PROGRAM COURSES

CS Bachelor Program

Program Courses

It is worth noting that course codes consist of two parts: the first two letters (CP) represent the faculty
code and the second two letters represent the department code (CS). The following table lists topic areas indicated by the middle digits in course numbers:

Middle Digit Topic Areas
0 Programming Systems
1 Architecture & Organization
2 Theoretical Foundations & Algorithms
3 Intelligent Systems
4 Database & Information Retrieval
5 Software Engineering
6 Computing Systems
7 Network Computing
8 Human Computer Interaction
9 Applications & Advanced Topics

Required Course List

Code Course Title Credits Prerequisite
--- Lab Science (II)* 4 ---
CPCS-211 Digital Logic Design 3 CPIT-201
CPCS-212 Applied Math for Computing (I) 4 MATH-202
CPCS-214 Computer Organization & Architecture (I) 3 CPCS-211
CPCS-223 Analysis & Design of Algorithms 3 CPCS-204
CPCS-241 Database (I) 3 CPCS-204
CPCS-301 Programming Languages 3 CPCS-204
CPCS-222
CPCS-302 Compiler Construction 3 CPCS-301
CPCS-323 Summer (workplace) Training 0 ---
CPCS-324 Algorithms & Data Structures (II) 3 CPCS-222
CPCS-223
CPCS-331 Artificial Intelligence (I) 3 CPCS-204
CPCS-223
CPCS-351 Software Engineering (I) 3 CPCS-204
CPCS-361 Operating Systems (I) 3 CPCS-214
CPCS-204
CPCS-371 Computer Networks (I) 3 CPCS-214
CPCS-381 Human-Computer Interaction (I) 2 CPCS-204
CPCS-391 Computer Graphics (I) 3 CPCS-204
CPCS-212
CPCS-498 Senior Project (I) 1 Senior Level
CPCS-499 Senior Project (II) 3 CPCS-498
MATH-202 Calculus (II) 3 MATH-110
STAT-352 Applied Probability & Random Processes 3 STAT-210
Total 56 Credits+

* Must include lab component subject to approval by department and academic advisor.
+ The Mathematics department has reduced the course MATH-202 from 4 to 3 credit hours. Students must compensate for this 1 credit according to the department resolution number 81019 dated 7/6/1434 H.

Elective Course List

Code	Course Title	Credits	Prerequisite
CPCS-353	Software Eng. Practices	3	CPCS-351
CPCS-372	Computer Networks (II)	3	CPCS-371
CPCS-403	Internet Application Programming	3	CPCS-371 CPCS-324
CPCS-404	Component-Based Computing	3	CPCS-351
CPCS-405	Software Technology Topics	3	CPCS-351
CPCS-413	Computer Architecture (II)	3	CPCS-214
CPCS-414	High Performance Computing	3	CPCS-361
CPCS-424	Theory Of Computation	3	CPCS-212 CPCS-222
CPCS-425	Information Security	3	CPCS-361 CPCS-371
CPCS-432	Artificial Intelligence (II)	3	CPCS-331
CPCS-433	Artificial Intelligence Topics	3	CPCS-331
CPCS-442	Database (II)	3	CPCS-241
CPCS-454	Object-Oriented Analysis & Design	3	CPCS-351
CPCS-457	Software Engineering Theory	3	CPCS-351
CPCS-462	Operating Systems (II)	3	CPCS-361
CPCS-463	Computing Systems Security	3	CPCS-361 CPCS-371
CPCS-464	Dependable Computing	3	CPCS-463
CPCS-465	Performance & Modeling of Computing Systems	3	CPCS-324 CPCS-361
CPCS-466	Systems Programming	3	CPCS-361
CPCS-473	Computer Networks Practice	3	CPCS-371
CPCS-474	TCP/IP & Web Networking	3	CPCS-371
CPCS-482	Multimedia & User Interface Design	3	CPCS-381
CPCS-494	Special/Selected Topics*	3	---

* Require approval according to the department policy.