

# Curriculum

COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE
<b>General Education Requirements: 24 Credit Hours</b>					
ARL 100	Communication Skills in Arabic I	ENG 200	English II	FWS 100	Academic Skills for Success
FWS 205	UAE and GCC Society	FWS 305	Technical Communications for Work Place	STT 100	General Statistics
ISL 100	Islamic Culture	MTT 102	Calculus I		
<b>Degree Requirements: 63 Credit Hours</b>					
COE 202	Engineering Ethics, Economy, and Law	STT 201	Intermediate Statistics and Research Methods	MTT 200	Calculus II
MTT 202	Discrete Structures and Applications	MTT 204	Introduction to Linear Algebra	PHY 102	Physics and Engineering Applications I
PHY 102 L	Physics and Engineering Applications I Lab	PHY 201	Physics and Engineering Applications II	PHY 201 L	Physics and Engineering Applications II Lab
CHE 205	General Chemistry I	CHE 201 L	Chemistry Lab	CSC 202	Programming II
CSC 301	Data Structures and Algorithms	CSC 305	Data Communications and Networks	CSC 308	Operating Systems
ITE 422	System and Networks Administration	ITE 390	Computer Ethics	SWE 201	Structured Programming
SWE 302	Formal Methods in Software Engineering	SWE 399A	Internship/Project in Software Engineering	SWE 399B	Internship/Project in Software Engineering
SWE 401	Software Engineering	SWE 499A	Capstone Design Project in Software Engineering-Part A	SWE 499B	Capstone Design Project in Software Engineering-Part B
COE 102	Introductory Big Data Analytics				
<b>Major Requirements: 36 Credit Hours</b>					
CSC 302	Database Management Systems	CSC 307	Web Design	CSC 408	Distributed Information Systems
ITE 409	Human Computer Interactions	ITE 408	Information Security	ITE 421	Native Mobile Application Development
SWE 370	Object Oriented Design Patterns	SWE 371	Software Requirements and Specification	SWE 471	Software Design and Architecture
SWE 472	Software Testing and Quality Assurance	SWE 473	Software Maintenance and Evolution	CSC 406	Artificial Intelligence
<b>Electives: 12 Credit Hours</b>					
ME 1	Major Elective I	ME 2	Major Elective II	ME 3	Major Elective III
OE 1	Open Elective I	OE 2	Open Elective II		
<b>Concentrations</b>					
<b>Big Data Analytics Concentration Requirements: 15 Credit Hours</b>					
COE 102	Introductory Big Data Analytics	CIS 404	Data Warehousing and Data Mining	CSC 406	Artificial Intelligence
ITE 442	Data Science and Big Data Analytics	CE 1	Concentration Elective		
<b>Web and Mobile App. Dev. Concentration Requirements: 15 Credit Hours</b>					
ITE 410	Web Programming	ITE 423	Advanced Mobile Application Development	CSE 410	Mobile Device Security
ITE 414	Introduction to E-Commerce	ITE 415	Advanced E-Commerce Application Design		



## BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING

## Program Overview

Software Engineering is the application of engineering to the systematic development of software. It is a relatively new area of study and is becoming increasingly critical due to the emerging challenges of building reliable quality software systems.

Software Engineers apply theoretical knowledge to analyze, design, develop, and test high quality software systems



## Student's Testimonial

**Muhammad Abdullah Usman Ghani Khan - BSc. in Software Engineering student**

Being part of the first batch of the Software Engineering program at Abu Dhabi University (ADU) has been a great experience with a unique learning atmosphere. Once I began taking courses, I immediately knew the Software Engineering program was the right fit for me. At ADU, learning is so much fun! Professional teaching, creative classes, effective explanations, and entertaining material that you get here – all contribute to your success in the industry. My professors have been generous with their time, supporting me in my classwork as well as extracurricular opportunities. Studying on the Program has made people treat me differently: they see that I am investing in my long-term career. Now I am finishing my degree with a final project that involves cutting edge software technologies. Thank you ADU for helping in reaching my career goal and become a Software Engineer.



## Career Prospects

**Career Prospects for Software Engineering Graduates:**

- Software Engineer
- Software Developer
- Full-Stack Developer
- Mobile App Developer
- QA Engineer / Test Engineer
- DevOps Engineer
- AI Engineer
- Web Developer
- Cloud Engineer
- Game Developer
- Data Engineer
- Software Architect
- Business Intelligence (BI) Developer