. Share Holders: Definition, rights and liabilities
    - b. Directors.
      - i. Board of Directors: Qualification, appointment, powers, duties and liabilities
      - ii. Managing Director/Chief Executive Officer: Appointment and terms of appointment
    - c. Secretary of Joint Stock Company: Appointment and duties
  - ix) Company Meetings.
    - a. Statutory Meeting: Definition, procedures and business conduct at statutory meeting
    - b. Annual General Meeting (AGM): Definition , procedures, business conduct and report of AGM
    - c. Extra Ordinary Meeting: Definition, purposes and procedure of conduct
    - d. Meeting of Board of Directors: Definition, procedure and conduct
  - x) Winding up of Joint Stock Company: Meaning and modes of winding up
- Week 09: Internal Assessment (Test, Quiz, Assignment & Presentations etc.**
- Week 10: Insurance:**
- i) Definition of Insurance
  - ii) Principles of Contract of Insurance
    - i. UmberrimaeFeidi
    - ii. Insurable Interest
    - iii. Indemnity Principle
  - iii) Types of Insurance.
    - a. Marine Insurance
    - b. Life Insurance
    - c. Fire Insurance
  - i) Advantages and Disadvantages of Insurance
- Week 11: Customs & Excise:**
- i) Definition of duty
  - ii) Objectives of duty
  - ii) Types of duty
    - a. Custom duty
    - b. Excise duty
- Week 12 & 13: Stock Exchange:**
- i) Meaning of Stock Exchange
  - iii) Functions Stock Exchange
  - i) Procedure of dealing at Stock Exchange
  - ii) Causes of fluctuation in security prices
- Week 14 & 15:Securities and Exchange Commission of Pakistan (SECP):**
- i) Definition of SECP

- ii) Structure/Management of SECP
- iii) Powers and Functions of SECP

**Week 16: Internal Assessment (Test, Quiz, Assignment & Presentations etc.**

**Recommended Texts:**

Madura, J. (2010). *Introduction to Business*. Paradigm Pub.  
Ali, M.H. (latest Edition). *Business Organization*. Lahore.  
Nasir, M. S. (latest Edition). *Introduction to Business*. Lahore.  
Companies Ordinance 1984.  
Securities and Exchange Commission of Pakistan Act, 1997.  
Central Depositors Act, 1997

**Course Title : Principles of Financial Accounting**  
**Course Code : ACC 101**  
Credit Hours : 03  
Total Weeks : 16  
Total Hours : 48

**Course Objectives:**

The students will be able to develop a clear understanding how to record a transaction in different types of business Recognize, understand and maintain different accounts of business according to the standards.

Week 1	Introduction to Business, Commerce, Trading, Finance and Financial Institutions;
Week 2	Introduction to accounting and accounting information;
Week 3	Accounting concepts and conventions: IAS-1, The IASB and financial reporting IFRS-1;
Week 4	Field of accounting. Accounting terminology; Introduction of Accounting cycle. Accounting equation;
Week 5	Recording the business transaction: sources, records and books of original entry Journal, Ledger accounting & Trial Balance;
Week 6	From Trial Balance to Financial Statements: income statement single and multiple step income statement, Balance Sheet and classified balance sheet;
Week 7	Adjusting entries: Contra Accounts, Accruals and prepayments, adjusting trial balance;
Week 8	Events after the balance sheet date IAS-10; Week 9 Special journals for repetitive transaction, their types and formats;
Week 10	Subsidiary ledgers and Control accounts, for sales, purchases, transactions;
Week 11	Closing entries: temporary and permanent accounts, post close trial balance, reversing entries and Worksheet;
Week 12	Accounting for Merchandising concerns: purchase, sales ,Discounts, returns and allowances, Cost of goods sold;
Week 13	Inventories and its types, inventory valuation methods and its assumptions. Inventories IAS-2; Statutory regulations;
Week 14	Current assets treatment and current liabilities IAS-13;
Week15	Internal control of cash, Bank reconciliation, Cash book;Accounting for Note Receivables and Note Payables.
Week 16	Accounting for receivables, Bad debts: direct and allowance approach Provision and reserves.

**Recommended Texts:**

Chiappetta, L.W. (2005). *Fundamentals of Financial Accounting*, (17<sup>th</sup>Edition). McGraw-Hill Irwin.  
Meigs, W.B., Johnson, C.E., &Meigs, R.F. (2003). *Accounting; the basis of business decisions*, (11<sup>th</sup>Edition). McGraw-Hill.  
Maqbool, M. (2005). *Accounting Standards & Financial Reporting, Technical Reference Manual Volume-I and Volume-II*. PBP professional education.

Wild, J., Shaw, K., & Chiappetta, B. (2014). *Fundamentals of Accounting Principles*. (22<sup>nd</sup> Edition). McGraw-Hill Education.

**Course Title : Principles of Management**

**Course Code : MGT 101**

Credit Hours : 03

Total Weeks : 16

Total Hours : 48

**Course Objectives:**

This course is designed to give an overview of the theory and practice of management. The concept of management is presented as a discipline as well as a process. The course will cover the evolution of management, its history, and the development of important concepts. It will cover the basic functions of management: planning, organizing, leading, and controlling.

The objectives of this course are

- 1- To expose students to the theories of management, organizational theory, and the practice of management in contemporary organizations from a conceptual, analytical, and pragmatic perspective.
- 2- The course will also allow students to develop their own framework for analyzing and understanding management as well as exploring and developing their own personal philosophy of management.
- 3- The students would be able to communicate effectively, develop people, solve problems and making decisions, organize themselves and also would be able to work in team.

**Week 1: Management, managerial roles and competencies:**

- c. Definition of management
- d. Four Functions of Management
- c. Minzbergs' Managerial Roles
- d. Managerial Skills

**Week 2 & 3: Foundation/Evolution of Management Thinking:**

- e. Classical Approach
  - i. Scientific Management (Frederick Taylor, Lenien&Gilberth and Henery Gantt contribution)
  - ii. Administrative Approach (Henery Fayol contribution and principles, Max Weber theory of Bureaucracy)
- f. Behavioral Approach (Hawthorne Studies and Human Relations Movement)
- g. Quantitative Approach ( Management Science thought and Total Quality Management thought)
- h. Contemporary Approach (System Theory, Contingency theory and Learning organization theory)

**Week 4: Planning & Strategic Management:**

- f. An overview of planning fundamentals
- g. Level/types of planning
- h. Organizational Goals (Definition, purposes, kinds and characteristics)
- i. Planning process
- j. Strategic Management Process

**Week 5: Decision Making and the Escalation of Commitment:**

- g. Decision making and its characteristics
- h. Stages of decision making
- i. Factors affecting rational decision making

- j. What is escalation of commitment
- k. Why does escalation of commitment occurs
- l. How to avoid escalation of commitment

**Week 6: Organization and Structure:**

- c. Meaning of Organization and organization structure
- d. Forms of organizational structure
  - i. Centralization and decentralization
  - ii. Formalization
  - iii. Hierarchical Structure (Tall and Flat structure)
  - iv. Departmentalization (Functional, product and geographical)
  - v. Mechanistic vs organic structure
  - vi. Contemporary organization structures (Matrix structure, boundary less organization and learning organization)

**Week 7 & 8: Leadership & Leader's styles:**

- e. Leadership defined
- f. Meaning of effective leadership
- g. Leader versus manager
- h. Theories/approached of effective leadership:
  - i. Trait theory
  - ii. Behavioral theories (University of Low studies, The Ohio State University studies, University of Michigan studies, Managerial Grid)
  - iii. Contingency theories (Fiedler's contingency Model, Path-Goal theory)
  - iv. Power Influence
  - v. Transformational Leadership

**Week 9: Mid-Semester Examination**

**Week 10: Controlling:**

- e. What is organizational control
- f. Importance of control system
- g. Controlling process/control system
- h. Methods of control

**Week 11: Human Resource Management:**

- d. Human resource management defined
- e. The importance of HRM
- f. The Human resource management process

**Week 12: Communicating:**

- a. Meaning of Communication
- b. Communication process
- c. Types of organizational communication (verbal, non-verbal, formal, informal, upward, downward and horizontal )
- d. Barriers to effective communication

**Week 13: Personality and Human Behavior:**

- c. Definition of personality
- d. Theories of personality:
  - i. Trait Theory of Personality
  - ii. Myer Briggs Type Indicator (MBTI)

- iii. Big-Five Personality Model
- iv. Type A and Type B personality

**Week 14 & 15: Motivation: Theories and Styles:**

- j. Meaning of Motivation
- k. Goal Setting theory
- l. Reinforcement theory
- m. Need theories (Maslow's Hierarchy of need theory, Alferd's ERG theory, Mclelland need theory)
- n. Theory X and Theory Y
- o. Equity Theory
- p. Herzberg two factor theory
- q. Job Characteristics Model
- r. Vroom's expectancy theory

**Week 16: Assessment (Quiz, assignment and presentation)**

**Recommended Texts:**

- Hill, W. L. C., & McShane, S. (2006). *Principles of Management*. PA, USA: McGraw-Hill Professional.
- Carpenter, M. (2009). *Principles of Management*. Flat World Knowledge, Inc.
- Certo, C. S., & Certo, T. S. (2015). *Modern Management: Concepts and Skills*. NJ, USA: Prentice- Hall.
- Robbins, P. S., De Cenzo, A. D., & Coulter, M. (2014). *Fundamentals of Management: Essential Concepts and Applications*. NJ, USA: Prentice- Hall.
- Hannagan, T. (2009). *Management: Concepts & Practices*. NJ, USA: Prentice- Hall.
- Mejia, Balkin, & Cardy. (2006). *Management*, (3<sup>rd</sup> Edition). McGraw-Hill.
- Morden, T. (2004). *Principles of Management*, (2<sup>nd</sup> Edition). Ashgate.
- Bateman, S. (2002). *Management Competing in New Era*, (5<sup>th</sup> Edition). McGraw-Hill.

<b>Course Title :</b>	<b>Principles of Financial Accounting</b>
<b>Course Code :</b>	<b>ACC 101</b>
Credit Hours :	03
Total Weeks :	16
Total Hours :	48

**Course Objectives:**

The students will be able to develop a clear understanding how to record a transaction in different types of business Recognize, understand and maintain different accounts of business according to the standards.

Week 1	Introduction to Business, Commerce, Trading, Finance and Financial Institutions;
Week 2	Introduction to accounting and accounting information;
Week 3	Accounting concepts and conventions: IAS-1, The IASB and financial reporting IFRS-1;
Week 4	Field of accounting. Accounting terminology; Introduction of Accounting cycle. Accounting equation;
Week 5	Recording the business transaction: sources, records and books of original entry Journal, Ledger accounting & Trial Balance;
Week 6	From Trial Balance to Financial Statements: income statement single and multiple step income statement, Balance Sheet and classified balance sheet;
Week 7	Adjusting entries: Contra Accounts, Accruals and prepayments, adjusting trial balance;
Week 8	Events after the balance sheet date IAS-10; Week 9 Special journals for repetitive transaction, their types and formats;
Week 10	Subsidiary ledgers and Control accounts, for sales, purchases, transactions;
Week 11	Closing entries: temporary and permanent accounts, post close trial balance, reversing



	entries and Worksheet;
Week 12	Accounting for Merchandising concerns: purchase, sales ,Discounts, returns and allowances, Cost of goods sold;
Week 13	Inventories and its types, inventory valuation methods and its assumptions. Inventories IAS-2; Statutory regulations;
Week 14	Current assets treatment and current liabilities IAS-13;
Week15	Internal control of cash, Bank reconciliation, Cash book;Accounting for Note Receivables and Note Payables.
Week 16	Accounting for receivables, Bad debts: direct and allowance approach Provision and reserves.

**Recommended Texts:**

- Chiappetta, L.W. (2005). *Fundamentals of Financial Accounting*, (17<sup>th</sup>Edition). McGraw-Hill Irwin.
- Meigs, W.B., Johnson, C.E., &Meigs, R.F. (2003). *Accounting; the basis of business decisions*, (11<sup>th</sup>Edition). McGraw-Hill.
- Maqbool, M. (2005). *Accounting Standards & Financial Reporting, Technical Reference Manual Volume-I and Volume-II*. PBP professional education.
- Wild, J., Shaw, K., & Chiappetta, B. (2014). *Fundamentals of Accounting Principles*. (22<sup>nd</sup>Edition). McGraw-Hill Education.

<b>Course Title</b>	:	<b>Intermediate Financial Accounting</b>
<b>Course Code</b>	:	<b>ACC 102</b>
Credit Hours	:	03
Total Weeks	:	16
Total Hours	:	48

**Course Objectives:**

This course is designed to provide understanding of accounting methods and procedures as followed by different forms of business organizations and commercial ventures. It systematically covers the accounting process of classification, summarization, presentation and interpretation of historical data in the light of established accounting practices and major form of business organization i.e. partnerships and limited companies. Application of principles set out by IASs in the preparation of financial statements is also required from the students.

Week 1	Average Due Date and Account Current: Average Due Date; Steps for calculation of Average Due Date; Due date of a Bill of Exchange; Average due date as the Basis for Calculation of Interest; Account Current;
Week 2	Sectional and Self-Balancing System: Classification of Ledgers; Sectional Balancing System; Self-Balancing System; Transfer between Subsidiary Ledgers; Advantages of Self-Balancing Ledger; Rectification of Errors relating to the Self-Balancing System;
Week 3	Single Entry System: Pure, Simple and Quasi Single Entry System; Characteristics of Single Entry System; Limitations of Single Entry System; Difference between Double Entry System and Single Entry System; The Transaction Approach; The Balance Sheet Approach; Steps for ascertaining Profit; Difference between Statement of Affairs and Balance Sheet; Conversion to Double Entry System;
Week 4&5	Partnership – I: Appropriation of Profit and Loss: Meaning of Partnership; Features of Partnership; Partnership Deed; Kinds of Partners; Registration of Partnership Firm; Partners’ Capital Account; Interest on Capital; Partner’s Salaries, Commission; Partners’ Drawings; Partners’ Loan Accounts; Sharing of Profits; Guarantee of Profits to or by a Partner;
Week 6&7	Partnership – II: Admission of a Partner; Adjustment in regard to Profit-sharing Ratio; Adjustment in regard to Goodwill; Types of Goodwill; Valuation of non-purchased Goodwill; Treatment of Goodwill on Admission of a New Partner; Adjustment in regard

	to Revaluation of Assets and Liabilities; Adjustment in regard to Undrawn Profits; Adjustment in regard to Partners' Capitals; Admission of a partner during an Accounting Year;
Week 8-10	Partnership – III: Retirement of a Partner: Adjustment in regard to Goodwill; Adjustment in regard to Revaluation of Assets and Liabilities; Adjustment in regard to Undistributed Profit; Computation of retiring Partner's Interest; Mode of payment of Retiring Partner's Interest; Unsettled accounts of a Retiring Partner; Admission-cum-Retirement;
Week 11&12	Partnership – IV: Death of a Partner: Ascertainment of Financial Interest; Unsettled accounts of a Deceased Partner.
Week 13&14	Partnership – V: Dissolution of the Firm: Dissolution by the Partners; Dissolution by the Court; Steps in the dissolution Process; Settlement of Accounts; Accounting Entries for Dissolution; Realisation of Assets and Settlement of Liabilities; Settlement of the Accounts of the Partners; Where all the partners are solvent; Where some of the partners are solvent and other are insolvent; Where all the partners are insolvent (Note: Gradual Realisation of Assets and Piece-meal Distribution are excluded.).
Week 15&16	Contract Accounts; Nature; Work in Progress; Profit on Incomplete Contract; Estimated Profits, IAS 11.

Recommended Texts:

- Mukherjee, A., & Hanif, M. (2013). *Modern Accountancy*, (2<sup>nd</sup> Edition). New Dehli, Tata McGraw-Hill Publishing Company Limited.
- Shukla, M.C. & Grewal, T.S. (Revised by Gupta, S. C.) (2008). *Advanced Accounts*, (Vol-2). New Dehli S. Chand Limited.
- Chiappetta, L.W. (2005). *Fundamentals of Financial Accounting*, (17<sup>th</sup> Edition). McGraw-Hill Irwin.
- Meigs, W.B., Johnson, C.E., & Meigs, R.F. (2003). *Accounting; the basis of business decisions*, (11<sup>th</sup> Edition). McGraw-Hill.
- Maqbool, M. (2005). *Accounting Standards & Financial Reporting, Technical Reference Manual Volume-I and Volume-II*. PBP professional education.
- Wild, J., Shaw, K., & Chiappetta, B. (2014). *Fundamentals of Accounting Principles*. (22, Edition.) McGraw-Hill Education.

<b>Course Title</b>	:	<b>Human Resource Management</b>
<b>Course Code</b>	:	<b>HRM 101</b>
Credit Hours	:	03
Total Weeks	:	16
Total Hours	:	48

**Course Objectives:**

The importance of human resource cannot be overemphasized in the modern world. The contents will help students to grasp the main concerns of HRM in today's dynamic business environment. The course deals with the issues of recruitment, training, motivational techniques, different performance appraisal procedures, and their use for efficient handling of human resource.

Week 1	Introduction to HRM;
Week 2	Job Design and Analysis;
Week 3&4	Human Resource Planning;
Week 5&6	Recruitment and Selection;
Week 7&8	Testing, Interviewing;
Week 9&0	Performance Appraisal;
Week 11	Training;
Week 12	Promotion, Transfer, Layoff and Discharge;

Week 13&14 Motivation;  
Week 15&16 Discipline

**Recommended Texts:**

Dale, S., & Macmillan, B. (1985). *The Management of People at Work*, (5<sup>th</sup>Edition), Publishing Company, New York.

Flippo E. B. (1971). *Principles of Personnel Management*, (3<sup>rd</sup>Edition), McGraw-Hill Book Company.

Decenzo, David A. & Robbins, S.P. (1996). *Human Resource Management*. Indiana University: John Wiley.

William B. & Davis, K. (1989). *Human resources and personnel management* (3<sup>rd</sup> Edition). Pennsylvania State University: McGraw-Hill.

Bernardin, H.J. (2004). *Human Resource Management*. New Delhi: Tata McGraw-Hill.

**Course Title :** Principles of Marketing  
**Course Code :** MKG 101  
Credit Hours : 03  
Total Weeks : 16  
Total Hours : 48

**Course Objectives:**

Marketing is not just selling or advertising. It is a rigorous, disciplined science that applies a reasoned framework to the selection of target markets and the optimization of marketing decisions. In this course we seek to:

- Introduce to students the key marketing ideas and phenomena, especially the core theme of delivering benefits to customers.
- Develop students' skills in marketing analysis and planning.
- Familiarize students with the tactics of the marketing (Product strategy, advertising and communications [Promotion], and distribution [Place], and Price - 4P's) and enhance problem solving and decision making abilities in these areas.
- How to evaluate the attractiveness of different markets.

Week 1 The Field of Marketing, Introductory Concepts;  
Week 2 Adapting Marketing to the New Economy; Positioning Marketing as the Driver in the Digital Economy;  
Week 3 Marketing- oriented Strategic Planning; Scanning the Marketing Environment;  
Week 4 Marketing research process; Marketing information systems; Identifying Marketing Opportunities;  
Week 5&6 Consumer behavior; Consumer purchase decision process; ; Influences on consumer behavior: Social influences; Thaler, R. "Mental Accounting and Consumer Choice." *Marketing Science* 4 (1985): 199-214; Simonson, I. "Get Closer To Your Customers By Understanding How They Make Choices." *California Management Review* 35, no. 4 (Summer 1993);  
Week 7 Identifying Marketing Segments and Selecting Target Markets; Case study assignment; Product positioning and Differentiating the Marketing Offering The Product Life Cycle;  
Week 8&9 The marketing mix: Product; Meaning and classification of product; Development of new product; "Jager's Gamble." *Economist* 37, no. 3 (Oct 9, 1999); Staff. "Know Thyself." *Economist* 76, no. 76 (1999);  
Week 10&11 Determinants of product mix; Product adoption-diffusion process; Product portfolio classification; Product deletion strategy; Case study assignment;  
Week 12 The marketing mix: Price; Nature and importance of pricing; Pricing objectives; Factors influencing pricing decision; Anderson, E., and Duncan Simester. "Mind Your Pricing Cues." *Harvard Business Review* 81, no. 9 (Sep 2003); Dolan, Robert J. "How Do You Know When the Price Is Right?" *Harvard Business Review* (September 1995). Reprint

## TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

---

	No. 95501;
Week 13	Developing Price Strategies and Programs; The marketing mix: Promotion strategy; Role of promotion in business marketing; Developing and implementing the promotional mix;
Week 14	Advertising, sales promotion and public relations; Dye, Renee. "The Buzz on Buzz." Harvard Business Review (November 2000). Reprint No. R00606;
Week 15	Managing The Sales Force; Case study assignment; Managing Retailing, Wholesaling and Market Logistics; Managing The Total Marketing Effort; Marketing plan development analysis;
Week 16	The marketing mix: Distribution; Designing distribution channel; Selecting the type of channel; (Staff. (1997). <i>Republic Industries, Toyota Settle Dispute over Dealerships, The Wall Street Journal</i> ; Staff. (1997). <i>Categorical Imperatives, Economist</i> .)

### Recommended Texts:

- Pride, M. W., & Ferrell, O. C. (2014). *Foundations of Marketing*. South-Western College/West.
- Tanner, J., & Raymond, A. M. (2010). *Principles of Marketing*. Flat World Knowledge, Inc.
- Kotler, P., & Armstrong, G. (2013). *Principles of Marketing, (15th Edition)*. NJ, USA: Prentice- Hall.
- Kotler, P. (2011). *Marketing Management*. 14<sup>th</sup> Edition, Prentice- Hall.
- Lamb, W. C., Hair, F. J., & McDaniel, C. (2014). *Marketing*. South-Western College Pub.
- Kerin, R., Hartley, S., & Rudelius, W. (2012). *Marketing*. PA, USA: McGraw-Hill.
- Stanton, E. W. (2004). *Marketing, (13<sup>th</sup> Edition)*. McGraw-Hill.

<b>Course Title</b>	<b>:</b>	<b>Financial Management</b>
<b>Course Code</b>	<b>:</b>	<b>FIN 101</b>
Credit Hours	:	03
Total Weeks	:	16
Total Hours	:	48

### Course Objectives:

The objective of this course is to provide theoretical and conceptual knowledge of finance to the students. The course covers wide areas of finance. This course will not only be helpful in passing their examination but will also help them in practical life.

Week 1	An Overview of Financial Management; Careers in Finance; How are Companies Organized; Finance in the Organizational Structure of the Firm; The Goals of the Corporation; Business Ethics and Social Responsibility; Agency Relationships;
Week 2&3	Financial Statement, Cash Flows and Taxes; A Brief History of Accounting and Financial Statements; Financial Statements and Reports; The Balance Sheet; The Income Statement; Statement of Retained Earnings; Net Cash Flow; Statement of Cash Flows; Modifying Accounting Data for Managerial Decisions; MVA and EVA; Depreciation;
Week 4-6	Analysis of Financial Statements; Ratio Analysis; Liquidity Ratios; Asset Management Ratios; Debt Management Ratios; Profitability Ratios; Market Value Ratios; Trend Analysis, Common Size Analysis, and Percent Change Analysis; Tying the Ratios Together; Comparative Ratios and "Benchmarking"; Uses and Limitations of Ratio Analysis; Problems with ROE; Looking Beyond the Numbers;
Week 7-9	Financial Planning and Forecasting Financial Statements; Strategic Plans; Operating Plans; The Financial Plan; Computerized Financial Planning Models; Sales Forecasts; Financial Statement Forecasting: The Percent of Sales Method; The AFN Formula; Forecasting Financial Requirements When the Balance Sheet Ratios Are Subject to Change; Other Techniques of Forecasting Financial Statements;
Week 10&11	The Financial Environment; The Financial Markets; Financial Institutions; The Stock Market; The Cost of Money; Interest Rate Levels; The Determinants of Market Interest

- Rates; The Term Structure of Interest Rates; What Determines the Shape of the Yield Curve?; Using the Yield Curve to Estimate Future Interest Rates; Investing Overseas; Other Factors That Influence Interest Rate Levels; Interest Rates and Business Decisions;
- Week 12&13 Risk and Return; Investment Returns; Stand-Alone Risk; Risk in Portfolio Context; Calculating Beta Coefficient; The Relationship between Risk and Rates of Return; Physical Assets versus Securities; Some Concerns about Beta and the CPM; Volatility versus Risk;
- Week 14–16 Valuation of Bonds, preferred stock and common stock

**Recommended Texts:**

- Brigham, F. E., & Houston, F. J. (2014). *Fundamentals of Financial Management*. Cengage Learning.
- Van Horne, J. M., & Wachouicz J. M. (2008). *Fundamentals of Financial Management* (illustrated). Financial Times/ Prentice-Hall.
- Block, S., Hirt, G., & Danielsen, B. (2010). *Foundations of Financial Management*, (14<sup>th</sup> Edition). PA, USA: McGraw-Hill.
- Brigham, E.F. & Ehrhardt, M.C. (2013). *Financial Management: Theory and Practice* (14<sup>th</sup> Edition), HarCourt College Publishers.
- Brigham. E.F & Houston. J.F. (2012). *Fundamental of financial Management*, (12<sup>th</sup> Edition) Philadelphia: Dryden.
- Brooks, M. R. (2012). *Financial Management: Core Concepts, 2nd Edition*. NJ, USA: Prentice- Hall.
- Titman, J. S., Martin, D. J., & Keown, J. A. (2010). *Financial Management: Principles and Applications, 11th Edition*. NJ, USA: Prentice- Hall.
- Berman, K., Knight, J., & Case, J. (2013). *Financial Intelligence, Revised Edition: A Manager's Guide to Knowing What the Numbers Really Mean*. UK: Harvard Business Review Press.

**ELECTRONICS**

ELEC 316 Circuit Analysis (Found-1)  
4(3+1)

Course Outline

Electric current, electromotive force (voltage), resistance, conventional current, Ohm's law, work, energy, power, conductance, efficiency, real and ideal sources, Kirchhoff's voltage and current laws, voltage-divider rule, current-divider rule, series and parallel connected sources, series and parallel connected resistor capacitor and inductor networks, bridges, voltage and current source conversions, mesh analysis, nodal analysis, superposition theorem, Thevenin's theorem, Norton's theorem, maximum power transfer theorem, capacitance and capacitors, inductance and inductors, alternating current fundamentals, principle and operation of transformers, Resonant circuits, filter networks. transmission parameters, hybrid parameters, interconnection of two two-port networks.

Lab Outline

Study of Kirchhoff's current and voltage laws, current divider rule, voltage divider rule, superposition theorem, Thevenin's theorem, Norton's theorem, maximum power transfer theorem, simulation of basic electronic circuits using PSPICE. Frequency domain analysis and Bode plots, network analysis in s-domain, two port networks, circuit analysis techniques using PSPICE or other software.

#### Recommended Books

1. Thomas L.Floyd, Latest Edition, "Principles of Electronic Circuits" Prentice Hall. 2009
2. Edward Hughes, "Electrical and Electronic Technology", 9th Revised Edition, Prentice Hall, 2005.
3. William H. Hayt, Jack Kemmerly, and Steven M. Durbin, "Engineering Circuit Analysis", 7th Edition, McGraw-Hill, 2006.
4. Muhammad H. Rashid, "Introduction to PSpice Using OrCAD for Circuits and Electronics", 3rd Edition, Prentice Hall, 2003.

ELEC 325 Basic Electronics (Found-2)  
4(3+1)

#### Course Outline

Introduction to electronics, diodes: pn junction diode, forward and reverse characteristics of a diode, ideal diode, practical diode, equivalent circuit of a diode, current equation of a diode, diode as a switch. Types of diodes: Schottky diode, zener diode, tunnel diode, varactor diode, LED, laser diode. Applications of diodes: Half- and full-wave rectifiers, clipper and clamper circuits, voltage multipliers. Bipolar junction transistor: Operation, npn and pnp transistors, unbiased transistor, DC biasing of a transistor, static characteristics, DC circuit analysis, load line, operating point and bias stabilization. Transistor as an amplifier. Transistor biasing configurations: Common emitter, common base, common collector. Field-effect transistor. FET biasing techniques: Common drain, common source and common gate, fixed bias and self bias configurations, voltage divider biasing. Universal JFET bias curve. Darlington pair.

### Lab Outline

The emphasis is first on understanding the characteristics of basic circuits that use resistors, capacitors, diodes, bipolar junction transistors and field-effect transistors. The students then use this understanding to design and construct more complex circuits such as rectifiers, amplifiers and power supplies.

### Recommended Books

1. Robert Boylestad and Louis Nashelsky, "Electronic Devices and Circuit Theory", 9th Edition, Prentice Hall, 2006.
2. Robert Painter, "Introductory Electronic Devices and Circuits: Electron Flow Version", 7th Edition, Prentice Hall, 2006.
3. Thomas L. Floyd, "Electronic Devices", 9th edition. Prentice Hall, 2011.

ELEC 326 Digital Logic Design-1 (Found-3)  
4(3+1)

### Course Outline

Basic concepts and tools to design digital hardware consisting of both combinational and sequential logic circuits, logic gates, combinational logic design, Encoders, Decoders, Multiplexers, Demultiplexers, code converters, sequential circuits and logic design, Different types of Flip Flops and its applications, D Flip Flop, J-K Flip Flop, RS Flip Flop, State Machine, Designing of synchronous and asynchronous counters, up-down counters, ring counters, random counters, Shift registers and its types. Serial in-parallel out, serial in-serial out, parallel in-serial out, parallel in parallel out. Bus organized computer systems.

### Lab Outline

Basic logic gates; circuits such as MUX/DEMUX, encoder/decoder, arithmetic logic unit (ALU); Counters and shift registers.

### Recommended Books

1. Thomas L. Floyd, "Digital Fundamentals", 6th edition. Pearson Education, 1996
2. Malvino Brown, "Digital Computer Electronics", 3rd Edition, McGraw-Hill, 1995
3. Morris Mano and Charles R. Kime, "Logic and Computer Design Fundamentals", 3rd Edition, Prentice Hall, 2003.
4. Roger L Tokheim, "Digital Electronics: Principles and Applications", Student Text with Multi SIM CD-ROM, 6th Edition, McGraw-Hill, 2002.

ELEC 433 Amplifiers and Oscillators (Found-4)  
4(3+1)

#### Course Outline

Amplifier analysis: Transistor as an amplifier, hybrid model of a transistor, small-signal analysis, large-signal analysis, gain calculation of single-stage amplifier, cascading, multistage gain calculations.

Classification of amplifiers on the basis of biasing: Class A amplifier, class B amplifier, class AB

amplifier, class C amplifier, push-pull amplifier, complementary symmetry amplifier.

Classification of

amplifiers on the basis of coupling: RC-coupled amplifier, transformer-coupled amplifier, direct-coupled

amplifier. Classification of amplifiers on the basis of frequency: Audio-frequency amplifier, radio-

frequency amplifier, tuned amplifiers. Feedback: Feedback concept, feedback amplifiers, voltage feedback amplifier, current feedback amplifier. Effect of feedback on frequency response.

Practical

amplifier considerations: Input and output impedance, amplifier loading, impedance matching.

Oscillators: Basic theory, tank circuit, damped and undamped oscillations, phase-shift oscillator, Colpitts

oscillator, Hartley oscillator, Wein Bridge oscillator, Clap oscillator.

#### Lab Outline

Transistor curve tracer, introduction to PSPICE and AC voltage dividers, characterization and design of

emitter and source followers, characterization and design of AC variable-gain amplifier, design of test

circuits for BJTs and FETs, design of FET ring oscillators, design and characterization of emitter-coupled

transistor pairs, tuned amplifier and oscillator, design of oscillators.

#### Recommended Books

1. Thomas L. Floyd, "Electronics Fundamentals: Circuits, Devices, and Applications", 6th Edition, 2004,

Prentice Hall.

2. Thomas L. Floyd and David Buchla, "Basic Operational Amplifiers and Linear Integrated Circuits", 2nd

Edition, Prentice Hall, 1999.

3. Robert Boylestad and Louis Nashelsky, "Electronic Devices and Circuit Theory", 9th Edition, Prentice Hall, 2006.

ELEC 443 Computer-Aided Electronic Design (Found-8)  
2(0+2)



**Lab Outline**

Introduction to computer-aided design, OrCAD and Protel; Schematic design and layout design of circuit

boards using software (OrCAD or Protel). Prototyping of electronic circuits, use of vero-board and bread-

board, soldering of electronics circuits, physical manufacturing of PCB's.

**Recommended Books**

1. Muhammad H. Rashid, "Introduction to PSpice Using OrCAD for Circuits and Electronics", 3rd Edition, Prentice Hall, 2004.
2. M. M. Shah, "Design of Electronic Circuits and Computer Aided Design", New Age International, 1993.
3. Akram Hossain, "Computer-aided Electronic Circuit Board Design and Fabrication: Using OrCAD/SDT and OrCAD/PCB Software Tools", 4th Edition, Prentice Hall, 1996.

ELEC 444 Electromagnetic Field Theory (Found-9)

3(3+0)

**Course Outline**

Vector analysis, Coulombs law and electric field intensity, Gauss's law, flux density and divergence,

energy and potential, conductor dielectric and capacitance, Poisson's and Laplace's equations, steady-

state magnetic field, magnetic forces, materials and inductance, time-varying fields and Maxwell's

equations, uniform plane waves.

**Recommended Books**

1. William Hayt and John A. Buck, "Engineering Electromagnetics", 7th Edition, McGraw-Hill, 2006.
2. Sadiku, Matthew N, "Elements of Electromagnetics", 2nd Edition, Oxford University Press, 1994.
3. Hearld J and W.Muller-Kristen, "Electrodynamics", 2nd Edition, World Scientific Publishing, 2011.

ELEC 445 Analog and Digital Communication (Found-10)

4(3+1)

**Course Outline**

Basic definitions; modulation and de-modulation techniques: amplitude, angle, pulse modulation, digital

modulation techniques; information theory; error detection and correction; multiplexing techniques; noise

and its effects on signal transmission; BER performance of various modulation techniques under noisy

environment.

### Lab Outline

Design and study of low-power AM and FM transmitters and receivers. Study of different signals  
behavior and its analysis-using computer simulated experiments and receivers. Study and construction of  
different digital communication systems. Multiplexing and Demultiplexing using digital ICs, line coding,  
design and construction and study of digital carrier systems. Study of TV system, Telephone system,  
digital switching systems.

### Recommended Books

1. B. P. Lathi, "Modern Digital and Analog Communication Systems", 3rd Edition, Oxford University Press, 1998.
2. Leon W. Couch, "Digital and Analog Communication Systems", 7th Edition, Prentice Hall, 2007
3. John G. Proakis and Masoud Salehi, "Communication Systems Engineering", 2nd Edition, Prentice Hall, 2002.



## GEOGRAPHY

### **Course Title: Foundation-I: Fundamentals of Geography**

Course Number: Geog. 311

Credit Hours: 2+1 (3)

Learning objectives: To make the student understand about the subject of Geography

### Course outline

- Introduction and Definitions of Geography
  - o Scope of the subject
  - o Roots of the discipline and basic geographic concepts
  - o The evolution of geography from ancient to modern period
  - o Branches of Geography and its relations with other disciplines.
- Five Major Themes of Geography
  - o Location: Absolute and relative
  - o Place: Physical and anthropogenic characteristics
  - o Interaction of different processes
  - o Movement
  - o Region

- Earth as a planet its celestial positions, shape and size.
  - o Rotation and revolution and related phenomena
  - o Earth's Satellite Moon
  - o Lunar and Solar Eclipses
- Positions on Map and Globe,
  - o Geographical coordinates and its characteristics,
  - o World time zones standard and local time
- A glance at the Globe: distribution of land and water
- Introduction of Lithosphere, Hydrosphere, Atmosphere and Biosphere

Lab. Work: Study of maps, atlases and different types of models to understand various Geographical Phenomena.

Field Visit: to show the characteristics of places and man-environment interaction.

**Books Recommended**

Christopherson, R.W. (2000), Geo-systems, Prentice-Hall, Inc, USA.

De Blij, H. J and Muller, P.O. (1996), Physical Geography of the Global Environment, USA, John Wiley and Sons Inc.

Fraser, C. (1993) Unlocking the five themes of Geography. Globe Book Company, New Jersey.

Gabler, R.E, Sager, R.J and Wise, D.L. (1997), Essentials of Physical Geography, Saunders College Publishing, New York

Mcliveen, J.F.R. (1992), Fundamentals of Weather and Climate, Prentice Hall New Jersey

Strahlar, A.N., Strahlar, A.H. (2004), Physical Environment, John Wiley. New York

Stringer, E.T. (2004), Modern Physical Geography, New York: John Wiley.

Taylor, J. (1993), Integral Physical Geography, London Longman

Thompson, R.D. et al. (1986), Process in Physical Geography, London, Longman.

Thurman, H.V. & Mexrill (1996), Essentials of Oceanography, Menson, London

Course Title: Foundation-II: Physical Geography

Course Number: Geog. 321

Credit Hours: 2+1 (3)

Learning objectives: To create an understanding about the characteristics of four spheres of the earth, and the processes which are bringing changes in these spheres.

**Course outline:**

- Introduction
  - o Definition, scope and major branches
  - o Realms of the physical environment
- Lithosphere
  - o Internal structure of earth
  - o Rocks—origin, formation and types: Igneous, Sedimentary and Metamorphic Rocks
  - o Plate tectonics, mountain building forces
  - o Geomorphic processes – endogenic and exogenic processes and their resultant landforms
  - o Earthquakes and volcanic activity, folding and faulting
  - o Weathering, mass wasting, cycle of erosion, erosion and deposition
  - o Landforms produced by running water, ground water, wind and glaciers
- Atmosphere
  - o Composition and structure of atmosphere

- o Atmospheric temperature and pressure,
- o Global circulation and wind systems
- o Cyclones and other disturbances
- o Atmospheric moisture and precipitation
- o Air masses and fronts
- Hydrosphere
- o Hydrological cycle
- o Ocean composition, morphology
- o Temperature, salinity and other characteristics of ocean water
- o Movements of the ocean water; waves, currents and tides
- Biosphere
- o Eco-systems
- o Formation and types of soils

Lab. Work: Identification of rocks and minerals, study and identification of landforms using Satellite imageries and Topographic Sheets. Construction and applications of models showing various types of landforms. Observation and recording of weather data from a mini weather station.

Field visits: Ground truthing and identification of various types of rocks, fluvial, glacial, desert landform, soils types. Visit to any suitable area to observe and appreciate the characteristics of physical features Mountainous, Plains, Plateaus, Deserts and Coastal areas.

Visit to any national park/biosphere reserves; Soil Survey of Pakistan, Geological Survey of Pakistan,

### Books Recommended:

- King, C. A. M. (1980) Physical Geography, Basil Blackwell, Oxford.
- Mcliveen, J. F. R. (1992) Fundamentals of Weather and climate, Prentice Hall, New Jersey.
- Monkhouse, F. J. (1996) Principles of Physical Geography, Hodder & Stoughton, London.
- Peterson, J. F., Sack, D. & Gabler, R. E. (2011) Physical Geography, Brooks Cole.
- Scott, R. C. (1996) Introduction to Physical Geography, West Publishing Co, New York.
- Small, R. J. (1989) Geomorphology and Hydrology, Longman, London.
- Strahler, A. (2013) Introduction to Physical Geography, John Wiley & Sons, New Jersey.
- Strahlar, A. N., Strahlar, A. H. (2004) Physical Environment, John Wiley, New York.
- Stringer, E. T. (2004) Modern Physical Geography, John Wiley, New York.
- Thornbury, W. D. (2004) Principles of Geomorphology, John Willy & Sons, New York.
- Thurman, H. V. & Trujillo, A. P. (2013) Essentials of Oceanography, Prentice-Hall, Inc, New York.

Course Title: Foundation-III: Human Geography

Course Number: Geog. 431

Credit Hours: 2+1 (3)

Learning Objective: This course attempts to impart knowledge regarding the interaction and relationship between man and environment and associated problems.

### Course outline:

- Introduction
- o Definition, scope and branches
- Basic approaches
- o Approached to Human Geography: Environmental Determinism, Possibilism, Probabilism, Cognitive behaviourism, Coupled nature-human systems
- o Population and its characteristics, Population distribution, structure and composition
- o Population dynamics: fertility, mortality, migration
- Economic activities
- o Classification of Economic Activities
- o Agriculture, mining, forestry, animal husbandry and poultry raising
- o Industries: cottage, light and heavy

- o Trade, transport and services
- o Tourism
  - Human Settlements
- o Theories of human settlement
- o Types of settlements
  - Rural settlements
- o Dispersed, Nucleated and Ribbon Settlements
  - Urban Settlements
- o Urban hierarchy and functions
  - Urbanization
- o Process of urbanization
- o Urban structure, morphology and theories
- o Land use and land cover patterns
  - Environmental issues, causes and remedies

Lab work: to represent population characteristics, economic activities and settlement types on maps of various scale at local, regional, and supra-regional levels and correlate it with the physical characteristics of those localities.

Field visits: To explore economic activities in the context of natural environment of relevant area/region. To study rural and urban settlements, industrial areas and national parks.

Books recommended:

- Ahmed, Q. S. (2001) Fundamentals of Human Geography, Royal Book Company, Karachi.
- Becker, A. & Secker. (2002) Human Geography: Culture, Society, and Space, John Wiley and Sons, New Jersey.
- Becker, A. & Secker. (2002) Human Geography: Culture, Society, and Space, New York; John Wiley and Sons, New Jersey.
- Benko, G. & Shorhmay. (2004) Human Geography: A history for the 21st century, Hodder Arnold, London.
- Blij, H. J. D. (2002) Human Geography: Culture, Society, and Space, John Wiley and Sons, New Jersey.
- ouberg, E. H. (2012) Human Geography People, Place and Culture, John Wiley & Sons, Inc., Hoboken.

Course Title: Foundation-IV: Map Work

Course Number: Geog. 432

Credit Hours: 2+1 (3)

Learning Objective: To train students in map drawing, reading and its use for geographical analysis

Course outline:

- Introduction to Maps
- Essential elements of map
- Classification and types of map
- Principles and methods of map making, reading and reproduction
- Scale: types and their use, construction
- Grid reference, coordinate system and indexing methods
- Enlargement and reduction of maps
- Map projections: types, main principles, choice of projection characteristics and uses
- Graphic/Mathematical construction of Cylindrical, Conical and Zenithal projections
- A study of the Survey of Pakistan maps:
  - o Historical development of survey and mapping in Pakistan

- o Numbering system
- o Physical and cultural features to be described and interpreted
- Interpretation of weather maps of Pakistan

Lab work: to work with maps in understanding scale its relationship with maps area, distance calculation of area on the map; symbolization process; work on the contour line, drawing of valley profiles, calculation of gradient. Record of practical.

Field visits: Visit to Survey of Pakistan and Pakistan Meteorological Department.

Books recommended:

Carey, H. H. (1983) How to Use Maps and Globes, Franklin Watts, New York.

Guljan, R. & Mushtaq, R. (1974) Map Projection, Oxford University Press, Oxford.

Kraak, M. J. & Ormeling, F. J. (1996) Cartography: Visualization of Spatial Data Harlow, Longman.

Robinson, A. H. (2002) Elements of Cartography, John Willey & Sons, New York.

Course Title: Foundation-V: Geography of Pakistan

Course Number: Geog. 441

Credit Hours: 2+1 (3)

Learning Objective: This course attempts to impart knowledge regarding the relationship between man and physical, socio-economic and cultural environment including land, population, human settlements, resources and related human activities with special reference to Pakistan.

Course outline:

- Introduction and genesis of Pakistan
- Geo-strategic position of Pakistan
- o Location and geographical significance
- o Geo-political importance
- o Administrative setup
- Land and Physical Environment:
  - o Physiography
  - o Climate and climatic regions
  - o Hydrology
  - o Soils and vegetation
- The People
  - o Population characteristics: structure, composition and distribution
  - o Population change
  - o Urbanization
- Economy
  - o Agriculture (crops and livestock). Irrigation
  - o Power and mineral resources
  - o Industries
  - o Trade
  - o Tourism
- Transport and Communication
- Major challenges of Pakistan
- o Water, power, security and environmental issues

Lab. Work: Survey, data collection and presentation on different thematic maps

Field visits: To identify various physical regions and study of at least one region's land use, urban structure, mining area, national parks, industrial areas and various rural and urban settlements and other natural resources.

Books recommended:

- Ahmad, K. S. (1978) *Geography of Pakistan*, Oxford University Press, Oxford.
- Burkey, J. S. (1991) *Pakistan the continuing search for Nationhood*, Western Press Oxford, UK.
- Davidson, A. P. & Ahmad, M. (2003) *Privatization and the Crisis of Agricultural Extension*
- Dichter, D. (1967) *Geography of N-W.F.P*, Oxford University Press, Oxford.
- Hameed, A. (1972) *Study of the Middle Indus Basin*, San Francisco State College, San Francisco.
- Khan, F. K. (1991) *Geography of Pakistan*, Oxford University Press, Karachi
- Spate, O. H. K. (latest edition) *India and Pakistan*, Methuen, New York., London
- Tayyeb, A. (1973) *A Political Geography of Pakistan*, Oxford University Press. Oxford.

Course Title: Foundation-VI: History & Development of Geographic Thought

Course Number: Geog. 442

Credit Hours: 2+1 (3)

Learning Objectives: To study the evolution of geographic thought and concepts from classic to modern times.

Course outline:

- Nature of Geography
- Evolution of Geography
  - o Pre-classical and classical periods: ancient Geography
  - o Medieval Geography: Muslim contributions, European contributions.
  - o Modern Geography: Humboldt and Ritter,
  - o Geography from the middle of the 20th century,
  - o Dichotomies-physical and human, systematic and regional.
  - o Quantitative Revolution, Geo-informatics and Ecology.
- Established traditions: Earth science, area study, spatial organization, man-land, system analysis and cartographic science.
- Man-environment interaction themes: Environmental Determinism, Possibilism, Probabilism, Cognitive Behaviourism, World views on man-environment relationship.
- Development of Nomothetic traditions: facts, concepts, hypotheses and paradigms, Ideographic vs. Nomothetic.
- Philosophical framework: Positivism: Pragmatism, Phenomenology
- Evolution of modern tools and models in geography
- Development of geography in Pakistan

Lab. Work: Writing of assignments and construction of maps showing the travels and voyages of famous explorers; diagrammatic representation of various models and relating them to geographical thought and seminar presentation on given themes.

Books recommended:

- Cresswell, T. (2013) *Geographic Thought: A critical Introduction*, Wiley-Blackwell, Oxford.
- Clayton, K. & Johnson, J.H. (Ed.), (1988) *Aspects of Geography*, Macmillan, London.
- Dickinson, R. E. (1969) *The Makers of Modern Geography*, Routledge, London.
- Dickinson & Howarth, O.J.R. (1933) *The Making of Geography*, The Clarendon Press, Oxford.
- James, P. E. & Mailim G. J. (1981) *All Possible Worlds*, John Wiley & Sons, New York.
- Johnston, R. J. (1983) *Geography and Geographers*, Edward Arnold, London.
- Kenzer, M. S. (Ed.) (1989) *On Becoming a Professional Geographer* Columbus, Merril Publishing Co., UK.
- Mayhew, S. (1986) *Geography*, Harmonds Worth: Penguin
- Mitchel, B. (1989) *Geography and Resources Analysis*, Longman, New York.

Tim, U. (1992) The Place of Geography, Longman, London.  
 Unwin, D. (1989) Introductory Spatial Analysis, Methuen, New York.

## HEALTH AND PHYSICAL EDUCATION

Course No	Course title	Course Description	C.H
HPE-301	Foundation of Physical Education & Sports	Foundation	3(3+0)

### Objective

This course is being introduced with a view to reflect the current status and emerging developments in the field of physical education. Emphasis has been placed on the contents that well in term develop the practical and applicable aspect of the foundation of physical education in the area of sports, in addition to the personality development, a prime objective of the field. Effects have been made to collect the diversity of the field at a single juncture and make it a useful, worthy and comprehensive accomplishment for the future generation. It is hoped that this professional and collaborative approach will work as a curtain raiser for the future prospects and pave the way to the excellence in this unique and important area of sports.

### Unit# 1 Definition and Meaning of Physical Education and Sports

Definition of Physical Education and sports  
 New name for the field.  
 Allied fields.  
 Terminology.

### Unit #2 Philosophies of Physical education and Sports

#### Components of philosophy

Metaphysics  
 Epistemology  
 Logic  
 Axiology  
 Ethics  
 Aesthetics

#### Philosophies in physical education

Idealism  
 Realism  
 Pragmatism  
 Naturalism  
 Existentialism  
 Modern Philosophies in physical Education

### Unit#3 Objectives of Physical Education & Sports

Clarifying terms Aims, Objectives and Goals  
 Objectives of Physical Education and Sports  
 Organic development  
 Cognitive development  
 Motor development  
 Social development



**Learning in three Domains and Assessment**

1. Cognitive Domain.
2. Affective Domain.
3. Psycho motor Domain.

**Unit#4 Psychological and Social Foundations of Physical Education and Sports**

- a. Definition of learning.
- b. Theories of Learning and their implications.  
Factor Affecting Learning.  
Concept and theories of play

**Unit #5 Careers and Professional Consideration in Physical Education Sports**

- a. Physical Education and sports career Opportunities
- b. Leadership and Professional Development
- c. The Teaching Profession
- d. Teaching Responsibilities

**Unit #6 Issues, Challenges and the Future of Physical Education and Sports**

**Books Reference:**

1. Bucher CA and Thaxton NA: Physical Education and sport: change and challenge, st.Louis 1981, Mosby.
2. Bucher CA and Wuest DA foundation of Physical Education and sport 13<sup>th</sup> Edition 1999 WCB Mc Graw-Hi
3. Sedentop D Introduction to Physical Education, Fitness and sport Mountain view, Calif 1990, Mosby.
4. Singh YK. (Yogesh kumar) and ms Nath R ( Ruchika) Teaching of Psychology Ansari Road Daryagang New Delhi- 110002.2005.A.P.H Publishing corporation

Course No	Course title	Course Description	C.H
HPE-305	Sports Bio Mechanics	Foundation	3(3+0)

**OBJECTIVES OF COURSE:**

This course has been designed to impart basic scientific technical information about body movements involved in sports activities by elaborating biomechanics, form of motion, Kinematics of Physical Activities, Analyzing Games techniques.

**UNIT 1 INTRODUCTION TO BIOMECHANICS**

- a. Definition and Meaning of Biomechanics
- b. Terminology used in Biomechanics
- c. Importance of Biomechanics in Health, Phy: Edu & Sports

**UNIT 2 MOVEMENT**

- a. Definition and Meaning of Movement
- b. Types of Movement
  1. Basic Movement
  2. Derived Movement

**UNIT 3 ANATOMICAL BASIS OF MOTION**

1. Definition of motion
2. Anatomical basis of human motion
  - a. Role of muscular system in human motion
  - b. Role of skeletal system in human motion
  - c. Role of nervous system in human motion

**UNIT 4 ENVIRONMENT AND MECHANICAL LAWS IN REFERENCE TO MOTION**

1. Definition of environment
2. Environmental factors affecting movement
3. Mechanical Laws( Newton's Laws of Motion)
  1. Force 2. Mass 3. Gravity 4. Friction 5. Liver 6. Energy 7. Air Resistance 9. Equilibrium

**UNIT 5 DIMENSION OF HUMAN BODY**

- a. BMI
- b. Types and characteristics of Human Body in accordance to Phy: Edu & Sports
- c. Importance of Body Types
- d. correctives exercises for each body type

**UNIT 6 HUMAN POSTURE**

- a. definition and importance of posture
- b. measurement of good posture
- c. postural defects
  - a. Tilted Head
  - b. khphosis
  - c. lordosis
  - d. khoholordosis
  - e. scoliosis
  - f. knee and foot deformities
  - g. Remedial exercises for postural defects

**References**

1. Anna Espenscnada, Helen M. Eckert Motor Development, Chales E. Merrill publishing Company
2. Claeny Goddon and Bluer Applied Kinesiology and Biomechanics, McGraw Hill Book Company
3. Clyde Knmapp and Particias Hageman Kannard. Teaching Physical Education in Secendary Level, McGraw Hill BOOK Company.
4. David A. Winter Biomechanics of Human Movement, John Wily and Sons

Evelyn L. Schurr, Movement experience for Children, Prentice Hall, Inc Englwood Cliff New Jersey

Course No	Course title	Course Description	C.H
HPE-306	Rules of Athletics	Foundation	3(3+0)

**Objective:**

The main purpose of this course is to enhance the knowledge of the students regarding Track & field. This course will also be helpful in developing the skill of the students regarding the marking, and laying out the standard track and other circles and marking of the track. The students will be able to conduct the track and field competitions at various levels as well as to perform the duties of technical officials.

**Unit # 1 History of Ancient Olympic Games with Special Reference to Track & Field**

**Unit# 2 Modern Olympic Games with Special Reference to Athletics.**

**Unit# 3 Introduction to Athletic**

**Unit# 4 Method of laying of 200 and 400 Meters Running Track.**

**Unit# 5 How to conduct track and Field competitions at College, University and National level**

**Unit# 6 Officials and their duties in Athletics**

**Unit# 7 Rules of Track Events**

- i) Sprint Races** 100 Meters, 200 Meters & 400 Meters.
- ii) Middles Distance Races** 800 Meters and 1500 Meters
- iii) Long Distance Races** 3000,5000 and 10000 Meters
- iv) Hurdles Races** 100 Meters & 400 Meters (for women)  
110 Meters, 400 Meters & 3000 Meters  
Steeple chase (for man)
- v) Relay Races** 4X100 Meters, 4X400 Meters
- vi) Road Races**
- vii) Cross Country**
- Viii) Combined Events**

**Unit# 8 Rules of Field Events (Jumps)**

- Broad Jump/ long Jump
- High Jumps
- Triple Jump/Hop step & Jump
- Pole Vault

**Unit# 9 Rules of Field Events (Throws)**

- Shot Put
- Discus
- Javelin
- Hammer

**Unit# 10 Rules of WADA in IAAF Competitions**

**BOOKS REFERENCE**

1. DR. P.Modak Rules & Principles of sports & Game , New Delhi Khel Shitya Kendra,india 2005
2. M.B.Davies Physical Training, Games and Athletics in Schools New Delhi, Khel Sahitya Kendra, 2005
3. Ekta Teaching and coaching Athletics. New Delhi, Sports Publiation, 2004
4. Mood Musker Rink Sports and recreational Activities,13<sup>th</sup> Edition, McGraw Hill, 2003
5. O.P.Sharma, Athletics Skills & Rules, Delhi Khel shitya , Kendra,india 2003
6. Guy Butler Athletics & Training, New Delhi, Sonali publication 2003.
7. Dr. M. L. Kamlesh Athletic Personality;A Psychological Probe, New Delhi, Khel Sahitya Kendra, 2004.
8. R. Jain. Track and Field, New Delhi, Khel Sahitya Kendra, 2003
9. Daniel D.Arnheim Essentials of Athletic Training-5<sup>th</sup> Edition,Toronto,McGraw Hill, 2002.
10. Danial D.Arnheim, Athletic Training-4<sup>th</sup> Edition, CA, WCB, McGraw Hill,1999
11. Sharma,N.P. Fundamental of track and Field. New Delhi; Khel Sahitya Kendra,india 2005
12. Danial D Arnheim Athletic Training-4th Edition, CA, WCB, McGraw Hill, 1999
13. Sharma, N.P, Fundamental of track & Field. New Delhi: Khel shitya Kendra 2005
14. Gothi,E. Teaching & Coaching Athletics. New Delhi: Sports Publication 2004.
15. Jain, R. Track and Field. New Delhi: khel shitya Kendra, 2003
16. Thani Vivek. Ency of track &field. New Delhi, khel shitya Kendra, 2003
17. I.A.A.F Hand book of Athletics, P.A.A.F Publisher, 2000.  
Allen GuttmanWomen's Sports, Columbia University press 1991 USA

Course No	Course title	Course Description	C.H
HPE-401	Rules of Games	Foundation	3(3+0)

### Objective

The prime focus of this course would be to develop the knowledge of the students about international rules of different games. This course will also help in enhancing the organizational skills of the students in addition to improving the students' knowledge regarding the organization and conduct of tournaments at different level. It will also contribute towards the development of leadership qualities and sportsmanship among the students of Health & Physical education.

#### Unit#1 Concepts of Sports and Games

Definition of sports and games  
Types of games  
Values of sports and games

#### Unit #2 Allied areas of Sports and Games

Camping  
Civil  
Defense  
Mountain  
Climbing  
Hiking/Trekking  
Camping

#### Unit #3 Competitions and their Types

Single elimination or knockout system  
Round Robin or league system  
Combination system  
Challenge system  
Ladder system  
Pyramid system

#### Unit#4 Organizational Structure and Conduct of Games at Different Levels

Education level  
Private level  
National level  
International level  
Role of Associations, Federations, Olympic committee, provincial sports boards, Pakistan Sports Board, HEC, PCB and ICC in National and international level sports.

**Unit#5**

**National and International Competitions**

National Games  
SAF Games  
Asian Games  
Common Wealth Games  
Olympic Game  
World Games  
Para Olympic Games  
World University Games  
World Championships  
Other competitions.

**Unit #6**

**Brief History and Rules of the following Games**

**Ball Games**

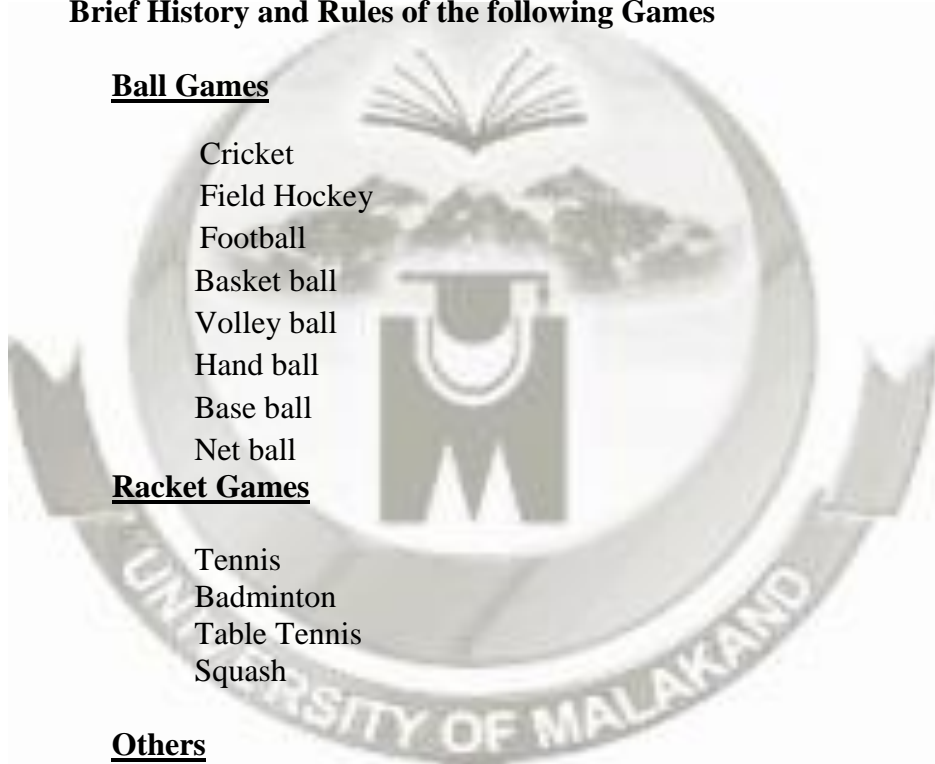
Cricket  
Field Hockey  
Football  
Basket ball  
Volley ball  
Hand ball  
Base ball  
Net ball

**Racket Games**

Tennis  
Badminton  
Table Tennis  
Squash

**Others**

Kabaddi  
Tug of war  
Swimming  
Water polo  
Gymnastics  
Chess



**Books Reference:**

1. Dr .P.Modak Rules & Principles of sports & Games, New Delhi Khel Shitya Kendra, India 2005.
2. Dr.Anil Sharma Sports law ( With latest Rules and Management), New Delhi Khel Shitya Kendra, Indian 2004
3. Dr. Anil Sharma The Illustrated Encyclopedia of rules in sports & Games, New O.P. Sharma Delhi , sport publication 2004.
4. Mood musker Rink Sports and recreational activities, 13<sup>th</sup> Edition, London, Mc Graw Hill, 2002.
5. B.K.Chaturvedl Rules & Skills of game & sports, new Delhi Goodwill Publishing House, 2003.
6. Lokesh Thai Rules of Games & Sports, New Delhi, Sports Publications, 1995.
7. Ruth Medley Rules of the Games
8. Pankaj Rules of Games & Sports
9. B.N Ahuja Rules and skills of Games & Sports
10. R.B Goel Sports and Games

Course No	Course title	Course Description	C.H
HPE-402	Health Education	Foundation	3(3+0)

**Objective:**

This course is designed to acquaint students with principles of health, religious aspects of health, and to promote healthy life style in community.

**Unit# 1 Introduction**

- a. Definition of health and health education
- b. Aims and objectives of health education
- c. Importance of health education in community
- d. Relationship of health education with physical Education.

**Unit# 2 Islam and Health Education**



- a. Personal Hygiene.
- b. Personal Hygiene and Islamic principles.

**Unit # 3 Environment and Human Health**

- a. Impurities of air and their effects on health
- b. Water and health
- c. Noise and its impact on mental health.

**Unit# 4 Foods and Nutrition**

- a. Definition of Foods.
- b. Functions of Foods.
- c. Food Hygiene.
- d. Definition of Nutrition.  
Nutrients.
  - 0. Protein.
  - 1. Carbohydrates
  - 2. Fats.
  - 3. Minerals.
  - 4. Water.
  - 5. Vitamins.
- e. Diet & Concept of Diet in Sports

**Unit# 5 Diseases their Causes, Symptoms and Preventive Measures**

**6. Bacterial Diseases**

Cholera  
T.B  
Tetanus

**Viral Diseases**

Polio  
Measles  
Hepatitis  
AIDS/HIV

**Fungal Diseases**

Athlete Foot  
Ring Worm

**Parasite Diseases**

Malaria  
Thread worm  
Ascariasis

**Venereal diseases**

Syphilis  
Gonorrhea

**Non Communicable Diseases and their care**

Hypertension  
Diabetes  
Asthma  
Epilepsy

**Unit# 6 Health Hazards**

Opium  
Heroine  
Alcohol  
Cigarette smoking  
Snuff (Naswar)  
Sleeping pills  
Hashish (chars )

**Unit# 7 Disinfections and Disinfectants.**

**Unit# 8 First Aid.**

- a. Definition of first aid.
- b. Principles of first aid.
- c. Duties of first aider.
- d. RICE, DRABC, SALTAPS.

**BOOKS REFERENCE:**

Akhtar saleem M.Muhammad Iiyas.et.,al. Shah S.K Dr.et.Al

Andreson st.

Wilf Paish

Asif Malik D.P.E

Modern Health Education

Community Medicine and public Health  
4<sup>th</sup> edition time trades, urdu bazaar Karachi.

Synopsis of Hygiene and Public Health

All Community Health

Diet in Sport EP Publishing Limited

Ilmul adban O Ilmusihat Iqra Book Agency, Sadaf Plaza Qissa  
Kjawani bazaar Peshawar

Course No	Course title	Course Description	C.H
HPE-402	Health Education	Foundation	3(3+0)

**Objective:**

This course is designed to acquaint students with principles of health, religious aspects of health, and to promote healthy life style in community.

**Unit# 1 Introduction**

- a. Definition of health and health education
- b. Aims and objectives of health education
- c. Importance of health education in community
- d. Relationship of health education with physical Education.

**Unit# 2 Islam and Health Education**

- a. Personal Hygiene.
- b. Personal Hygiene and Islamic principles.

**Unit # 3 Environment and Human Health**

- a. Impurities of air and their effects on health
- b. Water and health
- c. Noise and its impact on mental health.

**Unit# 4 Foods and Nutrition**

- a. Definition of Foods.
- b. Functions of Foods.
- c. Food Hygiene.
- d. Definition of Nutrition.
- Nutrients.
  0. Protein.
  1. Carbohydrates
  2. Fats.
  3. Minerals.
  4. Water.
  5. Vitamins.
- f. Diet & Concept of Diet in Sports

**Unit# 5 Diseases their Causes, Symptoms and Preventive Measures**

**6. Bacterial Diseases**

Cholera  
T.B  
Tetanus

**Viral Diseases**

Polio  
Measles  
Hepatitis  
AIDS/HIV

**Fungal Diseases**

Athlete Foot  
Ring Worm

**Parasite Diseases**

Malaria  
Thread worm  
Ascariasis

**Venereal diseases**

Syphilis  
Gonorrhea

**Non Communicable Diseases and their care**

Hypertension  
Diabetes  
Asthma  
Epilepsy

**Unit# 6 Health Hazards**

Opium  
Heroine  
Alcohol  
Cigarette smoking  
Snuff (Naswar)  
Sleeping pills  
Hashish (chars )

**Unit# 7 Disinfections and Disinfectants.**

**Unit# 8 First Aid.**

- a. Definition of first aid.
- b. Principles of first aid.
- c. Duties of first aider.
- d. RICE, DRABC, SALTAPS.

Course No	Course title	Course Description	C.H
HPE-404	Planning Sports Facilities	Foundation	3(3+0)

**Objective**

The objectives of the course are to raise the awareness among the students about the planning in sports and physical education. It also aims at developing their concept about the latest facilities in sports and use of modern laboratories in sports. The course will also enhance the capabilities of the students regarding facilities planning in sports.

**Unit # 1 Planning Process**

**a. Basic Consideration.**

**b. Need for Area and Facilities.**

Major Concepts.

Steps in Planning Factors.

Planning Units – Types and Functions

**Unit#2 Planning for Sports & Physical Education facilities**

a. Major Concepts .

b. Steps in Planning Process.

c. Responsibilities of Physical Educator

**Unit#3 Facilities for Research**

**a. General Consideration.**

**b. Teaching and Research Laboratories**

**c. Specific laboratories Facilities.**

Measurement and Evaluation.

Biomechanics.

Exercise Physiology.

Motor Learning and Psychology Learning

**Unit# 4 Planning Of Indoor Facilities**

a. Courts

b .Gymnasium.

c. Swimming Pool.

**Unit#5 Outdoor Facilities**

Stadium.

Track& field

**Unit # 6 Facilities for Faculty and Staff**

a. Administrative Units.

b. Essential administrative facilities.

c. Administrative office.

d. Faculty offices.

e. Audiovisual and Conference Room.

f. Locker Shower Room

g. Toilet and Lavatory Facilities.

**Unit#7 Understanding of PC-1 and Compilation of PC-1**

### Book References

1. Planning facilities for Athletics ,physical Education ,and Recreation(1974)
2. American Association for Health physical Education, and Recreation 12013 sixteenth Street N.W Washington DC 2006.
3. Eugene M.E, Richard P.T(1976);facilities in sports and physical Education; C.V Mosby company.

## LIBRARY AND INFORMATION SCIENCE

INFORMATION, LIBRARY AND SOCIETY  
Course Code LIS 115 Credit Hours 3

### Objectives:

- To explore the environment in which library and information professionals work.
- To understand social, political and economic context in which libraries and other information agencies operate.
- To understand the nature of library and information and their role in society.

### Description:

Nature of information and knowledge. Library and Information Profession, Library and its role in Society. Information society. Communication and information management. Social information. Economic aspects of information. Information policy. Freedom of information. Information privacy. Intellectual property. Information ethics.

### Recommended Readings:

1. Baker, D., & Evans, W. (2011). Libraries and society : role, responsibility and future in an age of change, from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=683144>
2. Campbell, J. W. P., & Pryce, W. (2013). *The library : a world history*.
3. Chowdhury, G. G. (2007). *Librarianship : the complete introduction*. London: Facet.
4. Ershova, T. V., Hohlov, Y. E., International Federation of Library, A., & Institutions. (2002). Libraries in the information society, from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=628730>
5. Hamilton, S., Seidelin, S., & Ifla/Faife. (2003). *Intellectual freedom in the information society, libraries, and the Internet*. Copenhagen: IFLA/FAIFE.
6. Hornby, S., & Clarke, Z. (2003). *Challenge and change in the information society*. London: Facet.
7. Lester, J., & Koehler, W. C. (2003). *Fundamentals of information studies: understanding information and its environment*. New York: Neal-Schuman Publishers.
8. Society for the, P., & Improvement of, L. (1981). *The role of the Society for the Promotion and Improvement of Libraries in Pakistan : a brief survey*. Karachi: The Society.
9. Torr, J. D. (2003). *The information age*. San Diego: Greenhaven Press.

## EVOLUTION OF LIBRARIES AND INFORMATION SOURCES

Course Code LIS 116 Credit Hours 3

### Objectives:

- To give an overview of the evolution of libraries
- To give an overview of different formats of information and knowledge from ancient to present times
- To develop basic understanding regarding these formats

**Description:**

Ancient records of knowledge. History of libraries. Evolution of alphabets. Clay tablets. Parchment. Papyrus roles. Codex. Invention of printing, Books. Serials--- Journals, Magazines, Newspapers. Audio. Visual. Multimedia. Microforms.

**Recommended Readings:**

1. Bopp, R. E., & Smith, L. C. (2011). *Reference and Information Services: An Introduction: An Introduction: ABC-CLIO.*
2. Chappel, W. (1980). *A short history of the printed word.* New York: Arno Pr.
3. Foot, P. W. R. (1967). *The story of communications.* Oxford; New York: Pergamon Press.
4. Goker, A., & Davies, J. (2009). *Information retrieval: Searching in the 21st century:* John Wiley & Sons.
5. Harris, M. H. (1995). *History of libraries in the western world.* Metuchen, N.J.: Scarecrow Press.
6. Kilgour, F. G. (1998). The evolution of the book, from <http://site.ebrary.com/id/10358318>
7. Liu, Z. (2008). *Paper to digital : documents in the information age.* Westport, Conn.: Libraries Unlimited.
8. Staikos, K. (2012). *History of the library in western civilization : from petrarch to michelangelo.* [Place of publication not identified]: Hes & De Graaf Publ.
9. Wilkie, C., Aslib, & Information Management, I. (1999). *Managing film and video collections.* London: Aslib/Imi.

**USER SERVICES IN LIBRARIES**  
*Course Code LIS 117      Credit Hours 3*

**Objectives:**

- To understand the types and terminology of user services in libraries.
- To develop skills for Planning, designing, implementing and evaluating effective user services.

**Description:**

Introduction to user services. Circulation service. Reference and Information services. Referral service. Current awareness service (CAS). Selective Dissemination of Information (SDI). Documentation services. Translation services. Inter Library Loan (ILL) and Document Delivery. Reprographic service. User education.

**Recommended Readings:**

1. Bopp, R. E., & Smith, L. C. (2001). *Reference and information services: an introduction.* Englewood, Colo.: Libraries Unlimited.
2. Bopp, R. E., & Smith, L. C. (2011). *Reference and Information Services: An Introduction: An Introduction: ABC-CLIO.*
3. Evans, G. E., Amodeo, A. J., & Carter, T. L. (1999). Introduction to library public services, from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=18400>
4. Goker, A., & Davies, J. (2009). *Information retrieval: Searching in the 21st century:* John Wiley & Sons.
5. Janes, J. (2003). *Introduction to reference work in the digital age:* Neal Schuman Pub.
6. Katz, W. A. (1974). *Introduction to reference work. Vol. 1. 2nd ed.* New York.
7. Katz, W. A. (1978). *Introduction to reference work. Vol. 2. 3rd ed.* New York.

**USE OF EMERGING TECHNOLOGIES IN LIBRARIES**  
*Course Code LIS 118      Credit Hours 3*

**Objectives:**

- To develop a conceptual understanding of information and other technologies used in libraries.
- To develop practical skills in using library technologies.

**Description:**

Information and other library technologies. Hardware. Software. Operating systems. Telecommunications and networks. Internet and WWW, barcode technology, wireless technology and virtual private network (VPN). Social networking. Email. Word processing. Spreadsheets. Presentation software. Desktop publishing. Databases. Library security systems. Tele-lifts. Digitization hardware and software. Reprographic technology, Radio Frequency Identification (RFID) Scanning.

**Recommended Readings:**

1. Burke, J. J. (2006). *Library technology companion*. New York: Neal-Schuman.
2. Ferguson, S., & Hebels, R. (2003). *Computers for librarians: An introduction to the electronic library*. Wagga Wagga: Centre for Information Studies, Charles Sturt University.
3. Miller, J. B. (2008). *Internet technologies and information services*. Westport, CT: Libraries Unlimited.
4. Morley, D. (2007). *Understanding computers: today and tomorrow*. Boston, Mass: Thomson/Course Technology.
5. Rowley, J. (2001). *The electronic library*. London: Library Association Publ.
6. Shelly, G. B., Cashman, T. J., & Vermaat, M. (2007). *Discovering computers 2007: A gateway to information*. Boston, Mass: Thomson Course Technology.

**ORGANIZATION OF INFORMATION**  
*Course Code LIS 119      Credit Hours 3*

**Objectives:**

- To introduce theories and trends of bibliographic description and subject analysis.
- To understand concepts of organization of both print and electronic information.
- To give an overview of the efforts of information organization in Pakistan.

**Description:**

Historical development of the organization of information. Systems for organization of information: Environments, Storage and Retrieval tools, Encoding standards, Cataloguing Codes and its modern aspects Resource Description and Access (RDA), Current systems. The information organization process: Surrogate/Metadata records: Description, Access; Authority control. Subject access: Analysis, Verbal subject approaches, Classification. Organization and administration: Arrangement, Management issues. Problems of information organization in Pakistan.

**Recommended Readings:**

1. Chan, L.Louis Mai.(1994). *Cataloguing and Classification: An introduction. 2<sup>nd</sup> ed.* New York: Mc Graw Hill.
2. Coleman, A. (2004). *Guide to selecting and cataloging quality WWW resources for the small library*. Fairfield, CA: LRACCC.
3. Harvey, D. R., Hider, P., & Harvey, D. R. (2004). *Organising knowledge in a global society: Principles and practice in libraries and information centres*. Wagga Wagga, N.S.W.: Centre for Information Studies, Charles Sturt University.

**International Federation of Library Associations and Institutions. (2002). *ISBD(M): International Standard Bibliographic Description. (2002). Available at:***  
[www.ifla.org/VII/s13/pubs/isbd\\_m0602.pdf](http://www.ifla.org/VII/s13/pubs/isbd_m0602.pdf)

- Khurshid, Anis (1993). *Jadid Catalogue Sazi*, Islamabad: Muqtadara Qumi Zaban.
4. Rowley, J. E., & Farrow, J. (2000). *Organizing knowledge: An introduction to managing access to information*. Aldershot, Hampshire: Gower.
5. Svenonius, E. (2000). *The intellectual foundation of information organization*. Cambridge, Mass: MIT Press.
6. Taylor, A. G., & Joudrey, D. N. (2008). *The organization of information*. Westport, Conn: Libraries Unlimited.

**BASIC REFERENCE AND INFORMATION SOURCES**  
*Course Code LIS 120      Credit Hours 3*

**Objectives:**

- The primary intent is to acquaint students with basic reference sources and learn about a few standard titles in each of the basic categories.
- Enable them to retrieve information efficiently using these information sources.

**Description:**

Definition. Evaluation Criteria. Bibliographies and its types, Basic guides to reference materials, Library catalogs; Serials guides; Indexes and abstracts; HEC NDL; Dictionaries and thesauri; Almanacs and fact books; Encyclopedias; Directories; Biographical sources; Geographical sources-- Maps, atlases &



gazetteers; Reference Web sites; Internet Public Library). Evaluation

**Recommended Readings:**

1. *Basic reference sources*. <http://www.lili.org/forlibs/ce/able/course11/welcome-2.htm>
- 2.
3. Bopp, R. E., & Smith, L. C. (2011). *Reference and information services : an introduction*. Santa Barbara, Calif.: Libraries Unlimited.
4. Goker, A., & Davies, J. (2009). *Information retrieval: Searching in the 21st century*: John Wiley & Sons.
5. Harper, M. (2011). *Reference sources and services for youth*. New York, NY: Neal-Schuman Publishers.
6. Jadhav, U. S., & Jange, S. (2012). *Library and information sources and services*. New Delhi: Regency Publications.
7. Janes, J. (2003). *Introduction to reference work in the digital age*: Neal Schuman Pub.
8. Katz, W. A. (2002). *Introduction to reference work: Vol. 1, Basic information services*. Boston: McGraw-Hill
9. Loyd, S., Building Services, R., & Information, A. (1993). *Information sources for building services professionals: BSRIA*.
10. Singh, G. (2013). *Information sources, Services and Systems*. India; New Delhi: PHI Learning Private Limited.



**INTRODUCTION TO PUBLISHING AND BOOK TRADE**  
**Course Code LIS 122      Credit Hours 3**

**Objectives:**

- To develop understanding of the information industry dynamics
- To develop learning about dealing with commercial and non commercial publishers in libraries context

**Description:**

What is publishing? A brief history of publishing; Scholarly publishing/communication; Job of publisher. Types of publishers—commercial, non-commercial. Electronic publishing. Dynamics of foreign and local book trade in Pakistan; Acquisition of foreign books. Journals and databases in libraries of Pakistan: procedure and problems. Vendors, book-sellers and distributors. Library rates and rebates.

**Recommended Readings:**

1. Gorman, G. E. (2005). *Scholarly publishing in an electronic era*. London:Facet.
2. Ameen, K. (2008). Issues of book acquisition in university libraries: A case study of Pakistan. *Library Philosophy and Practice*. <http://www.webpages.uidaho.edu/~mbolin/lpp2008.htm>
3. BUBL Link. *Electronic publishing*. Available at <http://bubl.ac.uk/LINK/e/electronicpublishing.htm>
4. De Sompel, H. V., et al. (2004). Rethinking scholarly communication: Building the system that scholars deserve. *D-Lib Magazine*, 10 (9). Available at: <http://www.dlib.org/dlib/september04/vandesompel/09vandesompel.html>
5. Evans, G. E., & Margaret, Z. (2005). *Developing library and information center collections*. Littleton, CO: Libraries Unlimited. (Chap. 11)
6. NBCP. (1981). *Problems of book distribution in Pakistan*. Karachi.
7. NBCP. (1981). *Problems of book publishing in Pakistan*. Karachi.
8. NBCP. (1981). *Problems of periodical publishing in Pakistan*. Karachi.
9. Wilkinson, F. C., & Lewis, L. K. (2009). *The complete guide to acquisitions management*. Littleton, CO: Libraries Unlimited.
10. Wilson, T. (1997). Electronic publishing and the future of the book. *Information Research*, 3 (2). Available at: <http://informationr.net/ir/3-2/paper39.html>
11. Ibrahim Saad (1994) Readers on Book publishing in Pakistan. Royal book co

## FOOD SCIENCE AND TECHNOLOGY

**FSAT-5101****Introduction to Food Science and Technology****3 (2+1)**

This is an introductory course which enables the students to understand the basics of food science and technology. Students will explore and gain an understanding into the history of Food Science and the factors that have shaped Food Science in Pakistan, the organizations involved in Food manufacturing, food regulatory processes, Food composition, its classification depending on sources, consumption pattern and basic analysis of food components. The course is the study of the physical, biological, and chemical makeup of food; the causes of food deterioration; and the concepts underlying food processing. Food scientists and technologists apply scientific disciplines including chemistry, engineering, microbiology, and nutrition to the study of food to improve the safety, nutrition, wholesomeness and availability of food. Depending on their area of specialization, food scientists may develop ways to process, preserve, package, and/or store food according to industry and government specifications and regulations. It could involve enhancing the taste, making it last longer, making sure it's safe to eat, or even boosting its nutritional content.

### *Contents (Theory)*

- 1 Introduction to food science, food technology, relationship with other disciplines
- 2 Career opportunities.
- 3 Significance of food science and technology
- 4 Food industry: history, developments
- 5 Important food industries in Pakistan
- 6 Food sources: plants, animals and marine
- 7 Food constituents and their functions: water, carbohydrates, lipids, proteins, vitamins, minerals.
- 8 Classification of foods on the basis of perishability and pH
- 9 Food spoilage agents: enzymes, microorganisms, pests, physical factors
- 10 Principles of food preservation
- 11 Prevention or delay of autolysis, microorganisms and pests

### *Contents (Practical)*

- 1 Use of basic food laboratory equipment.
- 2 Estimation of Moisture, Fat, Protein, Carbohydrates, Fiber and Ash content in food samples.
- 3 Determination of soluble solids, total solids, pH, Acidity, total sugars, Specific gravity and Refractive index.

### *Recommended Texts*

- 1 Awan, J. A. (2018). *Food science and technology*. Faisalabad: Unitech Communications.
- 2 Robert, L. S., Ramirez, A. O., & Clarke, A. D. (2015). *Introducing food science*. (2<sup>nd</sup> ed.) Florida: CRC Press.

### *Suggested Readings*

- 1 Stewart, G. F., & Amerine, M. A. (2012). *Introduction to food science and technology*. Amsterdam: Elsevier.
- 2 Potter, N. N., & Hotchkiss, J. H. (2012). *Food science*. Berlin: Springer Science & Business Media.

**FSAT-5102****Elements of Food and Nutrition****3 (3+0)**

This course enables the students to understand the composition, food processes and their interaction with health and diseases. The students learn how to prevent and cure the nutritional disorders. Nutrition has been playing a big role in our lives, affecting daily habits and health behaviours. A career in nutrition is ideal for those seeking to promote a balanced lifestyle and improve people's diets, while helping them to keep a healthy weight, boost their immune system, increase their energy levels, and reduce the risk of developing certain diseases. This course opens up different avenues for future, and depending on the role you choose, could make a real difference to people's lives. A nutritionist can help people to lead healthier lives through education in food and nutrition, or enhance their mental and physical performance through specially designed diets. Nutritionist could become a food analyst or work in public health – and look at the chemical and physical properties of food, or conduct tests for bacteria and disease.

*Contents*

- 1 Introduction: Food, diet, balanced diet, nutrients food groups, food guide pyramid, meal planning, menu planning, diet therapy, principles/factors of diet selection
- 2 Nutritional status assessment
- 3 Eating Food: Smell, taste, satiety
- 4 Water: Functions, sources, regulation in body, dietary requirements, content in food
- 5 Carbohydrates: Types, role in body, dietary fiber, sweeteners, dietary requirements, content in food.
- 6 Fats and Oils: Types, functions, dietary requirements, content in food, fat substitutes
- 7 Proteins: Amino acids, protein synthesis, classification, functions, quality of proteins, dietary requirements, content in foods
- 8 Vitamins: Classification, functions, deficiency and excess, content in food
- 9 Mineral Elements: Classification, functions, deficiency and excess, content in food
- 10 Digestion: Alimentary tract, digestive juices, secretions
- 11 Absorption and Metabolism of Nutrients: Carbohydrates, protein, lipids
- 12 Nutrient and Dietary Deficiency Disorders: Malnutrition, obesity, coronary diseases, diabetes, lactose and gluten intolerance, dental caries-symptoms, causes, prevention
- 13 Acid-Alkaline and Electrolytes status in relation to health and diseases
- 14 Different values of foods in nutrition
- 15 Nutrients and genes

*Recommended Texts*

- 1 Awan, J. A. (2007). *Elements of food and nutrition*. Faisalabad: Unitech Communications.
- 2 Gibney, M. J., Lanham-New, S. A., Cassidy, A., & Vorster, H. H. (2013). *Introduction to human nutrition*. (2<sup>nd</sup> ed.) Chichester: John Wiley & Sons.

*Suggested Readings*

- 1 Geissler, C., & Powers, H. (2017). *Human nutrition*. (13<sup>th</sup> ed.) Oxford: Oxford University Press.
- 2 Whitney, E. N., & Rolfes, S. R. (2018). *Understanding nutrition*. (15<sup>th</sup> ed.) Boston: Cengage Learning.

**FSAT-5103**

**Food Processing and Preservation**

**3 (2+1)**

The course provides students the knowledge and training on the process and the impact of the process on food product quality. The student will learn general processing flow for various food products, physical principles of operation for various types of equipment and impact of the processing on the physical, chemical and sensory properties of the food products. In the food processing industry, workers convert food materials from their raw unprocessed states into consumable items. Continue reading this article to learn more about education options and career prospects in the field of food processing. Food processing is the sector of food production whereby raw food materials, such as grains, livestock and fruit, become food items for sale in supermarkets, butcher shops and other food retail locations. Food processing occupations include bakers, butchers and food cooking machine operators. Food scientists are also part of this industry; these workers may develop new ways to process and package foods, research food additives or enforce sanitation laws at food processing sites.

*Contents (Theory)*

- 1 Preparation of Foods for food processing:
- 2 Introduction, Properties of raw materials, Storage and Transportation of raw materials.
- 3 Preparatory Operations: Cleaning, Sorting, Grading, Size reduction, Blanching, sulphiting.
- 4 Heat Processing: Methods thermisation, Pasteurization, HTST, Commercial sterilization, UHT.
- 5 Canning: Unit operations. Retort Operation. Equipment. Effect of heat processing on nutrients and microorganisms.
- 6 Low Temperature Preservation. Refrigeration: Methods and equipment.
- 7 Cold storage: requirements, insulation, air circulation, humidity, refrigeration load, controlled atmospheric storage.
- 8 Freezing: Theory, Methods, Equipment and Changes in foods.
- 9 Evaporation and Dehydration: Evaporation concentration and Condensation. Principles, Equipment, Applications.
- 10 Drying: Principles, Equipments, Types of driers. Dehydration: Applications, Dehydrated products vegetables, fruits and milk.
- 11 Use of Chemical Additives: Contaminants, Adulterants, Additives. Food Additives: Classification, Criteria for selection, Effect on food properties, Detection methods.

*Contents (Practical)*

- 1 Bottling/canning of selected fruits, vegetables.
- 2 Cold storage of fruits and vegetables. Freezing of fruits and vegetables.
- 3 Dehydration of fruits and vegetables. Use of chemicals in preservation of food products.
- 4 Production of vinegar, yoghurt and pickles. Evaluation of bottled, frozen and dehydrated products. Visit to food industries.

*Recommended Texts*

- 1 Rahman, M. S. (2007). *Handbook of food preservation*: Florida: CRC press.
- 2 Awan, J. A. (2011). *Food processing and preservation*. Faisalabad: Unitech Communications.

*Suggested Readings*

- 1 Fellow, P. J. (2005). *Food processing technology: principles and practices*. (2<sup>nd</sup> ed.) Florida: CRC Press, Taylor and Francis Group, Boca Raton.
- 2 Brennan, J. G. (2006). *Food processing handbook*. Weinheim: Wiley-VCH Verlag GmbH and Co. KGaA.

**FSAT-5104**

**Unit Operations in Food Processing**

**3 (3+0)**

This course is the study of unit operations in preserving foods by thermal and alternative food processing methods. Recitation through problem solving and experimentation. Interdependence of food engineering, chemistry, and microbiology principles in food preservation. Food industry is in need of knowledgeable food scientists with background in engineering, chemistry, microbiology, consumer acceptance among others. Food scientists encounter variety of challenges in day-to-day job which include but not limited to develop novel food processes, operate a food process equipment, evaluate microbial safety, formulate new products, reformulate existing products to meet changing consumer demand, test nutritional content of processed food, develop strategies for improving manufacturing and packaging operation, enforce certain federal and state regulations for making safe product, and study consumer acceptance of formulated products. It is important to understand the process and packaging parameters that make the food safe and preserve food quality. During the semester we will also learn to do simple process calculations that may help answer “what-if” type processing questions. Hopefully, our journey during the semester will help you to better appreciate the importance and benefits of integrating knowledge from engineering, chemistry and microbiology for controlling different food process.

*Contents*

- 1 Introduction: Materials handling. Energy and Mass balance
- 2 Heat transfer fundamentals conduction, convection and radiation
- 3 Preparatory Operations: Receiving, Cleaning, Sorting, Grading, Peeling, Size reduction
- 4 Crystallization. Types of mixers, Centrifugation
- 5 Homogenization, Bleaching, Deodorization, Extraction, Grinding. Mechanical Separation
- 6 Screening, Filtration, Centrifugal filtration
- 7 Filtration based on motion of particles through fluids, Sedimentation
- 8 Transport of Fluids through Pipes: Laminar and turbulent regimes
- 9 Circulation of fluid through porous beds. Darcy'slaw: Permeability, porosity
- 10 Filtration: Fundamentals, Equipment, Maintenance problems, Prospects
- 11 Separation processes by membranes
- 12 Solid-liquid extraction

*Recommended Texts*

- 1 Earle, R. L. (2013). *Unit operations in food processing*. Amsterdam: Elsevier.
- 2 Fellows, P. J. (2009). *Food processing technology: principles and practice*. Amsterdam: Elsevier.
- 3 McCabe, W. L., Smith, J. C., & Harriott, P. (2005). *Unit operations of chemical engineering*. NewYork: McGraw Hill Inc.

*Suggested Readings*

- 1 Jeankopolis, C. J. (2004). *Transport processes and separation process*. New Jersey: Prentice Hall Professional Technical Reference.
- 2 Earle, R. L., & Earle, M. D. (2004). *Unit operations in food processing*. Palmerston North: The New Zealand Institute of Food Science and Technology.

- Gustavo, A., & Barbosa-Canovas, V. (2002). *Unit operations in food Engineering*. Florida: CRC Press, Taylor and Francis Group, Boca Raton.

**FSAT-5105**

**Community Nutrition**

**3 (3+0)**

Students will be able to evaluate community nutrition interventions. Explain the healthcare and nutrition policies. Interpret nutrition information for the public. Community nutrition is the process of helping individuals and groups develop healthy eating habits in order to promote wellness and prevent disease. The goal of community nutrition is to educate individuals and groups so that they adopt healthy eating habits. Dieticians and nutritionists work with many other health care professionals in promoting improved community nutrition. Their efforts emphasize a preventive approach in educating individuals in how a change in dietary habits will reduce the risk of illness. Community nutrition focuses on all age groups. The groups targeted range from babies to pregnant women to older adults. For example, a young pregnant woman may not realize how poor eating habits affect her developing fetus or she may be unaware of the importance of breastfeeding. Older adults may lose interest in eating due to loneliness, inability to prepare meals, or a physical condition such as difficulty chewing. Individuals with diabetes may not understand the need to control their blood glucose levels through diet as well as medication.

*Contents*

- 1 Introduction
- 2 Health care in America
- 3 The policy-making process
- 4 Food insecurity in united states
- 5 Assessing a community
- 6 Planning and evaluating community nutrition interventions
- 7 Opportunities in community nutrition
- 8 Emerging issues/ determinants of health/ HP2020 health care industry
- 9 Assessing community needs cont./ step 3 national nutrition monitoring/HP 2020
- 10 Understanding behavior change nutrition education
- 11 Domestic hunger programs
- 12 Maternal and child nutrition
- 13 Child and adolescent's nutrition
- 14 Senior nutrition

*Recommended Texts*

- 1 Boyle, M. A. (2017). *Community nutrition in action: an entrepreneurial approach*. (7<sup>th</sup> ed.) Boston: Cengage Learning.
- 2 Temple, N. J., & Steyn, N. (2016). *Community nutrition for developing countries*. Edmonton: Athabasca University Press and UNISA Press.

*Suggested Readings*

- 1 Burgess, A., Bijlsma, M., & Ismael, C. (2009). *Community nutrition: a handbook for health and development workers*. New York: Macmillan Pub., Ltd.
- 2 Nnakwe, N. (2017). *Community nutrition*. Massachusetts: Jones & Bartlett Learning.

**FSAT-5106**

**Food Safety and Laws**

**3 (3+0)**

The course aims to teach food safety as a scientific discipline describing handling, preparation, and storage of food in ways that prevent food-borne illness. Food can transmit pathogens which can result in the illness or death of the person or other animals. Objective of course is to give concepts of food safety and risk assessments and to provide knowledge about of food safety systems and food laws. The quality and safety of food is an important task, not only for the food industry. The issue of quality and safety of food is highly vital for each person. The way we eat affects our health, working capacity, quality of life, and the health and life of future generations. Food contamination can occur at any stage in the supply chain, and the primary responsibility for ensuring safety lies on food producers. Nevertheless, in many cases, incidents related to foodborne diseases are the result of non-compliance with the rules for handling food at home, catering, and marketing.

*Contents*

- 1 What is Food Safety?
- 2 Characterization of food hazards, biological, chemical and physical

- 3 Hazards from natural origin
- 4 Hazards produced during food processing, storage and preparation
- 5 Hazards associated with nutrient fortification
- 6 Food Safety systems, GMP, TQM
- 7 HACCP
- 8 Pakistan Standards and Quality Control Authority
- 9 Pure Food Rules
- 10 Punjab Food Authority
- 11 International Organization for Standardization
- 12 National Standard for Drinking Water Quality
- 13 Food labeling
- 14 Concept of Halal, Islamic food laws and regulations
- 15 Consumer laws in Pakistan
- 16 The World Trade Organization (WTO)
- 17 Codex Alimentarius.

*Recommended Texts*

- 1 Rai, V. R., & Bai, J. A. (2017). *Food safety and protection*. London: CRC Press, Taylor & Francis Group.
- 2 Gabriela, S., & Kiran, P. (2016). *International food law and policy*. Switzerland: Springer International Publishing.
- 3 Awan, J. A., & Anjum, F. M. (2010). *Food toxicology*. Faisalabad: Unitech Communications.

*Suggested Readings*

- 1 Schmidt, R. H., & Rodrick, G. E. (2003). *Food safety handbook*. New York: Wiley-Interscience, A John Wiley & Sons Publications.
- 2 PSQCA. (2010). *Standards for different food items*. Karachi: Pakistan Standards and Quality Control Authority.

**FSAT-5107**

**Food Packaging**

**2 (2+0)**

This course will enable the students to learn principles of packaging science including legal and safety aspects, packaging functions and requirements, types of packaging materials, modified atmosphere packaging, active packaging, packaging for emerging processing technologies, shelf life and package testing among other relevant topics. Food packaging lies at the very heart of the modern food industry and very few foods are sold unpackaged. Good packaging prevents waste and ensures that the food retains its desired quality throughout its shelf life. Despite its importance and the key role that packaging plays, it is often regarded as, at best, somewhat superfluous, and, at worst, a serious waste of resources and an environmental menace. Food Packaging plays such an important role in the preservation and marketability of a product, many companies seek a contract packaging service to help them obtain the best quality packaging available. Benefits to a co-manufacturer include cost, speed, quality and innovation.

*Contents*

- 1 Food packaging: introduction, needs, functions, systems, development
- 2 Packaging types: primary, secondary, tertiary
- 3 Packaging materials: rigid containers, flexible packaging
- 4 Properties of food packaging: physical, chemical
- 5 Packaging guidelines: retail containers, shipping containers
- 6 Factors influencing design and selection of packaging materials: product, distribution, marketing, packaging operation, cost
- 7 Printing processes: inks, adhesives
- 8 Filling and labeling. Safety and legislation
- 9 Novel food packaging techniques
- 10 Food labeling: importance, types, methods

*Recommended Texts*

- 1 Yam, K. L., & Lee, D. S. (2012). *Emerging food packaging technologies: principles and practice*. Berlin: Elsevier.
- 2 Robertson, G. L. (2012). *Food packaging: principles and practice*. (3<sup>rd</sup> ed.) Florida: Taylor &

Francis.

- 3 Lee, D. S., Yam, K. M., & Piergiovanni, L. (2008). *Food packaging science and technology*. Florida: CRC Press, Taylor and Francis Group, Boca Raton.

*Suggested Readings*

- 1 EIRI. (2007). *Handbook of packaging technology*. New Delhi: Engineers India Research Institute.
- 2 Robertson, G. L. (2006). *Food packaging: principles and practices*. Florida: CRC Press, Taylor & Francis Group, Boca Raton.

## HUMAN NUTRITION AND DIETETICS

FST-101	Introduction to Food Science and Technology	3(2-1)	Supporting
<b>Objectives</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> To understand the role of Food Science and Technology towards ensuring food security</li> <li><input type="checkbox"/> To acquaint knowledge about the food constituents, food classification and spoilage agents</li> <li><input type="checkbox"/> To comprehend the role of various food processing and preservation methods in shelf life extension and availability of food around the year</li> </ul>		
<b>Theory</b>	<ul style="list-style-type: none"> <li>• Introduction: food science and technology, food processing and preservation; Food safety and security; Food sources and global food situation; Food constituents and their functions: water, carbohydrates, lipids, proteins, vitamins and minerals; Food classification based on perishability and pH; Spoilage agents in food: enzymes, microorganisms, insects, rodents, birds and physical factors; Principles of food preservation; Preparatory operations in food processing; Food preservation techniques - high temperature: pasteurization, sterilization, canning; low temperature – refrigeration, freezing; removal of moisture – drying, dehydration; use of chemical additives; fermentation techniques – alcoholic, acetic, lactic; Irradiation technology; food packaging and labeling.</li> </ul>		
<b>Practical</b>	<ul style="list-style-type: none"> <li>• Bottling / canning of selected fruits and vegetables; Cold storage of fruits and vegetables; Freezing of fruits and vegetables; Dehydration of fruits and vegetables; Blanching of fruits and vegetables; Use of chemicals in preservation of food products; Preparation of fermented food products – vinegar, preparation; Evaluation of bottled, frozen and dehydrated products.</li> </ul>		
<b>Recommended Books</b>	<ul style="list-style-type: none"> <li>• Awan, J.A. and S.U. Rehman. 2011. <i>Food Preservation Manual</i>. Unitech Communications, Faisalabad, Pakistan.</li> <li>• Awan, J.A. 2011. <i>Food Processing and Preservation</i>. Unitech Communications, Faisalabad, Pakistan.</li> <li>• Awan, J.A. 2011. <i>Food Science and Technology</i>. Unitech Communications, Faisalabad, Pakistan.</li> <li>• Potter, N.N. and J.H. Hotchkiss. 1995. <i>Food Science</i>. 5<sup>th</sup>Ed. The AVI Pub. Co. Inc., Westport, Connecticut, USA.</li> </ul>		

TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

HND-102	Macronutrients in Human Nutrition	3(3-0)	Foundation
<b>Objectives</b>	<ul style="list-style-type: none"> <li>To abreast knowledge about the normal nutrient metabolism in healthy human</li> <li>To understand interactions between the intake, absorption, transport, processing, storage, catabolism and excretion of nutrients and the regulation of metabolic homeostasis in the intact organism</li> </ul>		
<b>Theory</b>	<ul style="list-style-type: none"> <li>Carbohydrates: nature, structures; Classification and functions of carbohydrates: monosaccharaides, disaccharides, oligosaccharides, polysaccharides; Digestion and absorption of carbohydrates: glycolytic pathway, glycolysis, glycogenesis, glycogen catabolism, tricarboxylic acid cycle and pentose phosphate pathway; Biosynthesis of carbohydrates: gluconeogenesis; Regulation of carbohydrate metabolism pathways; CHO metabolism in diabetes; Proteins: structural features, characteristics, functions; Amino acids: biosynthesis and degradation, food sources (on the basis of their functions in human body);. Digestion and absorption; Metabolic fates of amino acids: deamination, transamination, Urea cycle, Ketogenic amino acids, Glucogenic amino acids, Protein metabolism in liver and kidney diseases, Protein energy malnutrition; Lipids-nature, classification; Fatty acids: saturated, unsaturated, polysaturated, glycerol, cholesterol, sterol; Lipoprotein systems (blood lipids); Fats biosynthesis: lipids, phospholipids and sphingolipids; Lipid biosynthesis: cholesterol, sterol; Lipid oxidation; Essential fatty acids: sources, health benefits; Adipose tissues; Digestion, absorption, metabolism and transportation of lipids; Oxidation of fatty acids (beta oxidation); Ketone bodies.</li> </ul>		
<b>Practical</b>	NA		
<b>Recommended Books</b>	<ul style="list-style-type: none"> <li>Berdanier, C.D. and J. Zempleni. 2009. Advances Nutrition: Macronutrients, Micronutrients and Metabolism. CRC Press, Taylor &amp; Francis Group, Boca Raton, FL, USA.</li> <li>Byrd-Bredbenner, C., G. Moe, D. Beshgetoor and J. Berning. 2015. Wardlaw's Perspectives in Nutrition. 10<sup>th</sup> Ed. McGraw-Hill Education, Columbus, OH, USA.</li> <li>David L.N., A.L. Lehninger and M.M. Cox. 2013. Lehninger Principles of Biochemistry. 6<sup>th</sup> Ed. W.H.FreemanandCompany, New York.</li> <li>Gropper, S.S. and J.L. Smith JL. 2013. Advanced Nutrition and Human Metabolism. 6<sup>th</sup> Ed. Cengage Learning, Belmont, CA, USA.</li> </ul>		

HND-104	Nutrition Policies and Programs	3(3-0)	Foundation
<b>Objectives</b>	<ul style="list-style-type: none"> <li>To familiarize with global and local nutrition policies and programs in the domain of public health nutrition</li> <li>To prevent and control specific micronutrient deficiencies through diet based approaches among the vulnerable</li> <li>To promote appropriate diets and healthy lifestyles and access, analyze and monitor nutrition situations</li> </ul>		
<b>Theory</b>	<ul style="list-style-type: none"> <li>History and importance of nutrition intervention planning; World declaration on nutrition; Nutrition development partners; Policy guidelines; Community nutrition programs: national and international, supplementary feeding programs; Food fortification, supplementation and diet diversification; School feeding programs: interventions and impacts; Improving household food security; Protecting consumers</li> </ul>		



**TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK**

	through improved food quality and safety; Preventing and managing infectious diseases; Promoting breast feeding; Caring for socio-economically deprived and vulnerable; Preventing and controlling specific micronutrient deficiencies; Promoting appropriate diets and healthy lifestyle; Improving health care; Five years plan for Pakistan (Nutrition); Nutrition intervention: counselling for change; SUN movement; One health concept; National nutrition programs: food & nutrition program, Tawana Pakistan, school health program; Developing effective food and nutrition policies and programs.
<b>Practical</b>	NA
<b>Recommended Books</b>	<ul style="list-style-type: none"> <li>• Edelstein, S. 2011. Nutrition in Public Health: A Handbook for Developing Programs and Services. 3<sup>rd</sup> Ed. Jones &amp; Bartlett Learning, Sudbury, M.A, USA.</li> <li>• IFPRI. 2016. Taking Actions: Progress and Challenges in Implementing Nutrition Policies and Programs. International Food Policy Research Institute, Washington, DC, USA.</li> <li>• Nnakwe, N.E. 2009. Community Nutrition: Planning Health Promotion and Disease Prevention. Jones and Bartlett Learning International, London, UK.</li> <li>• Semba, R.D. and M.W. Bloem. 2008. Nutrition and Health in Developing Countries. 2<sup>nd</sup> Ed. Humana Press, New York, USA.</li> <li>• Spark, A. 2007. Nutrition in Public Health: Principles, Policies and Practice. CRC Press, Taylor &amp; Francis Group, Boca Raton, FL, USA</li> </ul>

<b>HND-201</b>	<b>Micronutrients in Human Nutrition</b>	<b>3(3-0)</b>	<b>Foundation</b>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• To understand the functional roles of vitamins and minerals in human nutrition with special reference to metabolism</li> <li>• To familiarize with the deficiency symptoms and health disorders associated with improper intake of vitamins and minerals</li> <li>• To analyze losses of micronutrients during food processing</li> </ul>		
<b>Theory</b>	<ul style="list-style-type: none"> <li>• Vitamins: nomenclature, history, development of the vitamins concept; Fat and water soluble vitamins: sources, chemistry, absorption, transport and storage, metabolism, function, deficiency, bioassay, interaction with other nutrients, recommended daily allowances and toxicities; Diagnosis, treatments and prevention of vitamin deficiencies in human; Stability of vitamins under different storage conditions; Vitamin like compounds; Losses of vitamin during food processing; Minerals: types, history and developments of the minerals concept; Criteria of essentiality of minerals and their classification; Minerals distribution in human body; Macro- and micro- minerals: dietary sources, absorption, metabolism, metabolic function, deficiency symptoms and disorders, recommended daily allowances, diagnosis, treatments and prevention of mineral deficiencies in human; Water and electrolytes.</li> </ul>		
<b>Practical</b>	<ul style="list-style-type: none"> <li>• NA</li> </ul>		

<b>Recommended Books</b>	<ul style="list-style-type: none"> <li>• Allen, L. 2006. Guidelines on Food Fortification with Micronutrients. World Health Organization, Geneva, Switzerland.</li> <li>• Bender, D.A. 2009. Nutritional Biochemistry of Vitamins, 2<sup>th</sup> Ed. Cambridge University Press, Cambridge, UK.</li> <li>• DiSilvestro, R.A. 2004. Handbook of Minerals as Nutritional Supplements. CRC Press, Taylor &amp; Francis Group, Boca Raton, FL, USA.</li> <li>• Gropper, S.S. and Smith, J.K. 2012. Advanced Nutrition and Human Metabolism, 6<sup>th</sup> Ed. Wadsworth Cengage Learning, Belmont, CA, USA.</li> </ul>
--------------------------	--

HND-203	Food and the Allergic Reaction	3(3-0)	Foundation
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• To acquire an in-depth understanding of toxicology related to food and health</li> <li>• To understand various types of toxins from plant, animal and plant origins as well induced by extraneous chemicals</li> <li>• To familiarize with food allergens, their health implications and management</li> </ul>		
<b>Theory</b>	<ul style="list-style-type: none"> <li>• Toxicology: introduction, dose-response, absorption, translocation, storage, excretion; Natural toxins of plant origin: goitrogens, cyanogenic glycosides, favism, lathyrogens, lecithins (hemagglutinins), mutagens in natural plant, caffeine, flavonoids and some others; Natural toxins of animal origin: animal liver, marine animals; Toxicity by extraneous chemicals: agricultural chemicals, food processing, packaging, additives, adulterants; Toxicity from water; Microbial toxins: mycotoxins – molds, mushrooms; Bacterial food intoxication; Bacterial food infection; Food allergies: introduction, incidence of food allergy, food allergens of protein families, animal origin and plant origin; Adverse allergic reaction, diagnosis, prevention, legislation and labeling, allergen management, food intolerances, emergency treatment of food-induced allergic reactions.</li> </ul>		

<b>Practical</b>	NA
<b>Recommended Books</b>	<ul style="list-style-type: none"> <li>• Awan, J.A. and F.M. Anjum. 2010. Food Toxicology. Unitech Communications, Faisalabad, Pakistan.</li> <li>• Coutts, J and R. Fielder. 2009. Management of Food Allergens. John Wiley &amp; Sons Ltd., Chichester, West Sussex, UK.</li> <li>• Jedrychowski, L. and H.J. Wichers. 2009. Chemical and Biological Properties of Food Allergens. CRC Press, Taylor &amp; Francis Group, Boca Raton, FL, USA.</li> <li>• Metcalfe, D., H.A. Sampson, R.A. Simon and G. Lack. 2014. Food Allergy: Adverse Reaction to Foods and Food Additives, 5<sup>th</sup> Ed. Wiley-Blackwell, John Wiley &amp; Sons Ltd., Chichester, West Sussex, UK.</li> <li>• Shibamoto, T and L. Bjeldanes. 2009. Introduction to Food Toxicology, 2<sup>nd</sup> Ed. Academic Press, London.</li> </ul>

HND-205	Meal Planning and Management	3(3-0)	Foundation
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• To understand the importance of meal planning and its role in everyday life</li> <li>• To apply the principles of meal planning in the planning of balanced and appropriate meals keeping in mind the nutritional requirements, family budget and food requirements choices of different age groups</li> <li>• To identify market trends and conditions while purchasing food keeping in mind food costs and quality</li> </ul>		
<b>Theory</b>	<ul style="list-style-type: none"> <li>• Importance and principles of meal planning for family and occasions; Nutritional value of meal; Family meal budgeting; Rules for good menu planning; Menu planning for families; Selection of various foods in relation to season and market conditions; Composition and storage of food; Selection, use and care of table appointments; Study of different types of table settings, table manners and etiquettes; Kitchen safety and settings; Basics of food hygiene and sanitation; Food labeling; Menus for schools, geriatric and healthcare centers.</li> </ul>		
<b>Practical</b>	<ul style="list-style-type: none"> <li>• Survey and record keeping of market prices (retail &amp; wholesale); Types of foods available in the market from different food groups. <i>e.g.</i> retail cuts of meat and types of milk; Comparison of weight, volume and effect of cooking on color, taste and texture of different foods; Planning, preparation and service of meals for different occasions at different income levels; Understanding food labels; Market visits for cost and quality and food marketing regulations. Food service visits (Restaurants, School, Colleges, and Hospitals).</li> </ul>		
<b>Recommended Books</b>	<ul style="list-style-type: none"> <li>• Brown, A. 2015. Understanding Food Principles &amp; Preparation, 5<sup>th</sup> Ed. Cengage Learning, Belmont, CA, USA.</li> <li>• McWilliams, M. 2012. Fundamentals of Meal Management, 5<sup>th</sup> Ed. Dorling Kindersley India Pvt. Ltd., New Delhi, India.</li> <li>• Narvaez-Soriano, S. 2004. A Guide to Meal Management and Table Services. Rex Book Store, Manilla, Philippine.</li> <li>• Sethi, M. 2008. Institutional Food Management. New Age International Pvt. Ltd. New Delhi, India.</li> </ul>		

HND-202	Assessment of Nutritional Status	3(1-2)	Foundation
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• To impart hands-on training in nutritional assessment techniques to diagnose health problems</li> <li>• To understand and apply dietary guidelines for standard nutrient intake</li> <li>• To select an appropriate method for measuring dietary needs of hospitalized patients.</li> </ul>		
<b>Theory</b>	<ul style="list-style-type: none"> <li>• Nutritional assessment systems: nutrition surveys, nutrition surveillance, nutrition screening. Nutritional assessment methods: anthropometrics, biochemical, clinical, dietary. Measuring food consumption at national level: food balance sheets, total diet consumptions. Food consumption at the household levels: food account, household food records, household 24-hour food record. Measuring food consumption at individual levels: 24-hour recall, repeated 24-hour recall, weighed food records, diet history, food frequency questionnaire. Selecting an appropriate method: determining the mean nutrient intake, calculating the population at risk, ranking individuals by food and nutrient intake.</li> </ul>		
<b>Practical</b>	<ul style="list-style-type: none"> <li>• Practicing methods of nutritional assessment (ABCD of Nutritional assessment); Comparison of the data with references values for drawing conclusions.</li> </ul>		
<b>Recommended Books</b>	<ul style="list-style-type: none"> <li>• Driskell, J.A. and Wolinsky, I. 2011. Nutritional Assessment of Athletes, 2<sup>nd</sup> Ed. CRC Press, Taylor &amp; Francis Group, New York, USA.</li> <li>• Gibson, R.S 2005. Principles of Nutrition Assessment. Oxford University Press Inc., New York, USA.</li> <li>• Lee, R.D. and Nieman, D.C. 2012. Nutritional Assessment, 6<sup>th</sup>ed. The McGraw Hill Companies Inc., New York, USA.</li> <li>• McGuire, M. and Beerman, K.A. 2011. Nutritional Sciences: From Fundamentals to Food. Cengage Learning, Belmont, CA, USA.</li> </ul>		

## ENGLISH

ELL421 Introduction to Literature I: History of English Literature (Semester-I)

- 1) *Characteristics of Anglo-Saxon Literature*
- 2) *Characteristics of Medieval Literature*
- 3) *General Background to Renaissance and Reformation*
- 4) *The Development of Sonnet*
- 5) *Elizabethan Drama, Prose and Poetry*
- 6) *Jacobean Drama, Metaphysical Poets, Milton*
- 7) *Restoration Drama*
- 8) *The Age of Reason and Neo-Classicism*
- 9) *Augustan Satire*
- 10) *The Rise of Novel*
- 11) *Romanticism*
- 12) *Victorian Drama, prose and Novel*
- 13) *Modern Drama, Prose, Novel and Poetry*

*Suggested Readings:*

- 1) *A Critical History of English Literature* by David Daiches
- 2) *A Short History of English Literature* by Ifor Evans

ELL422 Introduction to Linguistics I: English Language (Semester-I)

- 1) *English: Present and Future*  
It's Importance, Its Future, Its Assets and Liabilities
- 2) *The Indo-European Family of Languages*  
The Discovery of Sanskrit, Grimm's Law and Karl Verner's Law, The Indo-European Languages, Home Of The Indo-European Family
- 3) *Old English*  
It's Origin, Its Dialects, Its Characteristics, Its Vocabulary, and Old English Literature
- 4) *Foreign Influences on Old English*  
The Celtic Influence, Latin Influence, Scandinavian Influence
- 1) *The Norman Conquest and the Subjection of English (1066-1200)*  
The Norman Settlement, The Status Of French, The Status Of English
- 2) *The Re-Establishment of English (1200-1500)*  
Changing Conditions After 1200 A.D., English And French in the Thirteenth Century, Factors Responsible For the Re-Establishment of English
- 3) *Middle English*  
A Period of Great Change, Changes in Grammar, Changes in Vocabulary, Middle English Dialects, The Rise Of Standard English, Importance And Spread London English
- 1) *The Renaissance (1500-1650)*  
Changing Trends And Their Effects On The Grammar And Vocabulary Of English, The Problems Faced By English, Opposition And Justification Of Borrowing From Foreign Languages, Characteristics And Variations In The Grammatical Categories, The Importance Of Sound Changes And Great Vowel Shift

2) *English Language in the Eighteen Century (1650-1800)*

Changing Scenario for English Language, The Contributions Of Dr Johnson, Jonathan Swift, Eighteenth Century Grammarians And Rhetoricians: Their Aims And Ideals

3) *English in the Nineteenth and Twentieth Century (1900 and Onwards)*

English Language and Science, Sources of New Words, English Dialects and Standard Speech, Oxford Dictionary

*Suggested readings:*

- 1) A History of the English Language by Albert C. Baugh
- 2) The Story of Language by C.L. Barber

ELL423 Introduction to Literature II: Poetry (Semester-II)

Poetry and Versification (Rhyme and Rhythm)

Poetic Devices (Language, Simile, Metaphor, Imagery, Symbolism, Ambiguity etc)

Elements of Poetry (Theme, Setting, Points Of View, Theory of Deviation, Parallelism etc)

Sub-Genres of Poetry (Epic, Ballad, Ode, Sonnet etc)

ELL424 Introduction to Linguistics II: General (Semester-II)

1) *Language*

Function and Purpose, Definitions by Prominent Linguists, Aspects of Language

2) *Linguistics*

Definition, Difference between Linguistics and Traditional Grammar, Nature, Scope and Its Various Branches

3) *Difference between Animal and Human Communication:*

Charles Hockett's Design Features

4) *The Development of Linguistics:*

In Antiquity, In the Middle Ages, Comparative Linguistics, Twentieth Century Linguistics

5) *Phonetics and Phonology*

The Production of Speech Sounds, Speech Organs, Classification of Sounds,

Cardinal Vowels, Diphthongs, Phonemes and Allophones

6) *Morphology:*

Morpheme, Free, Bound, Functional Free, Derivational and Pure Derivational Morphemes, Prefixes and Suffixes, Allomorphs, Morphophoneme

Rules for Combining and Cutting Morphemes,

Word Formation in English Language: Prefixation and Suffixation, Conversion and Compounding, Reduplication and Clipping, Acronyms and Blends

7) *Language Planning:*

Status Planning, Acquisition Planning, Corpus Planning, Language Planning and Politics, Ethnic Politics and Language, Corpus Planning and Politics, Standardization of Language.

8) *Writing:*

Origin and History of Writing, Phonographic Systems, Speech versus Writing

9) *Anthropological Linguistics*

Its Aims, Sapir-Whorf Hypothesis, Functionalism and Interactionism, Componential Analysis

10) *Language Change*

How Does a Language Change? Causes of Language Change

11) *Grammar*

Verb, Voice, Adjective, Adverb, Pronoun, Tense and Aspect, Modal and Primary Auxiliaries,

Clause: Its Types

*Suggested readings:*

- 1) An Introduction to Linguistics by Tariq Rehman, Vanguard Books Pvt. Ltd
- 2) Sociolinguistics, by R.A. Hudson, Cambridge University Press
- 3) Linguistics- An Introduction, By Jean Aitchison, Hodder and Stoughton
- 4) Grammar, By Frank Palmer, Penguin Books

ELL425 Introduction to Literature III: Short Stories and One-Act Plays (Semester-III)

A. *Short Stories*

1) *Nathaniel Hawthorne (1804-1864)*

Young Goodman Brown

2) *Edgar Allen Poe (1809-1849)*

The Tell-Tale Heart

3) *Mark Twain (1835-1910)*

A Helpless Situation

A Dog's Tale

4) *Guy de Maupassant (1850-1893)*

The Necklace

Mademoiselle Fifi

5) *Oscar Wilde (1854-1900)*

The Happy Prince

The Devoted Friend

6) *Anton Chekhov (1860-1904)*

The Bet

The Lottery Ticket

7) *O. Henry (1862-1910)*

The Gift of the Magi

The Last Leaf

8) *H.G. Wells (1866-1946)*

The Diamond Maker

*One-Act Plays*

1) *Eugene O'Neill (1888-1953)*

The Moon for the Caribbees

2) *Anton Chekhov (1860-1904)*

The Bear

3) *Lady Gregory (1852-1932)*

The Rising of the Moon

4) *Edward Albee*

The Sandbox

ELL426 Introduction to Linguistics III: Phonetics and Phonology (Semester-III)

PHONETICS

1) *The problems of English pronunciation.*

2) *Difficulties of foreign learners of spoken English*

3) *The sounds of a language*

- 4) *The organs of speech and their function*
- 5) *The process of articulation of speech sounds*
- 6) *Classification of sounds*
- 7) *Vowel sounds*

Features of vowel articulation, Description of vowel sounds, Cardinal vowels which are eight in number, The vowel diagram

- 8) *English vowels in detail*  
Pure vowels, Diphthongs, Triphthongs
- 9) *Consonant sounds*

Features of consonant articulation, description of consonant sounds under which we have the following sub sub-headings- Place of articulation, Manner of articulation, Action of the vocal cords, Position of the soft palate

- 10) *English consonants in detail*

Plosive consonants, Affricate consonants, Nasal consonants, Fricative consonants, Lateral consonants, Frictionless continuant

- 11) *Semi vowel or Approximants*

#### PHONOLOGY

- 1) *Relationship between phonetics and phonology.*

- 2) *Area of study in phonology.*

- 3) *Phoneme*

Phone and allophone, Special phonemic region

- 4) *Phonetic transcription*

The principles of phonetic transcription, Types of phonetic transcription, Phonetic representation of vowel and consonant sounds

- 5) *Strong and weak forms*

Nature and use of weak forms, weak form words, Use of the strong words

- 6) *Syllable*

The structure of a syllable, The syllabic division of words in English, Consonant clusters

- 7) *Stress in English*

The nature of verbs stressed in English, Rules of verb stressed in English, Sentence stress

- 8) *Assimilation*

The nature of assimilation, Kinds and types of assimilation, Consonant change in assimilation

- 9) *Elision*

The nature of elision, kinds of elision

- 10) *Intonation*

Rhythm of English speech, The tunes of English language, Intonation and meaning

*Suggested readings:*

- 1) English Phonetics and Phonology-A Practical Course by Peter Roach, Cambridge University Press
- 2) An Outline of English Phonetics by Daniel Jones 9th Edition, Cambridge University Press

#### ELL427 Introduction to Literature IV: Prose and Fiction (Semester-IV)

Narrative Devices

Elements of Novel (Plot, Setting, Point Of View, Irony, Characterization, etc)

Types of Novel

The Dramatic Technique



Elements of Drama (Plot, Characterization, Paradox, Dramatic and Verbal Irony, Dialogue, Monologue / Soliloquy, Pattern etc)  
Types of Drama (Comedy, Tragedy, etc)  
Stagecraft

## POLITICAL SCIENCE

**Course Title:** Fundamentals of Political Science      **Credit Hours: 03+0**  
**Code: PSC-112**      **Total Marks: 100**

### Course Introduction:

Fundamental of Political Science provides an introduction to the scientific study of politics. It offers the basic tools necessary for beginners to become both critical consumers and beginning producers of scientific research on politics. It further deals with the basic concepts and terminologies used in Political science which are necessary for the students in advanced learning in the subject of Political Science.

### Learning Objectives:

The course is designed in order to introduce students with the fundamentals of the subject and prepare them for advance studies in coming semesters. The objective of the course is to make the students familiar with the basic concepts and terminologies used in Political Science.

### Contents

#### Unit 1

**Definitions, Scope, Nature and Significance of Political Science**

#### Unit 2

**Evolution of the Discipline of Political Science**

#### Unit 3

**Approaches to the Study of Political Science,**

- Traditional
- Modern
- Post-modern

#### Unit 4

**Relations of Political Science with other Social Sciences**

- (An interdisciplinary approach)
- History, Economics, Geography, Law, Logic, Sociology, Anthropology and Psychology

#### Unit 5

**Basic concepts of Political Science**

- Power, Authority and Legitimacy
- Nation and Sovereignty
- Law, Liberty, Rights and Duties
- Public opinion and Propaganda.

#### Unit 6

**Emerging Political Concepts and Terminologies in Political Science:**

- Globalization, governance, terrorism
- Power sharing

**Recommended Books**

3. Sarwar, M. (1996). *Introduction to Political Science*. Lahore: Ilmi Kutub Khana.
4. Haq, M. U. (1996). *Theory and Practice in Political Science*, Lahore: Book land.

**Course Title:**

**Introduction to State**

**Credit Hours: 03+0**

**Code: PSC-123**

**Total Marks: 100**

**Course description:**

Introduction to state emphasizes on functional aspects of politics in a society. The students will be enabled to understand the various forms of state and government, functioning of the Political system and study its various components and actors influencing this functioning. This course also deals with the theories concerning origin and evolution of state. It further deals with the praxis of political ideologies in a state. Moreover, introduction to state gives an introduction to the regional and international organizations that affect behaviors of the states.

**Learning Objectives:**

This course enables the students to understand the basic concept of state, its evolution and different theories about the evolution, government, and various forms of state i.e. government. The course also educates the students about political ideologies and regional/international organizations.

**Course Contents**

**Unit 1**

**Definitions of State**

**Origin and Evolution of State (Analysis of Framework)**

- Theories of evolution of state
- Western concept of state
- Islamic concept of state

**Unit 2**

**State and its elements**

**Kinds of State**

- Confederation and Federation
- Protectorate and Vassal
- Unitary and Federal

**Unit 3**

**Political Ideologies:**

- Liberalism
- Islamism
- Marxism
- Nationalism
- Secularism
- Feminism

**Unit 4**

**Supra-State Entities**

- League of Nations
- UN
- OIC

- SAARC
- ASEAN
- European Union

**Recommended Books:**

- (1) Haq, M. U. (1996). *Theory and practice in Political Science*, Lahore: Bookland.
- (2) Muhammad Sarwar, M. (1996). *Introduction to Political Science*, Lahore: Ilmi Kutub Khana
- (3) Mahajan, V.D. (2006). *Political Theory*, New Delhi, S. Chand & Co.

**Course title:** Political Institutions

**Credit. Hr 03+0**

**Code: PSC-124**

**Marks: 100**

**Course description:**

Political institutions are the central themes of Political Science. This course study political institutions functioning in a state. It deals with the branches of government, structure of the government, and its functions and role. It also discusses political systems and its characteristics and functions. It further describes various forces that work within the political system.

**Objectives:**

This course mainly focuses on conceptual analysis of political ideologies and its praxis in the society. Emphasis is made to enable the students to understand the role, functions and structure of political institutions existing within the state.

**Course Contents:**

**Unit 1**

**Government and its various organs**

- Legislature, Executive, Judiciary and Media
- Theory of Separation of Powers/Checks and Balance

**Unit 2**

**Forms of government**

- Monarchy and Aristocracy
- Democracy: Presidential and Parliamentary
- Dictatorships: Totalitarianism and Authoritarianism with special reference to Nazism and Fascism

**Unit 3**

**Constitution: Definitions, sources, kinds and reformation**

**Unit 4**

**Political System: Definitions, Characteristics and Functions**

**Unit 5**

**Political participation and representation**

- Political Parties: Types, systems, Structures, Functions,
- Interest Groups: Types, Functions, Relationship with Political Parties.

**Recommended Books:**

1. Shafi, C. A. (1997). *Usul-e-Siyasiat* (Urdu), Lahore: Standard Book Depot.
2. Agarwal, R.C. (2006). *Political theory (Principles of Pol. Science)*, NewDelhi: S. Chand & Co.
5. Sarwar, M. (1996). *Introduction to Political Science*. Lahore: Ilmi Kutub Khana.
6. Haq, M. U. (1996). *Theory and Practice in Political Science*, Lahore: Book land.

**Course Title:**  
**Code: PSC-125**  
**Course Contents**

**Islamic History**

**Credit Hours: 03+0**  
**Total Marks: 100**

**Unit 1**

**Pre-Islamic Arabia.**

- Geographical, Socio Economic and Religious conditions of Pre-Islamic Arabia, especially the City State of Makkah.

**Unit 2**

**The Holy Prophet (S.A.W) (517-632 AD)**

Early Life of the Prophet, Prophet-hood and Preaching of Islam, Response of the Society, Migration to Ethiopia and Medina, Socio-economic and cultural conditions in Madinah, contributions of Ansar and their 'Brotherhood', Charter of Madinah, Wars with Quraysh, (Battles of Badr, Uhd and Ahzab), Peace Accord of Hdaybia, Prophet's letters to the various rulers, Conquest of Makkah, Battle of Hunayn, Spread of Islam in Central Arabia, Tubuk Expedition, Prophet's last pilgrimage and the significance of the last Sermon, Life and achievements as a Prophet and Statesman. Role and Contribution of Ashab-i-Suffah.

**Unit 3**

**Hazrat Abu Bakr Siddique (R.A) (632-634 AD)**

Early life and sacrifices for the cause of Islam, his Election as Caliph; Movements of Apostasy, rise of false prophets, the refusal of Zakat payment, Consolidation of Centre, Conquest of Iraq, relations with Iran, Syria, and Byzantine, Compilation of Quran, his character and achievements.

**Unit 4**

**Hazrat Umar (R.A)**

Early life and sacrifices for the cause of Islam, his Election as Caliph, his administration of justice

**Unit 5**

**Hazrat Uthman Ghani (R.A) (644-656 AD)**

Early life, acceptance of Islam, his role during the life time of the Prophet, Abu Bakr and Umar, his election as Caliph, Conquest of North Africa, Cyprus, Tabaristan, Tukharistan and Makran, the Sabite Movement, opposition of Uthman. His martyrdom and its consequences, his services to the cause of Islam, Compilation and codification of Quran, his character and achievements

**Unit 6**

**Hazrat Ali Karam Allah Wajho (656-661 AD)**

Early life, his role during the life time of the Prophet, Abu Bakr, Umar and Uthman,

Hazrat Ali as Caliph, Battle of the Camel, Battle of Siffin, emergence of the Kharijites, Battle of Nahrawan, Hazrat Ali's martyrdom, his character and achievements. Nomination of Imam Hasan as Caliph and his abdication.

**Unit 7**

**Administration and Structure of Government under the Pious Caliphate**

Administrative, financial and judicial System under the Pious Caliphs

**Suggested Readings:**

1. Lambton, K.S & Lewis, B. (1970). *History of Islam*, Cambridge: Cambridge University Press
2. Haq, M. U. ( No date). *A short history of Islam*, Lahore
3. Hitti, P. K. (1974). *History of the Arabs*, 10th ed, London.

**Course Title:**

**Political Systems of UK and USA**

**Credit Hours: 03+0**

**Code: PSC-233**

**Total Marks: 100**

**Course Introduction:**

The course has been designed to acquaint the students with the political systems of the US and UK political systems are known for its uniqueness of federal and unitary nature. These systems have accommodated itself with the changing trends that have taken place in the world. This course is designed to study these two systems in a manner to understand their history, ideology, formal and informal political institutions and the process of political development. The countries under reference are to be studied in the lines of functional, structural and systemic models of comparative politics with particular reference to current writing on modernization and development.

**Learning Objectives:**

This course intends to make a comparative & analytical study of the political systems of UK and USA. It enables the students to understand political culture, political process, and interaction among various political & governmental forces, social & economic basis of politics, policy making & politics of pluralism, ethnicity & diversity.

**Contents:**

- Historical background and development;
- Constitutional /legal foundations of the system;
- Salient features
- Political process and political recruitment;
- Political parties and pressure groups, functioning of the organs of the government;
- Local government: structure and functions

**Recommended Books**

Edward S. Corwin, E. S. (1986). *The President Office and Powers*. New York: University Press

Palmer, N. D. (1967). *The Indian Political System*. Boston: Houghton Mifflin.

Macridis, R. C. (1955). *The Study of Comparative Government*. New York: Random House

Macridis, R. C. (1955). *Modern Political Systems*. New York: Prentice Hall Inc.

**Course Title:** Introduction to Geography **Credit Hours: 03+0**  
**Course Code: PSC-235** **Marks: 100**

**Course Objectives:**

The course is designed to understand the development of group identities such as nations and examine the linkages between these identities and the political organization of territory. To examine the 'functional approach' to states with an emphasis on how internal and external forces work centripetally and centrifugally on the integrity of state territories. It aims to develop an appreciation for the effects of boundaries on economic, political, and social processes. This course tries to achieve an understanding of the ideas that legitimizes the governance of particular territories by certain groups and/or individuals. It traces the evolution of geopolitical ideas. Further it identify the political, economic, and environmental forces that are undermining the modern nation-state system.

**Contents**

- **Introduction**
- Defining Political-Geographic Regions
- Group Identities: Peoples
- Territoriality, the State, and the Nation-State Ideal
- The Functional Approach to States
- Internal and External Centripetal and Centrifugal Forces
- Frontiers and Boundaries:
- Internationally and Internally Electoral Geography
- Legitimacy of Territorial Sovereignty
- Significance of Territory
- National Constructions of Territory
- Early Geopolitics
- Modern Geopolitics
- The Break-Down of the Nation-State:
- Global Political Economy
- Global Environmental Issues

**Suggested Readings**

Murphy, B. A. (1991). Regions as social constructs: The gap between theory and practice. *Progress in Human Geography* 15 (1): 22-35.

Happen, J. (1998). *The nine geopolitical regions of the South: political and historical regionalism* :Baton Rouge.

**Course Title** Political Systems of China, India and Turkey **Credit Hours: 03+0**

**Code: PSC-242**

**Marks: 100**

**Course Introduction:**

The course has been designed to acquaint the students with the political systems of China, India and Turkey. These systems are known as developing political systems since they are passing through transitional stage. These systems try to accommodate itself with the changing trends that are taking place in the world. This course is designed to study these systems in a manner to understand their history, ideology, formal and informal political institutions and the process of political development. The countries under reference are to be studied in the lines of functional, structural and systemic models of comparative politics with particular reference to current writing on modernization and development.

**Learning Objectives:** This course intends to make a comparative & analytical study of the political systems of China, India and Turkey. It enables the students to understand political culture, political process, and interaction among various political & governmental forces, social & economic basis of politics, policy making & politics of pluralism, ethnicity & diversity.

**Course Contents**

- Historical background and development;
- Constitutional/legal foundations of the system;
- Political process:
  - Political parties and pressure groups;
  - Functioning of the organs of the government: legislature, Executive and judiciary
- Political environmental factors influencing the politics such as geographic, socio-economic,
- International scenario, media etc.
  - Political culture: Salient features, public participation, ideological Orientations, nature of civil-military relations.

**Recommended Books:**

1. Basu, D.D. (1985). *Introduction to the Constitution of India*, New Delhi, Prentice-Hall, 11th edition,
2. Ergun Ozbudun, E. (2000). *Contemporary Turkish Politics: Challenges to Democratic Consolidation*, Lynner: Lienner.
3. Dreyer, J. T. (2011). *China's Political System: Modernization and Tradition*, Longman

**Course Title** History of International Relations **Credit Hours: 03+0**

**Code: PSC-244**

**Marks: 100**

**Course Introduction:**

Relations among states are the consequence of national, regional and transnational events. International relations deal with the forces which cause change in the national and world stage. Moreover, the changes which take place today have roots in the history as well. International Relations as a discipline studies

international systems, state relations, foreign policy, diplomacy, and power politics at large in its historical perspectives. History of international relations study the evolution of state relations, wars, world order and forces making the world history.

### **Learning Objectives:**

The course enables the students to orient and inform them regarding the origins, structures, processes of world history. It will also enlighten them about the global issues surrounding key international institutions, processes, politics, economic policies, foreign policy, diplomacy, and wars.

### **Contents:**

- Origin and development of International Relations;
- International Relations between the two world wars;
- Origin and causes of World Wars I and II;
- Developments in International Politics in the Post-World War -II era;
- Origin and causes of the Cold War;
- End of Cold War and its implications;
- Collapse of the Soviet Union and the New World Order;
- Characteristics of the International Politics after 9/11.
- Contemporary issues in International Relations:
- Role of non-state actors
- Terrorism;
- Religion and Politics;
- Globalization: Concept Network Societies (Manael Kasteil)
- Nuclear Proliferation

### **Recommended Books:**

1. Clonton, D.W. (1994). *The Two Faces of National Interest*, Baton Rouge, and Louisiana State University Press.
2. Holsti, K.J. (2004). *International Politics: A Framework for Analysis*, New Jersey: Prentice Hall, 2004.
3. Griffiths, M. (1995). *Realism, Idealism and International Politics*, New York, Rutledge

## **SOCIOLOGY**

Introduction to Sociology

Course Code: Soc-401

Credit Hours: 03

Course Objectives:

The course is designed to introduce the students with sociological concepts and the discipline. The focus of the course shall be on significant concepts like social systems and structures, socio-economic changes and social processes. The course will provide due foundation for further studies in the field of sociology.

Course Outline:

Introduction

Definition, Scope, and Subject Matter

Sociology as a Science

Historical background of Sociology

Basic Concepts

Group, Community, Society

Associations

Non-Voluntary

Voluntary

Organization



Informal  
Formal  
Social Interaction  
Levels of Social Interaction  
Process of Social Interaction  
Cooperation  
Competition  
Conflict  
Accommodation  
Acculturation and diffusion  
Assimilation  
Amalgamation

Social Groups  
Definition & Functions  
Types of social groups  
In and out groups  
Primary and Secondary group  
Reference groups  
Informal and Formal groups  
Pressure groups

Culture  
Definition, aspects and characteristics of Culture  
Material and non-material culture  
Ideal and real culture  
Elements of culture  
Beliefs  
Values  
Norms and social sanctions  
Organizations of culture  
Traits  
Complexes  
Patterns  
Ethos  
Theme  
Other related concepts  
Cultural Relativism  
Subcultures  
Ethnocentrism and Xenocentrism  
Cultural lag

Socialization & Personality  
Personality, Factors in Personality Formation  
Socialization, Agencies of Socialization  
Role & Status

Deviance and Social Control  
Deviance and its types  
Social control and its need



Forms of Social control  
Methods & Agencies of Social control

Collective Behavior  
Collective behavior, its types  
Crowd behavior  
Public opinion  
Propaganda  
Social movements  
Leadership

Suggested Readings:

Brown, K. (2004). *Sociology*. UK: Polity Press  
Frank, N. M. (2003). *International Encyclopedia of Sociology*. U.S.A: Fitzroy Dearborn Publishers  
Giddens, A. (2002). *Introduction to Sociology*. UK: Polity Press.  
Henslin, J. M. (2004). *Sociology: A Down to Earth Approach*. Toronto: Allen and Bacon.  
Kerbo, H. R. (1989). *Sociology: Social Structure and Social Conflict*. New York: Macmillan Publishing Company.  
Koenig, S. (1957). *Sociology: An Introduction to the Science of Society*. New York: Barnes and Nobel.  
Leslie, G. et al. (1973). *Order and Change: Introductory Sociology* Toronto: Oxford University Press.  
Macionis, J. J. (2005). *Sociology* (10<sup>th</sup> ed.) South Asia: Pearson Education  
Macionis, J. J. (2006). *Sociology*. (10<sup>th</sup> ed.) New Jersey: Prentice-Hall  
Tischler, H. L. (2002). *Introduction to Sociology* (7<sup>th</sup> ed.) New York: The Harcourt Press.

DEVELOPMENT OF Social Thought

Course Code: Soc-402

Credit Hours: 03

Course Objectives:

The course will provide familiarity about history of social thought, stages of social development and change. The course will emphasize contributions of Western, Eastern and Muslim Thinkers towards social thought and social development.

Course Outline:

Introduction

Historical Development of Social Philosophy

Difference between social thought and sociological theory

Early Social Thought

Folk Thinking

Greek

Egyptian

Babylonian

Chinese

Indian Social Thought

Contribution of Muslim Thinkers in Social thought

Abuzar Ghafari

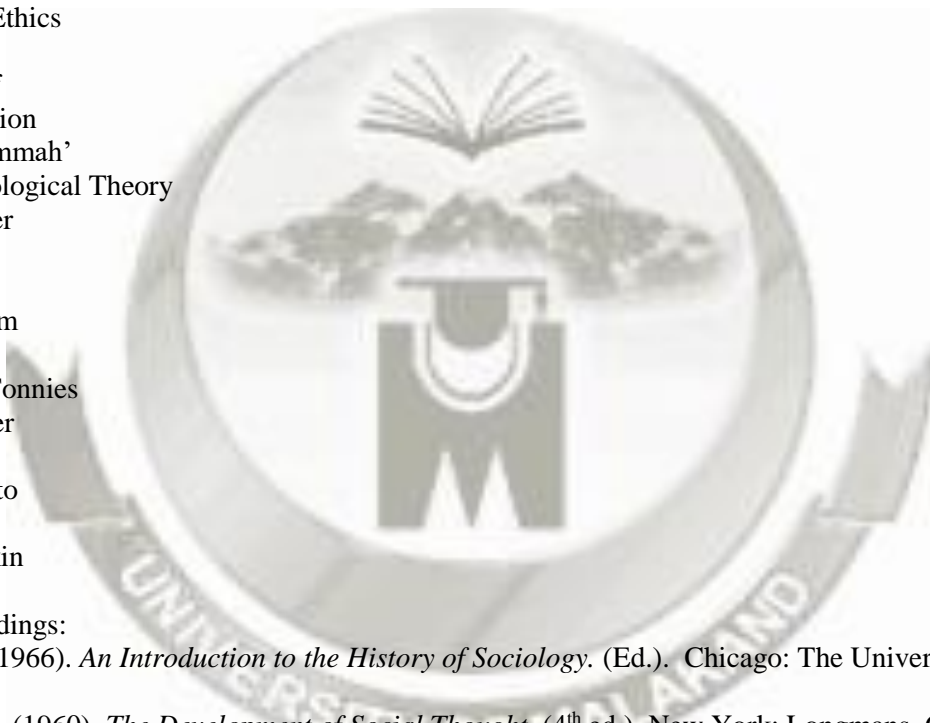
Wealth Theory

Imam Ghazali

Causes of group life

Social justice

Educational reforms  
Ibn-E-Khuldun  
Philosophy of history  
Science of culture  
Ethnocentrism  
Rise & fall of nations  
Causes of social life  
Shah Waliullah  
Evolution of society  
Causes of social life  
Societal disease  
Concept of perfect society  
Moulana Ubedullah Sindhi  
Basic Human Ethics  
Allama Iqbal  
Concept of self  
Theory of religion  
Concept of 'Ummah'  
Classical Sociological Theory  
Herbert Spencer  
August Comte  
Karl Marx  
Emile Durkheim  
Max Weber  
Ferdinand D. Tonnies  
Graham Sumner  
Rober MacIver  
Verlfredo Parato  
G. Lunberg  
Pitrim A Sorokin



Suggested Readings:

- Barnes, H. E. (1966). *An Introduction to the History of Sociology*. (Ed.). Chicago: The University of Chicago Press.
- Bogardus, E. S. (1960). *The Development of Social Thought*. (4<sup>th</sup> ed.). New York: Longmans, Green & Co.
- Coser, L. A. (1971). *Master of Sociological Thought: Ideas in Historical Social Context*. New York, Harcourt Brace.
- Coser, L. A. (1971). *Masters of Sociological Thought: Ideas in Historical and Social Context*. New York: Harcourt Brace Jovanovich Publishers.
- Coser, L. A. (1977). *Masters of Sociological Thought*. New York: Harcourt Brace Jovanarich Publisher.
- Dubin, R. (1978). *Theory Building*. New York: Maxwell, Macmillan.
- Keat, R. & John, U. (1982). *Social Theory as Science*. London: Routledge and Kegan Paul Ltd.
- Kinlock, G. C. (1987). *Sociological Theory: Its Development and Major Paradigms*. New York: McGraw Hill Inc.
- Ritzer, G. (1988). *Sociological Theory*. Singapore: McGraw Hill.
- Ritzer, G. (2000). *Sociological Theory*. (5<sup>th</sup> ed.). York: McGraw Hill Book Co.
- Turner, J. H. (1987). *The Structure of Sociological Theory* Homewood Illinois: Dorsey Press.

Sociological Theories  
Course Code: Soc-403

Credit Hours: 03

Course Objectives:

The course provides a review of sociological theorists i.e. classical, contemporary and modern sociological thinking. It focuses on the content and utility of theories in terms of understanding social world. While the course provides a general history of sociological theory, the focus remains on examining how theories have provided the basis for a better understanding of the character and dynamics of societies around the world.

The contents of the course also help understand the nature of sociological theories.

Course Outline:

Introduction

Meaning and Types

Development of sociological theory

Functions of sociological theory

Theory and Theorizing

Contemporary Sociological Theory

Talcott Parson

George Simmel

Robert K Merton

Ralph Dahrendorf

C.W.Mill

GH Mead

CH Cooley

Modern Sociological Theory

Pierre Bourdieu

Anthony Giddnes

Jurgen Habermas

Michel Foucault

George Ritzer

Suggested Readings:

Ashley, D., & Orenstein, D. M. (2005). *Sociological Theory: Classical statements* (6<sup>th</sup> ed.). Boston, Massachusetts, USA: Pearson Education.

Berlin, I. (1967). *Karl Marx: His Life and Environment*. Time Inc Book Division, New York.

Durkheim, E. (1895). *The Rules of Sociological Method* (8th edition), trans. Sarah A. Solovay and John M. Mueller, ed. George E. G. Catlin (1938, 1964 edition).

Enan, M. A. (2007). *Ibn Khaldun: His Life and Works*. The Other Press. p. v. ISBN 983-9541-53-6.

Farganis, J. (2000). *Readings in Social Theory: The Classic Traditions to Post Modernism*, (3<sup>rd</sup> Ed). MicGraw Hill.

Ferdinand, T. (ed. Jose Harris). (2001). *Community and Civil Society*, Cambridge University Press. ISBN 0-521-56119-1.

Fish, J. S. (2005). *Defending the Durkheimian Tradition. Religion, Emotion and Morality* Aldershot. Ashgate Publishing.

Gianfranco, P. (2000). *Durkheim*. Oxford: Oxford University Press.

Habermas, J. (1990). *The Philosophical Discourse of Modernity: Modernity's Consciousness of Time*, Polity Press, paperback, ISBN 0-7456-0830-2

Halfpenny, P. (1982). *Positivism and Sociology: Explaining Social Science*. London:Allen and Unwin.

Miller, D. (2009). *George Herbert Mead: Self, Language, and the World*. University of Texas Press. ISBN 0-292-72700-3.

Rickman, H. P. (1960). *The Reaction against Positivism and Dilthey's Concept of Understanding*, The London School of Economics and Political Science.

Ritzer, G. (1997). *Post Modern Social Theory*. MicGraw Hill.

## SOCIOLOGY OF HUMAN RIGHTS

Course Code: Soc-336

Credit Hours: 03

Course Objectives:

There is serious concern regarding basic human rights violation in general and in the third world in particular. The course of the sociology of human rights has been framed with the objective to provide information regarding the understanding of the philosophy of human rights in the local, national and international context. The students will then be promptly aware of the rights of the citizens, minority, children, prisoners, women etc and they shall then adopt better mechanism for Social Legislations- Constitutional provisions in favor of such deprived communities. Law relating to compulsory primary education, employment, labor legislations, health for all, social security, insurance schemes, human rights, trafficking in women and children and Legislations initiated by State Legislative Bodies shall be looked through the eyes that they shall meet regional, local and international social welfare needs.

Course Outline:

Introduction

Introduction and definition of Human Rights

Historical background of human rights

Need and importance of human rights in Pakistan

Human Rights and Islam

Islam and human rights

Human rights in Quran

The Hadith and Human Rights

Classification of Human Rights

Collective Rights

Ethnic and minority rights

Fundamental Rights

Constitutional rights

Internal Organization and Human Rights

Women rights and CEDAW (Convention on the Elimination of All kind of Discrimination Against Women)

Rights of the child (CRC)

Rights of Minorities (Declaration on the rights of persons belonging to minorities 1992)

Rights of the refugees (convention relating to the status of refugee 1951)

Human Rights in Pakistan

Fundamental rights of the citizens in Pakistan

Women rights in the constitution

Child rights in the constitution

Constitution and the minority.

Present Condition of Human Rights in Pakistan

Violation of Human Rights in Pakistan

Human Trafficking

Women Rights Violation

Rights of Children Violation

Prisoner's Rights Violation

Labor Rights

Human Rights and United Nation

Introduction of UNO

Charter based organs

International instruments (UN charter, Universal declaration of human rights, international covenant on civil and political rights 1966, international covenant on economic, social and cultural rights 1966)

The UNICEF

The UNHCR

The ILO

Suggested Readings:

Ahmad, K., & Khan, A. S. (1976). *Human Rights in Islam* (translation) Islamic foundation.

Ball, O., & Gready, P. (2006). *The No-Nonsense Guide to Human Rights*. Oxford: New Internationalist.

Beitz, C. R. (2009). *The Idea of Human Rights*. Oxford: Oxford University Press.

Brownlie, I. (2003). *Principles of Public International Law* (6<sup>th</sup> ed.). OUP.

Cassese, A. (1990). *Human Rights in the Changing World*. Policy press

Doebbler, C. F. J. (2006). *Introduction to International Human Rights Law*. Cd Publishing.

Donnelly, J. (2003). *Universal Human Rights in Theory and Practice* (2<sup>nd</sup> ed.). Ithaca: Cornell University Press.

Edward, L. (1998). *Encyclopedia of Human Rights* (2<sup>nd</sup> ed.) Taylor and Francis publisher.

Freeman, M. (2002). *Human Rights: An Interdisciplinary Approach*. Cambridge: Polity Press.

Glendon, M. A. (2001). *A World Made New: Eleanor Roosevelt and the Universal Declaration of Human Rights*. New York: Random House.

Haider, S. M. (1978). *Islamic Concept of Human Rights*. Lahore; Book House

Ignatieff, M. (2001). *Human Rights as Politics and Idolatry* (3<sup>rd</sup> print. ed.). Princeton, N.J.: Princeton University Press.

Ingam, A. (1994). *A Political Theory of Rights*. New York Clarendon p. Press

Ishay, M. R. (2008). *The History of Human Rights: From Ancient Times to the Globalization Era*. Berkeley, Calif.: University of California Press.

Khan, Z. (2007). *Human Rights: Theory and Practice* (2<sup>nd</sup> Revised Edition). Pakistan. Zaki Sons Karachi. ISBN. 969-8373-09-1

INTRODUCTION TO social research

Course Code: Soc-404

Credit Hours: 03

Course Objectives:

The course aims to learn about the basic concepts of social research, various research methodologies, both quantitative and qualitative. The students will learn about the usage of various methodologies while conducting research on different topics. The main tools and research techniques will be studied. It is assumed that the students have a background in basic social statistics and in social theories. The students will also learn about certain specific computer software like SPSS, NUDIST and Ethnograph.

Course Outline:

Introduction

Definition of Social Research

Characteristics of Scientific Social Research

Theory and Research

Qualitative and Quantitative Research Methods - An Introduction

Qualities of Good Researcher

Steps in Social Research

Choosing the Problem and its Significance

Review of Relevant Literature

Justification of Topic

Formulation of Objectives

Research Questions and Research Hypothesis  
Theoretical Framework: Inductive and Deductive Ways of Theorizing  
Conceptualizations and Operationalization  
Data Collection  
Data Analysis and Interpretation  
Report Writing

Dimensions of Social Research  
Use of Research  
Basic Research  
Applied Research: Evaluation, Actions, Social Impact  
Purpose of Social Research: Exploratory, Descriptive, Explanatory  
Time Dimension in Social Research: Cross Sectional and Longitudinal Studies  
Data Collection and Analysis Techniques: Quantitative Data and Qualitative Data

Philosophical and Methodological Foundations of Social Research  
Meanings of Methodology and Methods in Social Research  
Ontology and Epistemology  
Positivist Social Research  
Interpretive Social Research  
Critical Social Research  
Feminist and Postmodern Social Research

The Literature Review  
Significance and Purpose of Literature Review  
Theoretical and Empirical Literature  
Ways to Do Literature Review

Ethical Considerations in Social Research  
Meanings of Being Ethical in Social Research  
Informed Consent and Use of Deception  
Confidentiality and Anonymity  
Privacy  
Data Security  
Power Relations between Researcher and Researched

Academic Writing  
Meanings of Academic Writing?  
Analytical and Critical Approach in Academic Writing  
Ability to Synthesis Information  
Constructing a Line of Reasoning and Ability to Develop Counter Arguments  
Use of Credible and Latest Academic/scholarly Sources  
Literature Citing, References, and Bibliography  
Quoting  
Plagiarism  
Footnotes and Endnotes  
Composing and Formatting of Reports  
Graphic and Pictorial Presentation  
Proof Reading

**Books Recommended:**

- Babbie, E. (2004). *The Practice of Social Research*. (10<sup>th</sup> Ed.). Belmont: CA Words Worth Publishing.
- Babbie, E. (2005). *The Practice of Social Research*. Belmont, California: Wordsworth.**
- Baker, T. L. (1989). *Doing Social Research*. McGraw Hill.**
- Bridge, S., & Culhy. (2005). *Research Methods in the Social Science*. New Delhi: Vistaar Publiser.
- Christopher, W. (2003). *Sociological Methods and Research*. London: Sage Publications.
- Juliet, C., & Anselm, C. S. (2008). *Basics of Qualitative Research* (3<sup>rd</sup> Edition). New Delhi. Sage Publications New Delhi
- Monette, D. R., Sullivan, T. J., & Dejong, C. R. (1998). *Applied Social Research: Tool for the Human Services* (4<sup>th</sup> Edition) New York: Harcourt Brace College Publishers.
- Nachimas, C. F. & David, N. (1997). *Research Methods in the Social Sciences* (5<sup>th</sup> Edition) New York: St. Martin's Press Inc.
- Neuman, W. L. (2000). *Social Research Methods* (4<sup>th</sup> ed.) Allyn and Eacon., Boston.

Pakistani Society and Culture

Course Code: Soc-405

Credit Hours: 03

Course Objectives:

The course aims to make students learn about the nature and structure of Pakistani society. It aims to impart knowledge about national culture and sub-cultures of Pakistan. The course will develop understanding about the integrated function of various social institutions in the country.

Course Outline:

Introduction

Definition of Society

Characteristics of Pakistani Society

Social Stratification, Cast, Class and Ethnicity

Social Institutions in Pakistan

Family

Religion

Economy

Politics

Education

Recreational

Educational Dynamics

Illiteracy

Literacy

Universal Primary Education Concept

Schools; Technical and Higher Education

Status of Formal and Informal Education

Historical Perspective of Pakistani Culture

Provincial Culture

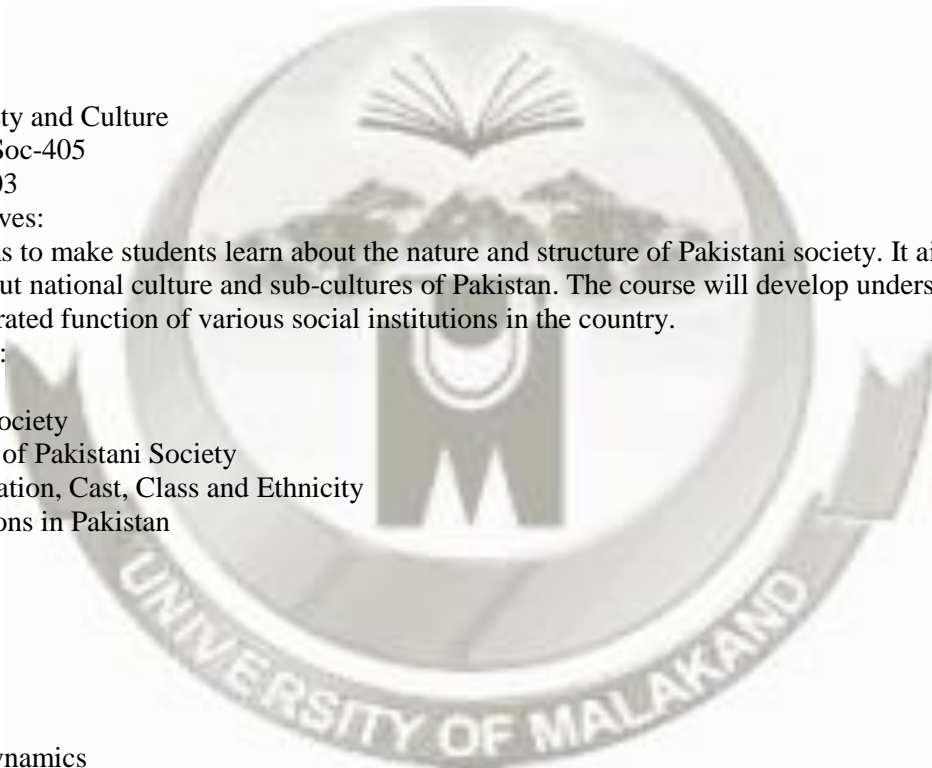
Culture of Punjab

Culture of Sindh

Culture of KPK

Culture of Baluchistan

Culture of Kashmir and Northern Areas





Urban and Rural Division of Pakistan  
Rural Society  
Urban Society  
Rural Power Structure

Minority and Their Belief

Major Social Problems

Major Occupation and Production Activities

Suggested Readings:

- Ahmad, S. A. (1975). *Mataloona: Pukhto Proverbs*. Oxford University Press, Karachi. p.57.
- Ahmad, S. A. (1980). *Pukhtun Economy and Society. Traditional Structure and Economic Development in a Tribal Society*. London: Routledge and Kegan Paul. p.24.
- Caroe, O. (1977). *A Review of Ahamd. In Asian affair.* , Vol.VII (October), pp. 352-3.
- Churchill, W. (1898). *The Story of the Malakand Field Force*. Leo Cooper and Octopus Publishing Groups (2002) plc, London. pp. 51-72.
- Dupree, L. (1980). *Afghanistan*. Princeton University Press. p.126.
- Gluckman, M. (1971). *Politics, Law and Ritual in Tribal Society*. Basil Blackwell, Oxford.
- Lindholm, C. (1996). *Frontier Perspective: Essay in Comparative Anthropology*. Karachi: Oxford University Press. p.196.
- Mumtaz, K. (1987). *Women of Pakistan in Readings on Women in Pakistan*. John Murray. London. p .7.
- Mumtaz, K., and Farida, S. (1987). *Women of Pakistan, Tow Steps Forward One Step Back*. Vanguard. p. 54-90.
- Shaheed, F. and Mumtaz, K. (1990). *Women's Participation in Pakistan*.
- Shaheed, F. et al. (1998). *Women in Politics: Participation and Representation in Pakistan*. Shirkat Gah, Pakistan. p.365.
- Shaheed, F., and Aisha, L. F. (2004). *Great Ancestors: Women Asserting Rights in Muslim Contexts: Information & Training Kit*. Lahore, Pakistan: Shirkat Gah.
- Spain, W. J. (1963). *The Pathan Border Line*. Mouton, The Hague. p.69.
- Zia, S., and Bari, F. (1999). *Women's Political Participation in Pakistan* Unpublished Report.

### GENDER STUDIES

Course Code: Soc-406

Credit Hours: 03

Course Objectives:

The concepts about gender relations will be learnt. The historical movements and feminist perspectives about gender relations will be explored. The course will provide understanding about globalization and its role towards changing gender relation in various societies around the world. Special emphasis shall be given to Muslim and Pakistani societies. Specific areas of gender discrimination (both for men and women) will also be learnt.

Course Outline:

Introduction

Definition, Concepts and Importance

Gender Studies in International Setting

Gender Studies in Pakistani Perspective

Feminism

Major Feminist Perspectives

Liberal Feminism  
Radical Feminism  
Marxist Feminism  
Theological Feminism

Gender and Human Rights

Definition and Nature of Human Rights  
Collective Rights  
Ethnic Minority Rights  
Fundamental Rights  
Property Rights

Gender and Politics

Gender and Third World Politics  
Women Political Leaders, Past and Present  
Women in the Legislatures and Executive of the Law  
Power and Patriarchy  
Women in Pakistani Political Setup  
Women Participation in Local Government System

Gender and Education

Gender and education  
Gender, Origin and development of education  
Gender Education and religion  
Gender Education and polity  
Gender Education and economy  
Gender Education and social mobility  
Gender and Forms of education

Gender and Population

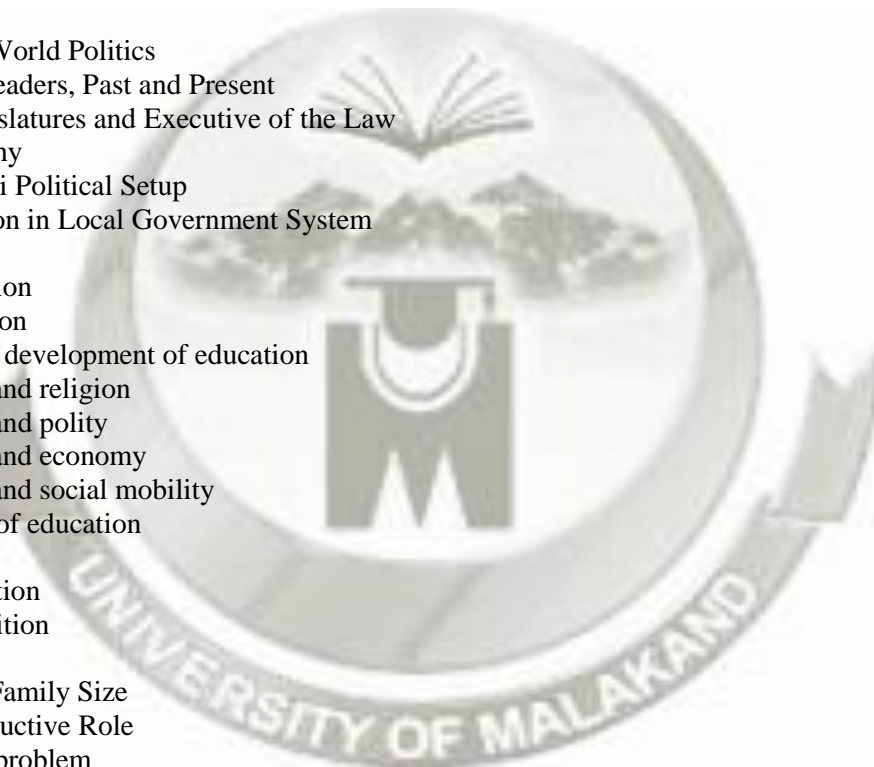
Population composition  
Sex Composition  
Gender Roles and Family Size  
Gender and Reproductive Role  
Gender and Youth problem  
Gender and Population Issues  
Changing Perspective of Gender Roles in Population

Gender and Development

Gender Roles  
Access to Resources  
Gender Disparity  
Problems of Gender Development  
The role of Development Aid in Gender development  
The role of non-government organizations in Gender development  
Journey from WID to GAD

Suggested Readings:

Beauvoir, S. D. (2007). *The Second Sex*, Vintage.



- Bornsterin, K. (1995). *Gender Outlaw: On Men, Women and Rest of US*, Vintage.
- Butler, J. (2004). *Undoing Gender*, Routledge.
- Butler, J. (2006). *Gender Trouble: Feminism and the Subversion of Identity*, Routledge.
- Faucault, M. (1990). *The History of Sexuality: An Introduction*, Vintage.
- Jane, P. (2008). *50 Key Concepts in Gender Studies*, New Delhi. Sage Publication.
- Johan, Z. S. (2008). *The Kaleidoscope of Gender*, New Delhi, Sage Publication.
- Kapadia, K. (2002). *The Violence of Development*. London, Zed Books.
- Kathy, D., Mary, S. E., and Judith, L. (2008). *Handbook of Gender and Women's Studies*, New Delhi, Sage Publication.
- Mary, H. (2008). *What is Gender? (Sociological Approaches)*. New Delhi, Sage Publication.
- Mead, M. (2001). *Male and Female*, Harper Perennial.
- Mirza, J. (2002). *Between Chadar and the Market*. Karachi, Oxford University Press.
- Radtke, H. L., and Henderikus, J. S. (1994-95). *Power and Gender*. London, Sage Publication.
- Rege, S. (2008). *Sociology of Gender (The Challenge of Feminist Sociology knowledge)*. New Delhi, Sage Publication.
- Ronnie, V. (2008). *Social and Gender Analysis in Natural Resource Management*, New Delhi, Sage Publication.
- Shaista, I. (2000). *From Purdah to Parliament*. Karachi, Oxford University Press.
- Sharlene, N. H. B. (2008). *Handbook of Feminist Research*. New Delhi, Sage Publication.



## PSYCHOLOGY

Course Title: HISTORY OF PSYCHOLOGY

Course Code: PSY 103

Credit Hours: 03

### Course Objectives

The course aims at the development of basic understanding of the various processes of scientific development and change and to become familiar with the chronological history of ideas which contribute to the field of Psychology. So, the brief historical context within which that historical development took place and the schools of psychology, are well explained and understood. It will enable current psychological thought within that historical development and context.

### Course Outline

#### 1. Introduction

- Brief History of Psychology
- Early Greek, Roman philosophy and Philosophers. (Thales, Anaximander, Heraclitus, Parmenides, Pythagoras, Empedocles)
- Early Greek Medicine
- The relativity of Truth; Protagoras, Gorgias, Xenophobes, Socrates, Plato, Aristotle
- Skepticism & Cynicism
- Epicureanism and Stoicism, Neoplatonism and Emphasis on spirit Contribution of Muslim Philosophers
- Scholasticism

#### 2. The Beginning of Modern Science and Philosophy

- Renaissance and the rise of Humanism; Challenges to Church authority; Rene Descartes
- British Empiricism; French Sensationalism; Positivism
- Rationalism
- Spinoza; Immanuel Kant; Johann Friedrich Herbart; Friedrich Hegel
- Romanticism and Existentialism
- Early developments in physiology and the rise of experimental psychology; Individual differences; Early Research on brain functioning, Voluntarism, Structuralism and other early approaches to psychology Voluntarism.

#### 3. Psychobiology

- Karl and Lashley; New connectionism; Behavioral genetics
- Contemporary Psychology
- The Diversity in contemporary psychology
- The tension between pure, scientific and applied psychology

#### 4. Psychology's status as a science; Post modernism

#### Recommended books:

1. Ajmal, M. (1986). Muslim Contribution to Psychotherapy and Other Essays. Islamabad, Pakistan: National Institute of Psychology, Quaid-i-Azam University.

2. Boring, E. G. (1957). A History of Psychology. New Jersey, USA : Prentice-Hall.
3. Leahey, T. H. (1987). A History of Psychology. New Jersey, USA: Prentice-Hall Inc.
4. Murphy, G. (1949). Historical Introduction to Modern Psychology. London: Routledge & Kegan Paul.
- Shultz, D. (1981). A History of Psychology. Florida, USA : Academic Press.

**Course Title: PERSONALITY THEORIES-II**

**Course Code: PSY 205**

**Credit hours: 03**

**Course Outcome:**

This course aims at the developing the understanding of theories related to Psychology, of the new era. This course aims at highlighting the basic concepts of the psychologists after Freud. It will enable the students to articulate each theory, its assessment techniques and the theoretical approach to the treatment and understanding of Human. Students will be able to critically evaluate each theory.

**Course Outline**

**1. Dispositional Theories:**

**Gordon Allport**

- Personality development
- Personality traits
- Critical evaluation

**Raymond Cattell**

- View of a person; Understanding of the person Factor analysis; Economic model
- Basic concepts; Data types; Traits; Personality of nations
- Critical evaluation
- Hans Eysenck
- Basic concepts; Traits and types;
- Measuring and describing E, N, and P
- Critical evaluation

**2. Humanistic And Existentialist Theories**

**Abraham Maslow**

- Basic concepts
- Five basic human needs
- Self-actualizing person
- Critical evaluation:

**Carl Rogers**

- Basic concepts
- Actualization
- Importance of self
- Personality development
- Client centered therapy

**George Kelly:**

- Basic concepts

- Personality as a system of constructs
- Relation among constructs
- Personality development
- Predictability
- Dependency constructs
- Role playing
- Choices: the C-P-C cycle
- Critical evaluation

### 3. Behaviorist Theories

#### B.F. Skinner

- Basic Concepts
- Operant conditioning
- Positive reinforcement
- Negative reinforcement and punishment
- schedules of reinforcement
- Operant conditioning and reinforcement
- Development of humans: Language, Personality and child rearing.
- Critical evaluation.

#### John Dollard and Neal E. Miller

- Basic concepts
- Psychopathology
- How fear is learned
- Effect of fear
- Critical evaluation

### 4. Social Learning Theory of Albert Bandura

- Basic concepts
- Models and modeling
- Goals and self-regulating
- Self-efficacy
- Reward
- Defensive behavior
- Critical evaluation

### 5. Current Paradigms

#### Recommended books:

1. Allen, B- P. (1997). Personality Theories: Development, Growth and Diversity. (2nd Ed.). Boston,USA: Allyn & Bacon.
2. Ewen, R- B. (1998). An Introduction to Theories of Personality. (5th Ed.) New Jersey,USA: Lawrence Erlbaun Associate Publishers.
3. Feist, J. (1985). Theories of Personality. Sydney: Holt Rinehart & Winston, Inc.

**Course Title: SCHOOLS OF PSYCHOLOGY**

**Course Code: PSY 105**

**Credit Hours: 03**

**Course Objectives**

The course will develop a basic understanding of the various processes of scientific development and change, It will assist in becoming familiar with the chronological history of ideas which contribute to the field of psychology. The historical context within which that historical development took place and the schools of psychology, are explained in brief.

**Course Outline**

**1. Roots of Psychology Philosophical roots:**

- Greek and Muslim contribution to the development of psychology.
- The spread of scientific psychology. Psychology in Europe, USA, and Former Soviet Union

**2. Systems and Schools of Thought:**

- Structuralism
- Functionalism
- Behaviorism
- Gestalt psychology and Field Theory
- Psychodynamics
- Humanistic Psychology
- Cognitive Psychology

**3. Psychology in Pakistan**

**4. Practicum: 25 Marks**

- Following experiments shall be performed by the students: Concept Formation Maze Learning Memory: Function of Recitation Memory: Function of Time (Saving Method) Memory: Method of Serial Reproduction Problem Solving

**Recommended books:**

1. Ajmal, M. (1986). Muslim Contribution to Psychotherapy And Other Essays. Islamabad,Pakistan: National Institute of Psychology, Quaid-i-Azam University.
2. Boring, E. G. (1957). A History of Psychology. New Jersey,USA : Prentice-Hall.
3. Leahey, T. H. (1987). A History of Psychology. New Jersey: Prentice-Hall Inc.
4. Shultz, D. (1981). A History of Psychology. Florida,USA : Academic Press.
5. Wolmen, B. B. (I 979). Contemporary Theories And Systems In Psychology. New York,USA: Harper & Row

**Course Title: PERSONALITY THEORIES-I**

**Course Code: PSY 202**

**Credit Hours: 03**

**Course Objectives**

This course aims to examine, in depth, specific theories of Psychology, under each of the major psychological models of personality through their theoretical concepts and principles, their explanation of personality development, their assessment techniques, and their application to treatment of psychopathology. Students will be able to articulate the major concepts and principles of each personality theory discussed in the class and in the text

**Course Outline:**

**1. Psychology Of Personality**

- Introduction to the Discipline
- Meaning of personality
- Meaning of theory
- Components of personality theory

**2. The Psychoanalytic Legacy; Sigmund Freud**

- Basic concepts
- Personality structure:
- Three interacting systems
- Personality development
- Five sequential stages.
- Personality dynamics
- instincts / anxiety / catharsis and anti-catharsis
- Defense mechanisms
- Application of psychoanalytic theory; Dream analysis paraphrases
- Psychotherapy
- Critical evaluation

**3. Personality's Ancestral Foundations: Carl Jung:**

- Basic concepts: Conscious and unconscious; Archetypes.
- Personality typology
- Personality development
- Further applications: Dream analysis; Psychopathology.
- Psychotherapy
- Critical evaluation

**4. Overcoming Inferiority And Striving For Superiority: Alfred Adler**

- Basic concepts:
- Developing social feelings: society; work and love
- Style of life; future goals vs. past events.
- overcoming inferiority Striving for superiority and supe
- Family influences on personality development
- Further applications: Dream analysis; Psychopathology
- Psychotherapy
- Critical evaluation

**5. Neo Freudians -Karen Horney**

- Basic anxiety
- Coping by way of 10 neurotic needs moving towards, or against, or away from people
- Development of an idealized vs. a real image of self
- Claims, shoulds
- Defense mechanisms.

**6. Harry Stack Sullivan**

- Empathy



- Anxiety and security
  - 3 modes of experience
  - 6 stages of Development
7. **Henry A. Murray**
- Definition of need
  - variety of needs
  - Strength of needs and interactions Environmental press
  - Themas
8. **Erik Erikson**
- Psycho-social stages of personality development
  - Identity crises
9. **Erich Fromm**
- Existential needs
  - Individual and social characters

**Recommended books:**

1. Buss, D. M. (2004). Evolutionary Psychology: The Science of Mind (2nd Ed.) Boston: Allyn & Bacon.
2. Ewen, R. B. (1998). An Introduction of Theories of Personality. (5th Ed.). New Jersey: Lawrence Erlbaum Associate Publishers.
3. Feist, J. (1985). Theories of Personality. Sydney: Holt Rinehart & Winston, Inc.
4. Pervin, L. A., Cervone, D., & John, O. P. (2005). Personality Theory and Research (9th Ed.). New York: John Wiley & Sons

**Course Title: ETHICS IN PSYCHOLOGY**

**Course Code: PSY 203**

**Credit Hours: 03**

**Course Objectives:**

The course aims at developing the students' insight about the ethics of Psychology, Being a student of psychology, it is necessary to be aware of the code of conduct of the particular field. It will enable the students to know, how to behave professionally, how to practice, conduct research and how to carry out experiments

**Course Outline:**

**1. Introduction To Ethics:**

- Ethical conduct of Psychologists
- Ethical Principles of Psychologist
- Ethical Standard
- Ethical Committees; Formation of working guidelines
- Privacy and Confidentiality
- Classroom Materials
- Research Data

**2. Assessment Materials**

**3. Psychologists And Social Responsibility**

**4. Ethics In Psychotherapy**

- Therapists' obligations.
- Sexually intimated behaviour with clients
- Dual relationship;
- Conflict of interest situation
- Psychologists and advertising.
- Acceptable advertisement; Unacceptable advertisement

**5. Ethical Issues Involved In Experimentation With Human And Animal Subjects**

**6. Relationship With Colleagues;**

- Monitoring conduct of colleagues;
- Vindictive/ difficult colleague;
- Relationship with students/ employees

**7. Ethics and Psychological research;**

**8. Psychologists responsibility;**

- Volunteerism;
- Enticements
- Concealment;
- Distortion;
- Deception;
- Debriefing

**Recommended books:**

1. Austin, K. M., Moline, M.E., & Williams, G. T. (1990). Confronting Malpractice: Legal & Ethical Dilemmas In Psychotherapy. Newbury Park: CA. Sage.
2. Spiegel, P. K., & Koocher, G. P. (1998). Ethics In Psychology. New York, USA : Oxford University Press.

**Course Title: EXPERIMENTAL PSYCHOLOGY**

**Course Code: PSY 204**

**Credit Hours: 03**

**Course Objectives**

This course will help the students to examine the importance of the Psychology of the individual to the development of self- esteem, cooperative learning, individual differences, and motivation and learning styles.

**Course Outline:**

**1. Psychophysics:**

- Importance of Psychophysics
- Absolute & Differential Thresholds

- Psychophysical Methods
  - Theory of signal detection.
- 2. Perception:**
- Perception and Sensation.
  - The Gestalt Concept of Perception.
  - Perceptual Consistencies; Depth Perception; Figure and Ground Perception; Perception of Movement; Perceptual defense and vigilance; Perception of time.
  - Visual illusions
- 3. Learning:**
- Types of learning.
  - Basic factors in learning and performance.
  - Role of reinforcement in learning.
  - Contemporary theories of Learning
- 4. Memory:**
- Theories of Memory.
  - Compartments of Memory (The storage and retrieval process.)
  - Mnemonics: ways of improving memory (Devices Mnemonics)
- 5. Thinking and Problem-Solving:**
- Nature of Thinking
  - Concept formation
  - Set and attitude as factors in Thinking
  - Creative Thinking
  - Theories of Thinking.
- 6. Practicum: 25 Marks**  
(Three of the following experiments shall be performed by the students:
- Meaningful vs. Nonsense Learning
  - Retroactive Inhibition
  - Simple Reaction Time
  - Transfer of Training
  - Trial Position Effect under Massed and Distributed Practice
  - Whole vs. Part Learning

**Recommended books:**

1. Andreas, B-G. (1972). Experimental Psychology (2<sup>nd</sup> Ed). New York, USA : John Wiley and Sons
  2. Boring, E.-G. (2007). History of Experimental Psychology. New Delhi, India : Cosmo Publications
  3. McGuigan, F. J. (2001). Experimental Psychology-Methods of Research: (7<sup>th</sup> Ed).UK: Prentice Hall.
- Postman, L & Eagan, J-P. (2007). An Introduction. New York, USA: Harper and Row.

**Course Title: INTRODUCTION TO SOCIAL PSYCHOLOGY**

**Course Code: PSY 301**

**Credit hours: 03**

**Course Objectives**

Social Psychology aims to give awareness of certain fundamental concepts and principals involved in human behavior, and in his interaction with the society. It provides an awareness of the major problems and issues in the discipline of social psychology, and the capacity to interpret them through research findings. The aim is to accomplish the goal, of the understanding and interpretation of human behavior.

**Course Outline:**

**1. The Field of Social Psychology**

- Introduction to social psychology
- Conducting research in social psychology
- Current trends and future scope

**2. Self- Presentation and Social Perception**

- Non-verbal behavior
- Attribution
- Impression management

**3. Social Cognition**

- Schemas
- Heuristics
- Affect and Cognition.

**4. Behavior and Attitudes**

- Nature of attitudes
- Formation, maintenance, and change in attitudes
- Relationship between attitude and behavior
- Cognition & attitude

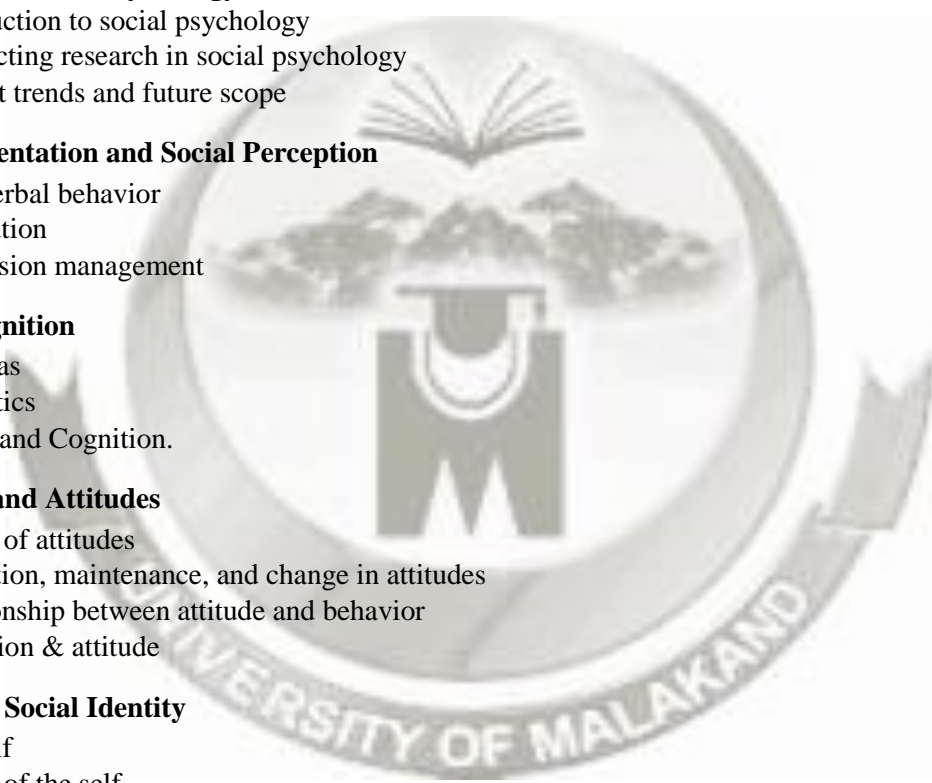
**5. Aspects of Social Identity**

- The self
- Nature of the self
- Self-concept
- Social diversity
- Self esteem
- Other aspects of self-functioning
- Self-focusing
- Cognitive and affective aspects
- Self-Monitoring
- Self-Efficacy

**6. Gender & Socialization**

**7. Social Influence**

- Conformity
- Compliance



- Obedience

**8. Pro-social Behavior**

- Why do we help?
- When do we help?
- Does true altruism really exist?
- Whom do we help?
- How we can increase helping?

**9. Aggression /hurting others**

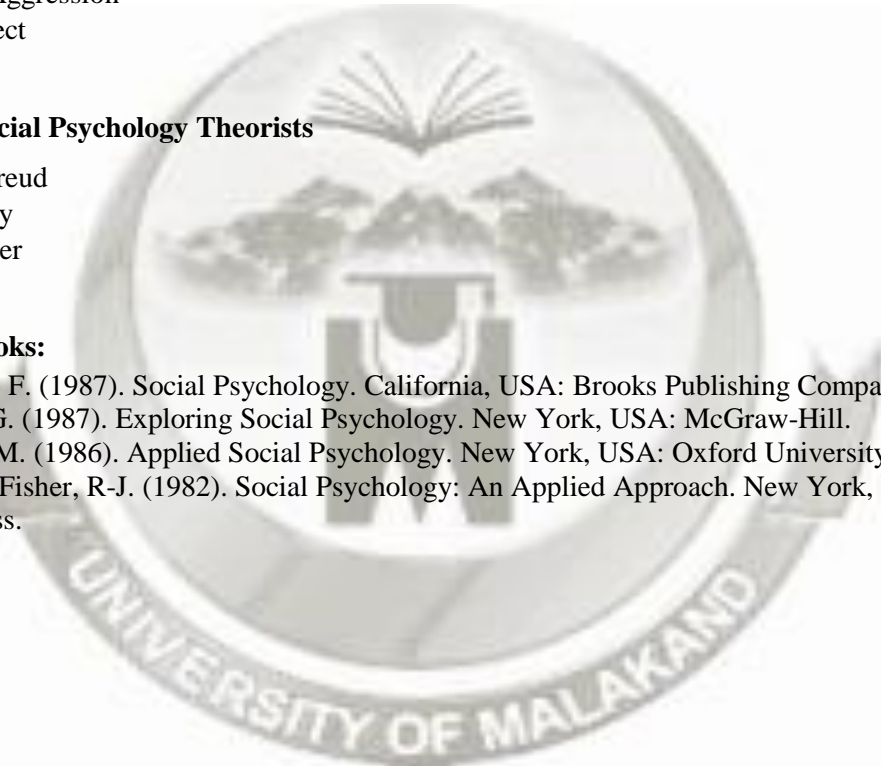
- What is Aggression?
- Influences on Aggression
- Reducing Aggression
- Lucifer effect
- Bullying

**10. Theories of Social Psychology Theorists**

- Sigmund Freud
- C.H. Cooley
- B. F. Skinner
- D H Mead

**Recommended books:**

1. Forsyth, D- F. (1987). Social Psychology. California, USA: Brooks Publishing Company.
2. Myers, D-G. (1987). Exploring Social Psychology. New York, USA: McGraw-Hill.
3. Wayant, J-M. (1986). Applied Social Psychology. New York, USA: Oxford University Press
4. Wesley.,& Fisher, R-J. (1982). Social Psychology: An Applied Approach. New York, USA: St. Martin Press.



## SOCIAL WORK

**COURSE TITLE: INTRODUCTION TO SOCIAL WORK**

**COURSE CODE: SW 106**

**CREDIT HOURS: 03 MARKS: 100**

**OBJECTIVES** The objective of this course is to acquaint and familiarize students with the basic concepts and, scope of Social work.

### CONTENTS

1. Definition of social work
2. Philosophical base of social work
3. History of professional social work
4. Relationship of social work with other social sciences
5. Generic principles of social work
6. Professional and voluntary social work
7. Islamic concept of social work
8. Modern concept of social work
  - a. Preventive
  - b. Curative
  - c. Rehabilitative
9. Social Work methods
  - a. Primary methods
    - i. Social Casework;
    - ii. Social group work
    - iii. Community organization
  - b. Secondary methods
    - i. Social Welfare Administration
    - ii. Social Research
    - iii. Social Action
10. Important fields of social work practice
  - a. Health
  - b. Education
  - c. Minorities
  - d. Beggary

### RECOAINIENDED READINGS

Adams, R. (2003). Social work and empowerment. London: Palgrave Macmillan. Ambrosino, R. (2005). Social work and social welfare introduction. Mexi: Thomson.

Bogo, NI. (2007).Social work practice. New Dehli: Rawat Publications.

Catherine N. D. & Karen M.S. (2012).Social Work Fields of Practice. Canada: John Wiley & Sons. Gautam; P.R. & Singh, R.S. (2011).Principles and practices of 26 Social Work. New Balaji Offset.

Healy, K. (2012). Social work methods and skills: The essential foundations of practice. New York: Palgrave Macmillan.

- Hepworth, D. H. & Rooney, R. (2010). *The Direct Social Work Practice: Theory and skills*. Belmont: Brook Cole.
- Jane M. & Ronnie, E. (2006). *Practice Skills in Social Work & Welfare*. Chennai (India): Allen&Unwin.
- Khalid, Muhammad (1990). *Sociological Theory: A Historical Perspective*. Karachi: Kifayat Academy.
- Khalid, Muhammad (2014). *Social Work: Theory & Practice*. Karachi: Kifayat Academy. Kirst-Ashman, K. (2003). *Introduction to social work and social welfare: critical thinking perspectives*. MEXI, Thomson.
- Liz O', R. (2010). *Recording in Social Work*. UK: Hobbs, Southampton.
- Louise, C. & Stephen, J. Y. (2011). *Social Work Practice: A Generalist Approach*. New Delhi: Asoke K. Ghosh.
- Maidment, J. (2006). *Practice skills in social work & Welfare*. AUST: Allen &Unwin.
- Michael, B. S. & Pam, T. (2012). *Social Work with Disabled People*. BASW Palgrave Macmillan.
- Mohammad, N. (2005). *Social work for weaker sections*. New Dehli: Anmol Publications.
- Rameshwari, D. & Ravi, P. (2004). *Social work Methods: Practices and Perspective*. Jaipur: Mangal Deep.
- Rory, T. & Leonie, N. (2002). *Reflection on Current Social Work Practices*. New Zealand: Murray Lock. 19.
- Safdar, S. (2008). *Introduction to Social Work*. Peshawar: University of Peshawar.
- Shah, N. A. (1994). *The Self Employed Women in Pakistan*. Karachi: P&WS + NEWS Karachi.
- Shah, N. A. (2001). *Karachi kay Nu Umar Mehnatkash Bachechey Aur Bachchiyan: Ek Jai-La*. Karachi: Bcc & T Press University of Karachi.
- Shah, N. A. (2004). *Karachi ki Gadagar Larkian: Ek Jaizao. (Social Problems in Pakistan)*. Karachi: Bcc Press, University Of Karachi.
- Shah, N. A. (2015). *The Aging Home- Based Women- Workers in Karachi*. Karachi: Bee + T Press, University Of Karachi.
- Suresh, S. (2013). *Handbook of Social Work Skills and Knowledge*. New Delhi. Thompson, N. (201) *Theorizing Social Work Practice*. Palgrave, London.
- Veronica, C. & Joan, O. (2012). *Social Work Practice*. BASW Palgrave Macmillan. Waston, D. (2006). *Social work process and practice: Approaches, knowledge and skills*. New York: Palgrave

COURSE CODE: SW 107

CREDIT HOURS: 03

MARKS: 100

**COURSE OBJECTIVES:**

The course will enable the students to understand the concept of Social Welfare, its evolution at national level, and history of Social. The course will help the students to understand the modern concept of Social

Welfare, Social Work and Welfare Polices in Pakistan.

**CONTENTS:**

1. Definition and Related Concepts
  - a. Functional definition
  - b. Descriptive definition
2. Relationship between social welfare and social work
3. Perspectives of Social Welfare
4. Historical Development of social welfare in Pakistan
5. Concept of social welfare in Islam
  - a)Widows
  - b. Orphans
  - c. Sick
  - d. Minorities
  - e. Elderly
6. Political system in Islam
7. Concept of sovereignty in Islam
8. National Social welfare plans in Pakistan
9.
  - a. Five year Plans
  - b. Contemporary social protection nets in Pakistan
10. Seminar on
  - a. Structure and functions of social welfare ministry/departments in Pakistan
  - b. Economic system of Islam
  - c. The role of Zakat Department and Pakistan Baitulmal in poverty alleviation

**RECOAINIENDED BOOKS:**

- Banks, S. (2001). *Ethics and Values in Social Work*. New York: Palgrave.
- Compton, B. R. & Gala, B. (1984). *Social Work Process*. Chicago: Dorsey Press.
- Hepworth, D. H. & Lesser, J. A. (1990). *Direct Social Work Practice: Theory and Skills*. California: Wordsworth.
- Khalid, M. (2014). *Social Work Theory and Practice with special reference to Pakistan*. Karachi: Kifayat Academy.
- Morales, A. T. & Sheofor, B. W. (1998). *Social Work: A Pro lession of Many Faces*. U.S.A: Allyn& Bacon.
- Omer, S. (I 960). *Professional Education/Or Social Work*. Lahore: University of Punjab. Piccard, B. J. (1988). *Introduction to Social Work: A Primer*. Chicago: The Dorsey Press.
- Pople, P. R. & Leslie L. (2010). *Social Work, Social Welfare and American Society*. Pearson.
- Practice Hall. 6. Government of Pakistan, (2003). *The Five Year Plan, MTFD (Medium Term Development Framework 2001-2011*. Islamabad: Planning Commission of Pakistan.
- Rehmatullah, S. (2003). *Social Welfare in Pakistan*. Karachi: Oxford University Press.
- Siporin, M. (1975), *Introduction to Social Work Practice*. New York: Macmillan Publishing Co. Inc.
- Skidmore, R. A. (1982). *Introduction to Social Work*. New Jersey: Prentice-Hall.
- Young, P. (2001). *Mastering Social Welfare*. London: Macmillan Press limited. Zastrow, C. (2012). *The Practice of Social Work*. Chicago: Dorsey Press.



**COURSE TITLE: SOCIAL PROBLEMS OF PAKISTAN COURSE**

**CODE: SW 204**

**CREDIT**

**HOURS: 03**

**1. Introduction**

- a. Definition and nature of social problem
- b. Importance of study of social problems
- c. Definition of social evil
- d. Difference between social problem & social evil
- e. Impacts of social problems on development Role of Social worker in the solutions of social problems

**2. Social problems**

- a. Crime.
- b. Over Population
- c. Juvenile Delinquency
- d. Illiteracy
- e. Poverty
- f. Social Inequality
- g. Beggary
- h. Unemployment and under employment,
- i. Child Labour.
- j. Drug Addiction
- k. Labour Probleths
- l. Gender based Violence
- m. Corruption
- n. Terrorism
- o. Urbanization

**RECOMMENDED READIGNS**

Eitzen, D. S. (2013). Social Problems. Boston: Allyn and Bacon, Inc.

Ginsberg, L. H., & Miller-Cribbs, J. (2005). Understanding social problems, policies, and progauns. Univ of South Carolina Press.

Khalid, M. (1992). Social Work Theory and Practice with special reference to Pakistan. (1 st ed). Kifayat Publishers Karachi, Pakistan

Khalid, Muhammad. (2003). Social Problems of Pakistan. Karachi: Kifayat Academy

Linda A. Mooney and Knox D,(2012). Understanding Social Problems Volume 8 Cengage Learning, ISBN 1111834482, 9781111834487

Singh, L. (2007). Anatomy of Social Problems. New Dehli: Cyber Tech Publications

**COURSE TITLE: SOCIETY AND SOCIAL INSTITUTIONS COURSE**

**CODE: SW 205**

**CREDIT HOURS: 3**

**MARKS: 100**

**COURSE OBJECTIVES**

The purpose of this course is to acquaint students with the structure and function of society as well as social institutions.

**CONTENTS**

1. Definition and description of society
2. Evolution of Society
3. Characteristics of Society
4. Forms of Society
5. Culture and related concepts
6. Definition and description of social institutions.
7. Structure and characteristics of social institutions.
8. Types of Social Institutions.
  - a. Primary
  - b. Secondary
9. Functions of Social Institutions.
  - a. Family Institution
  - b. Religious institution
  - c. Political Institution
  - d. Educational Institution
  - e. Economic Institution
  - f. Recreational institution

**RECOMMENDED READINGS**

Chiot, D. (1994). *How Societies Change*. (2nd ed.). UK: Pine Forge Press, Sage Publication Company.

Eitzen, D. S. (2013). *Social Problems*. Boston: Allyn and Bacon, Inc.

Ferguson, S. J. (2002). *Mapping the Social Landscape*. (3rd ed.). USA: McGraw-Hill Companies, Inc.

Gelderblom, D. (2003). *Social Institutions*. USA: Oxford University Press.

Griswold, W. (2008). *Culture and Societies in a Changing World*. New Dehli: Sage Publication Company.

Julian, J. & Kornblum, W. (2011). *Social Problems*. New Jersey: Prentice-Hall, Inc.

Khalid, Muhammad. (2003). *Social Problems of Pakistan*. Karachi: Kifayat Academy. Marker, M. N. (2002). *Social Inequality: Patterns and Processes*. USA: McGraw-Hill Higher Education.

Singh, L. (2007). *Anatomy of Social Problems*. New Dehli: Cyber Tech Publications.

**COURSE TITLE: HUMAN GROWTH AND PERSONALITY DEVELOPMENT**

**COURSE CODE: SW 206**

**CREDIT HOURS: 3**

**MARKS: 100 OBJECTIVES**

The purpose of the course is to enable the graduates of social work to understand the personality structure of the client. It also interprets the personality dynamics of the human being while working as team member in Social work settings.

**Contents**

1. Meaning and significance of human growth
2. Approaches to the study of human development
  - a) Social learning/Behaviorism Approach
  - b) Cognitive Approach
  - c) Psycho-Social Approach
3. Factors which influence human growth/development
4. Phases of human development (The Biological and Psychological development of the individual)
  - a. Pre-natal and post-natal development
  - b. Infancy
  - c. Pre-School Child
  - d. School Child
  - e. Puberty
  - f. Adulthood
  - g. Old Age
5. Levels of functioning of human mind and behavior .
  - a. Conscious level
  - b. Subconscious level
  - c. Unconscious level
- 6 Emotional Development
  - a. Introduction
  - b. Types of Basic emotions
  - c. Socio-demographic factors of emotions
7. Theories of personality development
  - a. Freud's Psycho Analytic Theory
  - b) Defense mechanisms b. Jung's Analytical Theory
  - c. Social Psychological Theory of Adler
  - d. Eric Erikson's Psychoanalysis and the life cycle
8. Concepts of abnormal behavior
  - a. Psychotic Disorder
  - b. Neurotic Disorder
9. Role of Nature & Nurture in Personality Development

**RECOMMENDED READINGS**

Bean, P. (2001). Mental Disorder and Community Satiety. New York: Palgrave Houndmiils, Basingstoke.

Diance, E. R. &Wendkos 0. S. (1978).Human Development. New York: McGraw Hill Book Company.

Fink, A. E. (1974). The Field of Social Work. New York: Holt Reinhort and Winston inc.

Fitch, S. K. (1970). Insights into Human Behavior. Boston: Houghton Mifflin Press.

Harold C. W. (1981). Approaches to Child and Family Policy. Colorado: West View Press. Hawks G. R. (1969). Behavior and Development from 5 to 12. London: Harper.

Hurlock, E. B. (1972). Child Development. New York: MacGraw Hill Book Company. Hurlock, E. B. (1978). Adolescent Development. New York: McGraw Hill Book Company. Justin, P. (1970). Human Development. New York: McGraw Hill Book and Company. Kerfoot, M. (1988). Problems of Childhood and Adolescence. New York: Macmillan.

Loveii, K. (1971). The Introduction to Human Development. London: ScothForesmaninc. Rice P.F. (1998). Human Development A life —span approach. Printice Hall, Upper Saddle river, New Jersey

Richard, S. S. (2001). Life's Choices Problems and Solutions. Sydney: Wadsworth/Thomson Learning.

Ryner, E. (1975). Human Development. London: Gorge Alien and Union Ltd.

Scmin, G. R. & Fiedfer, K. (1996). Applied Social Psychology. London: SAGE Publications Ltd.

COURSE TITLE: SOCIAL POLICY AND PLANNING

COURSE CODE: SW 207

CREDIT HOURS: 03

MARKS: 100

### OBJECTIVES

The aim of the course is to enable the students to understand concept of social policy and planning. It gives an understanding regarding the significance of social policy in the field of social welfare. It also familiarizes students with the process of translating social policies into social planning.

### CONTENTS

1. Definition, nature, scope
2. Concept of social policy in Islam
3. Objectives and determinants of social welfare policy
4. Constituents of social policy
- 5- Sectors working in the provision of social welfare
- 6- Globalization and social policy
7. Social legislation as instruments of social policy
8. Values' consideration in social welfare policy
  - a. Ensuring individual's dignity and integrity
  - b. Protection of family institution's survival
  - c. Ensuring vulnerable' rights protection
  - d. Ensuring human's respect and cooperation
9. Strategy to achieve objectives
10. Social welfare policies of Pakistan (1955, 1988, 1992, 1994)
11. Definition and concept of social welfare planning
12. Interdependence of economic, social and physical planning
13. Steps of Social Planning
14. Organizational and administrative frame work for planning

**RECOMMENDED READINGS**

- Adams, R. (2002). *Social Policy for Social Work*. New York: Palgrave Macmillan. Alexander, R. (2003). *Understanding legal concepts that influence social welfare policy and practice*. Belmont, CA: Brooks/Cole. Austin, M. J. & Jeffery, R. S. (2000). *Managing in the planning process*. In *The handbook of Social welfare management*. Thousand Oaks, CA: SAGE.
- Bamberger, M. & Hewitt, E. (1986). *Monitoring & Evaluation Urban Development Programs. A Hand Book for Progimm Managers & Research/BK 0775 World Bank Technical Paper No. 53*, Publisher World Bank ASIN
- Dean, H. (2012). *Social Policy: Short Introduction (2nd ed)*. Cambridge: Polity press.
- Dermon, W. & Whiteford, S. (1985). *Social Impact Analysis & Development Planning in the Third World*. London: Westview Press
- George, A. S. (2010). *Strategic Planning What Every Management Must Know*. New York: Free press.
- Kahn, A. J. (1969). *Studies in Social Policy & Planning*. New York: Russell Sage Foundation.
- Lohmann, R. A. & Lohmann, N. (2013). *Social Administration*. Columbia University Press: USA.
- Meenaghan, T. M., Keith, M. K. & John, G. M. (2004). *Social policy analysis and practice*. Chicago: Lyceum.
- Newman, H. & Wijk, A. V. (1987). *Se1J' Evaluation and Planning jOr Human Service Organisations*. Publisher AMACOM, ASIN.
- Rafiq, S. Z. (2003). *Community Development, Concept & Practice*. Peshawar: Saif Printing Press.
- Stephen, P. R. (1980). *The administrative process*, Prentic Hall Inc. New Jersey: Engleword cliff.

**COURSE TITLE: SOCIAL CASE WORK**

**COURSE CODE: SW 245**

**CREDIT HOURS: 03 MARKS: 100 OBJECTIVES**

This course will help students to understand social casework as a method of social work and to make them understand the process and application of social casework. It will also acquaint them with the skills and techniques of social casework practice.

**CONTENTS**

1. Definition and description of Social Casework
2. Origin of professional Social Casework and its development
3. Philosophical assumptions of Social Casework
4. Code of ethics of Social Casework Practice
5. Principles of Social Casework
6. Components of Social Casework; Person; Problem; Place, Process; and Professional caseworker
7. Problems solving process: Social study; Prognosis; Diagnosis; Treatment; Follow up
8. Worker-client professional relationship
  - (a) With reference to the problem
  - (b) With reference to the agency
  - (c) With reference to community

9. Approaches to Social Casework
  - a. Task Centred Approach
  - b. Social-Psychological Approach
  - c. Integrated approach of Practice
10. Techniques of Social.Casework Process
11. Interviewing in Social Casework
12. Recording in Social Casework
13. Counselling in Social Casework
14. Case Studies in Social Casework
15. Scope of Social Casework in Pakistan
16. Fields of Social Casework
  - a. Medical Social Work
  - b. Psychiatric Social Work
  - c. School Social Work
  - d. Social Casework with persons with disabilities
  - e. Social Casework with Drug Dependents
  - f. Social Casework with Senior Citizens
  - g. Social Casework with Displaced Persons
17. Trends and Issues in Social Casework Practice in Pakistan

**RECONIENDEED READINGS**

- Aptekar, H. H. (1941). Basic Concepts in Social Case Work.Chapel Hill.University of North Carolina Press.
- Cross, C. P. (1974). Interviewing and Communication in Social Work.Routledge& K. Paul.
- Deve, R. &Prakash, R. (2014).Social Work Methods, Practices and Perspective-Jaipur . Ivl.mgal Deep.
- Friedlander, W. A. (1964). Concepts and Methods of Social Work. Prentice-Hall, N. W.
- Jersey. Janet, S. (2005). Counselling Skills in Social Work Practice. Open University Press, Buckingham. Philadelphia.
- Khalid, Muhammad. (2014). Sock!! Work: Theory and Practice. Kifayat Academy. Karachi.
- Mathew, G. (1992). An Introduction to Social Case Work.Tata Institute of Social Science. Bombay. 8.
- Miller, L. (2005). Counselling Skills for Social Work.Sage Publications. London.
- Payne, M. (1997).Modern Social Work Theory.Macmillan Press, Ltd. London.
- Pease, B &Fook, J. (1999). Transforming Social Work Practice.Routledge, London & New York.
- Perlman, H. H. (1957). Social Case Work: A Problem Solving Process. Chicago: University of Chicago Press.
- Richard, M. E. (1944). Social Diagnosis. New York: Russell Foundation.
- Roberts, B. C., Galaway, B. &Cournoyer, B. (2005).Social Work Processes. California, Wadsworth.

## TOURISM AND HOTEL MANAGEMENT

THM 124

Tourism concepts & Principles

Cr. Hrs-3+01

### Unit-1

#### Introduction

Introduction, Types and Forms, Components of Tourism, Economic Importance, Benefits and costs of Tourism, Basis of Tourism

### Unit-2

#### Classification of tourists

Inbound outbound, national, internal, domestic tourists, Purpose of travel, types of tourists, importance of tourist classifications, factors that motivates tourists to travel.

### Unit-3

**Tourist behavior models, Plogs model, cohen, smith, global travel survey model, lieper,s model, push and pull factors, whole tourism system.**

### Unit-4

#### Impacts of Tourism

positive and negative impacts, Economic, environmental, social, cultural impacts.

### Unit-5

#### Tourism Marketing

What is marketing, market segments (target market), marketing mix, Market research

### Unit-6

#### Tourism Policy and Planning

International policy, Pakistan policy and planning, role of Government and other organizations, Case study of an International Touristic destination , the 5 As of tourist destination,

### Unit-7

#### Practical case studies

International Tourist destination, Domestic Tourist Destination, visit to different local Tourist sites.

- Visits to tourist destinations

#### Recommended books:

[Charles R. Goeldner](#) and J. R. Brent Ritchie (2011) [Tourism: Principles, Practices, Philosophies](#) 12<sup>th</sup> edition, John Wiley & Sons.

- Walker, John. (2002) *Introduction to Hospitality 3<sup>rd</sup> edition*. Upper Saddle River, NJ : Prentice Hall.
- Beaver , Allan (2006) *.A Dictionary of Travel and Tourism Terminology .* Oxfordshire, UK: CABI Publishing.
- Boniface, Brian G. and Chris Cooper (2001). *Worldwide Destinations: The Geography of Travel and Tourism*, 3rd edition. Oxford, UK: Butterworth – Heinemann.

Cooper , C. , J. Fletcher , D. Gilbert , and R. Shepherd , (1998), *Tourism: Principles and Practice .* Essex, UK: Longman

**THM 234****Hotel Operations****Cr. Hrs-3****Unit-1**

**Lodging- yesterday and today:** Ancient history, middle ages, colonial period, nineteenth century and twentieth century. The industry today, New trends

**Unit-2**

**The Hotel General Manager:** General Manager, role and responsibilities of G.M, General Manager's skills, Core skills

**Unit-3**

**Food Service:** The varied field of food service, the restaurant business, the dining market and the eating market, contemporary popular priced restaurants, restaurant operations, making a profit in food service operations, keeping the score in operations. Best practices in food and beverage management. Contemporary hotel catering

**Unit-4**

**Competitive Forces in Food Service:** Competitive conditions in food service, marketing mix, competition with other industries, self-operated facilities, business and industry food service, vending. Consumer concerns, Food service and the environment.

**Unit-5**

**Operations; Rooms:** The room side of the house, front office operations, Job at the front office, yield management, room rate structure, the property management system, guest accounting, reservation and forecasting, guest service

**Unit-6**

**Operations; Housekeeping, Engineering and security:** Housekeeping organization and operations, co-ordination with other departments, the hotel engineering functions/duties, engineering personnel, Duties of security department and personnel.

**Unit-7**

**Marketing and associated activities:** Building market leadership, consumer decision rules and implication of hotel choice, hotel pricing, Hotel sales organization and operations, public relations. Marketing research

**Unit-8**

**Financial control and information management:** Budgeting and forecasting, the economics of the hotel business, dimensions of the hotel investment decision. The hotel purchasing function, Data mining for hotel firms, Cash management and cost control.

- Visits to a Star Rated Hotel

**Recommended Books:**

- [Michael J. O'Fallon, Denney G. Rutherford](#) (2010) *Hotel Management and Operations 5<sup>th</sup> edition.* John Wiley & Sons.
- Jack D. Ninemeier and David K. Hayes (2006) *Hotel Operations Management 2<sup>nd</sup> edition* Persons.
- John R. Walker (2004) *Introduction to Hospitality Management 3rd Edition.* Pearson.
- Suzanne Weissinger (2000) *Hotel and Motel Operations 2<sup>nd</sup> edition.* Delmar-Thomson Learning.
- John Cousins, David Foskett, and Cailein Gillespie (2006), *Food and beverage Management 2<sup>nd</sup> edition.* Person.
- YU, L. (1999) *the Hospitality Business: Management and Operations.* The Haworth Hospitality Press.
- Vension, P. (1983) *Managing Hotel.* Heinemann.



**THM 233**

**Hotel Management I (Front Office)**

**Cr. Hrs-3+1**

**Unit-1**

**The Hospitality industry and Front Office**

Hospitality, Front Office Department, Role of Every Personnel in Front Office Department.

**Unit-2**

**Personal Grooming**

Personal Grooming

**Unit-3**

**Care of the customer**

Hotel security, Health & safety, the concept of hospitality and service, the customer care triangle, care of the customer, roles, responsibilities and attributes of a receptionist

**Unit-4**

**The reception office and communication**

Communication, verbal communication, non-verbal communication, written communication, visual communication, telecommunication,

**Unit-5**

**Reservations**

Sources of reservation, modes of reservation, types of reservation, methods of reservation, close outs, yield management, overbooking, control of reservation, confirming reservation and status of reservation, revision and cancellations

**Unit-6**

**Checking in and Staying**

Registration, Room status, the check in process, walk-in or chance booking, VIP Check in, Group arrivals, Selling rooms- departure

**Unit-7**

**Guest Accounting and Methods of Payment**

Principles of hotel billing, Type of system, Machine billing, Property Management System, Control procedure, Night Audit, Cash Floats, Methods of Payment, Foreign Exchange, Petty cash and paid outs, rapid/speedy check outs. Guest/Business Statistics

**Unit-8**

**Selling Techniques**

Reception as a sales department, Purpose of selling, ABC of selling, The hotel product, Selling methods

**Recommended Books:**

Peter Abbott and Sue Lewry (1999) *Front Office 2<sup>nd</sup> edition*, Butterworth Heinemann.

Dix colin and Baird chris (1998) *Front Office 4<sup>th</sup> edition*, Harlow Longman.

Sue Baker, Pam Bradley and Jeremy Huyton (2000) *Principles of hotel front office operations 2<sup>nd</sup> edition*: London Cassell.

[James A. Bardi](#), [William Sullivan](#), [Sheryl F. Kline](#)(2006),*Hotel front office management edition4<sup>th</sup>*.

John Wiley & Sons

South Asia Tourism Secretariat (2007) *Front Office, SATS*

**Unit-1****Tourism today: why it is global phenomenon embracing all our lives**

Introduction, travel and sustainability, the leisure society, the internet, tourism growth and development, tourism, the tourist and travel, new forces affecting tourism-globalization, inequality and the developed and developing world.

**Unit-2****Demand: Why do people engage in tourism**

What is tourism demand, the motivation dichotomy, why do people go on holiday, intrinsic and extrinsic motivation, classifying and understanding tourist motives, consumer behavior and tourism. The future of tourism demand

**Unit-3****Tour operating and travel retailing**

The tour operator, holiday maker, consumer trends affecting the future of tour operating, consumer issues in tour operating, marketing and planning the holiday, travel agents and information communication technology, social networking and tourism, the future of travel retailing.

**Unit-4****Visitor attraction**

Classify visitor attractions, recent trends and patterns, product considerations, attraction as a leisure product, visitor's attractions and the product life cycle, visitor experience, managing the visitor experience, potential and prospects, the future for visitor attraction management

**Unit-5****The management of Tourism**

Managing tourism business, the purpose of management in tourism organizations, what do tourism managers manage? Marketing tourism as a management function, managing operational issues in tourism business, Managing service provision, human resource issues and service delivery, tourism and innovation, tourism management in action

**Unit-6****The public sector and tourism**

Governments and tourism, Planning and Tourism, Government tourism strategies, the public sector marketing of tourism, the future of the public sector in the management of tourism.

**Unit-7****Managing the visitor and their impacts**

The geography of tourism, its application to impact analysis, Analyzing the impact of tourism, the economic impact of tourism, social and cultural impact of tourism, tourism and the environment, visitor management, future issues for visitor management.

**Unit-8****The future of Tourism: post tourism**

The spread of tourism, understanding the future of tourism, understand the future divers of change for global tourism, the pressure for tourism to change, crisis and disasters in tourism, Technology and tourism, Climate change, tourism and the environment, limiting tourism; the beginning of the end? Towards a new tourism management concept; managed tourism

**Recommended Books:**

[Charles R. Goeldner](#) and J. R. Brent Ritchie (2011) *Tourism: Principles, Practices, Philosophies* 12<sup>th</sup> edition, John Wiley & Sons.

[Stephen Page](#) (2009) *Tourism Management* 3<sup>rd</sup> edition, Butterworth – Heinemann.

Lesley Pender and Richard Sharpley (2004) *The Management of Tourism* 1<sup>st</sup> edition. SAGE Publisher.

*David Weaver, Laura Lawton.*(2009), *Tourism Management*, 4<sup>th</sup> edition.

Boniface , Brian G. , and Chris Cooper .(2001) *Worldwide Destinations: The Geography of Travel and Tourism*,3<sup>rd</sup> edition ,Oxford, UK : Butterworth – Heinemann.

[Charles R. Goeldner](#) and J. R. Brent Ritchie (2008) [Tourism: Principles, Practices, Philosophies](#) 11<sup>th</sup> edition, John Wiley& Sons.

**THM 471** **Tourism Marketing** **Cr. Hrs-3**

**Unit-1**

**INTRODUCTION**

Marketing- Hospitality & Tourism Marketing- Marketing Management- Marketing Management Philosophies- characteristics of Service Marketing- Marketing's Future

**Unit-2**

**THE ROLE OF MARKETING IN STRATEGIC PLANNING**

Nature of high performance Business- Corporate Strategic Planning- Business strategy Planning- Unique Challenges of the Hotel Industry

**Unit-3**

**MARKETING INFORMATION SYSTEMS & MARKETING RESEARCH**

Marketing Information System- Research Problems Areas- The Internet; A great source of Marketing Information- Marketing Research in small business/smaller organizations

**Unit-4**

**CONSUMER & ORGANIZATIONAL BUYING BEHAVIOR**

Personal Characteristics affecting consumer behavior- The buyer decision process- The organizational buying process- Major influences on organizational buyers.

**Unit-5**

**MARKET SEGMENTATION, TARGETING & POSITIONING**

Market segmentation- Targeting- The frequent business traveller- Market positioning

**Unit-6**

**DESIGNING AND MANAGING PRODUCTS**

What is product- product levels- Augmented products- Brand Decisions- New product development- Marketing highlight- Product Life Cycle strategies-

**Unit-7**

**PRICING PRODUCTS: PRICING CONSIDERATIONS, APPROACHES AND STRATEGY**

Price- Factors to consider when setting prices- General Pricing Approaches- Pricing strategies- Segmented Pricing- Price Fixing- Other pricing considerations- Price changes

**Unit-8**

**DISTRIBUTION CHANNELS**

Nature of distribution channels- Marketing intermediaries- Top ten ideas for working with travel agents- Channel behavior and the organization- Selecting channel members- Responsibilities of channel members and suppliers

**Unit-9**

**PROMOTING PRODUCTS: COMMUNICATION AND PROMOTION POLICY AND ADVERTISING**

The communication process- Promotion tools and promotion mix- advertising- Major decisions in advertising- Public Relations-Major activity of PR department- Public Relations process- Sales promotion

**Unit-10**

**ELECTRONIC MARKETING, PROFESSIONAL SALES AND DESTINATION MARKETING**

Internet marketing- Direct Marketing- Sales Force Objectives- Sales Force structure and size- Managing the sales Force- Importance of Tourism to a Destination Economy- Tourism strategies and Investments-

Segmentation and Monitoring the Tourist Market-Organizing & Managing Tourism Marketing

**Recommended Book:**

Philip R Kotler, John T. Bowen and James Makens (2009) *Marketing for Hospitality & tourism 5<sup>th</sup> edition*. Pearson.

G.P.Raju (2009) *Tourism Marketing and Management 1<sup>st</sup> edition*: Manglam publication

Manpal Singh (2008) *Tourism Management 1st edition*: Himalaya Books PVT.LTD

Philip Kotler, John Bowen and James Makens (2002) *Marketing for Hospitality and Tourism 3<sup>rd</sup> edition*. Prentice Hall.

[J. Christopher Holloway](#) (2004) *Marketing for Tourism Edition 4<sup>th</sup>* Prentice Hall.

Dotty Boen Oelkers (2007) *Travel and Tourism Marketing*, Thomson South-Western.

Beid, R.D. and Bojanic, D.C. (2006) *Hospitality Marketing Management*. John Wiley & Sons.

Bowie, D. and Buttle, F. (2004) *Hospitality Marketing*. Butterworth-Heinemann.

Brassington, F. and Pettitt, S. (2003) *Principle of Marketing, 3<sup>rd</sup> edition*. Prentice Hall.

**THM 472**

**Event Management**

**Cr. Hrs-3**

**Unit-1**

**Introduction**

Birth of an events industry, what are events, types of events, the structure of the events industry, event management education and training.

**Unit-2**

**The impacts of Events**

Balancing the impact of events, Government's use of events as economic development strategies, economic impact studies.

**Unit-3**

**Event Tourism**

Developing destination-based event tourism strategies, the event strategic planning process, situational analysis, development of event tourism goal, creation of an event tourism organization structure, development of an event tourism strategy, implementation of an event tourism strategy, evaluation of an event tourism strategy, tourism events and regional development.

**Unit-4**

**Conceptualizing the event**

introduction, stake holders in events, the host organization, the host community, sponsors, media, co-workers, participants and spectator, creating the event concept, evaluating the event concept, synergy of ideas

**Unit-5**

**The planning function**

introduction, what is planning, planning for events, elements of the strategic event planning process, developing strategic plan

**Unit-6**

**Human Resource Management and Events**

Introduction, considerations associated with human resource planning for events, human resource planning process for events, recruitment, selection and induction, motivating staff and volunteers, techniques for effective staff and volunteers, team building, legal obligations.

**Unit-7**

**Strategic marketing for events**

Introduction, what is marketing, steps in strategic marketing process, planning event product experiences, integrated marketing communication for events

**Unit-8**

**Sponsorship of events**

Introduction, what is sponsorship, trends influencing the growth in sponsorship, sponsorship benefits for events and sponsors, the value of sponsorship policy, managing and servicing sponsorship

**Unit-9**

**Control & Budgeting**

Introduction, what is control, elements in categories of control, control methods, the budget, reporting.

**Unit-10**

**Risk Management & legal issues**

Introduction, risk management process, legal issues, contracts, constructing a contract, trademark and logos, regulations, licenses and permits

On-site logistics, techniques of logistics management, control of events logistics, evaluation of logistics

**Unit-11**

**Staging events**

Introduction, what is staging, theming and event design, programming, choice of venue, audience/guests, the stage, power. Lights, sound, audio visual and special effects, pops and decoration, catering, performers, the crew, hospitality, the production schedule, recording the event, contingencies

**Unit-12**

**Evaluation and reporting**

Introduction, what is event evaluation, when to evaluate event, reporting to the stakeholders, types of research, what to evaluate, measuring visitors expenditures, media monitoring and evaluation, finalization

**Unit-13**

**Trends and issues**

Introduction, societal trends and their impacts on events, the growth of event industry, information technology, the growth of event research, increasing the government involvement in events

**Recommended books**

Glenn Bowdin, Johnny Allen, Rob Harris and Ian McDonnell (2010) [\*Events Management\*](#) 3<sup>rd</sup> edition, Routledge.

Ian Yeoman, Martin Robertson and Jane Ali Knight (2004), *Festivals and Events Management 1<sup>st</sup> edition*. Butterworth – Heinemann.

[Razaq Raj](#), Paul Walters and Tahir Rashid (2013) [\*Events Management: Principles and Practice\*](#) 2<sup>nd</sup> edition. SAGE Publication.

Vaibhav Mehndiratta (2008), *Event Management* 1<sup>st</sup> edition: Abhishek Publisher.

Lynn Van Der Wagen and Brenda R. Carlos (2004) [\*Event Management\*](#) , Prentice Hall

**THM 363 Tourism and Hospitality Law**

**Cr. Hrs-3**

**Unit-1 LAW OF CONTRACT**

- Definition
- Essential of Valid Contract
- Kinds of Contract
- Discharge of Contract
- Breach of Contract
- Remedies for Breaching an Enforceable Contract

**Unit-2 HOSPITALITY CONTRACTS**

- Specific Contract Clauses
- Franchise Contracts
- Management Contracts

**Unit-3 HOTEL OPERATOR OBLIGATIONS**

- Hospitality Operator Duties towards Guest
- Hospitality Operator responsibilities for Guest Property
- Hospitality Operator responsibilities of Serving Food

**Unit-4 LEGAL OBLIGATIONS IN TRAVEL AND TOURISM**

- Tourism
- Travel
- Tour Operators and Travel Agents
- Accommodations and Transportation
- Labor Laws
- Health and Safety
- Liability for Lost and Theft
- Wild Life
- Forest Act
- Taxation

**Unit-5**

**BREIFE INTRODUCTION OF PAKISTANI LAW REGARDING TOURISM & HOTELING**

- Pakistan Hotels and Restaurants Act-1976
- Tourist Guides Act-1982
- Travel Agency Act-1976
- Food Stuff Control Act-1958
- Immigration Law of Pakistan

**Recommended Books**

- Stephen C. Barth (2011) *Hospitality Law: Managing Legal Issues in the Hospitality Industry* 4<sup>th</sup> edition: New Jersey: Jonson Wiley & Sons.

[Jack P. Jefferies](#) and Banks Brown (2010) [Understanding Hospitality Law](#) 5<sup>th</sup> edition. [American Hotel & Lodging Educational Institute](#).

A.M. Chaudhry (2012) *The Law of Torts*, PLD Publishers, Lahore

Naveed Zafar Advocate (2007) *The Contract Act (IX of 1872)*, Eastern Law Book House, Lahore

## ISLAMIC STUDIES

### مطالعہ سیرت النبی صلی اللہ علیہ وسلم Study of Seerah of Holy Prophet

Title	Description
Nature of Course	Major
No. of C.Hrs.	03
Total Teaching weeks	18
Code	ISL 224
Objectives of the Course	<p>۱. طلباء کو مطالعہ سیرۃ طیبہ کی ضرورت و اہمیت سے آگاہ کرنا</p> <p>۲. تعمیر شخصیت میں مطالعہ سیرۃ طیبہ کے کردار کو واضح کرنا</p> <p>۳. بعثت نبوی کے موقع پر اقوام عالم کی عمومی صورت حال سے آگاہ کرنا</p> <p>۴. رسول اکرم صلی اللہ علیہ وسلم کی مکی اور مدنی زندگی کا اس طرح مطالعہ کروانا کہ طلباء ان واقعات سے نتائج کا استنباط کر سکیں</p> <p>۵. طلباء کو عہد نبوی کی معاشرت، سیاست، معیشت سے آگاہ کرنا</p>

#### Course Description

S.No.	Title	Description
1	سیرۃ النبی صلی اللہ علیہ وسلم: تعارف و اہمیت	<p>۱. سیرۃ کا لغوی اور اصطلاحی مفہوم</p> <p>۲. سیرۃ النبی کی ضرورت و اہمیت</p> <p>۳. تعمیر شخصیت اور معاشرتی استحکام میں مطالعہ سیرت کی اہمیت</p>
2	بعثت نبوی کے وقت دنیا کے حالات (۱)	<p>۱. بعثت نبوی کے وقت اہم تہذیبیں</p> <p>۲. عرب، مصر، حبشہ، بازنطینی، ساسانی</p> <p>۳. بعثت نبوی کے وقت اہم تہذیبوں کی مذہبی و معاشی حالت</p> <p>۴. بعثت نبوی کی تہذیبوں کی سماجی اور سیاسی حالت</p>
3	بعثت نبوی کے موقع پر دنیا کے حالات (۲)	<p>۱. ہندوستان، چین اور مغرب کی مذہبی و سماجی حالت</p> <p>۲. ہندوستان، چین اور مغرب کی معاشی حالت</p> <p>۳. ہندوستان، چین اور مغرب کی سیاسی صورت حال</p>
4	حضور صلی اللہ علیہ وسلم کے ابتدائی حالات زندگی	<p>۱. حضور صلی اللہ علیہ وسلم کا خاندانی حسب و نسب</p> <p>۲. پیدائش اور ابتدائی تربیت</p> <p>۳. لڑکپن اور جوانی کے حالات زندگی</p>
5	حضور صلی اللہ علیہ وسلم کی بطور آخری رسول بعثت	<p>۱. آخری رسول کے طور پر حضور صلی اللہ علیہ وسلم کے انتخاب کے اسباب</p>
6	مکی دور میں حضور صلی اللہ علیہ وسلم کی دعوت اسلام	<p>۱. دعوت اسلام کا آغاز اور طریق کار</p> <p>۲. دعوت اسلام کے اثرات اور ابتدائی مسلمان</p>
7	مکی دور میں حضور صلی اللہ علیہ وسلم کی عزیمت و استقامت	<p>۱. قریش مکہ کی مخالفت کے اسباب</p> <p>۲. ایذا رسانیوں اور ترہیبات کے اسالیب</p> <p>۳. حضور صلی اللہ علیہ وسلم کی عزیمت، استقلال اور صبر اور طائف کی طرف سفر</p>
8	ہجرت مدینہ: اسباب و اثرات	<p>۱. ہجرت مدینہ کے اسباب اور پس منظر</p> <p>۲. ہجرت مدینہ کے لیے حضور صلی اللہ علیہ وسلم کا سفر اور اس سے متعلقہ واقعات</p> <p>۳. ہجرت کے اثرات</p>

TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

9	حضور صلی اللہ علیہ وسلم کے مدینہ میں ابتدائی اقدامات	۱. مؤاخاة ۲. میثاق مدینہ ۳. مہاجرین کی بحالی اور اسلامی ریاست کا قیام
10	غزوات نبوی (۱)	۱. غزوہ بدر، اسباب، واقعات اور نتائج ۲. غزوہ احد، اسباب، واقعات اور نتائج ۳. غزوہ خندق، اسباب، واقعات اور نتائج
11	غزوات نبوی (۲)	۱. صلح حدیبیہ ۲. غزوہ خیبر ۳. فتح مکہ
12	غزوات نبوی کے اثرات	۱. غزوات نبوی کے سیاسی اور دفاعی اثرات ۲. غزوات نبوی کے معاشی اثرات ۳. غزوات نبوی کے سماجی اور دعوتی اثرات
13	رسول اللہ صلی اللہ علیہ وسلم کے داخلی سیاسی اقدامات	۱. یہود سے تعلقات ۲. مشرکین اور منافقین سے تعلقات ۳. قبائل عرب سے تعلقات
14	رسول اللہ صلی اللہ علیہ وسلم کے خارجی تعلقات	۱. غیر ملکی سربراہوں سے حضور صلی اللہ علیہ وسلم کی مراسلات ۲. غیر ملکیوں کے ساتھ وفود کا تبادلہ ۳. فتح مکہ، دعوت اسلامی کا فروغ ۴. حضور صلی اللہ علیہ وسلم کی خارجی سیاست کے اثرات
15	عہد نبوی۔ تہذیبی مطالعہ	۱. عہد نبوی کا معاشرتی و معاشی نظام ۲. عہد نبوی کا مذہبی نظام ۳. عہد نبوی کا نظام حکومت

نصابی کتب

نمبر شمار	نام مؤلف	نام کتاب
1	ابن ہشام	السيرة النبوية
2	مولانا شبلی نعمانی، سید سلمان ندوی	سيرة النبي صلى الله عليه وسلم
3	قاضی محمد سلیمان سلمان منصور پوری	رحمة للعالمين
4	مولانا سید ابو الحسن علی ندوی	نبی رحمت صلی اللہ علیہ وسلم
5	ڈاکٹر یسین مظہر صدیقی	عہد نبوی کا نظام حکومت
6	ڈاکٹر خالد علوی	انسان کامل

حوالہ جاتی کتب

نمبر شمار	نام مؤلف	نام کتاب
1	ڈاکٹر اکرم الضیاء العمری	السيرة النبوية الصحيحة
2	مولانا عبدالرؤف دانا پوری	اصح السير
3	مولانا صفی الرحمن مبارکپوری	الرحيق المختوم
4	پیر محمد کرم شاہ الازہری	ضیاء النبی صلی اللہ علیہ وسلم



مضامین قرآن کاتعارف

Title	Description
Nature of Course	Major
No. of Credit Hours	03 C.H.
Total teaching weeks	18
Code	ISL 115
Objectives of the Course	۱۔ قرآنی سورتوں کے اہم موضوعات کا تعارف کروانا ۲۔ اہم مضامین قرآن سے متعلق آیات کا تعارف کروانا ۳۔ طالب علم کو اہم قرآنی موضوعات کا اس طرح احاطہ کروانا کہ وہ ان پر گفتگو کر سکے

Course Description

S.No	Topic	Description
1	اسلامی نظام عقائد	۱۔ عقیدہ کا مفہوم، ضرورت و اہمیت ۲۔ دیگر مذاہب کے مختصر عقائد کا تعارف ۳۔ اسلامی نظام عقائد سے متعلق قرآنی آیات کا مطالعہ
2	عقیدہ توحید	۱۔ عقیدہ توحید کا مفہوم اور اہمیت ۲۔ عقیدہ توحید کی اہمیت سے متعلق قرآنی آیات ۳۔ عقیدہ توحید کے دلائل پر قرآنی آیات
3	عقیدہ رسالت	۱۔ عقیدہ رسالت کا مفہوم و اہمیت ۲۔ عقیدہ رسالت کے متعلق اہم قرآنی آیات ۳۔ انبیاء و رسل خاص طور پر رسول اللہ صلی اللہ علیہ وسلم سے متعلق منتخب قرآنی آیات کا مطالعہ
4	عقیدہ آخرت	۱۔ عقیدہ آخرت کا مفہوم اور اہمیت ۲۔ عقیدہ آخرت سے متعلق قرآنی آیات ۳۔ عقیدہ آخرت کے انسانی زندگی پر اثرات سے متعلق قرآنی آیات
5	عبادات کے احکام (1)	۱۔ صوم و صلوة کا تعارف و اہمیت ۲۔ صلوة کے احکام سے متعلق قرآنی آیات ۳۔ صوم کے احکام سے متعلق قرآنی آیات
6	عبادات کے احکام (2) حج، زکاة	۱۔ حج اور زکاة کا مفہوم اور ان کی اہمیت ۲۔ احکام حج سے متعلق قرآنی آیات ۳۔ احکام زکاة سے متعلق قرآنی آیات

TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

7+8	سیاست ، معاشرت اور معیشت	۱۔ سیاست ، معاشرت اور معیشت کا مفہوم اور اہمیت ۲۔ سیاست سے متعلق اہم قرآنی آیات ۳۔ معاشرت اور معیشت سے متعلق اہم قرآنی آیات
9	کائنات کی تخلیق اور نظام کائنات	۱۔ تخلیق کائنات کا قرآنی مفہوم ۲۔ تخلیق کائنات سے متعلق قرآنی آیات ۳۔ تخلیق کائنات کے مدارج
10	تاریخ امم و واقعات	۱۔ قرآن پاک کا اسلوب تاریخ ۲۔ تاریخی شواہد کے متعلق قرآنی آیات ۳۔ تاریخی واقعات کے متعلق قرآنی آیات
11	بین المذاہب مکالمہ اور دعوت	۱۔ بین المذاہب مکالمہ اور دعوت کا مفہوم اور ان کے درمیان فرق ۲۔ مکالمہ کے اساس اور اسالیب سے متعلق آیات ۳۔ دعوت کے اصول کے متعلق آیات
12	بنی اسرائیل اور قرآن	۱۔ بنو اسرائیل (یہود) کا تعارف و اہمیت ۲۔ بنی اسرائیل کے عقائد قرآن و سنت کی روشنی میں
13	نصاری اور قرآن	۱۔ نصاریٰ کا تعارف و تاریخ ۲۔ نصاریٰ کے عقائد قرآن مجید کی آیات کے تناظر میں
14	مشرکین اور قرآن	۱۔ مشرکین کا تعارف و تاریخ ۲۔ مشرکین سے متعلق اہم قرآنی آیات
15	منافقین اور قرآن	۱۔ منافقین تعارف و عقائد ۲۔ منافقین سے متعلق اہم قرآنی آیات

**1-تفسیر القرآن-Tafsir e Quran-I**

Title	Description	
Nature of Course	Major	
No. of Credit Hours	03 C.H.	
Total teaching weeks	18	
Code	ISL 122	
Objectives of Course	طلبا کو تفسیر قرآن کے مطالعہ سے آگاہ کرنا طلبا کو سورۃ البقرہ اور سورہ آل عمران کی تفسیر سے آگاہ کرنا طلبا سے مطالعہ تفسیر کے ذریعے قرآن پاک سے استنباط مسائل کی صلاحیت پیدا کرنا	
وضاحت	عنوان	نمبر شمار
1- سورۃ البقرہ کا تعارف 2- سورۃ البقرہ کی اہمیت 3- سورۃ البقرہ کے مضامین	سورۃ البقرہ کا تعارف	1
آیت نمبر 1 تا 286	مطالعہ متن	2
1- سورۃ آل عمران کا تعارف 2- سورۃ آل عمران کی اہمیت 3- سورۃ آل عمران کے مضامین	مطالعہ سورۃ آل عمران کا تعارف	3
آیت نمبر 1 تا 200	مطالعہ	4

**نصابی کتب**

نام کتاب	نام مصنف	نمبر شمار
تفسیر ماجدی	مولانا عبدالماجد دریا آبادی	1
مطالعہ قرآن	محمد میاں صدیقی	2
قرآن و سنت چند مباحث	پروفیسر حافظ احمد یار	3
تفہیم القرآن، ضیاء القرآن، تدبر قرآن، بیان القرآن، معارف القرآن، تبيين القرآن	اردو تفسیری ادب	4

**حوالہ جاتی کتب**

تفسیر القرآن العظیم	ابن کثیر	1
معارف القرآن	مفتی محمد شفیع	2
تفہیم القرآن	سید ابوالاعلیٰ مودودی	3
ضیاء القرآن	پیر محمد کرم شاہ	4
تفسیر ماجدی	مولانا عبدالماجد دریا آبادی	5

**History and Compilation of Hadith تاریخ و تدوین حدیث**

Title	Description
Nature of Course	Major
No. of C.Hrs.	03
Total Teaching Weeks	18
Code	ISL 234
Objectives of the Course	۱. حدیث و سنت کی حجیت و اہمیت سے آگاہ کرنا ۲. حفاظت و تدوین حدیث کے مختلف طریقوں اور ادوار کا مطالعہ کرنا ۳. عہدِ خلافت راشدہ اور صحابہ کرامؓ میں تاریخ حدیث کی نوعیت و اصرح کرنا ۴. محدثین کی مساعی کا مطالعہ کرنا

**Course Descriptions**

S.No.	Topic	Descriptions
1	حدیث و سنت کا تعارف	۱. حدیث کا لغوی و اصطلاحی مفہوم ۲. سنت کا مفہوم ۳. حدیث و سنت میں فرق
2	حدیث و سنت کی تشریحی حیثیت	۱. حجیت حدیث و سنت ۲. حدیث و سنت شریعت اسلامیہ کا بنیادی ماخذ ۳. حجیت حدیث پر اعتراضات کے جوابات
3	حفاظت حدیث کا پہلا دور (عہد رسالت)	۱. آغاز اسلام میں حفاظت حدیث کے طریقے ۲. عہدِ نبوی کے تحریری وثائق
4	حفاظت حدیث کا دوسرا دور (عہد خلفائے راشدین اور صحابہ کرام)	۱. عہدِ ابوبکر میں حدیث ۲. عہدِ فاروقی میں حدیث ۳. عہدِ عثمانی میں حدیث ۴. عہدِ علی میں حدیث ۵. صحف صحابہ
5	حفاظت حدیث کا تیسرا دور (تابعین و تبع تابعین)	۱. مکہ، مدینہ، کوفہ کے مراکز حدیث ۲. بصرہ، شام، مصر کے مراکز حدیث
6	حضرت عمر بن عبدالعزیز کے دور میں حفاظت و تدوین حدیث	۱. حضرت عمر بن عبدالعزیز کے دور میں تدوین حدیث کے محرکات ۲. اس دور کے اہم محدثین
7	تدوین حدیث (۱)	۱. دوسری صدی ہجری کی اہم تالیفات ۲. دوسری صدی ہجری کے کبار محدثین
8	تدوین حدیث (۲)	۱. فتنہ انکار حدیث کی ابتداء ۲. فتنہ وضع حدیث کے اسباب و محرکات ۳. فتنہ انکار حدیث اور وضع حدیث کا تدارک
9	تدوین حدیث (۳)	۱. کتب ستہ کے مؤلفین کا تعارف ۲. کتب ستہ کا تعارف اور اسالیب
10	تیسری صدی کے اہم محدثین (۱)	۱. علی بن المدینی، یحییٰ بن معین، ابوبکر بن ابی شیبہ ۲. ابوزرعہ رازی، ابو حاتم رازی، محمد بن جریر الطبری ۳. امام ابن خزیمہ، اسحاق بن راہویہ، احمد بن حنبل
11	تیسری صدی ہجری کے اہم محدثین (۲)	۱. محمد بن سعد، واقدی، امام دارمی ۲. امام ابن قتیبہ دینوری ۳. تیسری صدی کی اہم تالیفات

**TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK**

12	چوتھی صدی ہجری کے اہم محدثین (۱)	۱۔ امام حاکم نیشاپوری ، دارقطنی، امام ابن حبان ۲۔ امام طبرانی، امام قاسم بن اصبح، امام ابن السکن ۳۔ امام طحاوی ، امام ابو عوانہ، حافظ ابن مندہ
13	چوتھی صدی ہجری کے اہم محدثین (۲)	۱۔ حافظ ابن السنی ، حافظ ابن وامہد مزی، حافظ ابن عدی ۲۔ قاضی المحاملی
14	تدوین حدیث کا پانچواں دور	۱۔ مجد الدین ابن اثیر الجزری، عزالدین ابوالحسن ابن اثیر الجزری ، حافظ ابن الصلاح ۲۔ امام نووی، حافظ ابن دقیق العید ۳۔ جمال الدین مزّی، ابن تیمیہ، حافظ ذہبی

**نصابی کتب**

نمبر شمار	نام مصنف	نام کتاب
1	ڈاکٹر صبحی صالح	علوم الحدیث
2	ڈاکٹر خالد علوی	حفاظت حدیث
3	محمد ابوزہرہ	الحدیث والمحدثون
4	مفتی رفیع عثمانی	تاریخ کتابت حدیث
5	ڈاکٹر مصطفیٰ سباعی	السنة و مکانتها في التشريع الإسلامي
6	مولانا ضیاء الدین اصلاحی	تذکرۃ المحدثین (تین جلدیں)
7	ڈاکٹر محمد مصطفیٰ الاعظمی	دراسات في الحدیث النبوی و تاریخ تدوینہ

**حوالہ جاتی کتب**

نمبر شمار	نام مصنف	نام کتاب
1	امام حاکم	معرفة علوم الحدیث
2	پیر محمد کرم شاہ الازہری	سنت خیر الانام
3	سید ابو الاعلیٰ مودودی	سنت کی اثنینی حیثیت
4	علامہ ناصر الدین البانی	حجیت حدیث
5	علامہ غلام رسول سعیدی	تذکرۃ المحدثین
6	ڈاکٹر سراج الاسلام حنیف	تاریخ علوم حدیث

**Study of Islamic Fiqh I (العبادات) مطالعہ فقہ اسلامی**

Title	Description
Nature of Course	Major
No. of C.Hrs.	03
Total Teaching weeks	18
Code	ISL 125
Objectives of the Course	۱۔ طلباء کو مختصراً متن فقہ کا مطالعہ کروانا ۲۔ طلباء میں ایسی مہارت اور صلاحیت پیدا کرنا جس کی مدد سے عبادات کے متعلق فقہی مسائل سمجھ سکیں۔ ۳۔ طلباء میں فقہی مسائل کو سمجھنے کی صلاحیت پیدا کرنا۔ ۴۔ مختلف مسائل میں قرآن و سنت کے دلائل سے واقفیت حاصل کرنا

Course Description

S.No	Title	Description
1.	متن ”مختصر القدوری“ اور اس کے مصنف کا تعارف	۱. احمد بن محمد بن محمد قدوری کے حالات زندگی اور علمی خدمات ۲. ”مختصر القدوری“ کا اسلوب ۳. فقہ میں اس کی اہمیت ۴. ”مختصر القدوری“ کی خصوصیات
2.	”مختصر القدوری“ کی کتاب الطہارۃ میں سے مطالعہ نص ۱	۱. فرائض وضوء ۲. سنن وضوء ۳. نواقض وضوء
3.	”مختصر القدوری“ کی کتاب الطہارۃ میں سے مطالعہ نص ۲	۱. فرضیت غسل ۲. سنن غسل، واجبات غسل ۳. جنبی اور حائضہ کے احکامات
4.	”مختصر القدوری“ کی کتاب الطہارۃ میں سے مطالعہ نص ۳	۱. احکام المیاء ۲. پانی میں نجاست گرجانے کا حکم ۳. کنویں میں نجاست گرجانے کا حکم
5.	”مختصر القدوری“ کی کتاب الطہارۃ میں سے مطالعہ نص ۴	۱. تیمم کے احکامات ۲. فرضیت، سنن ۳. کن چیزوں پر تیمم جائز ہے ۴. مسح علی الخفین کا حکم
6.	”القدوری“ کی کتاب الصلوٰۃ میں سے مطالعہ نص ۱	۱. اوقات الصلوٰۃ ۲. مستحب اوقات ۳. مکروہ اوقات
7.	”مختصر القدوری“ کی کتاب الصلوٰۃ میں سے مطالعہ نص ۲	۱. شرائط وجوب ۲. ارکان صلاۃ، واجبات، سنن، مستحبات ۳. مکروہات، مفسدات

TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

8.	’مختصر القدوری‘ کی کتاب الصلوٰۃ میں سے مطالعہ نص ۳	۱.سجدہ سہو کا وجوب ۲.صلوٰۃ المريض ۳.صلوٰۃ المسافر
9.	’مختصر القدوری‘ کی کتاب الصلوٰۃ میں سے مطالعہ نص ۳	۱.صلوٰۃ الكسوف ۲.صلوٰۃ الخسوف ۳.صلوٰۃ العیدین
10.	’مختصر القدوری‘ کی کتاب الصوم میں سے مطالعہ نص ۱	۱.رویت ہلال کامسالہ ۲.فرضیت، شرائط وجوب ۳.اقسام
11.	’مختصر القدوری‘ کی کتاب الصوم میں سے مطالعہ نص ۲	۱.مفسدات صوم ۲.قضاء صوم، کفارات ۳.حکم المريض
12.	’مختصر القدوری‘ کی کتاب الحج میں سے مطالعہ نص ۱	۱.فرضیت حج ۲.شرائط وجوب ۳.اوقات حج
13.	’مختصر القدوری‘ کی کتاب الحج میں سے مطالعہ نص ۲	۱.ارکان حج، شرائط حج ۲.موافقت کا بیان ۳.احرام کے احکامات
14.	’مختصر القدوری‘ کی کتاب الحج میں سے مطالعہ نص ۳	۱.اقسام حج ۲.جنایات، کفارات
15.	’مختصر القدوری‘ کی کتاب الحج میں سے مطالعہ نص ۴	۱.الحج عن الغير ۲.بدی کے احکامات ۳.احصار

نصابی کتب

نمبر شمار	نام مصنف	نام کتب
۱-	أبو الحسين أحمد بن محمد القدوري	مختصر القدوري في الفقه الحنفي

حوالہ جاتی کتب

نمبر شمار	نام مصنف	نام کتب
۱-	عبدالله بن المودود الموصلي	الاختيار لتعليل متن المختار

بدایة المجتهد	ابن رشد	۲۔
الفقه الإسلامي وأدلته	وهبة الزحيلي	۳۔
كتاب الفقه على المذاهب الأربعة	عبدالرحمن الجزيري	۴۔

### عربی زبان Arabic Language-II

Title	Description
Nature of Course	Major
No. of Cr. Hrs.	03
Total Teaching weeks	18
Code	ISL 331
Objectives of Course	۱۔ عربی زبان کو صحیح استعمال کرنے کے لیے صرف و نحو کی مہارت پیدا کرنا ۲۔ عربی شعر کو پڑھنے اور سمجھنے کی صلاحیت پیدا کرنا ۳۔ طلباء میں عام عربی نصوص کو سمجھنے کی صلاحیت کو بہتر کرنا

#### Course Description

S.No.	Title	Description
1	علم النحو (۱)	۱۔ علم النحو کا تعارف ۲۔ علم النحو کی اہمیت ۳۔ علم النحو کی مبادیات
2	علم النحو (۲)	۱۔ علم النحو کے متعلقہ قواعد ۲۔ جملہ کی اقسام I (جملہ اسمیہ اور فعلیہ) ۳۔ جملہ کی اقسام II (نواسخ جملہ اسمیہ اور فعلیہ)
3	مبنی کلمات	۱۔ مبنی کلمات کا تعارف ۲۔ مبنی کلمات کی اقسام ۳۔ مبنی کلمات سے متعلق قواعد
4	اسماء	۱۔ اسماء موصولہ ۲۔ اسماء اشارہ ۳۔ اسماء افعال
5	معرب کلمات	۱۔ معرب کلمات کا تعارف ۲۔ معرب کلمات کی اقسام ۳۔ معرب کلمات کے متعلقہ قواعد
6	مرفوعات	مرفوعات
7	منصوبات	منصوبات
8	مجرورات	مجرورات
9	مرکبات	۱۔ مرکب ناقص اور اقسام ۲۔ مرکب تام (جملہ اسمیہ اور فعلیہ)
10	حروف عاملہ	۱۔ حروف استفہام ۲۔ حروف ناصبہ ۳۔ حروف جازمہ
11	مطالعہ نص (۱)	معلم الانشاء (الجزء الاول) میں سے منتخب مطالعہ
12	مطالعہ نص (۲)	معلم الانشاء (الجزء الثاني) میں سے منتخب مطالعہ
13	مطالعہ نصوص (۳)	قصص النبیین از مولانا ابوالحسن علی ندوی



TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

14	مطالعه نصوص (۴)	قصص النبیین از مولانا ابوالحسن علی ندوی
----	-----------------	---

نصابی کتب

نمبر شمار	نام مصنف	نام کتاب
1	عبدالستار خان	عربی کا معلم (چاروں حصے)
2	معین اللہ ندوی	تمرین صرف
3	محمد مصطفیٰ ندوی	تمرین النحو
4	مولانا عبدالماجد ندوی	معلم الانشاء

حوالہ جاتی کتب

نمبر شمار	نام مصنف	نام کتاب
1	علی جارم	النحو الواضح
2	نعیم الرحمن	اساس عربی
3	رشید الشریطی	مبادئ العربیة فی الصرف و النحو
4	عبدالرحمن امرتسری	کتاب النحو
5	محمد مصطفیٰ ندوی	تمرین النحو
6	عبدالرحمن طاہر	قواعد القرآن
7	جامعۃ الملك السعود، ریاض	اللغة العربیة لغير الناطقین بها

تاریخ تفسیر History of Tafseer

Title	Description
Nature of Course	Major
No. of C.Hrs.	03
Total Teaching weeks	18
Code	ISL 236
Objectives of the Course	۱۔ طلباء کو تفسیر کے مفہوم اور اس کی اہمیت سے آگاہ کرنا ۲۔ تفسیر کی مختلف اقسام اور اسالیب سے آگاہ کرنا ۳۔ تاریخ تفسیر کے مختلف ادوار کا مطالعہ کروانا ۴۔ مختلف اسالیب کی نمائندہ تفاسیر کا مطالعہ کروانا

Course Description

S.No.	Title	Description
1	علم تفسیر کا تعارف	۱۔ تفسیر کا لغوی و اصطلاحی مفہوم ۲۔ تفسیر و تاویل میں فرق
2	علم تفسیر کی اہمیت	۱۔ علم تفسیر کی قرآن فہمی میں اہمیت ۲۔ علم تفسیر کی قانون سازی میں اہمیت ۳۔ دینی علوم میں علم تفسیر کا مقام
3	تفسیر کی اقسام I	۱۔ تفسیر بالمأثور کا تعارف ۲۔ تفسیر بالمأثور کی اقسام ۳۔ تفسیر بالمأثور کے اسالیب اور درجات
4	تفسیر کی اقسام II	۱۔ تفسیر بالرأے کا مفہوم ۲۔ تفسیر بالرأے کی اقسام و شرائط ۳۔ تفسیر بالرأے کی حجیت کے بارے میں مفسرین کی آراء
5	تفسیر بالمأثور کی نمائندہ کتب تفسیر	۱۔ تفسیر بالمأثور کی ابتدائی کتب ۲۔ تفسیر بالمأثور کی قرون وسطیٰ میں کتب ۳۔ تفسیر بالمأثور کی معاصر کتب

TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

6	تفسیر بالرائے کی نمائندہ کتب	۱۔ تفسیر بالرائے کی ابتدائی کتب ۲۔ تفسیر بالرائے کی قرون وسطیٰ میں کتب ۳۔ تفسیر بالرائے کی معاصر کتب
7	علم تفسیر کا ارتقاء	۱۔ عہد نبوی میں علم تفسیر ۲۔ دور صحابہ میں علم تفسیر ۳۔ تابعین اور تبع تابعین کے دور میں علم تفسیر
8	تفسیری رجحانات (۱)	۱۔ فقہی اسلوب ۲۔ سائنسی اسلوب ۳۔ فلسفیانہ اسلوب
9	تفسیری رجحانات (۲)	۱۔ ادبی تفاسیر ۲۔ بلاغی تفاسیر ۳۔ اشاری تفاسیر
10	تفسیری رجحانات (۳)	۱۔ دعوتی تفسیر ۲۔ اجتماعی تفسیر ۳۔ کلامی تفسیر ۴۔ الحادی و باطنی تفسیر ۵۔ موضوعی تفسیر
11	علم تفسیر میں علماء برصغیر کی خدمات (۱)	۱۔ شاہ ولی اللہ کی خدمات ۲۔ قاضی ثناء اللہ پانی پتی کی خدمات ۳۔ ابوالکلام آزاد کی خدمات ۴۔ عبد الحق حقانی کی خدمات
12	علم تفسیر میں علماء برصغیر کی خدمات (۲)	۱۔ فراہی مکتب فکر ۲۔ حسین علی (میانوالی) مکتب فکر
13	علم تفسیر میں علماء برصغیر کی خدمات (۳)	۱۔ علامہ شبیر احمد عثمانی کی خدمات ۲۔ مولانا اشرف علی تھانوی کی خدمات ۳۔ مفتی محمد شفیع کی خدمات ۴۔ مولانا محمدادریس کاندھلوی کی خدمات
14	علم تفسیر میں علماء برصغیر کی خدمات (۴)	۱۔ مولانا سید ابو الاعلیٰ مودودی کی خدمات ۲۔ پیر محمد کرم شاہ الازہری کی خدمات ۳۔ علامہ غلام رسول سعیدی کی خدمات

نصابی کتب

نمبر شمار	نام مؤلف	نام کتاب
1	جلال الدین السیوطی	الإتقان في علوم القرآن
2	صبحی صالح	علوم القرآن
3	محمد حسین ذہبی	التفسیر والمفسرون
4	شاہ ولی اللہ	الفوز الكبير في أصول التفسير
5	غلام احمد حریری	تاریخ تفسیر و مفسرون
6	محمد تقی عثمانی	علوم القرآن

حوالہ جاتی کتب

نمبر شمار	نام مؤلف	نام کتاب
1	خالد عبدالرحمن العک	أصول التفسير
2	محمد سلیمان کافجی	التيسير في أصول التفسير
3	ابن تیمیہ	مقدمة في أصول التفسير
5	ڈاکٹر صاحبزادہ ساجد الرحمن (مرتب)	سہ ماہی فکر و نظر اسلام آباد کی اشاعت خاص۔ بر صغیر میں مطالعہ قرآن حکیم

## URDU

### اُردو داستان اور ناول : فنی و فکری مباحث (URDU 313)

(تخصیصی کورس ، کریڈٹ آورز: ۳)

#### پانچواں سمسٹر:

مقاصد:

- i. داستان اور ناول کی فنی حدود و قیود کو سمجھنا
- ii. نصاب میں شامل داستان نگار اور ناول نگار تخلیق کاروں کی انفرادیت کو سمجھنا
- iii. نصاب میں شامل داستانوں اور ناولوں کے فنی و فکری حوالوں کو سمجھنا اور ان کے مقام و مرتبہ کا تعین کرنا

- ۱- میرامن باغ و بہار
- ۲- رجب علی بیگ سرور فسانہ عجائب
- ۳- پنڈت رتن ناتھ سرشار فسانہ آزاد (تلخیص)
- ۴- ڈپٹی نذیر احمد مرآة العروس
- ۵- عبدالحلیم شرر فردوس بریں
- ۶- مرزا محمد ہادی رسوا امرآؤ جان ادا

مجوزہ کتب:

- رفیع الدین ہاشمی، 'سرور اور فسانہء عجائب' لاہور: سنگ میل پبلی کیشنز، ۱۹۷۵ء  
تبسم کاشمیری ، فسانہ آزاد (تلخیص) مکتبہ عالیہ ، لاہور  
زہرہ معین، 'باغ و بہار کا تنقیدی و کرداری مطالعہ، لاہور: رابعہ بکس ، ۱۹۸۱  
سید وقار عظیم، 'داستان سے افسانے تک' لاہور: الوقار پبلی کیشنز، ۲۰۱۰ء  
سید وقار عظیم، 'ہماری داستانیں' لاہور: الوقار پبلی کیشنز، ۲۰۰۷ء (طبع دوم)  
کلثوم نواز، 'رجب علی بیگ کا تہذیبی شعور' لاہور: سنگ میل پبلی کیشنز، ۱۹۸۵ء  
کلیم الدین احمد، 'اُردو زبان اور فن داستان گوئی' لکھنؤ: ادارہ ء فروغ اُردو، ۱۹۷۲ء  
گیان چند جین، اُردو کی نثری داستانیں، لکھنؤ: اتر پردیش اُردو اکادمی، ۱۹۸۷ء



### اُردو غزل کا فنی و فکری مطالعہ (URDU 314)

(تخصیصی کورس ، کریڈٹ آورز: ۳)

#### پانچواں سمسٹر:

مقاصد:

- i. اُردو غزل کی ہیئت ، اسلوب اور فکر سے متعلق معلومات فراہم کرنا
- ii. نصاب میں شامل شعراء کی انفرادیت کو سمجھنا
- iii. نصاب میں شامل تخلیقات کی تفہیم کرنا

1- اُردو غزل : تعارف و ارتقاء

۲۔ مفلسی	۱۔ کیا مجھ عشق نے ظالم کوں آب آہستہ آہستہ	ولی دکنی	شعراء:
۲۔ ہم کچھ آگے	۱۔ فقیرانہ آئے صدا کر چلے	میر تقی میر	سب بہار کھوتی ہے
۲۔ تہمت چند اپنے	۱۔ ہم تجھ سے کس ہوس کی فلک جستجو کریں	میر درد	زمانے میں ہوا کیا کیا کچھ
۲۔ دہن پر ہیں ان	۱۔ سن تو سہی جہاں میں ہے تیرا فسانہ کیا	خواجہ حیدر علی آتش	میرے دھر چلے
۲۔ اب دل ہے مقام	۱۔ دوست غمخواری میں میری سعی فرمائیں گے کیا	مرزا اسد اللہ خان غالب	کے گماں کیسے کیسے
۲۔ آنکھ اٹھائی ہی	۱۔ ان آنکھوں نے کیا کیا تماشا نہ دیکھا	۲۔ درد منت کش دوا نہ ہوا	داغ دہلوی
۲۔ جولان گہ حیات	۱۔ آج بھی قافلہ عشق رواں ہے کہ جو تھا	فانی بدایونی	بے کسی کا
۲۔ نیت	۱۔ نئے کپڑے بدل کر جاؤں کہاں اور بال بناؤں کس کے لیے	تھی کہ کھائی چوٹ	فراق گورکھپوری
۲۔ لب کشا	۱۔ اُس نے سکوت شب میں بھی اپنا پیام رکھ دیا	کہیں ختم ہی نہیں	ناصر کاظمی
		شوق بھر نہ جائے کہیں	احمد فراز
		لوگ ہیں سرکار کو کیا بولنا ہے	

مجوزہ کتب:

- حسن رضوی، 'وہ تیرا شاعر، وہ تیرا ناصر' لاہور: سنگ میل پبلی کیشنز، ۱۹۹۶ء  
 رشید احمد صدیقی، 'جدید اردو غزل' کراچی: اردو اکیڈمی سندھ، ۱۹۷۹ء  
 سید عبداللہ، 'نقد میر' لاہور: مکتبہ خیابان ادب، ۱۹۶۸ء  
 سید عبداللہ، 'ولی سے اقبال تک' لاہور: سنگ میل پبلی کیشنز، ۲۰۰۰ء  
 عبادت بریلوی، 'غزل اور مطالعہ غزل' علی گڑھ: ایجوکیشنل بک ہاؤس، ۲۰۰۵ء  
 فرمان فتح پوری (مرتب)، 'بیسویں صدی میں اردو غزل' کراچی: کراچی اردو اکیڈمی، ۱۹۸۷ء  
 یوسف حسین خان، 'اردو غزل، علی گڑھ: دارالمصنفین، (طبع چہارم)

### تاریخ ادب اردو اور ادبی تحریکات (URDU 315)

(تخصیصی کورس، کریڈٹ آورز: ۳)

### یادچواں سمسٹر:

مقاصد:

- i. تاریخ اور ادبی تاریخ کے مفہوم کو سمجھنا
- ii. اردو کی ادبی تاریخ سے واقفیت حاصل کرنا
- iii. اردو کی ادبی تحریکوں کو سیاسی، سماجی اور تہذیبی زاویوں سے سمجھنا
- iv. ادوار، اداروں اور ادبی تحریکوں کے زیر اثر تخلیق کردہ ادبی کارناموں کو سمجھنے کی صلاحیت پیدا کرنا

- (الف) ادوار:
- ۱۔ دکنی دور  
۲۔ دبستانِ دہلی  
۳۔ دبستانِ لکھنؤ
- (ب) ادبی تحریکیں:
- ۱۔ ایہام گوئی کی تحریک  
۲۔ علی گڑھ تحریک  
۳۔ رومانوی تحریک  
۴۔ ترقی پسند تحریک  
۵۔ حلقہٴ اربابِ ذوق  
۶۔ اسلامی ادب کی تحریک

مجوزہ کتب:

- ابواللیث صدیقی، 'لکھنؤ کا دبستان شاعری'، کراچی: غضنفر اکیڈمی، ۱۹۸۷ء  
انور سدید، 'اردو ادب کی تحریکیں'، کراچی: انجمن ترقی اردو، ۱۹۹۹ء  
جمیل جالبی، 'تاریخ ادب اردو'، لاہور: مجلس ترقی ادب،  
صفیہ بانو، 'انجمن پنجاب: تاریخ اور خدمات'، کراچی: کفایت اکیڈمی، ۱۹۷۸ء  
علی سردار جعفری، 'ترقی پسند ادب'، دہلی: انجمن ترقی اردو ہند، ۲۰۱۳ء (طبع چہارم)  
محمد خان اشرف، 'اردو ادب میں رومانویت'، لکھنؤ: تنویر پریس، ۱۹۵۵ء  
مظہر حسین، 'علی گڑھ تحریک: سماجی و سیاسی مطالعہ'، دہلی: انجمن ترقی اردو ہند، ۱۹۹۳ء  
نصیر الدین ہاشمی، 'دکن میں اردو'، دہلی: قومی کونسل برائے فروغ اردو زبان، ۲۰۰۲ء  
نور الحسن ہاشمی، 'دلی کا دبستان شاعری'، لکھنؤ: اتر پردیش اردو اکادمی، ۱۹۹۷ء  
یونس جاوید، 'حلقہٴ اربابِ ذوق'، لاہور: مجلس ترقی ادب، ۱۹۸۴ء



لسانیات (URDU 316)  
(تخصیصی کورس، کریڈٹ آورز: ۳)

**یاجو اں سمسٹر:**

مقاصد:

- i. لسانیات کو بحیثیت ایک علم سمجھنے کی صلاحیت پیدا کرنا  
ii. لسانیات کی مختلف اقسام کو ان کی مبادیات کے تحت سمجھنے کی کوشش کرنا  
iii. زبانوں کے خاندان اور اردو میں علمِ لسانیات کی تاریخ اور ارتقاء کو سمجھنا
- (الف) لسانیات اور اس کی اقسام:
- عمومی لسانیات، تاریخی لسانیات، سماجی لسانیات، اطلاقی لسانیات
- (ب) عمومی لسانیات:
- ۱۔ صوتیات  
۲۔ مارفیمیات  
۳۔ نحویات  
۴۔ معنیات
- (ج) تاریخی لسانیات:
- ۱۔ زبانوں کے خاندان  
۲۔ اردو میں لسانیات کی تاریخ اور ارتقاء

مجوزہ کتب:

- اقتدار حسین، 'لسانیات کے بنیادی اصول' لکھنؤ: فخر الدین علی احمد میموریل کمیٹی، ۱۹۸۵ء  
 خلیل احمد بیگ، 'اردو کی لسانی تشکیل' علی گڑھ: ایجوکیشنل بک ہاؤس، ۲۰۰۰ء  
 خلیل صدیقی، 'زبان کیا ہے؟' ملتان: بیکن بکس، ۲۰۰۱ء  
 سپہیل بخاری، 'اردو زبان کا صوتی نظام اور تقابلی جائزہ' اسلام آباد: مقتدرہ قومی زبان، ۱۹۹۱ء  
 عبدالسلام، 'عمومی لسانیات: ایک تعارف' کراچی: رائل بک کمپنی، ۱۹۹۳ء  
 محبوب عالم، 'اردو کا صوتی نظام' اسلام آباد: مقتدرہ قومی زبان، ۱۹۹۷ء  
 میمن عبدالمجید سندھی، 'لسانیات پاکستان' اسلام آباد: مقتدرہ قومی زبان، ۱۹۹۲ء



اردو افسانہ اور ڈراما: فنی و فکری مطالعہ (URDU 323)  
 (تخصیصی کورس، کریڈٹ آورز: ۳)

**چھٹا سمسٹر:**

مقاصد:

- i. اردو افسانہ اور ڈراما کو ان کے اصولوں کے تحت سمجھنا  
 ii. نصاب میں شامل افسانہ و ڈراما نگاروں کے فن سے واقفیت حاصل کرنا  
 iii. نصاب میں شامل تخلیقات کے فنی و فکری میلانات کو سمجھنا اور ان کا تجزیہ کرنا  
 الف) اردو افسانہ (تعارف و ارتقاء)  
 افسانہ نگار:

- ۱- پریم چند (کفن)  
 ۲- سجاد حیدر یلدرم (خارستان و گلستان)  
 ۳- کرشن چندر (پانی کا درخت)  
 ۴- غلام عباس (کتبہ)  
 ۵- ممتاز مفتی (سمے کا بندھن)  
 ۶- انتظار حسین (زرد کتا)  
 ۷- ام عمارہ (زندگی کا زہر)

ب) ڈراما (تعارف و ارتقاء)  
 ڈراما نگار:

- ۱- آغا حشر (رستم و سہراب)  
 ۲- امتیاز علی تاج (انار کلی)

مجوزہ کتب:

۲۰۰	دہلی: اریب پبلی کیشنز	آغا حشر کاشمیری حیات اور ڈرامانگاری	اقبال جاوید
۲			
۲۰۰	اسلام آباد: مقتدرہ قومی زبان	اردو افسانہ ایک صدی کا قصہ	انور احمد
۸			
۱۹۷	دہلی: طاہر بک ایجنسی	داستان سے افسانے تک	سید وقار عظیم
۳			
۱۹۹	علی گڑھ، انڈیا: ایجوکیشنل بک ہاؤس	فن افسانہ نگاری	سید وقار عظیم
۷			
س-ن	دہلی: مکتبہ جامعہ لمیٹیڈ	اردو افسانہ اور افسانہ نگار	فرمان فتح

پوری	تاج سعید	"قند" ڈراما نمبر	مردان: پریمئیر شوگر ملز	۱۹۶	نئی
(مدیر)	گوپی چند	اردو افسانہ: روایت اور	دہلی: ایجوکیشنل پبلشنگ	۲۰۱	۱
نارنگ	مرزا حامد بیگ	مسائل	ہاوس	۳	۳
		اردو افسانے کی روایت	اسلام آباد پاکستان: اکادمی	۱۹۹	۱
			ادبیات		

اردو ناول کا ارتقاء: بیسویں صدی تا حال (URDU 324)  
(تخصیصی کورس ، کریڈٹ آورز: ۳)

**چھٹا سمسٹر:**

مقاصد:

- i. بیسویں صدی میں تخلیق کردہ ناولوں کو اس صدی کے رجحانات کی روشنی میں سمجھنا
- ii. بیسویں صدی کے رومانی ، نفسیاتی ، سماجی ، سیاسی اور علامتی رجحانات کی روشنی میں مذکورہ ناولوں کا تجزیہ کرنا
- iii. نصاب میں شامل ناولوں میں ہیبت اور اسلوب کے عناصر کی تفہیم کرنا

(الف) ناول (تعارف و ارتقاء)

(ب) ناول نگاری

- |                     |                        |
|---------------------|------------------------|
| ۱- کرشن چندر        | دوسری برف باری سے پہلے |
| ۲- عزیز احمد        | گریز                   |
| ۳- رحیم گل          | جنت کی تلاش            |
| ۴- عبداللہ حسین     | اداس نسلیں             |
| ۵- بانو قدسیہ       | راجہ گدھ               |
| ۶- مستنصر حسین تارڑ | قلعہ جنگی              |

مجوزہ کتب:

نال اور ناول نگار	ملتان: کاروان ادب ، ۱۹۹۰
برصغیر میں اردو ناول	دہلی: مجلس اردو ، ۱۹۹۴
بیسویں صدی میں اردو ناول	سندھ کراچی: اردو اکیڈمی ، ۱۹۷۳
اردو ناول بیسویں صدی میں	دہلی: ترقی اردو بیورو ، ، ۱۹۹۵
پاکستان میں اردو ناول	اسلام آباد: علامہ اقبال اوپن یونیورسٹی ، ۱۹۹۳
آزادی کے بعد اردو ناول	پاکستان کراچی: انجمن ترقی اردو ، ۲۰۰۸
آل احمد سرور	
ڈاکٹر خالد اشرف	
ڈاکٹر عبدالسلام	
ڈاکٹر یوسف	
سر مست	
ظہور احمد	
ممتاز احمد خان	



اردو نظم: فنی و فکری مطالعہ (URDU 325)  
(تخصیصی کورس، کریڈٹ آورز: ۳)

**چھٹا سمسٹر:**

مقاصد:

- i.** اردو نظم میں کلاسیکی اور جدید رجحانات کی تفہیم کرنا
- ii.** کلاسیکی اور جدید نظم میں موجود امتیازات کا تجزیہ کرنا
- iii.** کلاسیکی اور جدید نظم کے فکری اور اسلوبیاتی عناصر کی تفہیم اور تجزیہ کرنا
- iv.** شعراء کی تخلیقات کی تفہیم کے ذریعے ان کے رجحانات کو سمجھنے کی کوشش کرنا
- (الف) کلاسیکی نظم (تعارف و ارتقاء)  
کلاسیکی نظم نگار
- ۱۔ جعفر زٹلی (در بیان توکل، دستور العمل در اختلاف زمانہ ناہنجاہ)
- ۲۔ نظیر اکبر آبادی (روٹی کی فلاسفی، کلجگ)
- (ب) جدید نظم (تعارف و ارتقاء)
- ۱۔ الطاف حسین حالی (چپ کی داد، نشاطِ امید) ۲۔ اختر شیرانی (بڑھے چلو، اے عشق کہیں لے چل)
- ۳۔ فیض احمد فیض (صبح آزادی، نثار میں تری گلیوں کے۔) ۴۔ ن۔م راشد (میں اُسے واقف اُفت نہ کروں، اندھا کباڑی)
- ۵۔ مجید امجد (ہری بھری فصلو!، کنواں) ۶۔ مصطفیٰ زیدی (پرستیدم شکستم)
- (ج) مزاحیہ نظم:
- ۱۔ اکبر الہ آبادی (لندن میں عقد، فرضی لطیفہ)
- ۲۔ مرزا محمود سرحدی (میں کسی پر بھی مبتلا نہ ہوا، پرانی غزل)
- مجوزہ کتب:
- ابواللیث صدیقی: نظیر اکبر آبادی
- پروفیسر سید: مرزا محمود سرحدی
- یونس شاہ: میرا جی: ایک مطالعہ
- جمیل جالبی: نئی نظم کے تقاضے
- جیلانی کامران: پانچ جدید شاعر
- حمید نسیم: میرا جی: شخصیت اور فن
- رشید امجد: اردو شاعری کا سیاسی و سماجی پس منظر
- غلام حسین: نظم جدید کی کروٹیں
- ذوالفقار: لاہور: سنگ میل، ۱۹۹۸
- وزیر آغا: لاہور: سنگت پبلشرز، ۲۰۱۳
- سندھ: اردو اکیڈمی، ۱۹۵۷
- ایبٹ آباد: سرحد اردو اکیڈمی، ۱۹۹۶
- لاہور: سنگ میل، ۱۹۹۰
- لاہور: مکتبہ عالیہ، ۱۹۸۵
- کراچی: فضلی سنز، ۱۹۹۴
- فیصل آباد: مثال پبلی کیشنز، ۲۰۱۰



## JOURNALISM & MASS COMMUNICATION

### JMC-111

#### INTRODUCTION TO MASS COMMUNICATION

##### CH 3

##### **Course Objectives:**

This course is aimed at introducing the students with basic concept of Communication and mass Communication. This course further enables the students to understand the Communication process and Distinguish among various mass media

##### **Course Contents**

Definitions, types and significance. Process of Communication: source; message; channel; noise; Destination; encoding; decoding; and

##### ➤ **Communication**

Feedback. Barriers in communication .Essentials of effective communication. Dimensions of mass communication: mass media, advertising, public relations, blogging, new media etc. and Functions of mass communication. (Information, Education, Opinion Formation, Entertainment and Development.)

##### ➤ **Media of Mass Communication**

Print Media: newspapers, magazines, periodicals, books, pamphlets, etc. Broadcast media: Radio, TV, film. New Media: (Internet)–On-line journalism. Traditional/Folk-Media. Comparative study of mass media, their components, functions and effects.

##### **Recommended Books:**

1. Dominick, J.R.(2006).Dynamics of Mass Communication(8<sup>th</sup> Ed.)New York. McGraw-Hill
2. Merrill, J.C., Lee, J., Friedlander, E.J., (1994). Modern Mass (2<sup>nd</sup> Ed). New York. Harper Collins College Publishers
3. Straubhaar, Larose. (2002). Media Now: Communication Media Information Age (3<sup>rd</sup> Ed.) USA. Wadsworth

### JMC-124

#### MASS MEDIA IN PAKISTAN

##### CH 3

##### **Course Objectives:**

This course is designed to study the role of Muslim Press in the Sub- continent with reference to the work of eminent Muslim journalists, and its role during freedom movement and struggle for Pakistan. It is further designed to help students to have a look on the evolution of print and electronic media in Pakistan from the beginning till date, with reference to their problems and prospects.

##### **Course Contents:**

##### ➤ **Historical Background**

- Growth of the Press in the sub-continent.

- Role of Sir Syed Ahmed Khan, Moulana Hasrat Mohani, Moulana Muhammad Ali Johar, Moulana Abul Kalam Azad and Zafar Ali Khan.
- Press and the Pakistan Movement.
- **History and Development of Press**
  - Press since independence.
  - Major Developments of Press in Pakistan
  - Major problems and prospects of Press in Pakistan
  - Progressive writer's movement
- **Government and Press**
  - Government Press relations
- **Electronic Media in Pakistan**
  - Brief introduction to media in Pakistan
  - Growth & expansion of Radio, Television and Film In Pakistan
  - Growth of Cable television and its cultural and ethical dimensions.
  - Rise and fall of film in Pakistan
  - Electronic Media in Private Sector. FM radio And Satellite Television.
  - Online Journalism: Development and future prospects
- **News Agencies**
  - Development of News Agencies.
  - Expansion, Working, Organizational, Structure and Future perspective in Pakistan.
  - Development of visual news agencies
  - Growth of regional press in Pakistan
  - Influence of foreign media in Pakistan
  - Emerging trends in journalism

**Recommended Books:**

1. Khurshid Abdus Salam, Journalism in Pakistan, United Publishers, Lahore
2. Lent J.A., Newspapers in Asia.
3. Majeed Nizami, Press in Pakistan, Department of Political Science, University of the Punjab.
4. Hasan Mehdi, Mass Media in Pakistan.
5. French David and Richard Micheal (2000), Television in Contemporary Asia, SAGE Publication International, UK.
6. Aziz Yousaf (2003), Cable Television–A vision for Future, Pakistan.
7. Aziz Yousaf (2003), Prospect & Promotion of Electronic Media in Pakistan.
8. Sh. Mugheesuddin (1981), ABC of Radio Journalism.

**Books in Urdu:**

1. Khurshid Abdus Salam (1966), Fun-e-Sahafat, Karwan Publications.
2. Khurshid Abdus Salam, Dastan-e-Sahafat.
3. Hijazi, Miskeen Ali (2005), Fun-e-Idarat, 6th Edition, Adan Printers.

4. Khurshid Abdus Salam, Sahafat Pakistan-o-Hind Mein.
5. Hussain, Muhammad Shahid, Iblighiat (2004) Education Publication House Delhi
6. Hijazi, Miskeen Ali (1995), Punjabmin Urdu Sahafat. Azhar Sons Printers. Lahore.
7. Shafiq Jhaulundhary (2008), Sahafat Aur Iblagh, 10 th Edition. Ali Ejaz Printers. Lahore.
8. Naz, Ahsan Akhtar (2002), Pakistan main Taraki Pasand Sahafat. Zahid Bashir Printers. Lahore.

## **JMC-126**

### **FUNDAMENTALS OF NEWS REPORTING**

#### **CH 3**

#### **Course Objectives:**

Learn basics of writing for newspaper Improve basic writing shields Understand difference between writing for print and broad cast media Learn News gathering techniques

#### **Course Contents:**

- News:
  - Definition
  - Elements c) Values
  - Sources and channels of News
- **News Writing techniques:**
  - Structure of News
  - Lead/introits components and types
  - Block Paragraphing
- **Basics of writing:**
  - Attribution
  - Plagiarism
  - Opinion vs. facts
  - Language, Grammar
- **Beat reporting:**
  - Crime & Accidents/Disasters
  - Sports
  - Commerce
  - Courts
  - Health
  - Education
  - Political

- Parliament
- Obituary
- **How Newspaper News are different form Radio and Television news**
- **Elements of online News reports**
  - Multimedia Contents
  - Text visuals and photos
  - Do's and Don'ts of a reporter

**Recommended Books:**

1. Anderson David “Investigative Reporting”, Englewood Cliffs, Prentice, Hall, 1964
2. Charnely Mitchell’s “Reporting”, New York Hoet, Rinhart& Winston 1964
3. Hohenberg “The Professional Journalist”
4. MacDougall, CurtsD. “Interpretative Reporting”, New York, Macmillian 1972
5. Porter and Luxon“ The Reporter and the News”
6. William L. Rivers “Finding Facts”, Engle wood Cliffs, N. J; Prentice Hall, 1975.
7. AldenTodd,“Finding Facts Fast”,Barclay,Ten Speed Pren,1979
8. Ken Metzler, “Creative Interviewing” ,Engle wood Cliffs, .J;Pren,1977

**JMC-235**

**INTRODUCTION TO ADVERTISING& PUBLIC RELATIONS**

**CH 3**

**Course Objectives:**

This course is designed to introduce students to the principles and techniques of advertising and public relations as currently practiced. Emphasis will be on the public relations and advertising processes and such activities that bring out student’s problem-solving approach and creativity in message construction.

**Course Content:**

- Advertising
  - Evolution and Development of Advertising
  - Advertising Definition, Function and Scope
  - Types of Advertising, Techniques of Advertising
  - Principle of Successful Advertising
  - Merits and Demerits of Advertising
  - Macro and Micro economic impact of Advertising
  - Socio-economic role of advertising
  - Advertising agency and its structure
  - Role of advertising association of Pakistan
  - Develop of Advertising Campaign
  - Practice Advertising Campaign
- **Public Relations:**

- Definition, Nature, Scope and history
- Public relations of PR
- Process of PR (Research, Planning PR Campaigns 42 execution and evaluation)
- Tools and Products of PR (Spoken tactics, written, Visual and new media)
- Government and Private Organizations PR
- PR in different sectors
- Responsibilities and qualities of PRO
- Comparative analysis of publicity, Propaganda, adv, PR
- Community, Corporation on-Profit organization-POL org
- **Practical:**
  - PR Campaign

**Recommended Books:**

1. Centre, H. Allen, Cutlip. M. Scott, "Effective Public Relations". New Jersey" Prentice Hall Inc.1978
2. Chandan, S J. et al. "Essentials of Advertising", New Delhi, Bombay, Oxford & IBH Publishing Co. Pvt.Ltd.1990
3. Jefkins, Frank. Long Acre, "Public Relations for Marketing Management", London: Pitman Publishing1991.
4. Jefkins, Frank, Long Acre, "Public Relations", London: Publishing, 1991
5. Jefkins, Frank, "Advertising: Made Simple", Calcutta; Rupa Co.1982
6. Mandell, Maurice I., Englewood Cliffs, N. J, "Advertising", Prentice- Hall, Inc. USA 1974
7. Nelson, Paul Roy, low: WCB, Wm. C, "The Design of Advertising", Brown Publishers Dubugue, USA, 1985
8. S.A.Siraj, "Taloqaat-e-Aama", Allama Iqbal Open University, 1990

**JMC-242**

**CRISIS REPORTING**

**CH 3**

**Course Objectives:**

**Course Contents:**

- Familiarity with textbook definitions of 'crisis' and its different types
- Ability to identify crisis situation
- Ability to differentiate 'crises from 'conflict'
- Familiarity with a tool kit for physical safety
- Ability to use first aid kit
- Ability to develop a checklist of items/steps for crisis reporting

**Required Readings:**

Chapter 1, "Theoretical approaches to and sociocultural perspectives in crisis communication," In Amiso M. George and Cornelius B. Pratt (eds), Case studies in crisis communication: International perspectives on hits and misses (pp. 3-27). New York: Routledge, 2012.

Chapter 1. “Global crisis? What is crisis? In Cottle, Simon (2009). Global crisis reporting: Journalism in the global age, New York: Open University Press.

Chapter 3. “(UN) natural disasters: The calculus of death and the ritualization of catastrophe, Cottle, Simon (2009). Global crisis reporting: Journalism in the global age, New York: Open University Press

Kriesberg, L. (2005). “Nature, dynamics, and phases of intractability,” In Chester A. C., Fen O. H. & Pamela A. (eds.) Grasping the nettle: Analysing cases of intractable conflict, Washington, D.C.: USIP.

## JMC-244

### COMMUNICATION THEORY-I

#### CH 3

##### **Course Objectives:**

Objectives: This course aims to equip the students to identify different phases of mass communication theories development in the historical context. It will enhance their abilities to understand different intellectual foundations in the field of mass communication.

##### **Course Contents:**

- Paradigm, theory and model Types and functions of theories Four eras of mass media theory
- Direct effect paradigm Propaganda theories
- Limited effect paradigm Two step flow of information Selective process Klapper’s phenomistic theory Diffusion theory Functional analysis
- Normative theories Libertarian theory Social responsibility theory Development media theory Democratic participant theory

##### **Recommended Books:**

1. Chaffee, Steven H. 2000 Mass Communication Uses and Effects, 3 rd ed. MacGraw – Hill, New York.
2. Joseph R. Mominick. 2004. The Dynamics of Mass Communication, 5 th e d. MacGraw-Hill, Inc. New York
3. Werner J. Severin & James W. Tankard, Jr. 2003. Communication Theories: Origins, And Uses in the Mass Media, 3rd ed. Longman Group Ltd. London.
4. James Curran, Michael Gurevitch. 2000. Mass Media and Society, 3 rded. St. Martin Press Inc. New York
5. Mac Quill. 2003. Theories of Communication, 2 nded. Longman Group Ltd. London.
6. Philip Rayner. 2003. Mass Media Studies: An Essential Introduction
7. Rutledge, New York.
8. Defleur Melvin L. 1999. Theories of Mass Communication, 3 rded. David McKay Co. New York.

**C-245**

**INTRODUCTION TO BROADCAST MEDIA**

**CH 3**

**Course Objectives:**

- Learn Audio Video Coverage
- Learn Audio Video editing and writing
- Understanding basic concepts of Radio and TV News
- Know the difficult approaches when reporting for radio and TV
- To produce a radio and TV news

**Course Contents:**

Introduction to Radio as a medium and structure

- **Type of Radio Programs**
  - News
  - Feature
  - Documentary
  - Voxpops
  - Interviews
- **Radio Production**
  - Basics of recording
  - Using audio variety
  - Sound bites

Audio Editing using adobe auditions software

Basics of Radio News writing and types of Radio news

Socio-economic impact of FM Radio economics Television:

Introduction to television as a medium and structure

- Basics of writing style guide for television a) Documentary b) Interviews c) Talk shows
  - Documentary
  - Interviews
  - Talk shows
- **Basics of TV News writing and its types**
  - Structure
  - Contents
  - Flow
  - Breathing techniques
  - Pastures of TV News delivery
- **Elements of a television news bulletin:**
  - Package b) Beeper c) Ticker d) Voxpaps
- **Television Production:**
  - Team

- Technical staff
- Design team
- Requisites for Pre-production and past Production
- Digital and analog IV
- Basics of TV anchoring
- **Basics of Video acquisition:**
  - Operating camera and Shooting
  - Recorders
  - Lighting
  - Set designing
  - Video composition and editing
  - F) Advanced Multiplatform Reporting

**Recommended Books:**

1. Andrew Hart, Rontledge, Understand the Media, New York .1991
2. Conrad fink, Longman, Inside the Media, NewYork.1990.
3. John Fiske, Mcthuen, Television Culture, London.1987
4. John C. Merill, John Lee, Modern Mass Media, Edward Jay Fried lander, Harper & Row, New York. 1990.
5. Conrad Lodziak, Frances Prilie, Power of TV, London. 1986.
6. Ray Eldon Hiebert, Donald F. Ungurait. Thomas W. Bohn, Longman, Mass media: An introduction to Modern Communication, NewYork.1982.
7. Stewart Price, Pitman Publishing, Media Studies, London. 1993
8. Shirley Biagi, Wadworth, Belmont, Media Impact, 2 nd Edition 1992.



PASHTO

<b>Title</b>	<b>Description</b>
<b>Course</b>	<b>Discipline Specific</b>
<b>Nature of Course</b>	<b>Major</b>
<b>No. of Credit Hours</b>	<b>03 C.H.</b>
<b>Total Teaching Weeks</b>	<b>18</b>
<b>Code</b>	<b>PKH 111</b>
<b>Objectives of the Course</b>	(۱) چې طالب علمان د بنيادي ژبپوهنې سره اشنا شي (۲) چې د ژبې د لساني مطالعې جوگه شي - (۳) چې د بنيادي ژبپوهنې د تاريخ نه خپر شي -

Course Title بنيادي ژبپوهنه (لسانيات)

Course Contents:

S.No	Title	Description
01	ژبه څه ته وائي؟	(۱) د ژبې تعريف (۲) د ژبې اصل يا بنياد (۳) د ژبې خصوصيات/رول
02	ژبپوهنه څه ته وائي؟	(۱) د ژبپوهنې تعريف (۲) د ژبپوهنې تاريخ (۳) ژبپوهنه سائنس دږ؟ (۴) د ژبپوهنې مختلف مکتبونه
03	د ژبپوهنې څانگې	(۱) عامه ژبپوهنه (۲) د مانيکرو او مېکرو ژبپوهنې تقابلي جائزه (۳) مستعمله ژبپوهنه
04	غرونه او غرپوهنه Phonetics & Phonology	(۱) د آوازونو پېدا کولو ځايونه (۲) اصلي غرونه او کومکي غرونه (Consonant & Vowel Sounds) (۳) فونوټکتکس (Phonotactics)
05	د ټکو جوړښت	(۱) ټکي څنگه جوړېږي (۲) د ټکو جوړېدو قسمونه (۳) مشتق ټکي
06	صرف Morphology	(۱) مارفيم (Morpheme) (۲) اېل او ښکلېل مارفيم (Free & Bound Morphemes) (۳) معنوي او مرستيال مارفيم (Lexical & Functional Morphemes)
07	گرامر Grammar	(۱) روايتي گرامر (Traditional Grammar) (۲) تشریحي گرامر (Descriptive approach)

TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

		پرهېزي کرنلار (Prescriptive Approach)
08	نحو Syntax	(۱) د جملې جوړښت (۲) تکرار (۳) د وني شکل (Tree Diagram)
09	معنیات (Semantics)	(۱) تعریف او قسمونه (۲) د معنیات اصول (۳) معنوي تعلق او تړون
10	ژبه او دماغ (دماغي ژبپوهنه) Neuro-Linguistics	(۱) په مزغو کښې د ژبې برخه (۲) د ژبې خطاي او د ژبې کمزوري (۳) ژبیزه ناروغي (۴) د ژبې د زده کړې غوره وختونه
11	ژبه او ذهن (ذهني ژبپوهنه) Psycholinguistics	(۱) ژبه څنگه زده کېږي او خپلېږي (۲) د مورنۍ ژبې قبولیت (۳) د بلې ژبې زده کړه او قبولیت
12	لیک	(۱) د لیک تاریخ (۲) د لیک قسمونه (۳) خوشنویسي (Orthography)
13	ژبه او ټولنه (ټولنیزه ژبپوهنه) Sociolinguistics	(۱) د ژبې تاریخ او بدلون (۲) علاقائي بدلون او سماجي بدلون (۳) د ژبې د معیاري کولو منصوبه بندي
14	د اشارو او نخښو ژبه	(۱) اشاره او اشارو قسمونه (۲) د نخښو ژبو قسمونه (۳) د نخښو شکلونه او معنی
15	د ژبې زده کړه او ښوونه	(۱) د ژبې د زدکړه او د ښوونې تاریخ (۲) د ژبې په زدکړه او ښوونه کې مسئلي (۳) د ژبې د ښودلو طریقي

مجوژه کتابونه : Recommended Books

- 1) ژبپوهنه، ډاکټر بشری اکرام
- 2) Language & Linguistics by Jolm Lyons
- 3) Linguistics: An Introduction to Language & Communication by Richard A. Deners, Ann K. Farmer.
- 4) Teach Yourself linguistics by Jean Aitchison
- 5) The Study of Language by George Yule
- 6) English Phonetics & Phonology- A Practical Course by peter Reach.
- 7) An Outline of English Phonetics by Danied Jones 9<sup>th</sup> Ed, Cambridge University Press
- 8) An Introduction to Phonetics & Phonology by John Clark & Calin Yallop. Blackwell.

Course Title: پښتو املاء او رسم الخط (لیک دود)

<b>Title</b>	<b>Description</b>
<b>Course</b>	<b>Discipline Specific</b>
<b>Nature of Course</b>	<b>Major</b>
<b>No. of Credit Hours</b>	<b>03 C.H.</b>
<b>Total Teaching Weeks</b>	<b>18</b>
<b>Code</b>	<b>PKH 112</b>
<b>Objectives of the Course</b>	<p>(۱) طالب علمان د املا او رسم الخط په معنی او مفهوم پوهول -</p> <p>(۲) د طالب علمانو د املا او رسم الخط د قسمونو او تاریخ سره اشنائي پیدا کول -</p> <p>(۳) د پښتو املا او رسم الخط کره او درسته پکارونه کول -</p>

Course Contents:

S.No	Title	Description
01	املا او رسم الخط	(۱) غیر توري (حرفونه) (۲) د غیر تورو تاریخي شاه لید (۳) املا او رسم الخط
02	د پښتو رسم الخط مختلف ډولونه	(۱) میخي (۲) گروتهي یا خروشتهي (۳) یوناني (۴) نسخ نستعلیق
03	د پښتو املا ارتقاء	(۱) د پښتو میخي لیک دود (۲) د پښتو خروشتهي لیک دود (۳) د پښتو یوناني لیک دود
04	د قاضي سیف الله کوششونه	(۴) د پښتو عربي لیک دود
05	پښتو املا کښې د بایزید انصاري اختراعات	(۵) د بایزید انصاري پښتو املا
06	د اخون دروېزه کوششونه	(۶) د اخون دروېزه پښتو املا
07	پښتو املا ته د خوشحال خان خټک بڅښنې	(۷) د خوشحال خان خټک املا (زنځیری)
08	د پښتو ټولني کابل او پښتو اکېډمي د پښتو املا په لړ کښې ابتدائي کوششونه	(۸) پښتو املا او د افغانستان فیصلي <ul style="list-style-type: none"> <li>• اوله فیصله (جون ۱۹۴۲ء)</li> <li>• دویمه فیصله (۳۰ اگست ۱۹۴۸ء)</li> <li>• درېمه فیصله (۲۷ اگست ۱۹۵۸ء)</li> </ul>
09	د پښتو د املا او رسم الخط په لړ کښې انفرادي کوششونه	(۱) قلندري املا (۲) د خان عبدالصمد خان کوششونه (۳) د عبدالکریم بریالۍ کوششونه

		(۳) د سعد الله جان برق کوششونه
10	د باره گلی سیمینار او پښتو املا	(۱) د باره گلی سیمینار (۲) د باره گلی د سیمینار اوولس فیصلی
11	پښتو املا او ستونزې	(۱) د (ی) په استعمال کښې د متفقه فیصلو باوجود اختلاف (۲) د نصابي کتابونو د بدلون او لیک لوست ستونزې (۳) د نوې املا په وجه د عام لوستونکیو د کتاب د لوست ستونزې (۴) د پښتو نوې املا او د کتابت د فن ستونزې
12	په کمپیوټر کښې د پښتو استعمال او په سوشل میډیا او وېب پاڼو کښې د پښتو لیک دود (عملي روزنه)	(۱) په کمپیوټر کښې د پښتو ژبې ایکټیوېشن (۲) د پښتو فونیتک کیپورډ انسټالېشن (۳) د پښتو کیپورډ پکارونه
13		(۴) د شاعرۍ د کتاب کمپوزنگ (عملي روزنه) (۵) د تحقيقي مقالې کمپوزنگ (عملي روزنه)
14		(۱) په سوشل میډیا کښې د پښتو لیک دود (۲) په وېب پاڼو کښې د پښتو لیک دود

### مجزوه کتابونه: Recommended Books

1. لیکوالي املا او انشاء، از گل باچا الفت
2. د خېرالبيان لیک دود، مشموله خېرالبيان، کابل چاپ، پوهاند عبدالشکور رشاد، مخ ۵۵ تا ۸۰
3. پښتو لیک دود، از پرېشان خټک
4. پښتو لیک دود، از حکمتيار
5. پښتو املاء، پروفېسر ډاکټر راج ولي شاه خټک
6. پښتو لیک دود، از خان شهيد عبدالصمد خان
7. د پښتو لیک دود، از عبدالکريم بريالے
8. پښتو لیک لار او پښتو املاء، پښتو اکېډمي پېښور

Course Title:

فنون لطيفه

<b>Title</b>	<b>Description</b>
<b>Course</b>	<b>Discipline Specific</b>
<b>Nature of Course</b>	<b>Major</b>
<b>No. of Credit Hours</b>	<b>03 C.H.</b>
<b>Total Teaching Weeks</b>	<b>18</b>
<b>Code</b>	<b>PKH 231</b>
<b>Objectives of the Course</b>	<p>(۱) طالب علمان د فن په معنی او مفهوم پوهول -</p> <p>(۲) د طالب علمانو سره د فنون لطيفه پيژندگلو -</p> <p>(۳) د پښتنو د اجتماعي نفسياتو په حواله د فنون لطيفه چاچ اخستل -</p>

Course Contents:

S.No	Title	Description
01	فن څه ته وائي؟	(۱) د فن تعريف (۲) د فن او هنر تر مېنځ فرق
02	فنون لطيفه	(۱) د فنون لطيفه تعريف (۲) د مادي فنون او فنون لطيفه تر مېنځ فرق
03	د فنون لطيفه قسمونه	(۱) د شاعري فن
04		(۲) د موسيقي فن
05		(۳) رقص (گداگانې)
06		(۴) د مصوري فن
07		(۵) د سنگ تراشي فن
08		(۶) د مجسمه سازي فن
09		(۷) د خطاطي فن
10		(۸) فن تعمير
11		(۱) کلاسي سزم (Classicism)

		(۲) پري رومانټيسزم (Pre-Romanticism)
12	د فنون لطيفه نظريات	(۳) نيو كلاسي سزم (Neoclassicism) (۴) رومانټيسزم (Romanticism)
13		(۵) ريئلزم (Realism) (۶) سمبولزم (Symbolism)
14		(۷) فنون لطيفه د اسلام په رڼا كښي
15		(۸) فنون لطيفه د پښتنو په نظر كښي

مجزوه كتابونه : Recommended Books :

- (1) سپين تمبل، نثار محمد خان
- (2) پختونو كے رقص، ڈاكٽر امين تنها
- (3) افغانی موسیقی- دين محمد ژواک
- (4) د پښتو موسیقي - فضل محمود روښان
- (5) راگ سروپ، محفوظ كهوگر، لوک ورثه، اسلام آباد
- (6) فنون لطيفه- مرزا سلطان احمد



Course Title:

ترجمه نگاري

<b>Title</b>	<b>Description</b>
<b>Course</b>	<b>Discipline Specific</b>
<b>Nature of Course</b>	<b>Major</b>
<b>No. of Credit Hours</b>	<b>03 C.H.</b>
<b>Total Teaching Weeks</b>	<b>18</b>
<b>Code</b>	<b>PKH 241</b>
<b>Objectives of the Course</b>	(۱) چې طالب علمان د ترجمې فن زده کړي - (۲) چې طالب علمان په پښتو کېښې د ترجمې د روایت نه خبر شي -

Course Contents:

S.No	Title	Description	
01	د ترجمه نگاري فن	(۱) د ترجمه نگاري تعريف (۲) د ترجمه نگاري اهميت او افاديت (۳) د ترجمې نگاري قسمونه	
02		(۴) د ترجمه نگاري فن (۵) د ترجمه نگاري معيار (۶) د ترجمې علمي مسئلې	
03		(۱) اصول (۲) مقصدونه (۳) ازاده او لفظي ترجمه	
04		(۱) ابتدائي دور (۲) دستيابي ترجمې (۳) جديد دور (۴) مذهبي موضوعات (۵) تاريخونه او تذکري	
05		(ادبي ترجمې) د خوشحالياتو ترجمې	د خوشحال خان خټک د افکارو ترجمې (انگرېزي): (۱) دي پوئمز آف خوشحال خان خټک (۲) دستار نامه (۳) بازنامه
06		د خوشحالياتو ترجمې	د خوشحال خان خټک د افکارو اردو ترجمې: (۱) منتخبات خوشحال خان خټک (۲) کلام خوشحال خان خټک (۳) رباعيات خوشحال خان خټک (۴) دستارنامه (۵) بازنامه
07	د رحمان بابا د کلام ترجمې	(۱) انگرېزي ترجمې (۲) اردو ترجمې (۳) فارسي ترجمې (۴) پنجابي ترجمې (۵) جرمني ترجمې	

08	شاعري	(۱) پښتو ته شوې منظومې ترجمې (۲) د پښتو شاعرۍ نورو ژبو ته شوې ترجمې
09	ناول	(۱) د پښتو نه ترجمې شوې ناولونه (۲) د نورو ژبو نه پښتو ته ترجمه شوې ناولونه
10	افسانه	(۱) په پښتو کېې ترجمه شوې افسانې (۲) د پښتو نه اردو ته ترجمه شوې افسانې
11	ډرامه	(۱) د پښتو نه نورو ژبو ته ترجمه شوې ډرامې (۲) د نورو ژبو نه پښتو ته ترجمه شوې ډرامې
12	سفرنامه	(۳) د پښتو نه نورو ژبو ته ترجمه شوې سفرنامې (۴) د نورو ژبو نه پښتو ته ترجمه شوې سفرنامې
13	تنقيدي ادب	(۱) د پښتو نه نورو ژبو ته د تنقيدي ادب ترجمې (۲) د نورو ژبو نه پښتو ته ترجمه شوې تنقيدي ادب پارې
14	د سياسي او تاريخي کتابونو ترجمې	(۱) د سياسي کتابونو ترجمې (۲) د تاريخ د کتابونو ترجمې
15		(۱) د علامه اقبال د کتابونو پښتو ترجمې (۲) د رباعياتِ عمر خيام پښتو ترجمې (۳) د فارغ بخاري او رضا همداني ترجمې (۴) امير حمزه خان شنواري ترجمې (۵) د ډاکټر شېر زمان طائزي پښتو ژبې ته کړې ترجمې

مجزوه کتابونه : Recommended Books

1. ترجمے کا فن، مرزا احامد بیگ
2. ترجمہ، روایت او فن، ډاکټر نثار احمد قریشي
3. فن ترجمہ کاری، ډاکټر صوبیه سلیم
4. اردو سے پښتو تراجم، پردل خان خټک
5. پښتو زبان و ادب کی تاریخ (ایک خاکه)، ډاکټر حنیف خلیل



Course Title: د پښتو شاعری کلاسیک دورہ

<b>Title</b>	<b>Description</b>
<b>Course</b>	<b>Discipline Specific</b>
<b>Nature of Course</b>	<b>Major</b>
<b>No. of Credit Hours</b>	<b>03 C.H.</b>
<b>Total Teaching Weeks</b>	<b>18</b>
<b>Code</b>	PKH 363
<b>Objectives of the Course</b>	(۱) چې طالب علمان د پښتو شاعری د کلاسیک دورې سره اشنا شي (۲) چې د پښتو شاعری د کلاسیک دورې د شاعرانو پېژندگلو ورسره اوشي –

**Course Contents:**

S.No	Title	Description
01	اشرف خان هجري	(۱) د اشرف خان هجري تعارف (۲) د اشرف خان هجري د شاعری فکري خصوصيات (۳) د اشرف خان هجري د کلام فني خصوصيات
02	کامگار خان خټک	(۱) د کامگار خان خټک تعارف (۲) د کامگار خان خټک د شاعری فکري خصوصيات (۳) د کامگار د کلام فني خصوصيات
03	کاظم خان شېدا	(۱) د کاظم خان شېدا تعارف (۲) د کاظم خان شېدا د شاعری فکري خصوصيات (۳) د کاظم خان شېدا د کلام فني خصوصيات
04	عبدالحمید مومند	(۱) د حمید بابا تعارف (۲) د حمید بابا د شاعری فکري خصوصيات (۳) د حمید بابا د کلام فني خصوصيات
05	معزالله خان مومند	(۱) د معزالله خان مومند پېژندگلو (۲) د معزالله خان مومند د کلام فکري خصوصيات (۳) د معزالله خان مومند د کلام فني خصوصيات
06	علي خان	(۱) د علي خان تعارف (۲) د علي خان د کلام فکري خصوصيات (۳) د علي خان د کلام فني خصوصيات
07	يونس	(۱) د يونس تعارف (۲) د يونس د کلام فکري خصوصيات (۳) د يونس د کلام فني خصوصيات
08	محمدي صاحبزاده	(۱) د محمدي صاحبزاده پېژندگلو (۲) د محمد صاحبزاده د کلام فکري خصوصيات

		خصوصيات ۳) د محمد صاحبزاده د کلام فني خصوصيات
09	احمد شاه ابدالي	۱) د احمد شاه ابدالي پيژندگلو ۲) د احمد شاه بابا د کلام فکري خصوصيات ۳) د احمد شاه بابا د کلام فني خصوصيات
10	پير محمد کاکړ	۱) د پير محمد کاکړ پيژندگلو ۲) د پير محمد کاکړ د کلام فکري خصوصيات ۳) د پير محمد کاکړ د کلام فني خصوصيات
11	حافظ الپورے	۱) د حافظ الپورے تعارف ۲) د حافظ الپورے د کلام فکري خصوصيات ۳) د حافظ الپورے د کلام فني خصوصيات
12	عبدالعظيم رانېزے	۱) د عبدالعظيم بابا پيژندگلو ۲) د عبدالعظيم بابا د کلام فکري خصوصيات ۳) د عبدالعظيم بابا د کلام فني خصوصيات
13	زرغونه	۱) د زرغونې تعارف ۲) د زرغونې د کلام فکري جاچ ۳) د زرغونې د کلام فني جاچ
14	ميرمن رابعه	۱) د ميرمن رابعه تعارف ۲) د ميرمن رابعه د کلام فکري جاچ ۳) د ميرمن رابعه د کلام فني جاچ
15	ميرمن نیک بخته	۱) د ميرمن نیک بختي پيژندگلو ۲) د ميرمن نیک بختي د کلام فکري جاچ ۳) د ميرمن نیک بختي د کلام فني جاچ

**مجزوه کتابونه : Recommended Books**

1. د رنگ او بو قافله، ډاکټر اقبال نسيم خټک
2. د پښتو کلاسي شاعري، هميش خليل
3. ساهو ادب، هميش خليل
4. د منتخبو کلاسي شاعرانو د ديوانونو مقدمي

TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

Course Title: پښتو کښي صحافتي ادب

<b>Title</b>	<b>Description</b>
<b>Course</b>	<b>Discipline Specific</b>
<b>Nature of Course</b>	<b>Major</b>
<b>No. of Credit Hours</b>	<b>03 C.H.</b>
<b>Total Teaching Weeks</b>	<b>18</b>
<b>Code</b>	<b>PKH 483</b>
<b>Objectives of the Course</b>	(۱) طالب علمانو سره د پښتو صحافت تعارف کول - (۲) د پښتو صحافت د تاريخ او ارتقائي سفر نه ئې خبرول - (۳) د ژبې او صحافت په رشته رڼا اچول -

Course Contents:

S.No	Title	Description
01	صحافت او د صحافت اهميت او ضرورت	(۱) د صحافت تعريف (۲) د صحافت اغراض و مقاصد (۳) د صحافت اهميت (۴) د صحافت ضرورت
02	د صحافت تاريخي شاليد	(۱) په نړيوال کچ د صحافت پېلات (۲) په پښتو کښي د صحافت ابتداء
03	د پښتو صحافت د (۱۸۴۷ء نه تر ۱۹۵۳ء)	(۱) د پښتو ورځپاڼې او اوونيز اخبارونه (۲) د پښتو مجلې او رسالې (۳) انصاف (۱۹۴۷ء) (۴) الصادقه (۱۹۴۸ء) (۵) اسلم (۱۹۵۳ء)
04	د پښتو صحافت د (۱۹۵۱ء نه تر ۱۹۵۵ء)	(۱) جمهور اسلام (۱۹۵۱ء) (۲) اباسين (۱۹۵۱ء) (۳) لار (۱۹۵۵ء) (۴) پښتو (۱۹۵۵ء) (۵) هلال نو (۱۹۵۵ء)
05	د پښتو صحافت د (۱۹۵۷ء نه تر ۱۹۵۹ء)	(۱) قند (۱۹۵۷ء) (۲) ننگياله (۱۹۵۷ء) (۳) دوران (۱۹۵۷ء) (۴) خپلواک (۱۹۵۸ء) (۵) ژوند (۱۹۵۸ء) (۶) رڼا (۱۹۵۹ء)
06	د پښتو صحافت د (۱۹۶۰ء نه تر ۱۹۷۱ء)	(۱) غنچه (۱۹۶۰ء) (۲) ليکوال (۱۹۶۳ء) (۳) امن (۱۹۷۱ء)

TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

07	د پښتو صحافت (۱۹۷۶ء نه تر ۱۹۹۰ء)	(۱) پلوشه (۲) جرس (۳) ليکوال (۴) گهيځ
08	د پښتو صحافت (۱۹۹۰ء نه تر ۲۰۰۰ء)	(۱) پاڅون (۲) انگازه (۳) ښکلا (۴) چغه
09	اليکټرانک ميډيا او پښتو صحافت	(۱) رېډيو د آزادۍ نه وړاندې (۲) رېډيو د آزادۍ نه پس
10		(۳) نړيوال رېډيو او پښتو صحافت (۴) ډيوه رېډيو (۵) مشال رېډيو (۶) بي بي سي
11		(۸) ټيلي ويژن او پښتو صحافت (۹) پاکستان ټيلي ويژن پېښور او پښتو صحافت
12		(۱۱) پښتو صحافت او ذاتي ټيلي ويژن چېنلونه (۱۲) اے وي ټي ځېبر (۱۳) افغان ټي وي (۱۴) مشرق ټي وي (۱۵) پښتون ټيلي ويژن
13		(۱۶) په نړيواله سطح د پښتو خپروني او پښتو صحافت (۱۷) د افغانستان پښتو ټيلي ويژن چېنلونه او پښتو صحافت (۱۸) بي بي سي او پښتو صحافت
14	سوشل ميډيا او پښتو صحافت	(۱) د فېس بک پاڼي او پښتو صحافت (۲) د يو ټيوب ذاتي چېنلونه
15	وېب پاڼي او پښتو صحافت	(۱) ملکي وېب پاڼي او پښتو صحافت (۲) نړيوالې وېب پاڼي او پښتو صحافت

مجوزہ کتابونہ : Recommended Books

1. پاکستان مين ادبي رسائل کی تاريخ، ډاکټر انور سديد
2. پښتو خپروني، حبيب الله رفيع

3. د پښتو نثر اته سوه کاله، زلمه هېواد مل  
 4. د پښتو ادبي تحريکونه، ډاکټر راج ولي شاه خټک  
 5. په سرحدي صوبه کېښې د صحافتي او ادبي مجلو روايت، ډاکټر محمد همایون  
 هما

**Course Title:** پښتو کېښې تحقيق او تنقيد

<b>Title</b>	<b>Description</b>
<b>Course</b>	<b>Discipline Specific</b>
<b>Nature of Course</b>	<b>Major</b>
<b>No. of Credit Hours</b>	<b>03 C.H.</b>
<b>Total Teaching Weeks</b>	<b>18</b>
<b>Code</b>	<b>PKH 482</b>
<b>Objectives of the Course</b>	(۱) چې طالب علمان په پښتو کېښې د شوي تحقيقي او تنقيدي زیارونو نه خبر شي/ - (۲) چې طالب علمان د نوي تحقيق دپاره تيار کړي شي -

**Course Contents:**

S.No	Title	Description
01	تحقيق او تنقيد	(۱) تحقيق څه ته وائي؟ (۲) تنقيد څه ته وائي؟ (۳) د تحقيق او تنقيد څه رشته ده؟
02		(۱) د تحقيق په ميدان کېښې شوي تحقيقي کار (۲) د تنقيد په ميدان کېښې شوي تحقيقي کار
03	په اولسي ادب شوي تحقيق	(۱) په پښتو فولکلور د شوي تحقيقي کار شاليد (۲) په غير تحريري اولسي ادب شوي تحقيقي کار (۳) په تحريري اولسي ادب شوي تحقيقي کار
04	د پښتو ادب اوله دوره	(۱) په ورومې دوره کېښې تحقيقي او تنقيدي زیارونه (۲) په ورومې دوره شوي تحقيقي او تنقيدي زیارونه
05	د پښتو ادب دوېمه دوره	(۱) په دوېمه دوره کېښې تحقيقي او تنقيدي زیارونه (۲) په دوېمه دوره شوي تحقيقي او تنقيدي زیارونه
06	خوشحاليات	(۱) د خوشحال بابا تحقيقي او تنقيدي زیارونه (۲) په خوشحالياتو شوي تحقيقي او تنقيدي زیارونه

07	د خوشحال بابا کورنی	(۱) د خوشحال د کورنی تحقیقي او تنقیدي زیارونه (۲) د خوشحال په کورنی شوې تحقیقي او تنقیدي زیارونه
08	د پښتو ادب کلاسیک دوره	(۱) د کلاسیک شاعرانو تحقیقي او تنقیدي نظریات (۲) په کلاسیک شاعرانو شوې تحقیقي او تنقیدي زیارونه
09	د پښتو ادب جدیده دوره	(۱) په پښتو غزل شوې تحقیقي او تنقیدي زیارونه (۲) په پښتو نظم شوې تحقیقي او تنقیدي زیارونه
10	قیصه ایز ادب	(۱) په پښتو افسانه شوې تحقیقي او تنقیدي زیارونه (۲) په پښتو ډرامه شوې تحقیقي او تنقیدي زیارونه (۳) په پښتو ناول شوې تحقیقي او تنقیدي زیارونه
11	پښتو کبې سفرنامه، رپورتاژ، تکل	(۱) په سفرنامه شوې تحقیقي او تنقیدي زیارونه (۲) په رپورتاژ شوې تحقیقي او تنقیدي زیارونه (۳) په تکل شوې تحقیقي او تنقیدي زیارونه
14	د پښتو ادبیاتو او د پښتنو تاریخ	(۱) د پښتو ادبیاتو په تاریخ شوې تحقیقي زیارونه
15		(۲) د پښتنو په تاریخ شوې تحقیقي زیارونه

**Recommended Books :** مجوزه کتابونه :

- (۱) په پښتو کبې تحقیق او تنقید، ډاکټر صاحب شاه صابر  
(۲) تنقید په پښتو ادب کبې، ډاکټر حنیف خلیل  
(۳) پښتو زبان و ادب کی تاریخ (ایک خاکه)، ډاکټر حنیف خلیل

## ARCHEOLOGY

### Detail of Courses

**COURSE CODE ARC- 115**     **ARCHAEOLOGICAL HERITAGE OF PAKISTAN**     **CR. HRS - 3**

This course is designed to provide an abstract view of the heritage of Pakistan. Some portions are totally regional based and can be explained within the given limits of present administrative boundaries.

1. Introduction  
Stone age to first agricultural communities
2. Urban Revolutions  
First Urbanism and its down fall (2600 BC to 5<sup>th</sup> century BC)  
Second Urbanism (5<sup>th</sup> century BC)
3. Religions and their Socio-Political Role  
Buddhism, Hinduism, Jainism, Sikhism etc.
4. Establishment of Kingdoms/Empires: regional/ provincial perspective; focus must remain over cities, monuments etc.
5. Establishment of States: Regional/ Provincial perspective; focus must remain over Cities, Monuments etc.

### **Recommended Readings**

- Dani, A.H. (1981). *Indus Civilizations New Perspective*, Islamabad.
- Dauids, R.T.W. (1926). *Buddhism: Its History and Literature*, 2' ed. London.
- Fairservis, W.A. (1975). *The Roots of Ancient India*, 2<sup>nd</sup> ed., Chicago.
- Khan, F.A. (2002). *The Kot Diji Culture*, Khairpur University.
- Kenoyer, M. (1998). *Ancient Cities of the Indus Valley Civilization*, Oxford.
- Mackay, E.J. (1938). *Further Excavations at Mohenjo-Daro*, Vol. I, Delhi.
- Masrshall, J. (1931). *Mohenjo-Daro and the Indus Civilization*, London.
- Thomas, E.J. (1975). *The Life of the Buddha as Legend and History*, London.

**COURSE CODE ARC- 116**

**INTRODUCTION TO ARCHAEOLOGY- I**

**CR. HRS: 03**

**Course Objectives**

This course is designed to acquire the knowledge about the basic concepts of Archaeology. This will help the students to get knowledge about the relation of Archaeology with Social Sciences and field Archaeology. The students will also visit to different museums and local sites of Archaeology.

**Theory**

- Definition and terminology of Archaeology
- Aims and objectives of Archaeology
- Brief history and development of Archaeology
- Relation of Archaeology with History, Anthropology
- Geography, Geology, Zoology
- Botany, Physics and Chemistry

**Practical**

- Visit to local sites and museums
- Photographic documentation of archaeological site
- Identification and drawing of artefacts
- Location of sites/monuments on the maps

**Recommended Readings**

Wheeler, R.E.M. (1961). *Archaeology from the Earth*, London.  
Agrawal, D.P. and Ghosh, A. (eds.) (1973). *Radiocarbon and Indian Archaeology*, Bombay.  
Aitkin, M.J. (1990). *Science- based Dating in Archaeology*, London: Longman.  
Bowman, S.G.E. (1990). *Radiocarbon Dating, the British Museum Publication*, London.  
Hole, F. and Heizer, R.F. (1977). *Prehistoric Archaeology: A brief Introduction*, New York.  
Joukowsky, M.A. (1980). *Complete Manual of Field Archaeology*, USA.

**COURSE CODE ARC- 126**

**INTRODUCTION TO ARCHAEOLOGY-II**

**CR. HRS: 03**

**Course Objectives**

This course is designed to acquire the knowledge about the basic concepts of Archaeology. This will help the students to get knowledge about the different techniques of dating and chronology of artifacts. The students will be able to know about various techniques of excavations.

**Theory**

- Basic concept of Archaeology, artefacts, stratigraphy, archaeological sites, settlement pattern, context
- Survey in Archaeology



- Excavation Techniques
- Chronology, artefacts
- coins, inscriptions, C14 dating
- dendrochronology and correlation of artefacts

### Practical

- Visit to local sites and museums
- Photographic documentation of archaeological site
- Identification and drawing of artefacts
- Location of sites/monuments on the maps

### Recommended Readings

Wheeler, R.E.M. (1961). *Archaeology from the Earth*, London.  
Agrawal, D.P. and Ghosh, A. (eds.) (1973). *Radiocarbon and Indian Archaeology*, Bombay.  
Aitkin, M.J. (1990). *Science-based Dating in Archaeology*, London: Longman.  
Bowman, S.G.E. (1990). *Radiocarbon Dating, the British Museum Publication*, London.  
Fagan, B.M. (1991). *In the Beginning: An Introduction to Archaeology*, Harper Collins, 7<sup>th</sup> edition.  
Hole, F. and Heizer, R.F. (1977). *Prehistoric Archaeology: A brief Introduction*, New York.  
Joukowsky, M.A. (1980). *Complete Manual of Field Archaeology*, USA.

**COURSE CODE ARC- 236**

**ANCIENT HISTORY OF SOUTH ASIA**

**CR. HRS – 3**

### Course Objectives

This course is designed to acquire the knowledge about the basic concepts of Archaeology. This will help the students to get knowledge about the different periods of history.

-

### Part – A

- Introduction
- Sources of ancient history
- Aryans: their social, political, cultural, economic and religious life
- Achaemenians rule in Pakistan
- Alexander's invasion of Pakistan
- Mauryan dynasty: Administration of Chandragupta Maurya, Asoka's contributions towards Buddhism

### Part -B

- Indo-Greeks
- Indo-Scythians
- Indo-Parthians
- Kushans: Achievements of Kanishka
- Sassanians
- Huns (Hephthalites)

- Hindu Shahis

### **Recommended Readings**

- Basham, A.L. (1954). *The Wonder that was India*, New York, rpt. India, 1963.  
Qureshi, I.H. (ed.) (1967). *A Short History of Pakistan*, Book One, Karachi.  
Rahman, A. (1979). *The Last Two Dynasties of the Śāhis*, Islamabad.  
Smith. V.A. (1914). *The Early History of India, from 600 BC to the Muhammad Conquest*, Oxford.  
Thapar, R. (1979). *A History of India*, Vol.1, New York: Penguin Books.

### **Journals:**

- *Ancient Pakistan*
- *Journal of the Pakistan Historical Society*

**COURSE CODE ARC- 244**

**STONE AGE OF PAKISTAN**

**CR. HRS – 3**

### **Course Objectives**

This course is designed to acquire the knowledge about the basic concepts of Stone age of Pakistan. This will help the students to get knowledge about the different periods of stone age of Pakistan and Khyber Pakhtunkhwa.

### **Theory**

- Introduction
- Palaeolithic (Lower, Middle and Upper): Soan Valley, Sanghao Cave, Rohri Hills, Ghaligai Rock Shelter
- Mesolithic: Thar Desert, Khanpur Cave, Jamal Garhi Cave, Rohri Hills
- Neolithic: Mehargarh, Jhandi Babar I, Kili Gul Muhammad, Gumla, Sheri Khan Tarakai
  
- **Practical**
- Location of prehistoric sites on the map
- Stone tools and their identification
- Visit to sites in the area

### **Recommended Readings**

- Agrawal, D.P. (1982). *Archaeology of India*, London: Curzon Press Ltd.  
Allchin, R & Allchin, B. (1982). *The Rise of Civilizations in India and Pakistan*, UK.  
De Terra, H. and Paterson, T.T. (1939). *Studies on the Ice Age in India and Associated Human Cultures*, Washington.  
Khan, F., Knox, J. R. and Thomas, K.D. (1991). *Explorations and Excavations in Bannu District of North West Frontier Province of Pakistan, 1985-1988*, London.  
Paterson, T.T. and Drummond, H.J.H. (1962). *Soan the Palaeolithic of Pakistan*, Karachi.  
Salim, M. (1986). *The Middle Stone Age Cultures of Northern Pakistan*, Islamabad.

**Journals:**

- Ancient Pakistan
- Ancient Sindh
- Frontier Archaeology
- Pakistan Archaeology
- Lahore Museum Bulletin
- Journal of Asian Civilizations

**COURSE CODE ARC- 245**

**BRONZE AGE OF PAKISTAN**

**CR. HRS – 3**

**Course Objectives**

This course is designed to acquire the knowledge about the basic concepts of Bronze Age of Pakistan. This will help the students to get knowledge about the different features of Bronze of Pakistan and Khyber Pakhtunkhwa. The students will be able to know about various types of Urbanism in Pakistan.

**Theory**

- Introduction
- Indus Urbanization (Early, Mature and Late Period)
- Mehrgarh, Jhandi Babar II
- Amri, Kot Diji
- Rahman Dheri
- Gandi Umar Khan, Maru, Noshero
- Harappa, Mohen-Jo-Daro
- Post Indus Period: Pirak, Jhukar, Jhangar, Cemetery-H (Harappa)
- Gandhara Grave Sites
- Taxila, Swat, Dir, Chitral
- Peshawar Valley and the emergence of Iron Age

**Practical**

- Location of sites on the map
- Identification of artefacts of various periods
- Visit to Bronze sites in the area

**Recommended Readings**

- Allchin, R and Allchin, B. (1982). *The Rise of Civilization in India and Pakistan*, UK.
- Asthana, S. (1985). *Pre- Harappan Cultures of India and the Borderlands*, New Delhi.
- Dani, A.H. (1981). *Indus Civilization – New Perspectives*, Islamabad.
- Kenoyer, M. (1998). *Ancient Cities of the Indus Valley Civilization*, Oxford.
- Lal, B.B. and Gupta, S.P. (1984). *Frontiers of the Indus Civilizations*, New Delhi.
- Lal, B.B. (1997). *The Earliest Civilizations of South Asia*, New Delhi.
- Mackay, E.J. (1938). *Further Excavations at Mohenjo-Daro*, Vol. I, Delhi.
- Wheeler, S.M. (1966). *Civilizations of the Indus and Beyond*, London.

**Journals:**

- Ancient Pakistan
- Journal of Asian Civilizations
- Lahore Museum Bulletin
- South Asian Archaeology
- Pakistan Archaeology
- Pakistan Heritage

**COURSE CODE ARC- 355**

**INDUS CIVILIZATION**

**CR. HRS – 3+1**

**Course Objectives**

This course is designed to acquire the knowledge about the basic concepts of Indus Valley Civilization of Pakistan. This will help the students to get knowledge about the different features of Indus Valley Civilization.

**Theory**

**1. Introduction**

- Terminology of the Indus Civilization
- Environmental background
- Discovery of Indus Civilization
- Present state of research on Indus Civilization

**2. Early Indus Period (from Mehargarh to the Rise of Mature Indus Period)**

- Distribution of Settlements (Tochi-Gomal/ Hakra/ Amrian/ Kot Dijian / Harappan)
- Development of Art and Architecture
- Major settlements of Early-Indus Civilization

**3. Mature Indus Period**

- Settlement pattern
- Art and architecture
- Town planning
- Seals
- Major crafts
- The Indus scripts
- Trade relations
- Decline of the Indus Civilization

**4. Late Indus Period**

- Settlement pattern
- Late Indus Cultures in Sindh, Punjab, Baluchistan, and Gujarat

### Practical

- Visit to related sites
- Prepare map of Mature Indus period, Kot Dijian period and late
- Pottery identification of various periods

### Recommended Readings

- Allchin, B. and Allchin, R. (1968). *The Birth of Indian Civilization*, London.
- Asthana, S. (1985). *Pre-Harappan Cultures of India and the Border lands*, New Delhi.
- Chakrabarti, D.K. (1990). *The External Trade of the Indus Civilization*, Delhi.
- Dani, A.H. (1981). *Indus Civilization– New Perspective*, Islamabad.
- Fairservis, W.A. (1975). *The Roots of Ancient India*, 2<sup>nd</sup> ed., Chicago.
- Kenoyer, M. (1998). *Ancient Cities of the Indus Valley Civilization*, Oxford.
- Khan, F.A. (1964). *The Indus Civilization and Early Iran*, Karachi.



## ECONOMICS

Development Economics

Course Code: ECON-233

Cr. Hrs-3

Course Introduction:

This is a first course in development economics that studies the economics of low and middle income countries. Topics include the structure of developing countries, their institutions, the policies their governments follow, the contours of poverty and inequality, and the ongoing struggles with economic growth. Course Objectives: To introduce the concept of growth and development and familiar students with different growth theories. Learning Outcomes: Students are expected to learn about the theoretical foundations for different policy issues such as--What is the role of markets? Is government intervention in a market is a good thing? Do we need to be concerned about inequality? And why? What are institutions, and how do they facilitate or hinder economic development? Is development necessarily uneven, with some sectors growing and others stagnating? How do we think about the political economy of development: from voting or lobbying all the way to conflict? What are local problems and policies and what are international problems and policies? Course Contents: 1. Scope and New Developments: Definitions: Economic Development and Growth, Identification of Development variables. Scope and Significance of Development Economics. Characteristics of LDC's. Measurement of Economic Development and Growth. Per Capita Income approach, Quality of Life Index / HDI etc. Historical overview of world development and emerging major issues pertaining to Less Developed Countries (LDC's). Why the whole world is not developed? 2. Major Theories of Development: Classical and Neo-classical Theories, Adam Smith and Competitive Capitalism, Vicious Circle of Poverty, Stages of Economic Growth, Balanced and Unbalanced Growth, Big Push Theory. Dependency Theory, Structuralist's View Point. Endogenous Growth Theory: New growth Theory. Income Convergence/Divergence debate. Market Friendly Approach. 3. Agriculture and Industry: Agriculture vs. Industry: Development Debate. Lewis' Model of surplus Labor. Rains' Fei Model and its critical review. Transforming Agriculture, Underemployment problem. Role of Agriculture: Market for Industrial Output, Provision of Input, food, Complementarities, productivity growth. 4. Population, Education and Human Capital: Demographic Transition,

Human Resources as a source of growth and their contributions. Investment in education and returns. Models of Employment & Unemployment: Time Criterion, Productivity Criterion and New Index etc., and Employment generation Strategies/Techniques. 5. International Debt, Aid/Assistance: Why international borrowing? Two Gap Model, Aid commitments and disbursement. Sources of borrowing. Debt Cycle Theory/Stages. Debt Burden: Debt Servicing, Debt Laffer Curve, Debt buy back etc., Latin American Debt Crises, ASEAN Crises, Debt Problem of LDC's and South Asia, Debt rescheduling etc. 6. Poverty and Income Distribution: 27 Definitions and Measurement of Poverty/Poverty Line. Poverty concepts/definitions. Absolute Poverty, Relative Poverty, Income approach, Expenditure approach, Basic needs approach, Poverty of Opportunities Index (POPI) and Calorie-based approach etc. Poverty Indicators. Poverty by socio-economic groups. Sources, impacts and policies to combat poverty. Strategies and tools to combat poverty. Growth and Income Inequality in the world. 7. Economic Growth and Environment: Model of Environment and Economic Activity. Market Based Approach and Externalities. Deforestation and Renewable Resources, Measuring environment values. Deforestation and Macroeconomic Environment. Industrialization and its environmental cost, Use of Pesticides and Environmental Impacts. Natural resources degradation. Cost of Pollutions/Environmental degradation. International awareness about environment, production and need for Reforms. Notes: Students shall visit Planning commission of Pakistan to observe process of planning and development. Recommended Readings/Books: 1. Balasubramanyam V. and Lall, S. Current Issues in Development Economics. McMillan London. Latest Edition. 2. Cypher J. M. and Dietz James L. The Process of Economic Development. Routledge. Taylor Francis Group, London/New York. Latest Edition. 3. Todaro M. P., Economic Development in the third World. Heinemann, London. Latest Edition. 4. Chenery H. B. and Srinivasen. Hand Book of Development Economics. Latest Edition. 5. Herrick B. and Kindleberger C. Economic Development. McMillan, New York. Latest Edition. 6. Jones H. G. An Introduction to Modern Theories of Economic Growth. McGraw Hills. Latest Edition. 7. Meier Gerald M. Leading Issues in Economic Development. Oxford University Press. Latest Edition

Intermediate Macroeconomics

Course Code: ECON-242

Cr. Hrs-3

Course Introduction:

The course is designed for the intermediate students having studies principles of Macroeconomics.

This course includes the data of macroeconomics, national income, money, prices and unemployment, economy in the short as well as long run and open economy macroeconomic aggregates. Course Objectives: The objective is to provide students with a clear understanding of the intermediate concepts, tools of analysis and terminologies used in macroeconomics

Learning Outcomes: The student is expected to learn the intermediate concepts of macroeconomics and open economy macroeconomic aggregates. Course Contents: A. Introduction to Macroeconomics

1. The Science of Macroeconomics (Mankiw Ch#1, ABC Ch#1, Williamson Ch#1) 1.1 What Macroeconomists Study 1.2 How Economists Think 2. The Data of Macroeconomics (Mankiw Ch#2, ABC Ch#2, Williamson Ch#2) 2.1 Measuring the Value of Economic Activity: Gross Domestic Product 2.2 Measuring the Cost of Living: The Consumer Price Index 2.3 Measuring Joblessness: The Unemployment Rate 2.4 From Economic Statistics to Economic Models 3. National Income: Where it comes from and where it goes? (Mankiw Ch#3, ABC Ch#3, Williamson Ch#4) 3.1 What Determines the Total Production of Goods and Services? 3.2 How Is National Income Distributed to the Factors of Production? 3.3 What Determines the Demand for Goods and Services? 3.4 What Brings the Supply and Demand for Goods and Services into Equilibrium? B. Money, Prices, and Unemployment 4. The Monetary System: What it is and How it Works? (Mankiw Ch#4, ABC Ch#7, Williamson Ch#11, 16) 4.1 What Is Money? 4.2 The Role of Banks in the Monetary System 4.3 How Central Banks Influence the Money Supply 5. Inflation: It Causes, Effects, and Social Costs (Mankiw Ch#5, ABC Ch#7,12, Williamson Ch#18) 5.1 The Quantity Theory of Money 5.2 Seigniorage: The Revenue From Printing Money 5.3 Inflation and Interest Rates 5.4 The Nominal Interest Rate and the Demand for Money 5.5 The Social Costs of Inflation 5.6 Hyperinflation 6. Unemployment (Mankiw Ch#7, ABC Ch#3,12, Williamson Ch#17) 6.1 Job Loss, Job Finding, and the Natural Rate of Unemployment 6.2 Job Search and Frictional Unemployment 6.3 Real-Wage Rigidity and Structural Unemployment 6.4 Labor-Market Experience: The United States 6.5 Labor-Market Experience: Europe C. The Economy in the Short Run: Economic Fluctuations 7. Introduction to Economic Fluctuations



(Mankiw Ch#10, ABC Ch#8, Williamson Ch#3) 7.1 The Facts about the Business Cycle 7.2 Time Horizons in Macroeconomics 7.3 How the Short Run and Long Run Differ 7.4 The Model of Aggregate Supply and Aggregate Demand 7.5 Aggregate Demand 7.6 The Quantity Equation as Aggregate Demand 7.7 Why the Aggregate Demand Curve Slopes Downward 7.8 Shifts in the Aggregate Demand Curve 7.9 Aggregate Supply 7.10 The Long Run: The Vertical Aggregate Supply Curve 7.11 The Short Run: The Horizontal Aggregate Supply Curve 7.12 From the Short Run to the Long Run 7.13 Stabilization Policy 7.14 Shocks to Aggregate Demand 7.15 Shocks to Aggregate Supply 8. Aggregate Demand I: Building the IS-LM Model (Mankiw Ch#11, ABC Ch#9) 8.1 The Goods Market and the IS Curve 8.2 The Money Market and the LM Curve 8.3 The Short-Run Equilibrium 9. Aggregate Demand II: Applying the IS-LM Model (Mankiw Ch#12, ABC Ch#11) 9.1 Explaining Fluctuations with the IS-LM Model 9.2 IS-LM as a Theory of Aggregate Demand 9.3 The Great Depression 10. Aggregate Supply and the Short-run Tradeoff between Inflation and Unemployment (Mankiw Ch#14, ABC Ch#11, and Williamson Ch #13) 10.1 The Basic Theory of Aggregate Supply 10.2 Inflation, Unemployment, and the Phillips Curve 11. A Dynamic Model of Aggregate Demand and Aggregate Supply (Mankiw Ch#15) 11.1 Elements of the Model 11.2 Solving the Model 11.3 Using the Model 11.4 Two Applications: Lessons for Monetary Policy 11.5 Toward DSGE Models 12. Classical Business Cycle Analysis: An Equilibrium Business Cycle Model (ABC Ch#10, Williamson Ch#12) 12.1 Business Cycles in the Classical Model 12.2 Money in the Classical Model 12.3 The Misperceptions Theory and the non-neutrality of Money 35 Recommended Readings/Books: 1. Mankiw, N. Gregory. Macroeconomics. Worth Publishers. Latest Edition. 2. Abel, Andrew, B., Bernanke, Ben S. & Croushore, D. Macroeconomics. Addison-Wesley. Latest Edition. 3. Williamson, Stephen D. Macroeconomics. Prentice Hall. Latest Edition. 4. Dennis W Jansen, Robert Ekelund. Intermediate Macroeconomics. Latest

Intermediate Microeconomics

Course Code: ECON-232

Cr. Hrs-3

Course Introduction:

This course is designed to teach the concept of economic models, utility, market structure, production function and game theories. It also emphasize upon the welfare concept in economics.

Course Objectives: The course seeks to provide an understanding of the core economic models for the analysis of decisions by consumers, markets and firms. Learning Outcomes: It would provide some illustrations of the applications of some models to contemporary issues in economics.

Course Contents: 1. An introduction to Economic models: Optimization techniques, Constructing a model, Optimization and equilibrium, 2. Utility: Constructing a Utility Function, Maximization of function of one variable Functions of several variables, Constrained maximization, utility maximization Axioms of rational choice, Utility, Indifference curves and marginal rate of substitution Utility functions for specific preferences, Utility maximization: optimization principle Indirect utility function, Income and substitution effects, Demand relationship among goods Demand functions, Changes in income, Changes in goods price, Individual demand curve Compensated demand curve, Mathematical development response to price changes, Consumer surplus revealed preferences, Substitutes and compliments Substitutability with many goods composite commodities. 3. From Individual to Market Demand: The Inverse Demand Function, the Elasticity of a Linear Demand Curve Elasticity and Demand, Elasticity and Revenue, Elasticity and Marginal Revenue. Supply: Market supply, Market equilibrium, Effect of tax Taxation with Linear Demand and Supply Passing along a Tax, Consumer and producers' burden of tax, deadweight Loss of a Tax. 4. Production function: Marginal productivity, Iso-quant maps and the rate of technical substitution Returns to scale, the elasticity of substitution, Cost functions Cost functions and the shifts in the cost curves, Short run long run distinction, Profit maximization. 5. Firms: The nature and behavior of firms, Profit maximization, Marginal revenue, and short run supply by a price taking firm, Profit functions, Profit maximization and input demands. 6. Monopoly: Linear Demand Curve and Monopoly, Markup Pricing, The Impact of Taxes on a Monopolist, Inefficiency of Monopoly, Deadweight Loss of Monopoly, Price Discrimination, First Degree Price Discrimination, Second-Degree Price Discrimination, Third-Degree Price Discrimination 7. Oligopoly: Choosing a Strategy, Quantity Leadership, the Follower's Problem,

the Leader's Problem Price Leadership Comparing Price Leadership and Quantity Leadership, Simultaneous Quantity Setting Cournot Equilibrium, Simultaneous Price Setting, Collusion. 8. Game theory: 25 Basic concepts, Nash equilibrium, Existence of Nash equilibrium, the prisoners dilemma, A two period game, Pricing in static games, Entry exit and strategy, Games of incomplete information. 9. The Edgeworth Box: Trade, Pareto Efficient Allocations, Market Trade, The Algebra of Equilibrium Walras' Law, Relative Prices, Equilibrium and Efficiency, Pareto Efficiency, Social Welfare Functions Welfare Maximization, Individualistic Social Welfare Functions, Fair Allocations. Recommended Readings/Books: 1. Varian, Hal. R. Intermediate Microeconomics: A Modern Approach. Latest Edition. 2. Pindyck and Rubinfeld. Microeconomics. Latest Edition. 3. Nicholson, Walter and Snyder, Christopher. Microeconomic theory Basic Principles and Extensions. Latest Edition. 4. Frank, Robert. H. Microeconomics and Behavior. Latest Edition.

### Principles of Macroeconomics

Course Code: ECON-123

Cr. Hrs-3

#### Course Introduction:

The course is designed for the beginners with no formal background or little acquaintance with economics. The course includes topics on national income, components and aggregate demand. The teacher is expected to draw examples from the surrounding world to clarify the concepts.

Course Objectives: The objective is to give the students with a clear understanding of the basic concepts, tools of analysis and terminologies used in macroeconomics Learning Outcomes: At the

end of the course, the students will learn the basics of macroeconomics, national income accounts,

and open economy macroeconomic aggregates. Course Contents: 1. Introduction: The economy in

aggregate, Complexities of the world of business, Scope of macroeconomics, Brief account of

classical and the development of macro-economic after the World War-II, Concept of business

cycles: Boom and Depression, three concerns of macroeconomics, Inflation, GDP growth and

unemployment, Macroeconomic variables and their mutual relationship, Macro-models as

abstraction from the real economy. 2. National Income: Definition and concept of national income,

Measures of national income: Gross Domestic Product (GDP) and Gross National Product (GNP),

GDP at factor cost and at market prices, Computation of national income: Product, Income and Expenditure approaches, Circular flow of income, Nominal versus Real income, Per capita income and the standard of living. 3. Components of Aggregate Demand: The Concept of Open and closed economy models, Concept of aggregate markets: Product, Money, Labor and Capital markets, Components of aggregate demand: Consumption, Investment and Government spending, Income and expenditure identities. Money and Monetary policy, Fiscal Policy. Recommended Readings/Books: 1. Mankiw, G– Principles of Economics. Latest Edition. 2. Samulson and Nordrons – Economics. Latest Edition. 3. Parkin, Michael – Macroeconomics. Latest Edition. 4. Miller, R.L. – Economics Today. Latest Edition. 5. Sloman, John, Economics. Latest Edition

### **Principles of Microeconomics**

Course Code: ECON-112

Cr. Hrs-3

#### **Course Introduction:**

Microeconomics is the subject matter of this course explaining the behavior of specific economic units. The main focus will be on theories of consumption, production, distribution and role of the government. The course will rely heavily on graphical analysis and simple numerical calculations. Course Objectives: To introduce students with the basic tools of microeconomics. Learning Outcomes: Students will be able to understand demand, supply, household behavior, consumer choice, the cost structure of the firms, market structures, market failures and externalities, economic regulations and Good governance. Course Contents:

1. Introduction to Economics: Studying Choice in a World of Scarcity: The No-Free- Lunch Principle , The Cost -Benefit Principle , Reservation Prices , Economic Surplus , Opportunity Cost , The Role of Economic Models , To What Extent should an Activity be Perused , Micro Economic Versus Macro Economics , Economic Naturalism , Positive Versus Normative Economics , Some common Pitfalls for Decision Makers , Conclusion.
2. Consumer Behaviour: Cardinal Approach/Utility Analysis, Marginal Utility, Law of Diminishing Marginal Utility, Law of Equi-Marginal Utility, Consumer Equilibrium Ordinal Approach of Consumer Behavior, Indifference Curves, Features of Indifference Curves, Budget Line, Consumer Equilibrium, Comparison between two approaches Conclusion.
3. Demand & Supply: Demand Function, Law of Demand, Shift in Demand, Change in Demand Factors Affecting Demand, Supply Function, Law of Supply, Changes in Supply Price Equilibrium, Market Equilibrium.
4. Elasticity of Demand & Supply: Price Elasticity of Demand & Supply, Point Elasticity of Demand & Supply Arc Elasticity of demand & Supply, Income Elasticity of Demand & Supply, Cross Elasticity of demand & Supply, Conclusion.

5. Efficiency and Exchange: Market Equilibrium and Efficiency, Economic Surplus, the Cost of Preventing Price Adjustments, Taxes and Efficiency, Conclusion.

6. The Theory of production & Theory of Cost: The Production Function , Total, average and marginal product, Laws of Returns to Scale , Short run Theory of Cost , Seven family cost curves, Relationship between Production and Cost Curves

7. Long- run Theory of Cost: Graphical Representation of Long Run Cost Economies, Diseconomies and Constant Returns to Scale.

8. Market Structure: 8 Perfect Competition vs. Pure Competition, Different Possibilities of SR firm Equilibrium, Profit Maximization in the Short-run and long-run.

9. Monopoly: Short run and Long run Equilibrium under Monopoly. Conclusion (Comparison of both) Imperfect Competition: Monopolistic Competition, Price and output determination in monopolistic competition, Comparison perfect competition with monopolistic competition Oligopoly: Definition, Strategic behavior and game Theory, Price Rigidity and the kinked demand curve, Conclusion (Comparison of both) Labor Markets The Market Demand for Labor, Supply of labor, Shifts in the market demand for and supply of labor, Inefficiency wages, monopsony

Recommended Readings/Books:

1. Mankiw. G, Principles of Economics, Southwest Publishers, Latest Edition.
2. Miller, R. L, Economics Today, Addison Wesley, Latest Edition.
3. Samuelson Nordons –Economics, McGraw-Hill, Inc, Latest Edition.
4. McConnell and Bruce-Principles of Economics, McGraw-Hill, Latest Edition.
5. Koutsoyiannis, A.; Modern Microeconomics, New York, The MacMillan Press Ltd, Latest Edition.

### **Project Appraisals and Investment Analysis**

Course Code: ECON-241

Cr. Hrs-3

Course Introduction:

This course is related to the methodologies used in the selection and appraisal of investment decisions in both the private and the public sectors. Course will focus on the theory and practice of project appraisal and cost-benefit analysis and will discuss their theoretical underpinnings and practical limitations. Course Objectives: To provide students with deeper understanding of a project appraisal and investment decisions. Learning Outcomes: It will provide practical exposure in financial and economic appraisal techniques, which helps the students to make right decisions about their future investment.

Course Contents:

1. Introduction and Overview: Investment – an Overview, Investment Appraisal – Nature and Scope, Investment Appraisal and Financial Decision Making, Cost-Benefit Analysis – Issues and Evolution, Projects and Project Appraisal, Public and Private Sector Appraisal

2. Investment Appraisal – Basic Evaluation Techniques: Introduction, Traditional Methods, Time Value of Money methods. Cash Flows, Capital Budgeting and Investment Decisions: Introduction, Identifying and Using Cash Flows, Capital Market Imperfections, Simple Ways to Cope with Risk

3. Social and Economic Cost-Benefit Analysis: Cost Benefit Analysis – an Illustration, Identifying Costs and Benefits, Valuation of Costs and Benefits, A Case Study in Valuation – Putting Money on Human Life

4. Discount Rate, Risk and Uncertainty in Cost Benefit Analysis: Introduction, The Discount Rate, Theoretical Consistency and Derivation of a Social Rate of Discount, The Social Discount Rate in Practice: A Case Study on Discount Rate Policy in the UK, Risk and Uncertainty, Methods for Handling Risk and Uncertainty. A case study depicts the situation of Pakistan

5. Different Criteria for Project Evaluation: Discounted Measures, Like NPV, IRR, BCR, and Net Benefit-Investment Ratio. Undiscounted measures for project worth. Comparative Analysis for Discounted Measures.

6. Income Distribution through Project Appraisal within and between Generations: Introduction – Income Distribution and Thorny Questions, Diminishing Marginal Utility of Income and Intergenerational Welfare Weights, Income Classes for Distributional Weights, Further Issues, Intergenerational Distribution, Case Study.

Recommended Readings/Books:

1. Steve Lumby and Chris Jones. Corporate Finance: Theory & Practice. Latest Edition.
2. Potts, David. Project Planning and Analysis for Development. Latest Edition.
3. Tan. Economic Analysis of Investment Operations. Latest Edition.
4. Richard Layard and Stephen Glaister. Cost-Benefit Analysis. Latest Edition.

### **World Economic History**

Course Code: ECON-244

Cr. Hrs-3

Course Introduction:

This course surveys the history of colonial expansion from the discovery of the America up to the colonization of the Middle East following the end of the First World War.

Course Objectives:

The course is intended to give students a chronological account of the rise of imperialism and the colonial expansion into Latin America, Asia and Africa.

Learning Outcomes: The course attempts to provide an essential background to understand the historical processes by which modern developed nations became developed, and how the underdeveloped “Third World” originated as part of the same historical process.

Course Contents:

1. Module One: The Discovery of the America to the Rise of Industrial Capital, 1492 – 1770, Introduction: Dependency Theories (Readings: Kuhn – Causes of underdevelopment). The

Discovery of America (Readings: Stavrianos, pp. 74-99), the Origins of the Slave Trade (Readings: Stavrianos, pp. 99-122). Overland trade routes and the Middle East (readings: Stavrianos, pp. 122-141), Origins of colonial expansion in Asia (Readings: Stavrianos, pp. 141-169).

2. Module Two: Industrial Capitalism to Monopoly Capitalism, 1771–1870, the first industrial revolution (Readings: Stavrianos, pp. 169-177), the Latin American Revolutions (Readings: Stavrianos, pp. 177-196), the End of the Slave Trade (Readings: Stavrianos, pp. 196-205), Expansions into the Middle East (Readings: Stavrianos, pp. 205-230). The Conquest of India (Readings: Stavrianos, pp. 230-250)

3. Module Three: Monopoly Capitalism to the First World War, 1870 – 1917, the Second Industrial Revolution. (Readings: Stavrianos, pp. 256-278), the Scramble for Africa (Readings: Stavrianos, pp. 278- 309), the Opium Wars and the Onslaught on East Asia (Readings: Stavrianos, pp. 309-333), Russian Political and Economic Developments (Readings: Stavrianos, pp. 333-349), the Japanese Response (Readings: Stavrianos, pp. 349-367)

4. Module Four: Nationalist Thought and Indigenous Responses to the West Origins of Nationalist Thought I (Readings: Stavrianos, pp. 367-390), Origins of Nationalist Thought II (Readings: Stavrianos, pp. 390-433), The Russian Revolution (Readings: Stavrianos, pp. 484-513). Rise of East Asia: (Readings: Arrighi p 59-77), (Re)-Globalization (Readings: pp. 496-540 from Findlay & O'Rourke also: Stiglitz p1-18).

### Recommended Readings/Books:

1. Stavrianos, L. S.' *Global Rift: The Third World Comes of Age*, (New York: William Morrow and Company. Latest Edition.
2. Kuhn, Frithjof. "Causes of underdevelopment and concepts for development. An introduction to development theories." *The Journal of Institute of Development Studies, NWFPAgriculture*. Latest Edition. 38
3. Arrighi, Giovanni. *Globalization and the Rise of East Asia Lessons from the Past, Prospects for the Future*. Latest Edition.
4. Findlay, Ronald, and Kevin H. O'Rourke. *Power and plenty: trade, war, and the world economy in the second millennium*. Princeton University Press. Latest Edition.
5. Stiglitz, Joseph E. *Globalization and its Discontents*. Latest Edition.

## EDUCATION

NOTE: Complete outlines for the subjects of AD in Education can be found on the following link:

<https://hec.gov.pk/english/services/universities/RevisedCurricula/Pages/Education.aspx>





## Arts & Design

<b>Course Name:</b> Hand Sewing	<b>Course Code:</b> AD-314
<b>Course Structure:</b> Lecture: 0, Practical: 3	<b>Credit Hours:</b> 3(0,3)
<b>Prerequisites:</b> None	

### Course Objectives:

- Understand the importance of needle work.
- Relationship of needle and thread in designing.
- How to embroider a fabric or can be stitched.
- How to do basic needle work.
- Develop an understanding of the principles used in hand sewing.
- Develop the ability to create original designs manually.

### Course Contents:

- Basting.
- Hemming.
- Running.
- Overcasting.
- Over handing.
- Placing Gathers.
- Double gathering or Gauging.
- Shirring.
- Scalloped edge.
- Honey combing or smocking.
- Bindings.
- Over handing.
- Button holes.
- Buttons.
- Eyelet holes.
- Hook and eye.
- Loops.
- Gussets.
- Tucking.
- Plaiting.
- Felling.
- French seam.
- Blind stitch.
- Ruffles.

- Lace edging.
- Whipping.
- Stockinet or darning.
- Grafting.
- Stocking web stitch.
- Fine drawing on heavy woolen material.
- Patching.
- Bias piecing.
- Piping.
- Hem stitch.
- Herringbone stitch.
- Feather stitch.
- Chain stitch.
- Kensinton outline stitch.
- Blanket stitch.
- Embroidery knots.
- Marking.

**Recommended Books:**

- School needlework by Olive. Hapgood.

<b>Course :</b> Photography	<b>Course Code:</b> AD-404
<b>Course Structure:</b> Lectures: 1 Practical: 2	<b>Credit Hours:</b> 3(1,2)
<b>Prerequisites:</b> None	

**Course Objectives**

Understanding of the visual forms and their aesthetic functions, and basic design principles. Development continues throughout the degree program, with attention to such areas as design, color, and lighting. Knowledge and skills in the use of basic tools, techniques, technologies, and processes sufficient to work from concept to finished product. This involves a mastery of the materials, equipment, and processes of the discipline, including but not limited to uses of cameras, film, lighting/digital technologies, processing in black and white, and color, and printing. An understanding of the industrial and commercial applications of photographic techniques.

**Course Contents:**

- Technical
- Camera Handling and Operation
- Focus and Depth of Field
- Exposure: aperture, shutter speed, ISO
- Exposure Modes
- Composition
- Subject/Content
- Framing
- Backgrounds

- Photo Shoot
- Subject and their Backgrounds: Urban Landscapes
- Review and critique
- Learning Objectives
- Putting technical and compositional concepts from Lesson 1 into action
- Choosing backgrounds and viewpoints
- Understanding effect of focal length

**Recommended Books:**

- Bruce BARNBAUM (Author), The Art of Photography: An Approach to Personal Expression, Rocky Nook; 2010.
- FROSH Paul, Image Factory Berg Publishers, USA, 2004.
- GIORDAN Daniel, Art of Photoshop, Sams, USA, 2005.
- FREEMAN Michael, Portrait Photography, Lark, 2003.
- HOY Anne H., The Complete Book of Photography, National Geographic Society, 2005.
- GORDON PARKS and Life Magazine, 100 Photographs that Changed the World, Time Inc. Home Entertainment, USA, 2003.

<b>Course :</b> Research Project	<b>Course Code:</b> AD-699
<b>Course Structure:</b> Lecture: 0, Practical: 6	<b>Credit Hours:</b> 6(0,6)
<b>Prerequisites:</b> None	

**Course Objectives:**

- The aim of the project is to testify students for independent design project planning, development, and execution. The project will be a reflection on the development and research compiled during 7th and 8th semester courses. Students will:
- Work on a design project in their selected area
- Design solutions
- Document their work
- Exhibit

**Course Contents:**

- Development
- Samples
- Prototypes/ Models/ Collection
- Visualization/ Presentation
- Display

**Recommended Books:**

- GILL Basic Perspective, Thames and Hudson, London.
- GLIMCHER & MOSKOWITZ, Great Drawings of All Time, Kodansha International, Tokyo, 1976
- RAYNES JOHN; Anatomy For the Artist, Hamlyn publishing group Ltd., 1979

## PAK STUDY

### Geography of Pakistan: (Foundation-2)

#### Course Objective:

This course focuses on the physical and human environment of Pakistan, its interaction and impact of interaction on both the land and the people. An important part of the course focuses on the actions that people can take to protect and conserve the environment.

#### Course Outline:

- a. Absolute and relative location area, international boundaries and administrative units of Pakistan
- Landforms
- b. Drainage system
- c. Soil: Types and Productivity
- d. Weather & climate: Temperature and rainfall conditions, Climatic regions
- e. Water resources: surface water and ground water resources – their distribution and quality.
- f. Growth and distribution of Population and problems associated with high growth rate.
- g. Agriculture: Rainfall and irrigated agriculture.
- a. Irrigation system:- Types of irrigation, brief history & development of canal irrigation system. Natural and human factors controlling land productivity.
- b. Important crops and their distribution
- h. Mineral Resources: - Metallic and non-metallic Minerals (Excluding fossil fuels)
- i. Industries: Factors controlling the location of industries. Major industries.
- j. Relationship of the geography of Pakistan with its history, cultural diversity, economy, population, and settlement distribution regional variations in developments, and international politics.

#### Recommended Books:

(Latest books to be identified and chapters to be identified)

1. K. U. Kureshi, Geography of Pakistan
2. Nazir Ahmad Khalid, Geography of Pakistan
3. F. A. Shams, Land of Pakistan, Kitabistan Publishing Company, Lahore
4. B. L. C. Johnson, Pakistan: A Geographical Perspective, Heinemann: London
5. Fazal-e-Karim, Pakistan: Geography, Economy and People, Oxford University Press, Karachi, 2003.
6. Government of Pakistan, Environmental Profile of Pakistan
7. Israr-ud-Din (ed), Studies in Pakistan Geography
8. Ahmad, Nazir, Water Resources of Pakistan and their Utilization, Lahore: Privately printed, 1993.
10. Bushra Afzal Abbasi, Geography of South Asia
11. A. R. Kemal, Mohammad Irfan and Naushin Mahmud (eds.), Population of Pakistan: An analysis of 1998 Population and Housing census. Pakistan Institute of Development Economic, 2003.
12. Ahsan Ullah and Hussain Ahmad, Spatial Pattern of Concentration and Dispersion of Manufacturing Industries in Pakistan Journal Geographic Vol. 1 , No. 1, 1997 Mahmood, Mir Anis, Energy Issues in Pakistan, Readings in Economics 1, Pakistan Institute of Development Economics, , Islamabad, 2007.

#### Journals:

Pakistan Geographical Review  
Journal Geographic  
Pakistan Journal of Geography  
Geographical Papers

#### Atlases:

Atlas of Pakistan (Survey of Pakistan)  
Oxford School Atlas for Pakistan (Oxford University Press)  
Political History of Pakistan (1947-to date)

### **Pakistan's Foreign Policy (F-7)**

#### Course Introduction:

This course is designed to familiarize the students with the basic principles and objectives of the foreign policy of Pakistan. The course covers the different conduct of Pakistan foreign policy from 1947 to to-date. Moreover, major issues rising from changing political realities have also been given due weight.

#### Course Outcomes:

Students will be able to outline the major determinants of Pakistan's foreign policy

Comprehend the complexities of global politics explain the dynamic changes in the political system

1. Era of neutrality 1947-1953

a. Pakistan initial problems 1947 b. Kashmir issue c. Commonwealth membership d. Pakistan and the western world e. Pakistan and the communist world f. Pakistan and the Muslim world g. Pakistan and United Nations

2. Era of Alliance 1954-1962

a. Pakistan's alignment with the US b. Response of the Muslim world c. Indus Basin treaty d. Sino-Indo war e. Formation of Non-aligned Movement

3. Era of Bilateralism 1963-1978

a. Pakistan turned towards the communist world b. Pak-Indo war 1965 c. Pakistan and OIC d. Pakistan's role in Sino-US relations e. East Pakistan crisis 1971 and the US role f. Pakistan's withdrawal from SEATO g. Pakistan and the Muslim bloc

4. Era of Non-Alignment 1979-1989

a. Pakistan withdrawal from CENTO b. Pakistan joined NAM c. Pakistan: a frontline state during the Afghan-Soviet war d. Pakistan's close relations with the Muslim World e. Soviet withdrawal

5. Era of Post-Cold War 1990-2001

a. Pakistan's geo-political and strategic triviality in the uni-polar world b. Emergence of Taliban in Afghanistan c. Kashmir insurgency d. nuclear program

6. Post 9/11 Era

a. Terrorism: a uni-focal global challenge b. US renewed interest in Pakistan c. Pakistan: a most important strategic ally of the US in the war on terror

#### Recommended Books:

1. Ahmad, Javeed (ed). Pakistan's Political, Economic and Diplomatic Dynamics. Lahore: Studio 4, 1999.

2. Ahmar, Moonis (ed). Internal and External Dynamics of South Asian Security, Karachi, 1998.

3. Hasnat, Syed Farooq and Pelinka (ed). Security for the Weak Nations. Lahore: Izharsons, 1986.

4. Hussain, Arif. Pakistan: Its Ideology and Foreign Policy. London: Frank Cass, 1966.

5. Hussain, Irtiza. Strategic dimensions of Pakistan's Foreign Policy. Lahore: Progressive Publishers, 1989.

6. Malik, Hafeez. Soviet-American Relations with Pakistan, Iran and Afghanistan. London: Macmillan, 1994.

7. Palmer, Norman D. South Asia and United States Policy. N. Y: Houghton Mifflin, 1996.

8. Qureshi, Ejaz Aslam (ed.). Pakistan and South Asian Environment. Lahore: Sang-e-Meel Publishing, 1991.

9. Shah, Mahtab Ali. The Foreign Policy of Pakistan, Ethnic Impact on Diplomacy, 1947-1994. London: I. B. Tauris, 1997.

10. Shahi, Agha. and Hamid H. Kizalbash (ed.). Pakistan's Security and Foreign Policy. Lahore: Progressive Publishers, 1988.

11. Shelton, U. Kodikara (ed.). External Compulsions of South Asian Politics. Karachi: Oxford University Press, 1993.

12. Yunus, Mohammad. Foreign Policy: A Theoretical Introduction. Karachi: Oxford University Press, 2003.

13. Wirsing, R. G. Pakistan's security under Zia. London: McMillan. 1991
14. Burke, S. M. Pakistan's foreign policy. Karachi: OUP. 1990.
15. Amin Shahid M. Pakistan's Foreign Policy: A Reappraisal. Karachi: Oxford University Press, 2004.
16. Rizvi, Hasan Askari. Pakistan and the Geo-strategic Environment: A study of Foreign Policy. St. Martin's Press, 2000.
17. Shahid, M. Imtiaz (ed), Contemporary Affairs. Lahore: Caravan Enterprises, 2001.

For Further Reading:

1. Nawaz, Shamsa, India's Nuclear Programme, Lahore: Progressive Publishers, 1985.
2. Wayne, A. Wilcox. India, Pakistan and Rise of China. N.Y: Walker, 1964.

Journals:

Pakistan Horizon

Defence Journal

### **Overview of the constitution of Pakistan Economic Development in Pakistan (F-6)**

Course Introduction:

The course has been designed to enable the students to understand various dimensions of Pakistan economy and assess the economic growth over the last sixty five years. It also stresses the importance of meaningful economic development which is sustainable, participatory, environmentally responsible and distributive.

Course Outcomes:

Students will be able to:

Understand key terms and concepts of economics

Identify the various economic institutions and their role in the growth of the economy of Pakistan

Identify the major economic issues and how they affect the economic development of Pakistan

Course Outline:

1. Economics

a. Key economic terms

b. Key economic concepts

2. The economic system of Pakistan.

a. Basic economic systems (socialist, capitalist and mixed)

b. Basic features of Pakistan's economy and infrastructure.

3. Economic Development in Pakistan

a. Obstacles in the way of economic development in Pakistan.

b. Factors promoting economic development in Pakistan

c. Human resource development

d. Agriculture development in Pakistan and reforms

e. Industrial development in Pakistan and labour trade unions

f. Role of informal sector

g. External determinants of Pakistan's economy

4. Economic Planning in Pakistan.

a. The first, second and third five-year plans.

b. Pakistan's development planning experience during the short term

planning period: 1970 – 77

c. Development planning of Pakistan during the fourth, fifth, sixth, seventh

and eight, five-year plans.

Recommended Books:

1. H. Gardezi and Jamil Rashid, Pakistan: The Unstable State. Lahore: Vanguard Books, 1983.
2. Khan, Shahrugh Rafi. 50 Years of Pakistan's Economy: Traditional Topics and Contemporary

- Concerns. Karachi: Oxford University Press, 1999.
3. Nabi, Ijaz. Agarian Economy of Pakistan: Issues and Policies. Karachi: Oxford University Press, 1986.
  4. Govt. of Pakistan, Annual Report 2002-2003: Review of Economy, State Bank of Pakistan. 2003.
  5. Haque, Irfan-Ul. Compendium of Pakistan Economy. Karachi: Royal Book Company, 1987.
  6. S. M., Huda, Economic Development of Pakistan: From Self Reliance to Debt Ridden Economy. Karachi: Royal Book Company, 1996
  7. Saeed Khawaja, Amjad. Economy of Pakistan 2000-2001. Karachi: Institute of Business Management, 2001
  8. Uzair, Mohammad. Economy of Pakistan: Perspective and Problems. Lahore: Royal book Company, 2004.
  9. Ahmad, Khurshid. Elimination of Riba from the Economy. Islamabad: Institute of Policy Studies, 1995.
  10. Willaim E, James. Foundations of Pakistan Political Economy: Towards an Agenda for the 1990s. Karachi: Oxford University Press, 1992.
  11. Akbar Zaidi, S, Issues in Pakistan's Economy. Karachi: Oxford University Press, 1999.
  12. Government of Pakistan, Leading Issues Facing Pakistan Economy, State Bank of Pakistan. 2003.
  12. Husain, Ishrat. Pakistan: The Economy of an Elitist State. Karachi: Oxford University Press, 1999.

Political History of Pakistan (1947-to date)

### **(Foundation-3)**

Course Objective:

The course provides students a brief historical survey of Pakistan's constitutional and political development.

Course Outline:

1. Pakistan: The Early Years (1947-58)
  - a. Independence and Establishment of Pakistan, b. Administrative and Political Problems
  - c. Quaid-i-Azam Muhammad Ali Jinnah as the First Governor General. dThe First Constituent Assembly: Working and Dissolution, e. The Second Constituent Assembly: Formation and Working, f. The One Unit Scheme, g. The 1956 Constitution: Main Features
  - h. The Economy & Foreign Policy, i. The Working of Parliamentary Democracy: An assessment
2. Ayub Era: 1958-1969
  - a. Imposition of Martial Law, b. Major Policies: System of Basic Democracies, Economic, Political and Social Reforms, c. The Constitution of 1962: Main Features. d. Foreign Relations
3. Yahya Regime 1969-1971
  - a. Imposition of Martial Law and the Political Situation, b. The Legal Framework Order and the Elections of 1970, c. Dissolution of One Unit, d. Secession of East Pakistan
4. Zulfikar Ali Bhutto Government 1971-1977
  - a. Major Reforms: Policy of Nationalization, b. The 1973 Constitution: Main Features.
  - c. Foreign Policy, d. Elections, Political Crisis and Imposition of Martial Law
5. Zia Regime: 1977-88
  - a. Major Policies, b. Foreign Policy: Focus on Afghanistan, c. Constitutional Changes: Elections, Revival of the 1973 Constitution, 8th, Amendment and the Restoration of Civilian Rule, d. Muhammad Khan Junejo as Prime Minister (1985-1988)
6. Democratic Governments: 1988-99
  - a. Elections
  - b. Benazir's Governments: Major Policies, Issues and Challenges
  - c. Nawaz Sharif Governments: Policies, Issues and Challenges
  - d. Breakdown of Parliamentary Democracy
  - e. Role of Judiciary

7. Musharraf's Regime: 1999 -2008
  - a. Major Political Developments
  - b. Post 9/11 Events and Impact on Pakistan
  - c. A Brief Look at the Economy and the Foreign Relations
8. Pakistan People's Party rule (2008-2012)
  - a. Martyrdom of Benazir Bhutto
  - b. Elections
  - c. Policies
  - d. Foreign relations

Recommended Books:

1. Keith Callard, Pakistan: A Political Study, 1957.
2. Lawrence Ziring, Pakistan in the Twentieth Century, Karachi: Oxford University Press, 1997
3. G. W. Choudhary, Constitutional Development in Pakistan, Longman Group Ltd., London, 1969
4. S. M. Burke, Pakistan's Foreign Policy: An Historical Analysis, Karachi, OUP, 1966 (latest edition)
5. Hasan Askari Rizvi, The Military and Politics in Pakistan, Lahore, 1974 (latest edition)
6. Herbert Feldman, Revolution in Pakistan, OUP, 1967
7. -----, From Crisis to Crisis, Karachi, OUP, 1972
8. Ayesha Jalal, Democracy & Authoritarianism in South Asia, Lahore: Sang-e-Meel Publications, 1995
9. Shahid Javed Burki, Pakistan Under Bhutto, The Macmillan, 1980
10. Charles Kennedy (Ed.), Pakistan 2005, Karachi, Oxford University Press, 2006
11. Safdar Mahmood, Pakistan: Political Roots and Development 1947-1999, Oxford University Press, Karachi, 2000
12. Anwar Syed, Issues and Realities of Pakistani Politics, Research Society of Pakistan, University of the Punjab, Lahore, 2007
13. M. Asghar Khan, We have Learnt Nothing from History: Pakistan Politics and Military Power, Karachi, Oxford University Press, 2007
14. Hamid Yusuf, Pakistan in Search of Democracy: 1947-1977, Lahore, Afro-Asia Publications, 1980
15. Charles Kennedy, Islamization of Laws and Economy: Case Study on Pakistan, Institute of Policy Studies, Islamabad, 1996
16. Ian Talbot, Pakistan: Modern History, Lahore, Vanguard, 1999
17. Muhammad Waseem, Democratization in Pakistan: A Study of the 2002 Elections, Lahore, Oxford University Press, 2007.

**Social Change and Development in Pakistan (F-8)**

Course Introduction:

This course will introduce students to the key concepts and theories of social change and development. Furthermore, it will facilitate understanding of the factors influencing social change and the main effects of social change in Pakistan.

Course Outcomes:

Students will be able to: Explain the concept of social change Explain the theories of social change and development and differentiate between them Identify the factors influencing social change and their impact on Pakistani society.

Course Outline:

1. Social Change
  - a. Concept of Social Change
  - b. Concept of Development
2. Theories of social change and development
  - a. Classical theories: Herbert Spencer, Oswald Spangler, Karl Marx, Max Weber and Ibn-i Khaldun.
  - b. Modern Theories: Talcott Parsons, Wright Mills.



c. Development Theories: W. W. Rostow, S. P. Huntington.

3. Factors influencing social change

a. Economic factors b. Means of Communication c. Educational Policies and Institutions

d. Science and Technology

4. Effects of Social Change

a. Growth of Middle Class b. Creation of New Professions c. Change in Family Pattern. d. Change in Status of Women and their Role in Society. e. Increased desire for Social Justice and Law and Order. f. Consumerism g. Role of civil society

Recommended Books:

1. Etzioni, Amita. and Eva Etzioni, (eds). Social Change: Sources, Patterns and Consequences. 2nd ed. New York: Basic Books Inc., 1974, Reproduced by National Book Foundation, Islamabad, 2001.

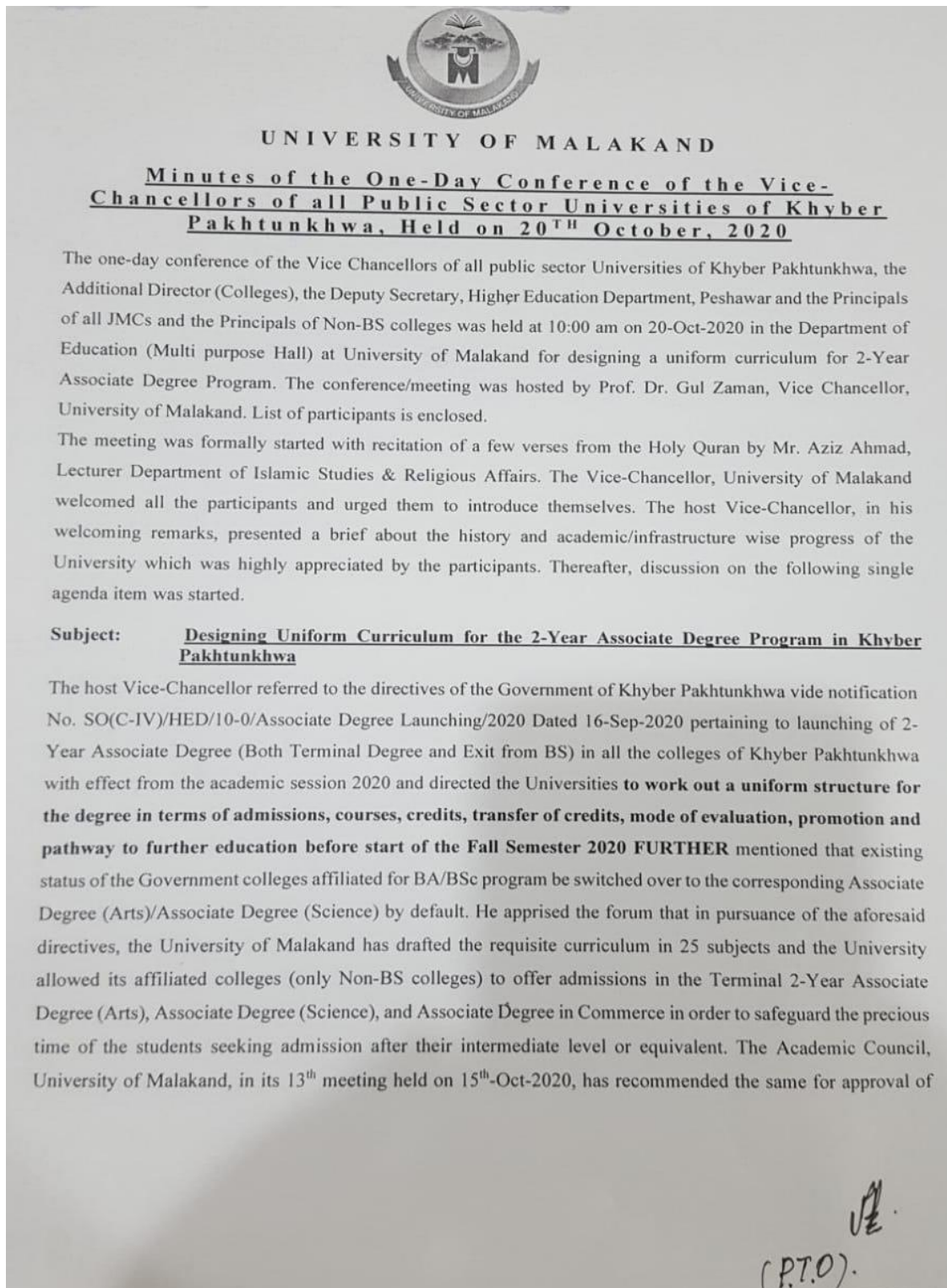
2. Saif, Lubna. and Javed Iqbal Syed, (eds). Pakistani Society and Culture. Vol. I and II, Islamabad: Allama Iqbal Open University, 2001.

3. Weiss, Anita, M. Culture, Clans and Development in Pakistan. Boulder, Colorado: Westview Press. 1991

4. Weiss, Anita, M. Walls within Walls: Karachi: OUP. 2007.



**APPENDIX-B**



## TWO YEARS ASSOCIATE DEGREE (AD) FRAMEWORK

*Draft minutes of the 25th meeting of the Syndicate, held on 20-Aug-2020*

the Syndicate. The host Vice-Chancellor also apprised the participants that two online meetings of VC's of all public sector universities, the HED with the Chairman, HEC were held through MS Teams in this regard.

Mr. Muhammad Roz Khan, Additional Director (Colleges), apprised the forum about the directives of the Government of Khyber Pakhtunkhwa pertaining to launching the 2-Year Associate Degree Program in all Non-BS colleges with effect from the Fall-2020 and urged the forum to frame and introduce uniform curriculum for the aforesaid degree program in order to safeguard the future of the respective students.

Thereafter, the University of Malakand, the University of Peshawar, the University of Swat, and the Shaheed Benazir Bhutto Women University Peshawar presented their respective models pertaining to the 2-Year Associate Degree Program. Meanwhile, Prof. Dr. S. Zulfiqar Gilani, Consultant Academics, Higher Education Commission, Pakistan, joined the session through Video link and appreciated the gathering of VCs and others for brainstorming for introducing the 2-Year degree in the country, however clarified that the Universities shall change/replace the nomenclature of degree from BA/BSc to Associate Degree (Arts)/Associate Degree (Science) and syllabi shall remain the same for the current session. He further elaborated the matter and referred to its notification pertaining to Undergraduate Education Policy 2020 wherein mentioned that the Universities shall ensure its implementation through normal procedure with effect from the Fall 2021. With regards to framing curriculum for 2-Year Associate Degree, he apprised the forum that the HEC is framing uniform curriculum for the said degree and the same shall be circulated amongst all Universities for implementation shortly but the same shall be in vogue from the next academic year.

The participants while discussing the proposed curriculum, unanimously agreed to share the same through forum for improvement, wherever deem fit. Therefore, Dr. Nasir Rashid, Assistant Professor/Focal Person of affiliated colleges, UOM, Dr. Muhammad Uzair Khan, UOP, and Dr. Robi Bilal, SBBWU, Peshawar presented their respective comprehensive models related to the 2-Year AD program. The forum appreciated the efforts of the aforesaid Universities and agreed upon that the same shall be brought into the notice of the Government of Khyber Pakhtunkhwa for information and further appropriate orders. The scheme of study of the AD Program of the University of Malakand was endorsed by most of the participants on the plea that it has been designed in line with the HEC Undergraduate Education Policy-2020 and agreed upon to implement the scheme of study designed for the first semester in order to avoid the wastage of precious time of the respective students. The forum discussed the deliberation of Dr. S.Z. Gilani in detail and thereafter came to the conclusion that either:

- A) a meeting of all VCs and Director Colleges with the Secretary to Government of Khyber Pakhtunkhwa, Higher Education Archives & Libraries Department, Peshawar shall be scheduled next week to settle the issue. Mr. Muhammad Roz Khan, Additional Director Colleges Peshawar was assigned the task to schedule the proposed meeting with Secretary HED on 24-Oct-2020. **OR**
- B) The Vice-Chancellors, University of Malakand and University of Swat and Mr. M. Roz Khan, Additional Director Colleges, Peshawar shall visit the HEC quarter concerned to share/present the proposed schemes of studies for the purpose to settle the issue accordingly.

The meeting ended with a vote of thanks to and by the Chair.

*UJ D.P.A.*

## ACRONYMS

**AD:** Associate Degree

**AH:** Arts and Humanities

**CV:** Civilizational

**EW:** Expository Writing

**Gen Ed:** General Education

**HEC:** Higher Education Commission

**HED:** Higher Education Department

**HEI:** Higher Education Institution (Universities, Institutes, or other Degree Awarding Institutions)

**ICT:** Information and Communication Technologies

**NS:** Natural Sciences

**QR:** Quantitative Reasoning

**SS:** Social Sciences

