

AG NIAZI UNIVERSITY SARGODHA

Department of Software Engineering

BS Software Engineering (BSSE) — 4-Year Degree Program Outline

Program Structure Overview

Degree Duration: 4 Years (8 Semesters) | **Total Credit Hours:** 135 | **Degree Focus:** Software Architecture, Quality Engineering, DevOps & Agile Development

Semester 1

#	Course Title	Credit Hours
1	Programming Fundamentals	3 + 1
2	Introduction to ICT	3
3	Calculus & Analytical Geometry	3
4	English Composition & Comprehension	3
5	Islamic Studies / Ethics	2
6	Pakistan Studies	2
Total Credit Hours		16

Semester 2

#	Course Title	Credit Hours
1	Object-Oriented Programming	3 + 1
2	Digital Logic Design	3 + 1
3	Discrete Structures	3
4	Database Systems	3 + 1
5	Communication & Presentation Skills	3
Total Credit Hours		18

Semester 3

#	Course Title	Credit Hours
1	Data Structures & Algorithms	3 + 1
2	Software Engineering Fundamentals	3
3	Computer Organization	3
4	Probability & Statistics	3
5	Web Engineering	3 + 1
Total Credit Hours		18

Semester 4

#	Course Title	Credit Hours
1	Software Requirements Engineering	3
2	Software Design & Architecture	3
3	Operating Systems	3 + 1
4	Computer Networks	3 + 1
5	Software Quality Engineering	3
Total Credit Hours		19

Semester 5

#	Course Title	Credit Hours
1	Software Construction & Development	3 + 1
2	Software Project Management	3
3	Software Testing & Quality Assurance	3 + 1
4	Human Computer Interaction	3
5	SE Elective-I	3
Total Credit Hours		19

Semester 6

#	Course Title	Credit Hours
1	Software Architecture	3
2	DevOps & Continuous Integration	3
3	Information Security	3
4	Mobile Application Development	3
5	SE Elective-II	3
Total Credit Hours		15

Semester 7

#	Course Title	Credit Hours
1	Final Year Project-I	3
2	Web Application Development	3
3	Agile Software Development	3
4	SE Elective-III	3
5	Entrepreneurship	3
Total Credit Hours		15

Semester 8

#	Course Title	Credit Hours
1	Final Year Project-II	3
2	Cloud Computing	3
3	Software Maintenance & Evolution	3
4	SE Elective-IV	3
5	Professional Practices	3
Total Credit Hours		15