

# Computer Engineering, BS

## Graduation Plan - 4 years

### 1st Year

Fall Semester		Hours
MATH 1210	Calculus I (MA)	4
CS 1400	Fundamentals of Programming	3
ENGL 2010	Intern Writing Selected Topics: (EN)	3
GE Life Sciences		3
GE Exploration (CHEM or BIOL course)		3

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**Hours** **16**

### Spring Semester

MATH 1220	Calculus II (MA)	4
CS 1410	Object Oriented Programming	3
PHYS 2210 & PHYS 2215	Physics/Scientists Engineers I (PS) and Physics/Scientists Engineers I Lab (LAB)	5
GE Literature/Humanities		3

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**Hours** **15**

### 2nd Year

#### Fall Semester

CS 2420	Introduction to Algorithms and Data Structures	3
MECH 2210 & MECH 2215	Circuits and Circuits Lab	4
PHYS 2220 & PHYS 2225	Physics/Scientists EngineersII and Physics/Scientists Engineers II Lab	5
ECE 2700 & ECE 2705	Digital Circuits and Digital Circuits Lab	4
ECE 1200	MATLAB and Arduino	1

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**Hours** **17**

#### Spring Semester

CS 2450	Software Engineering	3
MECH 2250 & MECH 2255	Sensors & Actuators and Sensors & Actuators Lab	4
MATH 2250	Differential Equations and Linear Algebra	4
ECE 2280 & ECE 2285	Microelectronics and Microelectronics Lab	4

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**Hours** **15**

### 3rd Year

#### Fall Semester

MECH 3200 & MECH 3205	Systems & Controls and Systems & Controls Lab	3.5
ECE 3730 & ECE 3735	Embedded Systems I and Embedded Systems I Lab	4
CS 2810	Computer Organization and Architecture	3
CS 3005	Programming in C++	3
MATH 3400	Probability & Statistics	3

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**Hours** **16.5**

#### Spring Semester

CS 3410	Distributed Systems	3
ECE 3500	Signals and Systems	3
ENGL 3010	Professional Writing and Business Ethics	3

ECE 4730 & ECE 4735	Embedded Systems II and Embedded Systems II Lab	4
Tech Elective 1		3
<b>Hours</b>		<b>16</b>
<b>4th Year</b>		
<b>Fall Semester</b>		
ECE 4005	CE Product Design I	3
Tech Elective 2		3
CS 3400	Operating Systems	3
CS 3310	Discrete Mathematics	3
GE Fine Arts		3
<b>Hours</b>		<b>15</b>
<b>Spring Semester</b>		
ECE 4015	CE Product Design II	3
ECE 4500	Digital Signal Processing	3
Tech Elective 3		3
GE - American Institutions		3
GE - Social and Behavioral Sciences		3
<b>Hours</b>		<b>15</b>
<b>Total Hours</b>		<b>125.5</b>

## Graduation Plan - 5 years (MATH 1010)

<b>1st Year</b>		
<b>Fall Semester</b>		
MATH 1010	Intermediate Algebra	4
ENGL 1010	Introduction to Writing (EN)	3
General Education (Life Science) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
General Education (American Institutions) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
<b>Hours</b>		<b>13</b>
<b>Spring Semester</b>		
MATH 1080	Pre-Calculus with Trigonometry (MA)	5
ENGL 2010	Interm Writing Selected Topics: (EN)	3
CS 1400	Fundamentals of Programming	3
General Education (Fine Arts) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
<b>Hours</b>		<b>14</b>
<b>2nd Year</b>		
<b>Fall Semester</b>		
ECE 2700 & ECE 2705	Digital Circuits and Digital Circuits Lab	4
CS 1410	Object Oriented Programming	3
ECE 1200	MATLAB and Arduino	1
MATH 1210	Calculus I (MA)	4
General Education (Exploration) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
<b>Hours</b>		<b>15</b>
<b>Spring Semester</b>		
CS 2420	Introduction to Algorithms and Data Structures	3
PHYS 2210 & PHYS 2215	Physics/Scientists Engineers I (PS) and Physics/Scientists Engineers I Lab (LAB)	5
MATH 1220	Calculus II (MA)	4
<b>Hours</b>		<b>12</b>

**3rd Year****Fall Semester**

MECH 2210 & MECH 2215	Circuits and Circuits Lab	4
CS 3005	Programming in C++	3
PHYS 2220 & PHYS 2225	Physics/Scientists EngineersII and Physics/Scientists Engineers II Lab	5

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<b>Hours</b>	<b>12</b>
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**Spring Semester**

MECH 2250 & MECH 2255	Sensors & Actuators and Sensors & Actuators Lab	4
ECE 2280 & ECE 2285	Microelectronics and Microelectronics Lab	4
CS 2450	Software Engineering	3
MATH 2250	Differential Equations and Linear Algebra	4

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<b>Hours</b>	<b>15</b>
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**4th Year****Fall Semester**

ECE 3730 & ECE 3735	Embedded Systems I and Embedded Systems I Lab	4
MECH 3200 & MECH 3205	Systems & Controls and Systems & Controls Lab	3.5
CS 2810	Computer Organization and Architecture	3
MATH 3400	Probability & Statistics	3

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<b>Hours</b>	<b>13.5</b>
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**Spring Semester**

ECE 4730 & ECE 4735	Embedded Systems II and Embedded Systems II Lab	4
ECE 3500	Signals and Systems	3
CS 3410	Distributed Systems	3
Tech Elective 1		3

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<b>Hours</b>	<b>13</b>
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**5th Year****Fall Semester**

ECE 4005	CE Product Design I	3
CS 3400	Operating Systems	3
Tech Elective 2		3
ENGL 3010	Professional Writing and Business Ethics	3
CS 3310	Discrete Mathematics	3

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<b>Hours</b>	<b>15</b>
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**Spring Semester**

ECE 4015	CE Product Design II	3
ECE 4500	Digital Signal Processing	3
Tech Elective 3		3
General Education (Lit / Humanities) ( <a href="http://catalog.dixie.edu/programs/generaleducation/#gerequirementstext">catalog.dixie.edu/programs/generaleducation/#gerequirementstext</a> )		3
General Education (Social & Behavioral Sciences) ( <a href="http://catalog.dixie.edu/programs/generaleducation/#gerequirementstext">catalog.dixie.edu/programs/generaleducation/#gerequirementstext</a> )		3

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<b>Hours</b>	<b>15</b>
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<b>Total Hours</b>	<b>137.5</b>
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## Graduation Plan - 5 years (MATH 1050)

### 1st Year

Fall Semester		Hours
MATH 1050	College Algebra / Pre-Calculus (MA)	4
ENGL 1010	Introduction to Writing (EN)	3
CS 1400	Fundamentals of Programming	3
General Education (American Institutions) ( <a href="http://catalog.dixie.edu/programs/generaleducation/#gerequirementstext">catalog.dixie.edu/programs/generaleducation/#gerequirementstext</a> )		3
<b>Hours</b>		<b>13</b>

### Spring Semester

MATH 1060	Trigonometry (MA)	3
CS 1410	Object Oriented Programming	3
ENGL 2010	Intern Writing Selected Topics: (EN)	3
General Education (Exploration) ( <a href="http://catalog.dixie.edu/programs/generaleducation/#gerequirementstext">catalog.dixie.edu/programs/generaleducation/#gerequirementstext</a> )		3
General Education (Life Science) ( <a href="http://catalog.dixie.edu/programs/generaleducation/#gerequirementstext">catalog.dixie.edu/programs/generaleducation/#gerequirementstext</a> )		3
<b>Hours</b>		<b>15</b>

### 2nd Year

Fall Semester		Hours
ECE 2700 & ECE 2705	Digital Circuits and Digital Circuits Lab	4
ECE 1200	MATLAB and Arduino	1
CS 2420	Introduction to Algorithms and Data Structures	3
MATH 1210	Calculus I (MA)	4
<b>Hours</b>		<b>12</b>

### Spring Semester

CS 2450	Software Engineering	3
PHYS 2210 & PHYS 2215	Physics/Scientists Engineers I (PS) and Physics/Scientists Engineers I Lab (LAB)	5
MATH 1220	Calculus II (MA)	4
<b>Hours</b>		<b>12</b>

### 3rd Year

Fall Semester		Hours
MECH 2210 & MECH 2215	Circuits and Circuits Lab	4
CS 3005	Programming in C++	3
PHYS 2220 & PHYS 2225	Physics/Scientists Engineers II and Physics/Scientists Engineers II Lab	5
CS 3310	Discrete Mathematics	3
<b>Hours</b>		<b>15</b>

### Spring Semester

MECH 2250 & MECH 2255	Sensors & Actuators and Sensors & Actuators Lab	4
ECE 2280 & ECE 2285	Microelectronics and Microelectronics Lab	4
MATH 2250	Differential Equations and Linear Algebra	4
General Education (Fine Arts) ( <a href="http://catalog.dixie.edu/programs/generaleducation/#gerequirementstext">catalog.dixie.edu/programs/generaleducation/#gerequirementstext</a> )		3
<b>Hours</b>		<b>15</b>

### 4th Year

Fall Semester		Hours
ECE 3730 & ECE 3735	Embedded Systems I and Embedded Systems I Lab	4
MECH 3200 & MECH 3205	Systems & Controls and Systems & Controls Lab	3.5
CS 2810	Computer Organization and Architecture	3

MATH 3400	Probability & Statistics	3
<b>Hours</b>		<b>13.5</b>
<b>Spring Semester</b>		
ECE 4730 & ECE 4735	Embedded Systems II and Embedded Systems II Lab	4
ECE 3500	Signals and Systems	3
CS 3410	Distributed Systems	3
Tech Elective 1		3
<b>Hours</b>		<b>13</b>
<b>5th Year</b>		
<b>Fall Semester</b>		
ECE 4005	CE Product Design I	3
CS 3400	Operating Systems	3
ENGL 3010	Professional Writing and Business Ethics	3
Tech Elective 2		3
General Education (Social & Behavioral Science) ( <a href="http://catalog.dixie.edu/programs/generaleducation/#gerequirementstext">catalog.dixie.edu/programs/generaleducation/#gerequirementstext</a> )		3
<b>Hours</b>		<b>15</b>
<b>Spring Semester</b>		
ECE 4015	CE Product Design II	3
ECE 4500	Digital Signal Processing	3
Tech Elective 3		3
General Education (Lit / Humanities) ( <a href="http://catalog.dixie.edu/programs/generaleducation/#gerequirementstext">catalog.dixie.edu/programs/generaleducation/#gerequirementstext</a> )		3
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>135.5</b>