

Program Name: Computer Science

COURSE	TITLE	LEC	LAB	CR	Pre-req	COURSE	TITLE	LEC	LAB	CR	Pre-req
<b>FRESHMAN YEAR</b>											
<b>SEMESTER 1</b>						<b>SEMESTER 2</b>					
CS 1001	Introduction to Computing	2	2	3	Co-requisite GCS 182	CS 1131	Advanced Programming	2	2	3	GCS 182
GMTH 181E	Pre-Calculus for Engineering	3	0	3	None	MATH 101	Calculus for Engineers I	3	0	3	GMTH 141E
GCS 182	Principles of Computing, Data and Algorithms	2	2	3	None	Choice	English Language II	3	0	3	GENG 131
GENG 131	Advanced English Language Skills & Critical Thinking	3	0	3	Placement	CS 1021	Computer Architecture and Organization	2	2	3	CS 1001
BIO 112	Introduction to Biology	2	3	3	None	GSTA 181	Introductory Statistics (Quantitative Reasoning)	3	0	3	None
Choice	Foreign Languages & Communication	1	2	2	None	GISL 121	Islam and Civil Society	3	0	3	None
<b>Total</b>		<b>13</b>	<b>9</b>	<b>17</b>		<b>Total</b>		<b>16</b>	<b>4</b>	<b>18</b>	
22						20					
<b>SOPHOMORE YEAR</b>											
<b>SEMESTER 3</b>						<b>SEMESTER 4</b>					
CS 2071	Database Systems	2	2	3	GCS 182	CS 2111	Web Application Development	2	2	3	CS 2071
CS 2132	Object Oriented Programming	2	2	3	CS 1131	GSEM 100	Research Seminar	1	2	2	NONE
CS 2171	Ethics in Computing	2	0	2	None	CS 2011	Data Structures and Algorithms	2	2	3	CS 2132
MATH 201	Calculus for Engineers II	3	0	3	MATH 101	STAT 201	Statistics for Computing	3	0	3	MATH 201 & GSTA 140
Choice	Arabic Language	3	0	3	None	CS 3067	Information and Cyber Security	2	2	3	CS 1001
GPHY 171	Foundation in Physics (Physical & Environmental Sciences)	2	2	3	None	CS 2091	Computer Networks	2	2	3	CS 1021
<b>Total</b>		<b>14</b>	<b>6</b>	<b>17</b>		<b>Total</b>		<b>12</b>	<b>10</b>	<b>17</b>	
20						22					
<b>JUNIOR YEAR</b>											
<b>SEMESTER 5</b>						<b>SEMESTER 6</b>					
CS 3081	Artificial Intelligence	2	2	3	STAT 201 and CS 2011	Choice	Creative Arts and Cultural Studies	3	0	3	
MATH 203	Discrete Mathematics	3	0	3	MATH 201	CS3151	Software Engineering	2	2	3	CS 2011
CS 3012	Algorithm Analysis	2	2	3	CS 2011	CS 3172	Research Projects in Computing	2	2	3	GSEM 200
CS 3101	Operating Systems	2	2	3	CS 1021 & CS 2011	MATH 310	Numerical Analysis	3	0	3	MATH 201 & CS 1131
GSEM 201	Research, Innovation and Intellectual Property	3	0	3	GSEM 100	Choice	Social Structure and Global Awareness	3	0	3	None
Choice	Social Structure and Global Awareness	3	0	3	None	Choice	Foreign Languages & Communication	1	2	2	None
<b>Total</b>		<b>15</b>	<b>6</b>	<b>18</b>		<b>Total</b>		<b>14</b>	<b>6</b>	<b>17</b>	
21						20					
<b>SUMMER SESSION</b>											
CS 3173	Summer Training	0	0	2	CS 3172						
<b>SENIOR YEAR</b>											
<b>SEMESTER 7</b>						<b>SEMESTER 8</b>					
MATH 307	Linear Algebra	3	0	3	MATH 201	CS 4175	Senior Project 2	0	0	3	CS4174
CS3133	Programming Languages	2	2	3	CS 3172		Technical Elective 4	2	2	3	None
CS 4174	Senior Project 1	3	0	3			Technical Elective 5	2	2	3	None
Choice	Technical Elective 1	2	2	3			Technical Elective 4	2	2	3	
	Technical Elective 2	2	2	3							
<b>Total</b>		<b>12</b>	<b>6</b>	<b>15</b>		<b>Total</b>		<b>6</b>	<b>6</b>	<b>12</b>	
18						12					
<b>Total credit hours required: 133</b>											