



Form no. (11B): **Knowledge and skills matrix for the Computer Science program**

Program content	Knowledge	Intellectual skills	Professional skills	General skills
LH130 ESP 0	–	I5	P10, P12, P13	G1, G4, G6
LH135 ESP-I	–	I5	P10, P12, P13	G1, G4, G6
LH136 ESP-II	–	I5	P10, P12, P13	G1, G4, G6
NC233 Communication Skills	–	I5	P10, P12, P13	G1, G2, G4, G6
Math 0	K12,K14	I2	P8	G1, G3, G5
BA101 Calculus I	K12,K14	I2	P8	G1, G3, G5
BA102 Calculus II	K12, K14	I2	P8	G1, G3, G5
BA201 Calculus III	K12, K14	I2	P8	G1, G3, G5
BA203 Probability and Statistics	K14	I2	P8	G1, G3, G5
BA204 Linear Algebra	K14	I2	P8	G1, G3, G5
BA113 Physics	K6	I2	P1, P7	G1, G3

EC134 Fundamentals of Electricity and Electronics	K6	I2	P1, P7	G1, G6
AR115 Visual Studies	K3	I5	P6	G1, G6
CS111 Introduction to Computers	K1, K6	I1, I2	P1, P4	G1, G2, G7
CC216 Digital Logic Design	K1, K4, K6	I2, I12, I13	P1, P7	G1, G2, G3
CC243 Computer Architecture	K4, K5, K6, K11	I4, I13	P1, P7	G1, G3
CS143 Introduction to Problem Solving and Programming	K1, K2, K3, K4	I1, I3, I10, I11	P2, P3	G1, G2, G7
CS243 Object-Oriented Programming	K2, K3, K4	I1, I3, I10, I11	P2, P3	G1, G2, G7
CS244 Advanced Programming Applications	K2, K3, K4	I1, I3, I10, I11, I13	P2, P3, P9	G1, G2, G7
CS345 Structure of Programming Languages	K10, K13, K18	I10, I11, I17	P15, P19	G1, G2, G7
CS433 Web Programming	K2, K10	I5, I10, I11	P2, P3, P6, P9	G1, G2, G7
CS343 Game Programming	K10, K13, K17, K19	I10, I11, I19	P14, P15, P19	G1, G2, G7
CS212 Data Structures and Algorithms	K2, K4, K7	I3, I7, I10, I11, I13	P2, P3, P9	G1, G3, G7
CS312 Computing Algorithms	K13, K15	I12, I17, I19	P11, P14, P15, P19	G1, G7
CS311 Theory of Computation	K13, K15	I15, I16, I17	P14, P19	G1, G3, G7
CS202 Discrete Structures	K14	I2	P8	G1, G3, G5

CS301 Numerical Methods	K14, K15	I13, I14	P15, P16	G1, G3, G5
IS373 Database systems	K2, K5	I4, I11, I13	P2, P4, P8,P9	G1, G3 ,G7
IS474 Advanced Database Systems	K15, K16	I12, I19	P14, P16	G1, G3 ,G7
CE231 Introduction to Networks	K4, K5, K6, K11	I4, I7, I11, I13	P3, P7	G1, G3, G7
CS331 Network Protocols & Programming	K13, K19	I11, I13, I17	P11, P13, P14, P15	G1, G2, G7
CS321 Systems Programming	K18	I15, I16, I17	P14, P15	G1, G2, G7
CS441 Compilers	K18	I11, I17	P14, P15	G1, G7
CS322 Operating Systems	K5, K6, K10	I3, I7, I11	P5, P7	G1, G2, G3, G7
CS427 Embedded Systems Programming	K13, K16, K19	I10, I13, I17, I19	P14, P18, P19	G1, G2, G7
CS366 Introduction to Artificial Intelligence	K7, K4, K10	I5, I6, I10, I11	P2, P3, P5, P9	G1, G2, G3, G7, G8
CS461 Software Agents	K10, K15, K19	I10, I11, I19	P14, P15, P19	G1, G7, G8
CS464 Soft Computing	K10, K15, K19	I10, I11, I19	P14, P19	G1, G7, G8
CS367 Robotics Applications	K16, K19	I14, I15, I16, I19	P11, P14, P15, P16, P17	G1, G7, G8

CS467 Advanced Artificial intelligence	K10, K17, K19	I9, I10, I11, I17	P14, P15, P19	G1, G7, G8
IS461 Decision Support Systems	K15, K16	I17, I18	P16	G1, G2, G3
CS452 Computer Graphics	K13, K16, K17	I11, I13, I14	P10, P14, P16	G1, G2, G3, G7
CS453 Virtual Environments	K10, K13, K17, K19	I10, I11, I19	P14, P15, P19	G1, G7, G8
CS454 Multimedia Acquisition & Communications	K16, K17	I18, I19	P16	G1, G2, G7
CS451 Human Computer Interaction	K13, K18, K19	I10, I11, I14	P10, P17	G1, G7
CS421 Computer System Security	K13, K15, K18	I10, I11, I13, I18	P11, P15, P18	G1, G3, G5, G8
CS405 System Modeling & Simulation	K14, K15, K19	I12, I14, I16, I19	P14, P19	G1, G5, G7
CS425 Distributed Systems	K16, K18, K19	I9, I17, I19	P14, P15, P19	G1, G2, G7
CS403 Optimization Techniques	K16, K19	I10, I11, I13, I19	P11, P15, P19	G1, G7
IS171 Introduction to Information systems	K1	I1, I2	P2, P3	G1, G3, G7
IS372 Information Systems Theory &	K15	I15, I16	P16	G1, G3

Practice				
IS391 Systems Analysis & Design	K3, K5, K7, K11	I5, I6, I12, I13	P6	G1, G7
IS371 E-business Fundamentals	K15, K16	I17, I18	P16, P17	G1, G2, G3
SE291 Introduction to Software Engineering	K18	I15, I16	P14, P15, P19	G1, G2, G3
SE391 Project Management	K18	I15, I16	P14, P15, P19	G1, G2, G3
SE392 Software Requirements & Specifications	K18	I15, I16	P14, P15, P19	G1, G2, G3
SE393 Principle of Software Architecture	K18	I15, I16	P14, P15, P19	G1, G2, G3
SE491 Software Component Design	K18	I15, I16	P14, P15, P19	G1, G2, G3
SE492 Software Verification	K18	I15, I16	P14, P15, P19	G1, G2, G3
NC272 Fundamentals of Business	K8	I7	P2, P4	G1, G3
NC252 Principles of Marketing	K8	I7	P2, P4	G1, G3
NC264 Principle of Microeconomics	K8	I7	P2, P4	G1, G3, G5

NC273 Global Business	K8	I7	P2, P4	G1, G3
NC282 Financial Accounting	K8	I7	P2, P4	G1, G3, G5
CS481 Computers & Society	K9	I7, I8	P4, P5	G1,G2, G4, G6, G7
CS401 Project I	K15, K16, K19	I13, I14, I17, I9	P10, P11, P12, P13, P14, P19	G1 to G8
CS402 Project II	K13, K16, K19	I15, I16, I18, I19	P10, P11, P12, P13, P14, P19	G1 to G8

Program Manager:

Head of Department: