MPhil - CS

[Master of Philosophy – Computer Science]

ELIGIBILITY CRITERIA:

a.   The candidate should have passed any of the examinations listed below, from a university / degree awarding institution recognized by the

Higher Education Commission of Pakistan.

as   BS (CS) / BS (SE) 4 Years Degree Program (min 130 credits hours), or Computer Science Conversion Course 2 Years Degree Program referred to "MCS " or "MSc (CS)", equivalent to 16 years of education.

OR

BCS / BIT-3 years Degree Program: Student will be required to complete the deficiency of difference of total earned credit hours and 130 credit hours (to be determined by the departmental Board of Studies).

OR

16 years Science and Engineering graduates are eligible but they have to cover the deficiency courses (to be determined by the departmental Board of Studies).

b.   Subject to policy/applicability, the candidate shall pass the Entrance Test as required by the HEC.

PROGRAM STRUCTURE:

(Program is equivalent to 18 years of education)

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

Minimum Credits: 30

COURSES OF STUDY:

(Information about the prerequisites (if any) of the course(s) will be provided by the Department at the beginning of the program)

Core Courses (Mandatory):   *Total: 12 Credits*

Code	Title of Course	Credits
CSC531	Information Security Assurance	3
CSC513	Advanced Database Management Systems	3
CSC501	Advanced IT Infrastructure	3
CSC581	Advanced Research Methodology for CSC	3

Major Courses – Electives / Specialization: *Total: 9 Credits*

Subject to University offering, the student shall opt one of the tracks given below. Minimum three courses will be required for thesis option within the opted stream:

Code	Title of Course	Credits

Computer Networks

Code	Title of Course	Credits
CSC639	Telecom Management	3
CSC632	Advanced Computer Networks	3
CSC633	Advanced wireless Technologies	3
CSC634	Network Design and Management	3

Thesis Additional Elective Courses   *Total: 6 Credits*

Code	Title of Course	Credits
CSC681	Thesis (with successful defense) in MPhil (CS)*	6
CSC636	Voice over IP Communications	3

Software Engineering

Code	Title of Course	Credits
CSC652	Software Architecture & Design	3
CSC653	Software Engineering Paradigms and Tools	3
CSC654	Advanced Software Project Management	3
CSC655	Advanced Software Quality Assurance	3
CSC656	Formal Methods in Software Engineering	3
CSC657	Geographical Information Systems	3
CSC658	Advanced Web Engineering	3

Artificial Intelligence

Code	Title of Course	Credits
CSC612	Machine Learning	3
CSC613	Embedded Systems	3
CSC614	Neural Networks	3
CSC615	Topics in Data Mining	3
CSC616	Knowledge based Systems	3
CSC561	Statistical and Mathematical Methods for Data Science	3
CSC617	Artificial Intelligence	3
CSC619	Simulation and Modeling	3
CSC618	Deep Learning	3
CSC531	information Security Assurance	3

*The Thesis can be substituted with two Elective/Specialization Courses to be chosen from the list of Elective Courses of chosen track given above (subject to University offering).