

Computer Science and Technology units of study

Computer Science and Technology

All candidates for the Bachelor of Engineering in Computer Engineering degree must satisfy the requirements described in the table of core units of study.

Candidates will also need to choose a number of recommended units (7credits) of study for Electronic Engineering, Control Engineering or Instrument Science and Engineering, The courses are listed as follows: Electromagnetic Field, Automatic Control Theory, Detecting Technology, Principle of Communication

Bachelor of Computer Science and Technology

Candidates for the four-year Bachelor of Engineering in Computer Science and Technology degree are required to complete a total of not less than 200 credit points including at least 180 credit points made up of units from the table of core units and recommended units of study. The additional 20 credit points may consist, in whole or in part, of free elective units of study.

Curricula in First Year

(P: Prerequisites C: Corequisite)

Compulsory Courses	Credits	Requirement	Semester
Advanced Mathematics (1)	6	C: Discrete Mathematics (1)	1
Advanced Mathematics (2)	4	P: Advanced Mathematics (1)	2
College Physics (1)	4	P: Advanced Mathematics (1) C: College Physics Lab. (1)	2
College Physics Lab. (1)	1	C: College Physics (1)	2
Discrete Mathematics (1)	2	C: Advanced Mathematics (1)	1
Linear Algebra	3	C: Advanced Mathematics (1) (selected)	1
Probability Theory and Mathematical Statistics	3	P: Advanced Mathematics (1)	2
C++Programming	3	P: Advanced Mathematics (1) P: Discrete Mathematics (1)	2

Optional Courses	Credits	Requirement	Semester
Electromagnetic Field	2	P: Advanced Mathematics (1) P: College Physics (1)	other Dep.
Automatic Control Theory	3	P: Advanced Mathematics (1)	other Dep.
Detecting Technology	2	P: Advanced Mathematics (1) P: College Physics (1)	other Dep.
Principle of Communication	2	P: Advanced Mathematics (1) P: College Physics (1)	other Dep.

Curricula in Second Year

(P: Prerequisites C: Corequisite)

Compulsory Courses	Credits	Requirement	Semester
College Physics (2)	4	P: Advanced Mathematics (1) C: College Physics Lab. (2)	3
College Physics Lab. (2)	2	C: College Physics (2)	3
Discrete Mathematics (2)	3	P: Discrete Mathematics (1)	4
Mathematical Methods in Physics	3	P: Advanced Mathematics (1) P: College Physics (1)	3
Basic Circuit Theory	4	P: Discrete Mathematics (1) P: Advanced Mathematics (1) P: College Physics (1) C: Basic Circuit Lab.	3
Basic Circuit Lab.	2	C: Basic Circuit Theory	3
Digital Electronic Technology	3	P: Discrete Mathematics (1) P: Advanced Mathematics (1) P: College Physics (1) C: Electronics Lab	3
Analog Electronic Technology	3	P: Advanced Mathematics (1) P: College Physics (1) C: Electronics Lab	4
Electronics Lab	3	C: Digital Electronic Technology C: Analog Electronic Technology	4
Algorithm and Complexity	3	P: Discrete Mathematics (1) P: Advanced Mathematics (1)	4
Compiler Principles	3	P: C++Programming C: Compiler Lab	4
Compiler Lab	2	C: Compiler Principles	4
Optional Courses	Credits	Requirement	Semester
Computer Organization and Architecture	4	P: C++Programming C: Computer Organization Lab.	4
Computer Organization Lab.	2	C: Computer Organization	4
Data Structure	4	P: Discrete Mathematics (1) P: C++Programming	4

Curricula in Third Year

(P: Prerequisites C: Corequisite)

Compulsory Courses	Credits	Requirement	Semester
Principles of Embedded System and Experiment	4	P: Computer Organization and Architecture	6
Operating System	3	P: Compiler Principles C: Operating System Lab	5
Software Engineering	2	P: Data Structure C: Software Engineering Lab	5
Principles of Database	3	P: Data Structure C: Database Lab.	6
Computer Network	3	P: Discrete Mathematics (1) P: C++Programming C: Computer Network Lab.	6
Computer Network Lab.	2	C: Computer Network	6
Operating System Lab	2	C: Operating System	5
Software Engineering Lab	2	C: Software Engineering	5
Database Lab.	2	C: Principles of Database	6
Optional Courses	Credits	Requirement	Semester
Technical Innovation Project	2	Depend	
Participation in Research Program(PRP)	3	Depend	
Internship/ Practical Training	2	Depend	
Signals and Systems	3	P: Advanced Mathematics (1) P: College Physics (1) P: Principle of Communication P: Analog Electronic Technology	5
Computer Security & Cryptography	3	P: Discrete Mathematics (1)(2) P: Algorithm and Complexity	6
Artificial Intelligence	3	P: Discrete Mathematics (1)(2) P: Algorithm and Complexity	6
Linux Kernel	3	P: Operating System P: Compiler Principles	6
Economy Informatics	3		6
DB2 Theory and Application	3	P: Data Structure P: Principles of Database	6

Curricula in Fourth Year

(P: Prerequisites C: Corequisite)

Optional Courses	Credits	Requirement	Semester
Graduation Thesis/Report	17		8
Massive Data Processing	3	P: Computer Network P: Principles of Database	7
Internet Information Retrieval	3	P: Computer Network	7
Storage Technology	3	P: Computer Network P: Data Structure P: Principles of Database	7
Electronic Business	3	P: Computer Network	7
Computer Graphics	3	P: Algorithm and Complexity P: Data Structure	7
Advanced Operating System	3	P: Linux Kernel P: C++Programming	7
Web Service and .NET technology	3	P: Computer Network P: Operating System	7
Introduction to AS400 System	3	P: Computer Organization and Architecture	7