

Computer Science Program Study Plan

| Level | Course Code | Course Title | Required or Elective | Pre-Requisite Courses | Credit Hours | Type of requirements (Institution, College or Department) |
|----------|-----------------------------|--|----------------------|----------------------------|--------------|--|
| Level 1 | 11030118 | English Language 1 | Required | None | 3 | University |
| | 31041103 | Calculus 1 | Required | None | 4 | College |
| | 41011151 | Programming Basics | Required | None | 3 | College |
| | 11010101 | Islamic Educatin 1 (Islamic Manners) | Required | None | 2 | University |
| | 41011153 | Introduction to Information Technology and Communications | Required | None | 3 | College |
| | 11010113 | Voluntary Service 1 | Required | None | 0 | University |
| Level 2 | 11030218 | English Language 2 | Required | 11030118 | 3 | University |
| | 31031104 | Physics 1 | Required | None | 4 | College |
| | 41011152 | Introduction to Algorithmic Problem Solving | Required | None | 3 | College |
| | 41011154 | English Language for Special Purposes | Required | None | 2 | College |
| | 11020107 | The Holy Quran (Recitation Correction) | Required | None | 2 | University |
| | 41011156 | Scientific Programming | Required | 41011151 | 3 | Department |
| Level 3 | 11010123 | Voluntary Service 2 | Required | None | 0 | University |
| | 41021231 | Advanced Programming | Required | 41011156 | 3 | Department |
| | 41011221 | Database | Required | 41011153 | 3 | Department |
| | 41012213 | Digital Logic Design | Required | None | 3 | Department |
| | 41011212 | Discrete Structures | Required | None | 3 | College |
| | 41021211 | Foundations of Information Systems | Required | 41011153 | 3 | Department |
| Level 4 | 41010132 | Probability and Statistics | Required | None | 3 | College |
| | 41011312 | Computer Organization and Architecture | Required | 41012213 or 41011153 | 3 | Department |
| | 41011327 | Web Development | Required | 41021231 41021231 | 3 | Department |
| | 41011234 | Matrices and Linear Algebra | Required | None | 3 | Department |
| | 41021266 | Data Structures and Algorithms | Required | 41011152 | 3 | Department |
| | 41021268 | Data and Computer Communications | Required | 41011153 | 3 | Department |
| Level 5 | 11020204 | Health Education | Required | None | 1 | University |
| | 41011324 | Intelligent Systems | Required | 41021231 | 3 | Department |
| | 41021373 | Advanced Web Development | Required | 41011327 | 3 | Department |
| | 41011314 | Operating Systems | Required | 41011153 | 3 | Department |
| | 41011313 | Software Engineering | Required | 41021231 | 3 | Department |
| 41021379 | Object Oriented Programming | Required | 41021231 | 3 | Department | |

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| | 11010117 | Islamic Education 2 (Islamic Civilization) | Required | None | 2 | University |
| Level 6 | 41011325 | Mobile Computing and Applications | Required | 41021231 | 3 | Department |
| | 41011321 | Human Computer Interaction | Required | 41021231 | 3 | Department |
| | 41011213 | Computer Networks | Required | 41011156 or 41021268 | 3 | Department |
| | 41011323 | Computer Graphics | Required | 41011234 And 41021231 | 3 | Department |
| | 11010112 | Essay and Research Writing Skills | Required | Earned70 CH | 2 | University |
| | 410xxxxx | Elective 1 | Elective | | 3 | Department |
| Level 7 | 41011411 | Senior Project for CS 1 | Required | 41011313 And Earned 85CH | 3 | Department |
| | 41011423 | Compiler Design and Theory | Required | 41021266 And 41011314 | 3 | Department |
| | 41011422 | Information Security and Privacy | Required | None | 3 | Department |
| | 41021425 | Data Visualization | Required | 41011156 | 3 | Department |
| | 41021427 | Innovation, Design and Prototyping | Required | None | 3 | Department |
| | 410xxxxx | Elective 2 | Elective | | 3 | Department |
| Level 8 | 41011421 | Senior Project for CS 2 | Required | 41011411 | 3 | Department |
| | 41011412 | Parallel and Distributed Computing | Required | 41011213 | 3 | Department |
| | 41021428 | Ethics in Computing and Professional Issues | Required | None | 3 | Department |
| | 41011616 | Selected Topics in Computer Science | Required | None | 3 | Department |
| | 410xxxxx | Elective 3 | Elective | | 3 | Department |
| | 410xxxxx | Elective 4 | Elective | | 3 | Department |
| Elective | Track 1: Artificial Intelligence | | | | | |
| | 41011614 | Recommender Systems | Elective | 41011324 | 3 | Department |
| | 41021901 | Natural Language Processing | Elective | 41011324 | 3 | Department |
| | 41021903 | Machine Learning | Elective | 41011324 | 3 | Department |
| | 41021905 | Agents, Knowledge and Data | Elective | 41011324 | 3 | Department |
| | Track 2: Networking | | | | | |

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| | 41021902 | Network Administration | Elective | 41011213 | 3 | Department |
| | 41021904 | Advanced Network Routing | Elective | 41011213 | 3 | Department |
| | 41021906 | Advanced Switching | Elective | 41011213 | 3 | Department |
| | 41021908 | Design and Management of Networking | Elective | 41011213 | 3 | Department |