FORMAN CHRISTIAN COLLEGE
A ChArtered UniVerSiTy

Course atlas
Summer 2011 Semester
COURSE ATLAS
SUMMER 2011 SEMESTER

<table>
<thead>
<tr>
<th>C</th>
<th>O</th>
<th>N</th>
<th>T</th>
<th>E</th>
<th>N</th>
<th>T</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Summer Registration Process.</td>
<td>. . . . . . . . .</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>General Education Divisions.</td>
<td>. . . . . . . . .</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Biological Sciences.</td>
<td>. . . . . . . . .</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Business.</td>
<td>. . . . . . . . .</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Chemistry.</td>
<td>. . . . . . . . .</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Computer Science/IT.</td>
<td>. . . . . . . . .</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Economics.</td>
<td>. . . . . . . . .</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Education.</td>
<td>. . . . . . . . .</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>English.</td>
<td>. . . . . . . . .</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Geography.</td>
<td>. . . . . . . . .</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Health &amp; Physical Education.</td>
<td>. . . . . . . . .</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Mass Communication.</td>
<td>. . . . . . . . .</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Mathematics.</td>
<td>. . . . . . . . .</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>History and Pakistan Studies.</td>
<td>. . . . . . . . .</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Physics.</td>
<td>. . . . . . . . .</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Political Science.</td>
<td>. . . . . . . . .</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Psychology.</td>
<td>. . . . . . . . .</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Religious Studies.</td>
<td>. . . . . . . . .</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Sociology.</td>
<td>. . . . . . . . .</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Statistics.</td>
<td>. . . . . . . . .</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>Urdu.</td>
<td>. . . . . . . . .</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summer Registration Process
The process must be followed! Read carefully!!!

STEP 1: See your advisor and fill out the summer course selection form. Students can register for 2 courses only (i.e., between 6 to 8 credits). Seniors wanting an additional course in order to graduate MUST get it approved by their advisor.

STEP 2: Students should pay in the accounts office for the number of credits they are planning to take. The dates for this payment will be posted by the Accounts office. The charge is Rs. 1250/-per credit.

STEP 3: On your given registration date, register for your summer classes.
   You MUST have:
   ▪ Your receipt of payment for credits
   ▪ Your valid university ID card
   ▪ Your signed course selection form

STEP 4: Pick up your schedule on the way out of the computer lab.

TO GET A REFUND FOR A COURSE THAT IS BLOCKED OR CANCELLED, YOU MUST GET YOUR RECEIPT AND SCHEDULE, YOU MUST GET YOUR RECEIPT AND SCHEDULE SIGNED BY ASSISTANT VICE RECTOR (MS SHAZIA SALMAN) OR DEAN OF STUDENTS (MS FAIZA ZAHEER)

NO REFUNDS WILL BE GIVEN FOR COURSES DROPPED AFTER MARCH 25, 2011
General Education Divisions

**Humanities**
Requirements (1 Course)
Islamic studies/ethics (ISLM 101 or CRST 152)

**Disciplines** (2 courses; at least one NOT in Religious Studies)
Art
English
History
Music
Religious Studies

**Social or Behavior Sciences**
Requirements (1 Course)
Pakistan Studies (PKST 101)

**Disciplines**: (2 courses; at least one NOT in Pakistan Studies)
Anthropology
Education
Pakistan Studies
Political Science

**Physical or Natural Sciences**
**Disciplines**: (3 courses with labs; at least one from each group)
Physical Sciences
Chemistry
Physics

Natural Sciences:
Botany
Zoology

**Mathematics and Information Technology**
Requirements: (1 Course)
A Computer Science course OR demonstrate competence in Computer Science.
***If competence is demonstrated, the student must take a course in this division to replace it***

**Disciplines**: (2 courses; at least one NOT in Computer Science)
Computer Science/Information Technology
Mathematics

**Communications**
Requirements: (4 Courses)
Fundamental of speech (MCOM 100)
English Writing /Grammar (ENGL 101) or demonstrated competence
Advanced Writing Skills (ENGL 103)
Communicative Urdu (URDU 101)
If competence is demonstrated, the student must replace ENGL 101 with another course from the English Discipline. ***
BIOLOGICAL SCIENCES

BIOL 101: Man and Environment  (4 credits)
Only for students who have not studied biology in higher secondary school or A-level or equivalent

Life on earth revolves around the interaction of living organisms with their environment. This course emphasizes the role of plants, animals and environment as it relates to survival and welfare of mankind.

Section A  Monday-Friday  8:00-9:30  S-410  Dr. Hamid Saeed
 Lab  Monday  1:15-2:45  S-431
Section B  Monday-Friday  8:00-9:30  S-416  Mr. Shahnawaz Cheema
 Lab  Tuesday  1:15-2:45  S-431

BIOL 102: Introductory Plant Biology  (4 credits)
Only for students who have studied biology in higher secondary school /A-level or equivalent.

This course covers the structure-function relationship of plants, basic principles of genetics and molecular genetics, and biotechnology as well as and its use in modifying plants. Ecosystem, environmental issues and the relevance of flowering plants in human life are also examined.

Section A  Monday-Friday  9:45-11:15  S-416  Dr. M. R. Siddiqi
 Lab  Wednesday  1:15-2:45  S-431

BIOL 103: Elementary Human Biology  (4 credits)
Only for students who have not studied biology in higher secondary school or A-level or equivalent

Basic human anatomy; nutrition; genetics of blood groups; genetic diseases, and effect of environment on human health.

Section A  Monday-Friday  9:45-11:15  S-410  Dr. W. George
 Lab  Thursday  1:15-2:45  S-431

BIOL 104: Life on Earth  (4 credits)
Only for students who have not studied biology in higher secondary school or A-level or equivalent

The science of biology and its various branches. Characteristics of life, organizational levels (from biological molecules and cells to organisms), ecology and evolution, a survey of various groups of organisms and their phylogenetic relationships.

Section A  Monday-Friday  9:45-11:15  S-425  Aisha Saleem Khan
 Lab  Monday  1:15-2:45  S-433

BIOL 105: General Zoology  (4 credits)
Only for students who have studied biology in higher secondary school or A level or equivalent

The structure, functions, ecology and evolution of all major animal groups including invertebrates and chordates. The origin of multicellular forms and basic environmental factors affecting them.

Section A  Monday-Friday  11:30-1:00  S-416  Dr. K. Z. Rasib
 Lab  Tuesday  1:15-2:45  S-433
BIOL 201: Cell Biology (3 credits)

This course will examine: the ultra structure of cell; the cell membrane, cytoskeleton, nucleus, mitochondria, chloroplast, ribosome, dictyosome, vacuole, microbodies & cell surface. Protein synthesis and secretion, chromosomal aberrations, mitosis, meiosis & cell cycle regulation will also be discussed.

Section A  Monday-Friday 9:45-11:15  
Lab       Wednesday 1:15-2:45  
          S-417  Dr. Asma Maqbool
          S-433

BIOL 315: Fundamentals of Microbiology (3 credits)

This course deals with the study of microbial life and its function using pure culture techniques, microscopy, bacterial morphology, anti-microbial resistance and their applications in industry, biotechnology, environmental science and basic research.

Section A  Monday-Friday 9:45-11:15  
Lab       Thursday 1:15-2:45  
          S-424  Dr. Saba Butt
          S-433

BIOT 301: Analytical Techniques in Biology (3 credits)

The course includes fundamental techniques in Biological Sciences involving vast array of methodologies that a biologist requires to step in any area of research. It includes various types of Chromatographies, Gel Electrophoresis, Staining procedures, Spectrophotometry, Microtomy and Microscopy.

Section A  Monday-Friday 08:00-09:30  
Lab       Monday 1:15-2:45  
          S-417  Dr Muhammad Irfan
          S-331

BTNY 207: Economic Botany (3 credits)

The course will cover the study of plant from their economic point of view. The improvement of plants for better yield of their economic products and the strategies for the domestication and preservation of economic plants. Plants as a source of food; beverage, herbs and spices; medicinal plants; psychoactive plants; poisonous and allergy plants; fibers, dyes, tannins; hydrogel, latexes and resins, wood cork and bamboo. Cultural and molecular approaches to improvement of economic products and domestication and preservation of economic plants.

Section A  Monday-Friday 11:30-1:00  
Lab       Tuesday 1:15-2:45  
          S-424  Dr Aisha Saleem Khan
          S-331

ENVR 403: Occupational Health & Safety (3 credits)

*Principles of occupational health at work; values system for industrial workers; OHS systems in different industrial sectors; components of OHS plan related to different activities such as industry, municipality etc. Industrial hygiene and safety, accident prevention and elimination, safety equipments. Pollution due to petroleum industry.*

Section A  Monday-Friday 11:30-1:00  
Lab       Wednesday 1:15-2:45  
          S-417  Mr Shahnawaz Cheema
          S-331
ZOOL 305: Integrated Pest Management (4 credits)
Prerequisite BIOL 302
People, plants and pests, dynamics of pest populations, intensive agriculture, pest problems, concepts of IPM, cultural control, host plant resistance, parasitoids and predators, microbial control, botanical pest control, synthetic organic insecticides biotechnological approaches, bioreational and other innovative approaches, IPM achievements, potential and challenges
Section A Monday-Friday 8:00-9:30 Lab Thursday 1:15-2:45 S-424 S-331
Dr. K. Z. Rasib

ZOOL 403: Ichthyology (4 credits)
Prerequisite BIOL 302
Aspects of knowledge related to fish, fish groups, comparative fish anatomy and physiology (ten body systems), ecology and ichthyogeography, fish behavior and phylogenetic relationships.
Section A Monday-Friday 8:00-9:30 Lab Monday 1:15-2:45 S-425 S-341 DR. W. George

BIOL 497: Internship (6 credits)
Instructor’s permission required.
Prerequisite: Students with CGPA of 2.75 or above will be eligible for internship.
Internship is offered to students who majoring in biological sciences. It may start at the end of summer 2010 semester and its duration will be 6 weeks.
Dr. Kauser Abdulla Malik

BIOL 498: Internship (6 credits)
Instructor’s permission required.
Prerequisite: Students with CGPA 2.75 or above will be eligible for internship.
Internship is offered to students who majoring in biological sciences. It may start at the end of summer 2010 semester and its duration will be 6 weeks.
Dr. Kauser Abdulla Malik

BIOL 499: Research (6 credits)
Head’s permission required
Prerequisite: Students with cumulative GPA 2.75 or above will be eligible for research.
Research is offered to students who majoring in biological sciences. Students can take summer courses and carry out research simultaneously.

BIOT 499: Research (6 credits)
Head’s permission required
Prerequisite: Student with CGPA 2.75 or above will be eligible for research.
Research is offered to students majoring in biotechnology. Students can take summer courses and carry out research simultaneously.
ENVR 498: Internship  
*Head’s permission required*  
(6 credits)

*Prerequisite*: Student with CGPA 2.75 or above will be eligible for research.

Internship is offered to students majoring in Environmental sciences with concentration in biological sciences. Internship will start at the end of summer 2010 semester and its duration will be 6 weeks.

ENVR 499: Research  
*Head’s permission required*  
(6 credits)

*Prerequisite*: Student with CGPA 2.75 or above will be eligible for research.

Research is offered to students majoring in Environmental sciences with concentration in biological sciences. Students can take summer courses and carry out research simultaneously.
BUSINESS MANAGEMENT

BUSN 390A: Summer Internship  (3 credits)
BUSN 390B: Summer Internship  (3 credits)

Minimum CGPA: 2.75
CHEMISTRY

CHEM 110: Introduction to Inorganic Chemistry (4 credits)
Prerequisite: F.Sc or A-level Chemistry

Introduction to the foundations of chemistry including electronic structure of atoms, ions and molecules, quantum numbers, periodic classification, chemical bonding and theories i.e. VBT, MOT for simple homonuclear and diatomic heteronuclear molecules, VSEPR theory and shape of molecules; Chemical equilibria; acid-base chemistry and redox reactions and electrochemical series.

Section A  Monday- Friday 11:30-1:00  S-215  Dr. M. Nadeem Asghar
Lab  Thursday 1:15-2:45  S-138

CHEM 114: Introduction to Organic and Biochemistry (4 credits)
Prerequisite: F.Sc or A-Level Chemistry

Chemistry of carbon, introduction to functional groups inter-conversion; study of hydrocarbons; study of hydrocarbons including additions to multiple bonds and substitution reactions of benzene; chemistry of food and its components including carbohydrates, proteins, lipids, vitamins and minerals.

Section A  Monday- Friday 08:00-09:30  S-116  Dr. M. Ikram Aujla
Lab  Wednesday 1:15-2:45  S-135

CHEM 240: Principles of Organic Chemistry (4 credits)
Prerequisite: CHEM 110 OR CHEM 114 OR CHEM 117

Discussion of properties and reactions of various functional groups using reaction mechanisms as a unifying theme. Emphasizes practical applications using industrial, environmental, current events and biological/medicinal including phenols, alcohols and thiols.

Section A  Monday- Friday 09:45-11:15  S-116  Dr. Dildar Ahmed
Lab  Monday 1:15-2:45  S-135

CHEM 241: Organic Chemistry I (4 credits)
Prerequisite: CHEM 100 or 110 or 114

A review of covalent bonding and hybrid orbital, inter-conversion of functional groups leading to synthesis of various compounds; resonance and inductive effects; organic acids and bases; stereochemistry including conformational analysis, geometric isomerism, mechanism of SN & E reactions and stereo specificity and stereo selectivity.

Section A  Monday-Friday 11:30-1:00  S-116  Dr. Seemal Jelani
Lab  Tuesday 09:45-11:15  S-135

CHEM 301: Organic Chemistry 1 (4 credits)
Prerequisites: CHEM 241

Organic synthesis basic concepts and scope, retro synthetic, Multi-step synthesis functional group protection, viable synthetic routes, yield consideration, real world examples and challenges and applications carbonyl compounds including carboxylic acid derivatives.

Section A  Monday-Friday 08:00-9:30  S-215  Dr. Dildar Ahmed
Lab  Thursday 1:15-2:45  S-135
**CHEM 308: Industrial Chemistry**  
(4 credits)  
Prerequisite: CHEM 100 or 110 or 114

Characteristics and importance of chemical industries, conversion efficiency and yield, rationalization, economic and technical feasibilities, fertilizers, acids, bases, glass, cement, ceramics, leather, and metallurgies of important metals.

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday, Friday 09:45-11:15</td>
<td>S-215</td>
<td>Dr. S. E. Benjamin</td>
</tr>
<tr>
<td>Lab</td>
<td>Monday 11:30-1:00</td>
<td>S-138</td>
<td></td>
</tr>
</tbody>
</table>

**CHEM 310: Biochemistry**  
(4 credits)  
Prerequisite: CHEM 240 OR 241

Detailed structure and physiological function of primary metabolites including carbohydrates, proteins, lipids, nucleic acids and nature and role of enzymes and coenzymes in living organisms.

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday, Friday 09:45-11:15</td>
<td>S-216</td>
<td>Dr. M. Ikram Ajula</td>
</tr>
<tr>
<td>Lab</td>
<td>Monday 11:30-1:00</td>
<td>S-135</td>
<td></td>
</tr>
</tbody>
</table>

**CHEM 452: Elementary Group Theory**  
(2 credits)  
Prerequisite: CHEM 110 or 114

Symmetry: symmetry elements and operations, point groups, group representation and character tables, reducible and irreducible representations, applications of group theory. (in bonding and IR etc.).

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday, Friday 9:45-11:15</td>
<td>S-119</td>
<td>Dr. Christy Munir</td>
</tr>
</tbody>
</table>
COMPUTER SCIENCE / IT

CSCS 100: Introduction to Computing (3 credits)

An introduction to the computer science discipline, including an introduction to computing environments, general application software, computing hardware, operating systems, desktop publishing, internet, software applications and tools and computer usage concepts; introducing software engineering and information technology within the broader domain of computing.

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday 8:00-09:30</td>
<td>S-319</td>
<td>Ms. Rabea Aden</td>
</tr>
<tr>
<td>B</td>
<td>Monday to Friday 09:45-11:15</td>
<td>S-319</td>
<td>Ms. Rabea Aden</td>
</tr>
</tbody>
</table>

COMP 102: Programming I (3 credits) (2 + 2)

Introduces students to the basic skills of problem solving and programming. It emphasizes problem analysis, algorithm design, program development and testing. It provides a solid foundation in structured design techniques and introduces the object oriented thought process and basic tools.

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday 11:30-1:30</td>
<td>S-218</td>
<td>Ms. Saira Anwar</td>
</tr>
</tbody>
</table>

COMP 111: Programming II (3 credits) (2 + 2)

Prerequisite: COMP 102

Continues the topics begun in COMP 102, shifting the emphasis to object oriented principles and techniques, classes inheritance, and polymorphism are fully explored and basic data structures are introduced. Other topics include basic searching and sorting techniques.

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday 11:30-1:30</td>
<td>S-219</td>
<td>Mr. S. Mahmood</td>
</tr>
</tbody>
</table>

COMP 113: Discrete Mathematics (3 credits)

Prerequisite: MATH 101 or A-Level or Intermediate Mathematics

Introduces the foundations of discrete mathematics as they apply to Computer Science, focusing on providing a solid theoretical foundation for further work. Further, this course aims to develop understanding and appreciation of the finite nature inherent in most Computer Science problems and structures through study of combinatorial reasoning, abstract algebra, iterative procedures, predicate calculus, tree and graph structures.

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday 09:45-11:45</td>
<td>S-210</td>
<td>Mr. Bilal Bajwa</td>
</tr>
</tbody>
</table>

COMP 200: Data Structures and Algorithms (3 credits) (2 + 2)

Prerequisite: COMP 111, COMP 113

Data structures, along with the algorithms required to manipulate them are introduced. Selection or construction of suitable data structures for a wide range of problems is emphasized, along with the analysis of the chosen solutions. Standard problems such as sorting and searching are explored in detail. Students are exposed to the concepts of time and space complexity of computer programs.

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday 11:30-1:30</td>
<td>S-319</td>
<td>Mr. Bilal Bajwa</td>
</tr>
</tbody>
</table>
COMP 205: Introduction to Information Technology (3 credits)
Prerequisite: COMP 102, STAT 102


Section A Monday to Friday 9:45-11:15  S-316  Mr. Shahid Mahmood

COMP 206: Hardware Logic and Design (3 credits) (2+2)
Prerequisite: Math 101 or A-Level or Intermediate Mathematic

This course is designed to introduced students to the fundamentals of Hardware system design, beginning at the digital logic level with bits, binary representations and basic binary operations. These are represented for hardware purposes using logic gates, and built up into combinational and then sequential logic circuits. Basic functional units are assembled from these circuits, and then combined to provide higher level computing functions. The basics of assembly language are introduced basic elements of some real life architectures are examined.

Section A Monday to Friday 11:30-1:30  S-120  Mr A. H. Zahid

CSIT 210: Introduction to Multimedia (3 credits)
Prerequisite: CSCS 100 or COMP 205

An introduction to multimedia, which covers the different media types and their uses, surveys the range of applications of multimedia, and introduces students to a selection of tools available for the production of multimedia applications. Includes hands-on practice in the production of simple multimedia applications. Accessible to students in a variety of disciplines where multimedia is used.

Section A Monday to Friday 9:45-11:15  S-218  Mr.A.H. Zahid

CSSE 301: Software Engineering II (3 credits)
Prerequisite: COMP 220

The course aims to provide the basis of the object oriented approach to software engineering, and basic concepts of agile methodologies, risk management, configuration management, re-engineering and quality assurance. The focus of this course is on UML based development of artifacts which include domain models, system sequence diagrams, contracts, real use cases, interaction diagrams supported by GRASP patterns, and class diagrams.

Section A Monday to Friday 9:45-11:15  S-317  Ms Saira Anwar
ECONOMICS

ECON 100: Basic Economics (3 credits)

This is a basic course of Economics for all disciplines, which would educate students about micro, as well as macro economics. The course shall help students to increase understanding about basic concepts of Economics such as demand, supply, allocation of resources, opportunity cost, national income inflation and unemployment etc.

NOTE: This course is not counted towards major in economics.

Section A  Monday to Friday 8:00-09-15  E-214  Mr. Rizwan Ahmad
Section B  Monday to Friday 9:45-11-15  E-214  Mr. Ghulam Shabbir

ECON 101: Microeconomics I (3 credits)

Microeconomics I is a core course for majoring in Economics. It introduces the students to the basic method and subject matter of microeconomics. The course covers consumer behavior, producer theory and output and price strategies under perfect and imperfect competition market structure.

NOTE: An important objective of the course is to provide a base for other courses to be taken to major in economics.

Section A  Monday to Friday 9:45-11-15  E-221  Dr. S. H. Syed

ECON 102: Macroeconomics I (3 credits)

This primary goal of this course is to introduce key macroeconomics concepts. This course emphasizes on national income accounting, determination of national income through Keynesian cross, Consumption, saving and investment theories; Money supply and demand; QTM and inflation, causes and cost of inflation and unemployment. The short period fluctuations in an economy and stabilization policies.

NOTE: An important objective of the course is to provide a base for other courses to be taken to major in economics.

Section A  Monday to Friday 8:00-09-30  E-221  Dr. Babar Aziz

ECON 103: Mathematics for Economists (3 credits)

The nature of mathematical economics; Real number system; Set theory and economics: Static analysis. Linear models and Matrix algebra. Tools of algebra and calculus; Application of calculus in economics; Tools of comparative static, optimization of one and multivariable functions and its economic application. Optimization with constraints.

Section A  Monday to Friday 11:30-1:00  E-221  Dr. Babar Aziz

ECON 201: Microeconomics II (3 credits)

Prerequisite: ECON 101, 103

A continuation of Microeconomics I using mathematical and empirical models to analyze consumer theory, producer theory firm behavior under perfect and imperfect market structure. Input markets with both perfect and imperfect competition Game theory.

Section A  Monday to Friday 11:30-1:00  E-222  Dr. S.H. Syed
ECON 202: Macroeconomics II  
Prerequisite: ECON 102, 103  
(3 credits)

This course emphasizes the classical and Keynesian economic policy. Derivation of AD and AS models and their implication for stabilization policies. Short term and long term inflation-unemployment relationship; consumption and investment theories, economic growth, growth accounting and convergence.

Section A  Monday to Friday 8:00-9:30  E-222  Mr. Abdul Jalil Khan

ECON 203: Statistics for Economists  
(3 credits)

Descriptive statistics; measurement of central tendency and dispersion, random variable and discrete and continuous probability distributions, sampling and sampling distribution, estimation and confidence interval of small and large sample, maximum likelihood, hypothesis testing using one and two sample, analysis of variance.

Section A  Monday to Friday 9:45-11-15  E-222  Mr. Abdul Jalil Khan

ECON 206: Banking and Finance  
(3 credits)

Overview of financial system; role of financial institutions (banking and non-banking). Role of central bank in monitoring and regulating the financial markets. Determination of interest rate and yield curve. Financial assets and rates of return; international financial markets and domestic financial markets.

Section A  Monday to Friday 9:45-11-15  E-231  Ms. Zeresh Mall

ECON 210: Islamic Banking and Finance  
(3 credits)

An introductory understanding regarding Islamic economics i.e. the nature and methodology of Islamic economics. Islamic banks, Zakat insurance; unemployment and inflation; modes of Islamic finance; financing public expenditure in an Islamic perspective, risk management in Islamic financial market; Interest free banking; Islamic capital market products.

Section A  Monday to Friday 11:30-1:00  E-231  Mr. Rizwan Ahmed

ECON 300: Fundamentals of Econometrics  
Prerequisite: ECON 201, 202 & 203  
(3 credits)

Nature and methodology of econometrics; regression analysis and ordinary least squares; dummy variable regression models; relaxing the assumption of classical model; multicollinearity, heteroscedasticity and autocorrelation; WLS and GLS and FGLS; econometric modeling: model specification and diagnostic testing are taught in this course.

Section A  Monday to Friday 08:00-09:30  E-227  Mr. Zahid Iqbal

ECON 302: Research Methods and Computer Applications  
Prerequisite: ECON 300  
(3 credits)

Methods and methodologies of research used in Economics; techniques of investigation, data collection methods; research design; sampling and report writing and Application of econometric softwares.

Section A  Monday to Friday 11:30-1:00  E-227  Mr. Zahid Iqbal
ECON 303: Environmental Economics

Prerequisite: ECON 201

(3 credits)

Importance of environment protection. Valuing the environment; methods; property rights, externalities and environmental problems; environment impact analysis, benefit-cost analysis of pollution control; economics of pollution control; air pollution, regional pollutants, global pollutants, water pollution, toxic substances; the command and control policy framework with reference to Pakistan; efficient policy responses; cost-effective policies; development, poverty and environment; sustainable development.

Section A Monday to Friday 9:45-11:15 E-231 Ms. Uzma Hanif

ECON 304: Managerial Economics

Prerequisite: ECON 201, 203

(3 credits)

The purpose of this course is to provide basic understanding of the economic theory and analytical tools that can be used in decision making problems. It covers demand analysis, estimation and forecasting, production and cost theory and their estimation. Decision making under risk and uncertainly. Managerial theories and models of the firm.

Section A Monday to Friday 11:30-1:00 E-227 Ms. U. Hanif

ECON 307: International Trade Theory and Policy

Prerequisite: ECON 201, 202

(3 credits)

Theories of absolute and comparative advantage; Hecksher-Ohlin and Rybsynsky theorem. Factor endowments; factor intensities, factor prices and distribution; tariffs, quotas and dumping; imperfect competition and returns to scale. Commercial policies their objectives and impacts, trade agreements and trade control; the balance of payments and the exchange rate determination; international trade policies.

Section A Monday to Friday 11:30-1:00 E-323 Mr. G. Shabbir

ECON 313: Monetary Theory

Prerequisite: ECON 202

(3 Credits)

Nature of monetary economics, money supply process and definition of monetary aggregates. Theories of money demands, microeconomics determinants of demand for money, testing the demand for money, the weakness of the links between the theory of the demand for money and the testing of it. Monetary transmission mechanism. Price surprise central banking and the Money supply.

Section A Monday to Friday 9:45-11:15 E-323 Mr. Zahid Iqbal

ECON 311: Development and Growth Economics

Prerequisite: ECON 202

(3 credits)

Economics institutions and development; Diverse structures and common characteristics Measurements of Economics developed models; classic and modern, Economics development and issues of poverty, inequality, population, urbanization, education and health. Agriculture and Rural development, Growth models of Harrod-Domer, Solow-Swan, Kaldor and Joan Robinson. New growth theory.

Section A Monday to Friday 8:00-9:30 E333 Ms. Sameen Zafar
ECON 404: Corporate Finance (3 credits)
Prerequisite: ECON 201

Economic foundations of finance; corporate financial decision making; decision making under uncertainty and methods of risk reduction; asset structures stock prices; speculation and interest rate; volatility of asset prices. Random Walk and Wiener process; portfolio theory and valuation of securities; economic relationship between financial and real variable in economy.

Section A  Monday to Friday 11:30-1:00  E-231  Ms. Zeresh Mall

ECON 408: Internship (3 credits)

The internship is offered only to the seniors with GPA 3.00 or higher.

Credit will be granted for a full time internship of at least six weeks during summer vacations. Internship credit is not retroactive and must be prearranged with the Chairman, Department of Economics. The students must provide verification of the completion of internship on company letterhead from the head of institute no later than one week after such completion. The grading for internship will be done by the Chairman on the basis of the written report by the student on his/her internship and evaluation report of the company.
EDUCATION

EDUC 110: Foundations of Education  (3 credits)
Perspectives on economic, cultural, political, ideological, philosophical, aesthetic and psychological foundations of education. The history of education in Pakistan will also be covered.

Section A  Monday to Friday 8:00-09:30  N-217  Dr. C.J. Dubash

EDUC 300: Instructional Methods and Strategies  (3 credits)
Types of instructional methods and assessment strategies and best uses of each; discussion of and practice in choosing and planning for the appropriate instructional methods; classroom arrangements and management for each instructional method.

Section A  Monday to Friday 9:45-11:30  N-217  Dr. C.J. Dubash

EDUC 430: Student Teaching Experience  (12 Credits)
Prerequisites: EDUC 110,120, 300, 350
An extended field-based course with real-life experience in the classroom; all aspects of the teaching-learning process will be looked at from a practical perspective.

Section A  Monday to Friday  N –217 Dr. C.J. Dubash

EDUC 440: Senior Seminar in Education  (3 Credits)
Prerequisite: EDUC 110
Co requisite: EDUC 430
Discussion-based course for education majors who have completed or are completed their student-teaching experience. Discussion to be based on current trends in education and question arising from their teaching experience. Current trends in education; questions and concerns arising from students-teaching experiences.

N –217 Dr. C.J. Dubash
ENGLISH

ENGL 101: Writing and Grammar (3 credits)
Use of grammar structures in meaningful spoken and written communication; develop writing skills in organizing ideas, creating topic sentence, organizing paragraphs, using examples and details to support main ideas; making transitions; editing, revising and proofreading.

Section A  Monday to Friday 08:00-09:30  E203  Mr Azeem Alphonse
Section B  Monday to Friday 11:30-1:00  E-203  Mr Azeem Alphonse
Section C  Monday to Friday 08:00-09:30  E-202  Ms Ayesha Pervaiz
Section D  Monday to Friday 11:30-1:00  E-202  Ms Ayesha Pervaiz

ENGL 102: Communications Skills (3 credits)
Emphasis will be on the development of basic conversational skills, identifying the main ideas of conversations, lectures, and other spoken texts; recognizing and understanding stressed and reduced sounds in words and sentences; practice deriving the meaning of new word from the context, making inferences from what is heard, and basic note-taking skills for participating successfully in social conversation and academic discussions; improving pronunciation.

Section A  Monday to Friday 9:45-11:15  E-202  Mr. Waqar Azeem

ENGL 103: Advanced Writing Skills (3 credits)
Helps students perfect their skills in writing well-developed, coherent paragraphs and short essays with special attention to editing grammar. Proficiency in the skill of academic writing. Complex sentence structure and the relationship among sentence in extended texts. Common rhetorical forms will be practiced: Narration, Process description, Classification, Course-effect, and Comparison-Contrast.

Section A  Monday to Friday 08:00-09:30  AS-208  Mr. Fahad Aftab
Section B  Monday to Friday 09:45-11:15  E-203  Mr Liaqat Masih
Section C  Monday to Friday 9:45-11:15  E-204  Mr. Fahad Aftab
Section D  Monday to Friday 8:00-9:15  E-204  Dr.Kamal ud Din

ENGL 104: History of Literature (3 credits)
The course focuses on various ages and movements that have influenced literature over centuries

Section A  Monday to Friday 11:30-1:00  E-204  Dr.Kamal ud-Din

ENGL 213: Sociolinguistics (3 Credits)
This course reflects on the interdependence of language and culture in various sociological contexts. The students will be introduced to specific terminological and theoretical preliminaries necessary for the understanding of this subject. They will particularly be encouraged to prepare projects based on the role of English and other languages in South Asian cultures.

Section A  Monday to Friday 11:30-1:00  AS-208  Ms. Sobia Kiran
ENGL 304: Short Story  (3 credits)
Introduction to major short story writers in English and American literature emphasizing on familiarity with short story composition, technique, style and thought process.
Section A  Monday to Friday 8:00-9:45  E-205  Dr. Robert Reid

ENGL 307: Drama I  (3 credits)
A critical awareness of drama as a genre or a tradition with focus on its mutation from Classical to Elizabethan age onwards. It will further highlight what classical models are followed to make a play a 'well-written' play.
Section A  Monday to Friday 8:00-9:45  E-205  Mr Liaqat Masih

ENGL 325: American Drama  (3 credits)
A cross section study of selective American Playwrights. The idea is to develop a taste and understanding for American drama in particular.
Section A  Monday to Friday 09:30-11:15  E-205.  Dr. Robert Reid

LANG 100: Language Skills I  (12 credits)
This course will focus on helping students attain BICS (basic interpersonal communication skills) in English with enough practice so as to make transition to the next course easier. Daily practice in the use of all four language skills will be provided and variety material will be used to improve vocabulary and comprehension.
Section A  Monday – Friday  8:00-09:30  N-208  Prof. Zamir Naqvi

LANG 110: Language Skills II  (12 credits)
This course will focus on making the students attain BICS (basic interpersonal communication skills) in English with advanced levels of practice. Variety material will be used to improve all the skills for better comprehension along with fluency and competence.
Section A  Monday – Friday  8:00-09:30  N-209  Aneela Gill
GEOGRAPHY

GEOG 101: Fundamentals of Geography (3 credits)
Builds perspective about geography as a discipline; familiarizes its thematic domains and fundamental concepts.
Section A Monday to Friday 8:00-09:30 A-2 Ms. Zareen Jamil
Section B Monday to Friday 8:00-09:30 A-3 Ms. Khadija Shakrullah
Section C Monday to Friday 11:30-1:00 A-2 Mr. Kashif Shafique

GEOG 133: Geographical Profile of Pakistan (3 credits)
It relates to major features of the physical environment, resources, culture, communications and trade of Pakistan. Analyses of the major problems confronted by Pakistan relating to cross cultural relationships, socio-economic viability, environmental conservation, resource sustainability and development.
Section A Monday to Friday 9:45-11:15 A-3 Ms. Zareen Jamil

GEOG 240: Global Environmental Issues (3 credits)
The course describes the earth's ecosystem; major issues relating to the human use and misuse of environmental resources, and possible courses of action for their conservation.
Section A Monday to Friday 9:45-11:15 A-2 Mr. Kashif Shafique

GEOG 314: Hydrosphere Resources (4 credits)
Prerequisite: GEOG 101 or 210
Origin, structure and shape of the ocean basins; composition, thermodynamics, circulation and oscillations of marine water; maritime resources and their use by humans; water resources on land, their origin, distribution, availability and quality; use and conservation as a resource for mankind.
Section A Monday to Friday 11:30-1:45 A3 Ms. Khadija Shakrullah
HEALTH AND PHYSICAL EDUCATION

HPED 104: Swimming for Beginners (for boys) (1 credit)

Introduction to the basic skills in Swimming especially for students who have little or no experience in this sport. The Students will learn the competition rules of Freestyle as well as attain proficiency in it. They will also appreciate the importance of life-long fitness to health.

Section A  Tuesday and Thursday 9:00-10:00  Swimming Pool  Mr. Babar Kamil
MASS COMMUNICATION

MCOM 100: Fundamentals of Speech (3 credits)
Study of the basic principles and practices of good vocal production and oral communication. Examines texts, verse and prose in terms of vocal delivery. Explores the basic components of communication through analysis and practice in a variety of oral presentations. Focus is on English speaking skills.

Section A  Monday to Friday 9:45-11:15  E-227  Ms. N. Sehar
Section B  Monday to Friday 8:00-9:30  E-227  Ms. Rachel Hassan

MCOM 101: Introduction to Print Journalism (3 credits)
Brief history of printing and publishing, types of print journalism, introduction to newspaper organization, reporting and sub-editing. Contents of newspaper. Definition of news, structure, values and sources. Journalism in Pakistan.

Section A  Monday to Friday 08:00-9:30  E-213  Akram Soomro

MCOM 102: Introduction to Electronic Media (3 credits)
Origin and development of radio and television in Pakistan; television and radio as effective medium of communication introduction to private radio and television channels; role and effects of electronic media on society.

Section A  Monday to Friday 11:30-1:00  E-213  Dr. Rashid Khan

MCOM 103: Introduction to PR & Advertising (3 credits)
Advertising and its role in the society; consumer culture; advertising and mass media marketing; public relations; selling and sales management. Process and tools of PR.

Section A  Monday to Friday 9:45-11:15  E-213  Akram Soomro

MCOM 201: News reporting (3 credits)
Prerequisite: MCOM 101, 102
Mechanics, elements, value and structure of stories for print and electronic media; news sources for print and electronic media; qualifications and functions of a reporter; basics of camera and microphone reporting; interpretative and investigative reporting; reporting beats; interview techniques.

Section A  Monday to Friday 8:00-9:30  E-228  Dr Rashid Khan

MCOM 202: Sub-Editing (3 credits)
Prerequisite: MCOM 101, 102
Introduction, importance and process of the sub-editing; functions and qualifications of a sub-editor; source of news; techniques, types and new trends in headlines; technique, types, and new trends in make up; monitoring importance and techniques of radio and television; importance and techniques of picture editing and caption writing for pictorial display; journalistic terminologies.

Section A  Monday to Friday 9:45-11:15  E-228  M Ali
MCOM 301: Press Laws and Ethics  
Prerequisite: MCOM 101, 102, 103  
(3 credits)

Evolution of press laws with special reference to the Sub-continent and Pakistan; a critical analysis of the current press and publication regulations; PEMRA laws pertaining to the electronic media in Pakistan; freedom of expression; defamation laws; contempt of court; contemporary trends in copyright law and the concept of intellectual property rights; code of ethics for journalists from Western and Islamic perspectives.

Section A  Monday to Friday 9:45-11:15  E-229  Junaid Ghauri

MCOM 302: Opinion Writing  
Prerequisite: MCOM 101, 102  
(3 credits)

Contents and importance of editorial page; definitions and functions of editorial writing; qualification of editorial writers; topic selection, sources of material, types and structure of editorials; importance and selection of letters to the editor; definitions, structure types and importance of column and feature.

Section A  Monday to Friday 11:30-1:00  E-228  M Ali

MCOM 305: Magazine Journalism  
Prerequisite: MCOM 101  
(3 credits)

Introduction, scope and types of magazines; prospects and challenges of magazine journalism in Pakistan; writing for magazines; personality sketches, interviews and social round-ups; make-up and layout of magazines.

Section A  Monday to Friday 8:00-9:30  E-229  M Ali

MCOM 401: Radio Broadcasting: A Theoretical Introduction  
Prerequisite: MCOM 102  
(3 credits)

Origin and development of radio in the Subcontinent; functions of broadcasting house; role in national development; distinctive features of radio news; interviewing for radio; duties of a radio producer; trends in FM radio in public and private sector in Pakistan.

Section A  Monday to Friday 11:30-1:00  E-229  Mr.Junaid Ghauri

MCOM 403: Media History  
(3 credits)

Brief introduction to the beginnings of the press; a brief view of the growth of the Muslim press in the subcontinent; the role of the press in the War of Independence in 1857; journalistic achievements of Sir Syed Ahmad Khan, Maulana Muhammad Ali Johar and Mualana Zafar Ali Khan; the role of press in the Pakistan Movement.

Section A  Monday to Friday 8:00-9:30  E-230  Mr.Junaid Ghauri

MCOM 405: Mass Communication Studies  
Prerequisite: MCOM 101, 102  
(3 credits)

Definitions, types, elements and model of communication and mass communication features and function of mass communication, media literacy, public opinion and propaganda, two-step flow of communication; barriers in communication; essentials of effective communication; gate-keeping and information control; the role of the opinion leader, current media trends, mass media and culture, mass media and society, mass media effects debates.

Section A  Monday to Friday 11:30-1:00  E-230  Akram Soomro
MCOM 407: Internship / Research Project (3 credits)

Only for MCOM Students

Prerequisite for Internship: CGPA 2.75

An internship will allow students to experience first-hand the functioning of media organizations; sub-editing techniques, reporting techniques of different beats such as parliament, sports, commerce, social services and courts, etc.

Section A  Monday to Friday 9:45-11:00  E-230  Dr. Rashid Khan
MATHEMATICS

**MATH 100: Quantitative Skills** (3 credits)

Basic Algebra, Percentage, Profit, Loss, Commission, Ratio, Proportion, Zakat deduction, Unitary Methods, Time, Velocity, Distance, Area and other real life applications of Mathematics. Mean, Median, Mode, Data Interpretation, Introduction to Probability.

Section A    Monday to Friday 8:00-9:30    S-412    Mr. Shahzad Yousaf
Section B    Monday to Friday 8:00-9:30    S-413    Mr. Kamran Azhar

**MATH 101: Pre-Calculus & Trigonometry** (3 credits)

Fundamentals, equations and inequalities, functions and graphs, polynomial, rational, exponential and logarithmic functions, trigonometric functions and their graphs, trigonometric Identities, solution of right and oblique triangles. Matrices and their use in the solution of simultaneous equations.

Section A    Monday to Friday 9:45-11:15    S-412    Mr. Muhamamd Asghar
Section B    Monday to Friday 11:30-1:00    S-412

**MATH 102: Calculus 1** (3 credits)

Prerequisite: MATH 101 or A-Level Mathematics or Intermediate Mathematics

Functions, Graphs of functions, Translation, stretching and compressing graphs, Lines, Limits, Continuity, Differentiability and Integration with application, Introduction to definite integral, Introduction to parabola, hyperbola and ellipse.

Section A    Monday to Friday 9:45-11:15    S-413    Mr. Shahzad Yousaf

**MATH 312: Integral Equations** (3 credits)

Prerequisite Math-202

Introduction to integral equations, Linear and non-linear integral equations, Volterra and Fredholm integral equations, Conversion of ordinary differential equations to integral equations, Integral equations with symmetric and separable kernels, Method of successive approximation, Integral transform methods

Section A    Monday to Friday 11:30-1:00    S-413    Mr. Kamran Azhar
PAKISTAN STUDIES AND HISTORY

PKST 101: Pakistan Studies (Compulsory) (3 credits)
The ideology of Pakistan, post War of Independence developments, the Two-Nation theory, Pakistan movement, important events and the creation of Pakistan. Initial problems of Pakistan, constitutional development, Islamization in Pakistan. Land of Pakistan, economic and industrial development in Pakistan. The Islamic World and Pakistan.

Section A    Monday Wednesday Friday 08:00-9:30    S-212    Dr. S. A. Gill
Section B    Monday Wednesday Friday 9:45-11:15    S-213    Mr. Arif Queshi

HIST 250: History of Salateen-e-Delhi (3 credits)
This course will study the Salateen-e-Delhi period and will focus on the origin, main features and causes of its decline. This course will enable the students to analyze the development of art, culture & architecture of the age, along with critical evaluation of state & society under the rule of the Sultans.

Section B    Monday Wednesday Friday 11:30-1:00    S-213    Mr. Arif Queshi

HIST 302: Survey of Modern Europe (3 credits)
The geography, culture, social and political history of Europe, highlighting personalities, events and analyzing the politics. A study of the French Revolution, the Eastern Question, the unification of Italy and Germany. A study of the forces of nationalism, imperialism and totalitarianism as well as Europe's interaction with non-western cultures. Foreign policy of the big powers.

Section A    Monday Wednesday Friday 9:45-11:15    S-212    Dr. S. A. Gill
# PHYSICS

## PHYS 100: Introduction to Physics  
**Not to be OPTED by students who have studied physics at Intermediate / Alevels**

Introduction to physics, lays emphasis on basic concepts that can be treated with elementary mathematics. These include applications of physics in everyday life to which the student can relate. Concepts to be taken up are: Scope of Physics, Kinematics and bodies in motion; Communication, basic electricity medical physics and elements of astrophysics; laboratory: familiarization with measuring instruments and related experimentation.

<table>
<thead>
<tr>
<th>Section</th>
<th>Schedule</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday 9:45-11:15</td>
<td>S-07</td>
<td>Dr. Sufian Aslam</td>
</tr>
<tr>
<td>Lab</td>
<td>Tuesday, Thursday 08:00-9:30</td>
<td>S-09</td>
<td>Dr. Sufian Aslam</td>
</tr>
<tr>
<td>B</td>
<td>Monday to Friday 11:30-1:00</td>
<td>S-07</td>
<td>S.Iftikhar Hussain</td>
</tr>
<tr>
<td>Lab</td>
<td>Monday, Wednesday 8:00-9:30</td>
<td>S-09</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Monday to Friday 9:45-11:15</td>
<td>S-07</td>
<td>Dr. Sufian Aslam</td>
</tr>
<tr>
<td>Lab</td>
<td>Tuesday, Thursday 11:30-1:00</td>
<td>S-09</td>
<td></td>
</tr>
</tbody>
</table>

## PHYS 101: General Physics I  
**Prerequisite: Calculus I (Not to be opted with Phys 100)**

Mechanics, wave motions and optics with emphasis on the fundamental principles of physics, laboratory.

<table>
<thead>
<tr>
<th>Section</th>
<th>Schedule</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday 8:00-9:30</td>
<td>S109</td>
<td>Mr. Daniel Yousaf</td>
</tr>
<tr>
<td>Lab</td>
<td>Tuesday, Thursday 11:30-1:00</td>
<td>S-07</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Monday to Friday 9:45-11:15</td>
<td>S-109</td>
<td>Mr. Daniel Yousaf</td>
</tr>
<tr>
<td>Lab</td>
<td>Monday, Wednesday 11:30-1:00</td>
<td>S-07</td>
<td></td>
</tr>
</tbody>
</table>

## PHYS 221: Electricity and Magnetism  
**Prerequisite: PHYS 103**

Electrostatics, magnetostatics, electric current, laws of magnetism, Maxwell's equations, electromagnetic energy and electromagnetic wave equations, laboratory.

<table>
<thead>
<tr>
<th>Section</th>
<th>Schedule</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday 8:00-9:30</td>
<td>S-07</td>
<td>Dr. M. Y. Zaheer</td>
</tr>
<tr>
<td>LAB</td>
<td>Tuesday, Thursday 11:30-1:00</td>
<td>S-039</td>
<td></td>
</tr>
</tbody>
</table>
POLITICAL SCIENCE

PLSC 101: Introduction to Political Science (3 credits)
A survey of the area covered in Political Science including the nature of political science, the nature and forms of the state, structure of government, political dynamics, and the development of an appropriate political science vocabulary.

Section A    Monday to Friday 8:00-09:15       S-111    Ms. Shakila Sindhu

PLSC 102: Pakistan Government - National (3 credits)
A history of the freedom movement and study of the main institutions of the national government and what makes the Pakistan government unique.

Section A    Monday to Friday 8:00-09:15       S-112    Dr. M. Younis

PLSC 301: Ancient, Medieval and early Modern Political Theory (3 credits)
Prerequisite: PLSC 101
A study of political thought from early Greece through the 17th Century. Using original sources from philosophers including Aristotle, Plato, Hobbes, Machiavelli, Locke, Rousseau and Hegel.

Section A    Monday to Friday 11:30-1:00       S-112    Dr. Arshad S. Karim

PLSC 302: Seminar and Major Political Science Research Paper (3 credits)
Prerequisite: PLSC 101
A study of modern ideologies since the French Revolution, including Liberalism, Conservatism, Capitalism, Nationalism, Fascism, and Anarchism.

Section A    Monday to Friday 8:00-09:30       S-213    Dr. Arshad S. Karim

PLSC 317: Political Dynamics: Parties and Processes (3 credits)
Prerequisite: PLSC 101 & 102
This is an in-depth analysis of the two party and multiparty systems including a discussion of what parties are and what parties are not. A study will be made of the history of political parties, parties and elections, parties in a federal system and parties around the world.

Section A    Monday to Friday 11:30-1:00       S-111    Ms. Muneeza Mirza

PLSC 322: International law (3 credits)
Prerequisite: PLSC 101 & 320
This course begins with a study of the historical evolution of international law and continues with coverage of classifications of states, rights and duties of jurisdiction, theories of nationalism, diplomatic relations, operation and enforcement of treaties, redress of differences by war and other methods and neutrality.

Section A    Monday to Friday 9:45-11:15       S-112    Dr. M. Younas
PLSC 400: Current Political Problems (3 credits)
Prerequisite: PLSC 101, Junior Status

Topical issues and themes of justice, equality and liberty, women's rights, race relations, child labor, birth control and other topics as chosen by the professor and members of the class.

Section A  Monday to Friday 09:45-11:15  S-111  Ms. Shakila Sindhu
PSYCHOLOGY

PSYC 100: Introduction to Psychology (3 credits)
A survey of the historical background and sub-fields of psychology, research methods, biological basis of behavior and psychological processes such as sensation, attention, perception, learning, memory, motivation, emotions, intelligence, thinking and personality.

Section A  Monday to Friday 8:00-9:30  S-115  Suneel Samuel

PSYC 220: Statistics for Psychology (4 credits)
Prerequisite: PSYC100 or permission of the instructor
It is designed to equip the students with the basic statistical concepts and skills necessary for conducting research and provide adequate quantitative foundation for understanding psychological literature and the SPSS. This course will cover both (a) descriptive statistical techniques including frequency distributions, graphing, and measures of central tendency and variability, and (b) inferential statistical techniques including t-tests, analysis of variance, correlation and chi-square. The emphasis in this course is upon the application of statistics rather than the mathematical basis of statistics. The application of these techniques to research and the interpretation of results will be emphasized.

Section A  Monday to Friday 9:45-11:15  S-115  Riffat Zaheer

PSYC 340: Abnormal Psychology (3 credits)
Prerequisite: PSYC 100
Nature and concepts of abnormality; historical perspective with special emphasis on Pakistan; psychoanalytic, medical, behavioristic, humanistic, and cognitive behavioral models of abnormal behavior; psychological disorders; anti-psychiatry movement; overview of major psychotherapeutic techniques; prevention of mental sickness.

Section A  Monday to Friday 11:30-1:00  S-216  Suneel Samuel

PSYC 380: Psychology of Crime (3 credits)
Prerequisite: PSYC 100
Causes, effects, and effective methods of reducing crime. Historical, sociological and literary perspectives on crime. Theories of criminal behavior; relationship of criminal activity to class; gender, race; negative role of media; poor law enforcement; justice system; types of criminals; victims of crime; impact of crime on social life; control of crime; relationship between crime and punishment; crime in Pakistani society.

Section A  Monday to Friday 8:00-9:30  S-216  Aisha Ateeq

PSYC 460: Psychology of Women (3 credits)
Prerequisite: PSYC 100
The psychological, biological, social and life-span development differences and similarities of the genders with emphasis on the major life events of women. Female physiology, female cognitive skills, early socialization into sex roles, stereotyping of women in the media, cultural determinants of sex differences; work issues; power relationships between men and women, reproductive concerns, physical and mental health issues, discrimination and violence prevention, equality of genders, psycho-social factors in women's empowerment, status of women in Pakistan.

Section A  Monday to Friday 11:30-1:00  S-115  Riffat Zaheer
PSYC 470: Internship (3 credits)

Prerequisite: PSYC 100 and a minimum CGPA of 2.75

The course is intended to serve as a bridge between college/university and career. Internships through the Psychology department are intended to help students to achieve valuable training and work experiences, and to provide a meaningful link between formal course work and applied professional work. The culmination and tangible product of this internship will be a portfolio containing evidence of what students have done and learned during this course.

Section A  Monday to Friday 9:45-11:30  S-216  Aisha Ateeq
**RELIgIOUS STUDIES**

**ISLM 101: Islamic Education**  
(3 credits)

This course is intended to provide an introductory understanding of Islam. Students learn much about Islamic Way of life in this subject. They study through this course logical and rational vindication of their fundamental beliefs. The course is quite helpful in improving character traits, personality strengths and social manners in the light of Islamic teachings. By taking this course students improve their inner conviction about their faith and are likely to become better Muslims. Basic emphasis is on ethical development and character building of the students.

Section A  
Monday to Friday 8:00-09:30  
E-122  
Hafiz A. Ghani

**ISLM 103: Islamic Ideology**  
(3 credits)  
Prerequisite: ISLM101

This course provides rigorous insight into the Islamic Ideology and Islamic way of life. The course is a balance combination of basic and higher order thinking. It provides ample opportunity to the participants to discuss Islamic Ideology through different activities and explore the scope of its practical implication to real life. The course has especially been designed for the students who wish to appear in competitive examinations.

Section A  
Monday to Friday 9:45-11:15  
E-122  
Hafiz A. Ghani

**ISLM 104: Arabic Communication Skills**  
(3 credits)  
Prerequisite: None

This subject aims to provide an introductory understanding of Arabic Grammar and composition. It deals with the basic structure of Arabic Language. Everyday conversation, vocabulary enhancement, translation and composition are the part of contents.

Section A  
Monday to Friday 8:00-9:30  
E-126  
Atiq Ur Rehman

**ISLM 302: Islamic Jurisprudence-I**  
(3 Credits)  
Prerequisite: ISLM101/CRST152

This subject introduces students to the definition of law; Sources of Islamic Sharia: Qur’an, Sunnah, Ijma, Qiyas; Ijtihaad; Types of Islamic law; Islamic injunctions and their kinds, and family law. The course provides fundamental study of Islamic law and jurisprudence and its historical development.

Section A  
Monday to Friday 9:45-11:15  
E-126  
Atiq Ur Rehman
SOCIOLOGY

SOCL 100: Introduction to Sociology (3 credits)

This course aims to develop an understanding of societal processes by critically thinking about oneself in relation to the various social structures and worlds at the individual, group and societal levels. The global focus of the course uses the tools of Sociology to look at a variety of issues around the world. The course provides an opportunity to both learn about basic sociological approaches and to do some sociological research.

Section A  Monday to Friday 8:00-9:30  E-324  Mr. A. Azeem

SOCL 150: Sociology of Globalization (3 credits)

The course will introduce theories of globalization and trace the history of globalization. It will look at the various ways in which societies and cultures have been transformed by this phenomenon. Globalization's impact on Pakistani society will be analyzed through discussion and news analysis.

Section A  Monday to Friday 9:45-11:15  E-324  Mr. A. Azeem

SOCL 498: Internship (3 credits)

Prerequisite: Only available to Sociology majors and minors who have taken SOCL 100, 201 and 301 and who have a minimum CGPA of 2.75.

An internship in an organization which utilizes the skills learnt in the study of Sociology.

Section A  Monday to Friday 11:30-1:00  E-324  Mr. Shahid Rasheed
STATISTICS

STAT 100: Basic Statistics (3 credits)
Sample and population, variables, collection and presentation of data, measures of central tendency and dispersion for ungrouped data, index numbers, correlation and free hand line of trend.

Section A  Monday- Friday 8:00-09:30  S-420  Dr. Muhammad Aslam
Section B  Monday- Friday 9:45-11:15  S-420  M. Anwar Mughal

STAT 101: Statistical methods (3 credits)
Nature and scope of statistics, scales of measurements, measure of central tendency and dispersion for grouped data, moments, skewness and kurtosis, fundamental rules of counting, basic probability, and moments in probability context.

Section A  Monday- Friday 8:00-9:30  S-421  Dr. Mujahid Rasul
Section B  Monday, Friday 9:45-11:15  S-421  Dr. Muhammad Aslam

STAT 102: Probability and Probability Distributions (3 credits)
Basic set theory. Different approaches and laws of probability. Conditional probability, Bayes’ rule. Random variables, some standard discrete and continuous probability distributions

Section A  Monday- Friday 11:30-1:00  S-420  Dr. Mujahid Rasul

STAT 103: Quantitative methods in social Sciences (3 credits)
(Only for those students who are majoring in social science)
Application of Statistical methods in Social Sciences. Data analysis using SPSS.

Section A  Monday- Friday 11:30-1:00  N-207  M. Anwar Mughal
## URDU

### URDU 101: Communicative Urdu  (3 credits)

Communication and its different means; brief introduction to Urdu language; some fundamentals of Urdu grammar; functional Urdu; creative writing; journalistic Urdu.

<table>
<thead>
<tr>
<th>Section</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday</td>
<td>08:00-09:30</td>
<td>E-328</td>
<td>Ms. Noureen Khokhar</td>
</tr>
<tr>
<td>B</td>
<td>Monday to Friday</td>
<td>09:40-11:20</td>
<td>E-328</td>
<td>Ms. Noureen Khokhar</td>
</tr>
<tr>
<td>C</td>
<td>Monday to Friday</td>
<td>11:30-01:00</td>
<td>E-330</td>
<td>Dr. Muhammad Tahir</td>
</tr>
</tbody>
</table>

### URDU 104: A selection of Urdu Prose  (3 credits)

Letters: Ghalib; Essays: Sir Syed Ahmad Khan, Wazir Agha, Mushtaq Ahmad Yousfi; Short Story: Prem Chand; Character Sketch: M. Abdul Haque; Extract of Travelogue; Begum Akhtar Raiz-ud-Din.

<table>
<thead>
<tr>
<th>Section</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday</td>
<td>09:40-11:20</td>
<td>E-330</td>
<td>Mr. Muhammad Tahir</td>
</tr>
</tbody>
</table>

### URDU 208: Script Writing in Urdu  (3 Credits)

Documentary writing: Program scripts, Journalists scripts, Business scripts, Drama and film scripts.

<table>
<thead>
<tr>
<th>Section</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday</td>
<td>11:30-1:00</td>
<td>E-328</td>
<td>Ms. Noureen Khokhar</td>
</tr>
</tbody>
</table>

### URDU 301: Modern Urdu Poetry  (3 credits)


<table>
<thead>
<tr>
<th>Section</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday</td>
<td>09:40-11:20</td>
<td>E-323</td>
<td>Mr. Ateeq Anwar</td>
</tr>
</tbody>
</table>

### URDU 306: Travelogues in Urdu  (3 credits)

Evolution of travelogues in Urdu; selected extracts from Mahmood Nizaami, Begum Akhtar Riaz-ud-Din, Ibn-e-Insha, Mustansar Hussain Tarrar.

<table>
<thead>
<tr>
<th>Section</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday to Friday</td>
<td>11:30-1:00</td>
<td>E-122</td>
<td>Mr. Ateeq Anwar</td>
</tr>
</tbody>
</table>
NEW COURSE OFFERINGS

MCOM 100: Fundamental Of Speech (3 Credits)
Sec A Monday to Friday 9:45-11:15 E227 Ms N. Sehar
Sec B Monday to Friday 8:00-9:30 E227 Ms N. Sehar

CHEM 411: Research Project (6 Credits)
CHEM 412: Industrial Training (6 Credits)

New Sections

BIOL 101 C MON to FRI 11:30 - 13:00 S410
LAB TUES 13:15 - 15:05 S341
Dr. Hamid Saeed

BIOL 104 B MON to FRI 08:00 - 09:30 S313
LAB THUR 13:15 – 15:05 S341
Dr. Asma Maqbool

BIOL 402 A Limnology MON to FRI 11:30 – 13:00 S425
LAB TUES 13:15 – 15:05 S329
Dr. William George

BIOT 315 A Genomics and Tool of Bioinformatics (4 Credits)
Pre-requisite BIOT313
MON to FRI 11:30 - 13:00 S313
LAB FRI 14:00 – 16:00 S329 Dr. M. Irfan

HIST 250 B MON to FRI 08:00 – 09:30 S213
Arif Qureshi  
ECON 103 B  MON to FRI 9:45-11:15  E333  
Ms Sualeha Hussain  
CHEM 110 B  MON to FRI 08:00 – 09:30  S216  
LAB TUES 13:15 - 15:45  S138  
Dr. M. Nadeem Asghar  
COMP 311 A  COMPUTER NETWORKS  
MON to FRI 9:45-11:15  S-219  
A H Zahid  
COMP 401 A  Ethics for Computing Professionals  
Tues –Thurs 11:30  S-316  
S Mahmood  
**REVISED TIMINGS**  
LANG 100 A  Language Skills I 08:00-11:00  N-214  
Z. Naqvi  
LANG 110 A  Language Skills II 08:00-11:00  N-209  
A. Gill
Courses cancelled

- BIOL 101 D Man & Environment
- BIOL 103 B Elementary Human Biology
- CHEM 100 A Introduction to Chemistry
- COMP 205A Introduction to IT
- COMP206A Hardware Logic & Design
- CSCS 452 Computer Architecture
- CSIT 312 System & Network Administration
- MATH 100 C Quantitative Skills
- PSYC 100 B Introduction to Psychology
- PLSC 301A Ancient, medieval & early Modern Political theory
- PLSC 302A Seminar & Major Pol Research Paper

CHANGE OF INSTRUCTORS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Previous Instructor</th>
<th>New Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIT 210 A</td>
<td>A H Zahid</td>
<td>Asher Imtiaz</td>
</tr>
<tr>
<td>CSSE 301 A</td>
<td>S Anwar</td>
<td>S Mahmood</td>
</tr>
<tr>
<td>COMP 102</td>
<td>S Anwar</td>
<td>TBD</td>
</tr>
<tr>
<td>HIST 250 A</td>
<td>A Qureshi</td>
<td>Mavra Farooq</td>
</tr>
<tr>
<td>PKST 101A</td>
<td>S.Gill</td>
<td>Mavra Farooq</td>
</tr>
</tbody>
</table>
NEW COURSE OFFERINGS

MCOM 100: Fundamental Of Speech (3 Credits)
Sec A Monday to Friday 9:45-11:15 E227 Ms N. Sehar
Sec B Monday to Friday 8:00-9:30 E227 Ms N. Sehar

CHEM 411: Research Project (6 Credits)
CHEM 412: Industrial Training (6 Credits)

New Sections

BIOL 101 C MON to FRI 11:30 - 13:00 S410
   LAB TUES 13:15 - 15:05 S341
   Dr. Hamid Saeed

BIOL 104 B MON to FRI 08:00 - 09:30 S313
   LAB THUR 13:15 – 15:05 S341
   Dr. Asma Maqbool

BIOL 402 A Limnology MON to FRI 11:30 – 13:00 S425
   LAB TUES 13:15 – 15:05 S329
   Dr. William George

BIOT 315 A Genomics and Tool of Bioinformatics (4 Credits)
   Pre-requisite BIOT313
   MON to FRI 11:30 - 13:00 S313
   LAB FRI  14:00 – 16:00 S329
   Dr. M. Irfan

HIST 250 B MON to FRI 08:00 – 09:30 S213
ECON 103 B  MON to FRI 9:45-11:15  E333

Ms Sualeha Hussain

CHEM 110 B  MON to FRI 08:00 – 09:30  S216
LAB TUES 13:15 - 15:45  S138

Dr. M. Nadeem Asghar

COMP 311 A  COMPUTER NETWORKS
MON to FRI 9:45-11:15  S-219
A H Zahid

COMP 401 A  Ethics for Computing Professionals
Tues –Thurs 11:30-12:45  S-316
S Mahmood

REVISED TIMINGS
LANG 100 A  Language Skills I 08:00-11:00  N-214
Z. Naqvi
LANG 110 A  Language Skills II 08:00-11:00  N-209
A. Gill
Courses cancelled

- BIOL 101 D Man & Environment
- BIOL 103 B Elementary Human Biology
- CHEM 100 A Introduction to Chemistry
- COMP 205A Introduction to IT
- COMP206A Hardware Logic & Design
- CSCS 452 Computer Architecture
- CSIT 312 System & Network Administration
- MATH 100 C Quantitative Skills
- PSYC 100 B Introduction to Psychology
- PLSC 301A Ancient, medieval& early Modern Political theory
- PLSC 302A Seminar & Major Pol Research Paper

CHANGE OF INSTRUCTORS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Previous Instructor</th>
<th>New Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIT 210 A</td>
<td>A H Zahid</td>
<td>Asher Imtiaz</td>
</tr>
<tr>
<td>CSSE 301 A</td>
<td>S Anwar</td>
<td>S Mahmood</td>
</tr>
<tr>
<td>COMP 102</td>
<td>S Anwar</td>
<td>TBD</td>
</tr>
<tr>
<td>HIST 250 A</td>
<td>A Qureshi</td>
<td>Mavra Farooq</td>
</tr>
<tr>
<td>PKST 101A</td>
<td>S.Gill</td>
<td>Mavra Farooq</td>
</tr>
</tbody>
</table>