

2019 Curriculum

Each student majoring in Computer Engineering must satisfactorily complete a minimum of 132 credits, which are divided into four components:

- **(18) Credits** - General Education Requirement
- **(27) Credits** - Mathematics and Basic Science Requirement
- **(18) Credits** - College of Engineering Requirement
- **(69) Credits** - Computer Engineering Requirement
 - **(50) Credits** - Core Requirement
 - **(10) Credits** - Electrical Engineering Requirement
 - **(9) Credits** - Technical Electives

1- General Education Requirement (18 Credits)

A. Compulsory (12 Credits)

9988 - 123	Technical English I	3
9988 - 221	Technical English II	3
0330 - 100	Modern and Contemporary History of Kuwait	3
0600 - 310	Engineering Ethics	3

B. Elective (6 Credits)

Free Elective: Select any 6 credits from the following list of courses

Students select free electives from the list approved by the college of Engineering and Petroleum.

Department Code	Department	Courses calculated in the Major Sheet
0200	-105College of Law	Human Rights
0200	-106College of Law	Constitutional Law in Kuwait
0310	Arabic Language and Literature Department	All Courses
0320	English Language and Literature Department	All Courses
0330	History and Archeology Department	All Courses
0360	Philosophy Department	All Courses
0380	Mass Communication Department	All Courses
0810	Department of Educational Administration	All Courses
0820	Department of Educational Foundations	All Courses
0900	College of Sharia and Islamic Studies	All Courses
0920	Doctrine and Preaching Islam	All Courses
0930	Jurisprudence and Principle of Jurisprudence	All Courses
0940	Comparative Jurisprudence and Policy of Sharia	All Courses
1820	Introduction of Food Science and Nutrition	1820100
0600	Professional Ethics	0600310
1340	Geography Department	All Courses
1350	Psychology Department	All Courses
1360	Political Science Department	All Courses
1370	Sociology Department	All Courses
9989	Language Center	All Courses
0910	Biography of the Prophet	0910233

2- Mathematics and Basic Science Requirement (27 Credits)

0410 - 101	Calculus I	3
0410 - 102	Calculus II	3
0410 - 111	Linear Algebra	3
0410 - 211	Calculus III	3
0410 - 240	Ordinary Differential Equations	3
0420 - 101	General Chemistry I	3
0420 - 105	General Chemistry I Laboratory	1
0430 - 101	Physics I	3
0430 - 105	Physics I Laboratory	1
0430 - 102	Physics II	3
0430 - 107	Physics II Laboratory	1

3- College of Engineering Requirement (18 Credits)

0600 - 104	Engineering Graphics	2
0600 - 200	Computer Programming for Engineers	3
0600 - 205	Electrical Engineering Fundamentals	3
0600 - 207	Electrical Engineering Fundamentals Laboratory	1
0600 - 209	Engineering Economy	3
0600 - 304	Engineering Probability and Statistics	3
0600 - 308	Numerical Methods in Engineering	3

4- Computer Engineering Requirement (69 Credits)

A. Core Requirement (50 Credits)

0612 - 201	Advance Computer Programming	3
0612 - 203	Discrete Structures	3
0612 - 207	Data Structures	3
0612 - 262	Fundamentals of Digital Logic	3
0612 - 264	Fundamentals of Digital Logic Laboratory	1
0612 - 300	Design and Analysis of Algorithms	3
0612 - 341	Database Management Systems	3
0612 - 342	Database Management Systems Laboratory	1
0612 - 356	Computer Networks	3
0612 - 357	Computer Networks Laboratory	1
0612 - 363	Introduction to Embedded Systems	3
0612 - 364	Introduction to Embedded Systems Laboratory	1
0612 - 368	Computer Organization	3
0612 - 371	Software Engineering and Development	3
0612 - 445	Operating System	3
0612 - 453	Cryptography and Network Security	3
0612 - 468	Computer Architecture	3
0612 - 469	Computer Architecture Laboratory	1
0612 - 494	Computer Systems Engineering	3
0612 - 495	Capstone Design	3
0612 - 303	Web development 3	3
0612 - 325	Human-Computer Interaction	3
0612 - 333	Intelligent Systems	3
0612 - 399	Engineering Training	3
0612 - 402	Cloud and Net-centric Computing	3
0612 - 404	Principles of Compiler Design	3

0612 - 410	Theory of Computation	3
0612 - 413	Parallel and Distributed Computing	3
0612 - 414	Quantum Computing	3
0612 - 420	Data Mining: Techniques and Applications	3
0612 - 421	Information Retrieval and Organization	3
0612 - 433	Computer Vision	3
0612 - 434	Robotics	3
0612 - 435	Expert Systems	3
0612 - 436	Machine Learning	3
0612 - 438	Computer Graphics	3
0612 - 441	Advanced Database Systems	3
0612 - 443	Multimedia Systems and Applications	3
0612 - 451	Wireless and Mobile Networking	3
0612 - 454	Performance Evaluation and Simulation of Computer Networks	3
0612 - 455	Fundamentals of Optical Networking	3
0612 - 456	Advanced Computer Networks	3
0612 - 458	Network Programming	3
0612 - 459	Information Security	3
0612 - 462	Computer Arithmetic	3
0612 - 464	Testing of Digital Systems	3
0612 - 465	Design Automation of Digital Systems	3
0612 - 471	Fault Tolerant Computing	3
0612 - 472	Logic for Computer Engineers	3
0612 - 474	ASIC Design	3
0612 - 477	Hardware Description Language Based Design	3
0612 - 481	Software Quality Assurance	3
0612 - 482	Software Requirements Analysis	3
0612 - 483	Software Project Management	3
0612 - 493	Special Topics in Computer Engineering	3

B. Electrical Engineering Requirement (10 Credits)

0610 - 213	Linear Circuit Analysis	<u>3</u>
0610 - 233	Electronics I	<u>3</u>
0610 - 234	Electronics Laboratory I	<u>1</u>
0610 - 385	Introduction to Digital Signal Processing	<u>3</u>

C. Technical Electives (9 Credits)

Students choose 9 credits from one the following application domains.