



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

Program content	Knowledge	Intellectual skills	Professional skills	General skills
LH130 ESP 0	–	I5	P13	G1, G4, G6
LH135 ESP I	–	I5	P13	G1, G4, G6
LH136 ESP II	–	I5	P13	G1, G4, G6
NC233 Communication Skills	–	I5	P13	G1, G2, G4, G6
BA003 Math 0	K12	I2	P8	G1, G3, G5
BA101 Calculus I	K12	I2	P8	G1, G3, G5
BA102 Calculus II	K12	I2	P8	G1, G3, G5
BA201 Calculus III	K12	I2	P8	G1, G3, G5
BA203 Probability and Statistics	K12	I2	P8	G1, G3, G5
BA204 Linear Algebra	K12	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

<b>AR115</b> <b>Visual Studies</b>	<b>K3</b>	<b>I5</b>	<b>P6</b>	<b>G1, G6</b>
<b>CS111</b> <b>Introduction to Computers</b>	<b>K1, K6</b>	<b>I1, I2</b>	<b>P1, P4</b>	<b>G1, G2, G7</b>
<b>CE216</b> <b>Digital Logic Design</b>	<b>K1, K4, K6</b>	<b>I2, I11, I12</b>	<b>P1, I7</b>	<b>G1, G2, G3</b>
<b>CE243</b> <b>Computer Architecture</b>	<b>K4, K5, K6, K11</b>	<b>I4, I12, I13</b>	<b>P1, P7</b>	<b>G1, G3</b>
<b>CS143</b> <b>Introduction to Problem Solving and Programming</b>	<b>K2, K3, K4 K1,</b>	<b>I1, I3, I10, I11</b>	<b>P2, P3</b>	<b>G1, G2, G7</b>
<b>CS243</b> <b>Object-Oriented Programming</b>	<b>K2, K3, K4</b>	<b>I1, I3, I10, I11</b>	<b>P2, P3</b>	<b>G1, G2, G7</b>
<b>CS244</b> <b>Advanced Programming Applications</b>	<b>K2, K3, K4</b>	<b>I1, I3, I10, I11, I12</b>	<b>P2, P3, P9</b>	<b>G1, G2, G7</b>
<b>CS345</b> <b>Structure of Programming Languages</b>	<b>K10, K13, K18</b>	<b>I10, I11, I17</b>	<b>P15, P19</b>	<b>G1, G2, G7</b>
<b>CS433</b> <b>Web Programming</b>	<b>K2, K10</b>	<b>I5, I10, I11</b>	<b>P2, P3, P6, P9</b>	<b>G1, G2, G7</b>
<b>CS212</b> <b>Data Structures and Algorithms</b>	<b>K2, K4, K7</b>	<b>I3, I7, I10, I11, I12</b>	<b>P2, P3, P9</b>	<b>G1, G3, G7</b>
<b>CS311</b> <b>Theory of Computation</b>	<b>K13, K15</b>	<b>I15, I16, I17</b>	<b>P14, P19</b>	<b>G1, G3, G7</b>
<b>CS202</b> <b>Discrete Structures</b>	<b>K12</b>	<b>I2</b>	<b>P8</b>	<b>G1, G3, G5</b>
<b>CS301</b> <b>Numerical Methods</b>	<b>K14, K15</b>	<b>I13, I14</b>	<b>P15, P16</b>	<b>G1, G3, G5</b>
<b>IS373</b> <b>Database systems</b>	<b>K2, K5</b>	<b>I4, I11, I12</b>	<b>P2, P4, P8,P9</b>	<b>G1, G3 ,G7</b>
<b>IS474</b> <b>Advanced Database Systems</b>	<b>K14</b>	<b>I11, I16</b>	<b>P10, P14</b>	<b>G1, G3, G7, G8</b>

<b>CE231</b> <b>Introduction to Networks</b>	<b>K4, K5, K6, K11</b>	<b>I4, I7, I11, I12</b>	<b>P7, P3</b>	<b>G1, G3, G7</b>
<b>CS321</b> <b>Systems Programming</b>	<b>K18</b>	<b>I15, I16, I17</b>	<b>P14, P15</b>	<b>G1, G2, G7</b>
<b>CS322</b> <b>Operating Systems</b>	<b>K5, K6, K10</b>	<b>I3, I7, I11</b>	<b>P5, P7</b>	<b>G1, G2, G3, G7</b>
<b>CS366</b> <b>Introduction to Artificial Intelligence</b>	<b>K7, K4, K10</b>	<b>I5, I6, I10, I11</b>	<b>P2, P3, P5, P9</b>	<b>G1, G2, G3, G7, G8</b>
<b>IS461</b> <b>Decision Support Systems</b>	<b>K13, K18</b>	<b>I13, I15, I17</b>	<b>P12, P13, P18</b>	<b>G1, G6</b>
<b>CS452</b> <b>Computer Graphics</b>	<b>K13, K16, K17</b>	<b>I11, I13, I14</b>	<b>P10, P14, P16</b>	<b>G1, G2, G3, G7</b>
<b>CS451</b> <b>Human Computer Interaction</b>	<b>K14</b>	<b>I14</b>	<b>P16</b>	<b>G1, G7</b>
<b>IS421</b> <b>Computer System Security</b>	<b>K13, K15, K18</b>	<b>I10, I11, I13, I18</b>	<b>P11, P15, P18</b>	<b>G1, G3, G5, G8</b>
<b>CS405</b> <b>System Modeling &amp; Simulation</b>	<b>K14, K15, K19</b>	<b>I12, I14, I16, I19</b>	<b>P14, P19</b>	<b>G1, G5, G7</b>
<b>IS171</b> <b>Introduction to Information systems</b>	<b>K1</b>	<b>I1, I2</b>	<b>P2, P3</b>	<b>G1, G3, G7</b>
<b>IS372</b> <b>Information Systems Theory &amp; Practice</b>	<b>K13, K15</b>	<b>I10, I14, I15</b>	<b>P10, P12, P15, P19</b>	<b>G1, G3</b>
<b>IS391</b> <b>Systems Analysis &amp; Design</b>	<b>K13, K15, K18, K19</b>	<b>I10, I14, I15, I18</b>	<b>P10, P12, P15, P19</b>	<b>G1, G3</b>
<b>IS371</b> <b>E_business Fundamentals</b>	<b>K14, K20</b>	<b>I10, I14, I16</b>	<b>P12, P14, P15, P16 P19</b>	<b>G1, G7</b>
<b>IS471</b> <b>Strategic Planning for IS</b>	<b>K13, K15, K19</b>	<b>I14, I15</b>	<b>P12, P13, P15, P19</b>	<b>G1, G7</b>

<b>IS477</b> <b>Geographic Information Systems</b>	<b>K14, K20</b>	<b>I12, I16, I17</b>	<b>P12, P15, P19</b>	<b>G1, G7</b>
<b>IS478</b> <b>Integrated Information Systems Management</b>	<b>K13, K15, K16, K19</b>	<b>I15, I18</b>	<b>P12, P15, P17, P19</b>	<b>G1, G7</b>
<b>IS472</b> <b>E-Learning</b>	<b>K14</b>	<b>I10, I16, I17</b>	<b>P12, P15, P19</b>	<b>G1, G7</b>
<b>IS479</b> <b>Digital Libraries</b>	<b>K13</b>	<b>I12, I15</b>	<b>P15, P16</b>	<b>G1, G7</b>
<b>IS433</b> <b>Mobile Computing Applications</b>	<b>K14, K17</b>	<b>I12, I16, I17</b>	<b>P15, P16</b>	<b>G1, G7</b>
<b>IS476</b> <b>Multimedia Information systems</b>	<b>K13, K14</b>	<b>I10, I11, I13, I14, I15, I16</b>	<b>P15, P16, P18</b>	<b>G1, G2, G3, G4, G8</b>
<b>IS463</b> <b>Knowledge Management</b>	<b>K13, K15</b>	<b>I10, I14, I15</b>	<b>P10, P12, P15, P19</b>	<b>G1, G3</b>
<b>IS465</b> <b>Data Mining</b>	<b>K14</b>	<b>I11, I16</b>	<b>P10, P14</b>	<b>G1, G3, G7, G8</b>
<b>SE291</b> <b>Introduction to Software Engineering</b>	<b>K18</b>	<b>I11, I12, I14, I15</b>	<b>P11, P12, P17, P18</b>	<b>G1, G2, G3</b>
<b>SE391</b> <b>Project Management</b>	<b>K14, K18</b>	<b>I11, I12, I14, I15</b>	<b>P11, P12, P17, P18</b>	<b>G1, G2, G3</b>
<b>SE392</b> <b>Software Requirements &amp; Specifications</b>	<b>K18</b>	<b>I11, I12, I14, I15</b>	<b>P11, P12, P17, P18</b>	<b>G1, G2, G3</b>
<b>SE393</b> <b>Principle of Software Architecture</b>	<b>K18</b>	<b>I11, I12, I14, I15</b>	<b>P11, P12, P17, P18</b>	<b>G1, G2, G3</b>

<b>SE491</b> <b>Software Component Design</b>	<b>K18</b>	<b>I11, I12, I14,I15</b>	<b>P11, P12, P17,P18</b>	<b>G1, G2, G3</b>
<b>SE492</b> <b>Software Verification</b>	<b>K18</b>	<b>I11, I12, I14,I15</b>	<b>P11, P12, P17,P18</b>	<b>G1, G2, G3</b>
<b>NC272</b> <b>Fundamentals of Business</b>	<b>K8</b>	<b>I7</b>	<b>P2, P4</b>	<b>G1, G3</b>
<b>NC252</b> <b>Principles of Marketing</b>	<b>K8</b>	<b>I7</b>	<b>P2, P4</b>	<b>G1, G3</b>
<b>NC264</b> <b>Principle of Microeconomics</b>	<b>K8</b>	<b>I7</b>	<b>P2, P4</b>	<b>G1, G3, G5</b>
<b>NC273</b> <b>Global Business</b>	<b>K8</b>	<b>I7</b>	<b>P2, P4</b>	<b>G1, G3</b>
<b>NC282</b> <b>Financial Accounting</b>	<b>K8</b>	<b>I7</b>	<b>P2, P4</b>	<b>G1, G3, G5</b>
<b>NC281</b> <b>Organizational Behavior</b>	<b>K16</b>	<b>I8</b>	<b>P11</b>	<b>G2</b>
<b>CS481</b> <b>Computers &amp; Society</b>	<b>K9</b>	<b>I7, I8</b>	<b>P4, P5</b>	<b>G1,G2, G4, G6, G7</b>
<b>IS401</b> <b>Project I</b>	<b>K13, K14, K15, K16, K18</b>	<b>I10, I11, I12, I13, I14, I15, I18</b>	<b>P10, P11, P12, P13, P14, P15, P16, P18</b>	<b>G1-G8</b>
<b>IS402</b> <b>Project II</b>	<b>K13, K14, K15, K16, K18, K19</b>	<b>I13, I14, I16, I17</b>	<b>P12, P13, P17, P19</b>	<b>G1-G8</b>

**Program Manager:**

**Head of Department:**