

ADP (Software Engineering) [Associate Degree Program]

ELIGIBILITY CRITERIA:

The candidate has passed the Intermediate or equivalent examination with Mathematics securing at least 50% marks in aggregate from an institution recognized by the Higher Education Commission of Pakistan / Inter Board Committee of Chairmen, Pakistan.

*Equivalency certificate by IBCC will be required in case of education from some other country or system.

- The students who have not studied Mathematics at intermediate level have to pass deficiency courses of Mathematics (06 credits) in first two semesters.

PROGRAM STRUCTURE:

(Program is equivalent to 14 years of education)

Minimum Duration: 2 years; through 4 regular semesters (Fall/Spring)

STRUCTURE- ASSOCIATE DEGREE (60 CREDIT HOURS)

The breakup of these 60 Credits is as follows:

Category	Credits	No. of Courses
General Education	39	13
Distribution Courses	6	2
Major	15	5

GENERAL EDUCATION - COMPULSORY COURSES

Course Code	Course Title	Cr. Hrs.
GENL151	Functional Urdu	2
GENL252	Translation of Holy Quran (for Muslim Students)OR	4
GENL253	Principles of Ethics (for Non-Muslim Students)	
GENL324	Sports and Exercise Physiology	4
GENL434	Short Film and Drama Production	3
GENL435	Cultural Heritage in Pakistan	3
GENL121	Environmental Sciences	3
GENL122	Fundamentals of Applied Physics	3
GENL123	Every Day Science	3
GENL124	Geography and Natural Resources	3
GENL125	Introduction to Ecology	3
GENL101	Introduction to Political Science	3
GENL102	Introduction to International Relations	3
GENL103	Introduction to Sociology	3
GENL131	Population Studies	3
GENL132	Legal Systems of Pakistan	3

Course Code	Course Title	Cr. Hrs.
GENL231	Gender Studies	3
GENL161	Expository 1: Functional Composition & Comprehension	3
GENL262	Expository II: Communication and Academic Writing	3
GENL263	Exposition III: Technical writing & Presentation Skills	3
GENL111	Elements of Statistics & Probability	3
GENL112	General Mathematics	3
GENL113	Introduction to Mathematical Reasoning	3
GENL114	Introduction to Information and Communication	3+1
GENL115	Technology	3
GENL141	Logic and Critical Thinking	3
GENL142	Fundamentals of Islamic Studies (For Muslim Students)	3
GENL143	OR	3
	Moral Values (for Non-Muslim Students)	
	Pakistan Studies	

LIST OF DISTRIBUTION COURSES

No. of Distribution courses for Associate Degree Program: 2 courses (6 credits)

Political Science

Course Code	Course Title	Cr. Hrs.
PSIR-432	Politics of South Asia	3
PSIR-302	Comparative Political Systems of Developing States	3
PSIR-319	Contemporary Political Ideologies	3
PSIR-334	Major Issues in Pakistan's Politics	3
PSIR- 221	Introduction to Local Government System	3

International Relations

Course Code	Course Title	Cr. Hrs.
PSIR-442	Contemporary Regional and International Issues	3
PSIR-432	Politics of South Asia	3
PSIR- 431	Major Issues of Muslim World	3
PSIR-322	Conflict and Conflict Resolution	3
PSIR -303	Comparative Political Systems of Developed States	3

Psychology

Course Code	Course Title	Cr. Hrs.
PSY101	Introduction to Psychology	3
PSY121	Theories of personality	3
PSY112	Social Psychology	3
PSY412	Positive Psychology	3
PSY413	Attachment and Relationship	3

Sociology

Course Code	Course Title	Cr. Hrs.
SOCL 132	Pakistani Society and Culture	3
SOCL 331	Sociology of Emotions and Human Feelings	3
SOCL 341	Criminology and Society	3
SOCL 421	Sociology of Globalization	3
SOCL 441	Human Rights and Citizenship	3
SOCL 442	Sociological Approaches to Conflict Resolution	3
SOCL 231	Gender Studies	3

Economics

Course Code	Course Title	Cr. Hrs.
ECON 272	Comparative Economic system	3
ECON 141	Introduction to Development Economics	3
ECON275	Islamic Economics	3
ECON271	Issues in Pakistan's Economy	3
ECON 101	Introduction to economics	3

Education

Course Code	Course Title	Cr. Hrs.
Edu-211	School, Community and Teacher	3
Edu-241	Assessment and Evaluation in Classroom	3
Edu-315	Critical Thinking and Reflective Practices	3
Edu-272	Principles of Guidance and Counseling	3
Edu-313	Contemporary Trends and Issues in Education	3

Computer Sciences & IT

Course Code	Course Title	Cr. Hrs.
CRSC111	Basic Electronics	3
CRSC112	Applied Physics	3
CRSC116	Communication and Presentation Skills	3
CRSC117	Logic and Critical Thinking	3
CRSC121	Programming Fundamentals	3
CRSC225	Web Engineering	3
CRSC241	Database Systems	3
CRSC251	Introduction to Software Engineering	3
CRSC331	Computer Networks	3
CRSC341	Enterprise Systems	3
CRSC342	Business Process Engineering	3
CRSC343	Fundamentals of Graph Theory	3
CRSC344	Theory of Programming Languages	3
CRSC353	Software Requirements Engineering	3
CRSC381	Research Methodology for CSC	3
CRSC382	Operations Research	3
CRSC383	Stochastic Processes	3
CRSC422	Information Security	3
CRSC452	Formal Methods	3
CRSC453	Modeling and Simulation	3

Physical Education & Sports Science

Course Code	Course Title	Cr. Hrs.
SPSC121	Basics of Human Anatomy	3
SPSC122	Introduction to Sports Physiology	3
SPSC111	Philosophical Basis of Physical Education	3
SPSC112	Rules and Techniques of the Games	3
SPSC212	Science of Track and Field	3

Mathematics

Course Code	Course Title	Cr. Hrs.
MATH111	Logic and Set Theory	3
MATH112	Discrete Structures for CSC	3
MATH233	Differential Equations	3
MATH212	Linear Algebra for CSC	3
MATH113	Calculus and Analytical Geometry for	3
MATH312	CSC	3
MATH131	Algebra I	3
MATH201	Calculus I	3
MATH231	History of Mathematics	3
MATH 321	Linear Algebra I	3
MATH 333	Numerical Methods and Computation	3
	Multivariable Calculus for CSC	

Management Sciences

Course Code	Course Title	Cr. Hrs.
BUSS101	Introduction to Business	3
BUSS141	Principles of Human Resource Management	3
BUSS102	Management Principles and Application	3
BUSS104	Business on Internet	3
BUSS103	Principles and Practices of Marketing	3
BUSS107	Digital Banking	3
BUSS106	Banking and Financial Markets	3
BUSS105	Digital and Social Media Marketing	3
BUSS206	Fundamentals of Project Management	3
BUSS205	Business and Society	3
BUSS204	Professional Practices for Future Leaders	3
BUSS121	Principles of Business Finance	3
BUSS203	Business Ethics	3
BUSS202	Cross-border Business	3

Course Code	Course Title	Cr. Hrs.
BUSS201	Business Investment Decisions	3
BUSS109	Legal Mechanism of Business	3
BUSS108	Islamic Banking Systems	3

Accounting & Finance

Course Code	Course Title	Cr. Hrs.
ACCT111	Financial Accounting	3

Law

Course Code	Course Title	Cr. Hrs.
LAW101	Introduction to Law	3
LAW214	Human Rights Law	3
LAW483	Law of Contract	3
LAW484	Islamic Personal Law	3
LAW335	Law of Business Organizations	3
LAW421	Constitutional History in Pakistan	3

Mass Communications

Course Code	Course Title	Cr. Hrs.
MCOM101	Introduction to Journalism & Mass Communication	3
MCOM211	Journalistic English	3
MCOM111	Introduction to Social Media	3
MCOM322	Data Journalism	3
MCOM231	Broadcast Journalism	3
MCOM221	News Reporting and Writing	3

English

Course Code	Course Title	Cr. Hrs.
ENGL103	Introduction to Language & Linguistics	3
ENGL422	Issues in Syntax	3
ENGL102	Intro to Literary Device & Genre of Literature	3
ENGL555	IELTS through short stories	3

Course Code	Course Title	Cr. Hrs.
ENGL559	Introduction to Essentials of Proposal papers &	3
ENGL 304	Journals Popular Fiction	3

Islamic Studies

Course Code	Course Title	Cr. Hrs.
ISLM313	قرآن کا انسان مطلوب	3
ISLM371	اسلام اور جدید چیلنجز	3
ARAB111	آسان عربی بول چال	3
ISLM472	تزکیہ و تصوف (کیئریکٹر بلڈنگ)	3
ISLM333	غذا میں حلال و حرام اسلامی احکام	3
ISLM231	اسلامی فقہ اور عملی زندگی کے مسائل	3

Urdu

Course Code	Course Title	Cr. Hrs.
URDU371	نظم کا مطالعہ	3
URDU411	ناول کا مطالعہ	3
URDU211	شعرِ نہی	3
URDU313	شعری اصناف	3
URDU111	عملی قواعد اُردو	3

MAJOR COURSES OF STUDY

Major in Computer Science (for Associate Degree Program)

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Course Code	Course Title	Cr. Hrs.
CRSC251	Introduction to Software Engineering	3
CRSC121	Programming Fundamentals	4
CRSC301	Human Computer Interaction	3
CRSC353	Software Requirements Engineering	3
CRSC354	Software Architecture and Design	3