

# PHYSICS

## Bachelor of Science Degree in DDEP-Physics

Credits: 122  
CIP Code: 400801

Code	Title	Hours
<b>Required Courses</b>		
Select 48 credits <sup>1</sup>		48
<b>Cognate Courses</b>		
CMAT 111	Calculus I	4
CMAT 112	Calculus II	4
CMAT 211	Calculus III	4
<b>Physics Elective</b>		
Select nine credits <sup>2</sup>		9
<b>Total Hours</b>		<b>69</b>

<sup>1</sup> Includes transfer credits from partner institution. Please refer to Physics catalog entry for listing of major courses required. Includes 9 elective credits.

<sup>2</sup> Includes transfer credits from partner institution and CAU 300 level Engineering Courses. Please refer to Physics catalog entry for listing of electives. Included in number of required course credit (48).

### General Education Courses

Code	Title	Hours
<b>Area A: Humanities/Fine Arts</b>		
CPHI 105	Critical Thinking	3
CHIS 211	History of the United States	3
CHIS 212	History of the United States	3
<b>Area B: Social/Behavioral Sciences</b>		
CPSY 211	General Psychology	3
<b>Area C: Natural Sciences/Mathematics/Statistics</b>		
CHEM 111		4
CHEM 112		4
<b>Area D: Communications</b>		
CENG 105	College Composition I	3
CENG 106	College Composition II	3
CENG 201	Intro to World Literature I	3
or CENG 202	Intro to World Literature II	
<b>Area E: Financial/Technological</b>		
CCIS 105	Programming Principles I	3
CECO 107	Introduction to Economics	3
<b>Total Hours</b>		<b>35</b>

### Other University Requirements

Code	Title	Hours
CGED 100	First Year Seminar	1
CGED 101	1st-Year Seminar	1
<b>Total Hours</b>		<b>2</b>

**Free Electives: 15** (includes transfer credits from partner institution)

**Note:** Free Electives should be chosen in consultation with the advisor, depending on the choice of minor or stackable credentials.

## Dual Degree Engineering Program Plan of Study for Bachelor of Science Degree in DDEP-Physics

Course	Title	Hours
<b>First Year</b>		
<b>First Semester</b>		
CEGR 101	Introduction to Engineering	3
CEGR 101L	Intro to Engineering Lab	0
CMAT 111	Calculus I	4
CENG 105	College Composition I (Area D)	3
CGED 100	First Year Seminar	1
CCIS 105 & 105L	Programming Principles I and Programming Principles I Lab (Area E)	4
CPHI 105	Critical Thinking (Area A)	3
<b>Hours</b>		<b>18</b>
<b>Second Semester</b>		
CENG 106	College Composition II (Area D)	3
CMAT 112	Calculus II	4
CPHY 121	Physics I: Mechanics	3
CPHY 121L	Physics I: Mechanics Lab	1
CGED 100	First Year Seminar	1
CCIS 106 & 106L	Programming Principles II and Programming Principles II Lab	4
<b>Hours</b>		<b>16</b>
<b>Second Year</b>		
<b>First Semester</b>		
CENG 201 or CENG 202	Intro to World Literature I (Area D) or Intro to World Literature II	3
CCHE 111 & 111L	Gen Chem 1 & Recitation and General Chemistry Lab (Area C)	4
CMAT 211	Calculus III	4
CPHY 122 & 122L	Physics II: Elec & Magnetism and Physics II:Electricity&Mag.Lab	4
CEGR 110 & 110L	Engineering Graphics and Engineering Graphics Lab	3
<b>Hours</b>		<b>18</b>
<b>Second Semester</b>		
CEGR 211	Engineering Statics	3
CCHE 112 & 112L	Gen Chem II Lec & Recitation and General Chemistry II Lab (Area C)	4
CPSY 211	General Psychology (Area B)	3
CPHY 123 & 123L	Physics III:Optics/Modern Phys and Physics III: Optics&Mod.PhyLab	4
CMAT 212	Differential Equations	3
<b>Hours</b>		<b>17</b>
<b>Third Year</b>		
<b>First Semester</b>		
CHIS 211	History of the United States (Area A)	3

CMAT 214	Linear Algebra	3
CEGR 311	Engineering Dynamics	3
CEGR 201 & 201L	Electrical Circuit Analysis and Electrical Circuit Anal Lab	4
CPHY 211	Modern Physics	3
<b>Hours</b>		<b>16</b>

**Second Semester**

CHIS 212	History of the United States (Area A)	3
CPHY 321	Mathematical Physics I	3
CPHY 332	Electromagnetic Theory	3
CECO 107	Introduction to Economics (Area E)	3
Elective		3
<b>Hours</b>		<b>15</b>

**Fourth Year****First Semester****Courses to be Completed at Partner Institution 4th & 5th Year**

Additional hours needed to satisfy degree requirements can be taken (or transfer equivalent) at and transferred from partner institution beyond Junior Year

ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
CPHY 322	Mathematical Physics II (or transfer equivalent)	3
CPHY 331	Classical Mechanics (or transfer equivalent)	3
<b>Hours</b>		<b>15</b>

**Second Semester**

ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
CPHY 332	Electromagnetic Theory (or transfer equivalent)	3
CPHY 411	Thermo & Statistical Mechanics (or transfer equivalent)	3
<b>Hours</b>		<b>15</b>

**Fifth Year****First Semester**

ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
CPHY 412	Intro to Quantum Mechanics (or transfer equivalent)	3
CPHY 421	Undergraduate Research I (or transfer equivalent)	3
<b>Hours</b>		<b>15</b>

**Second Semester**

ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3

CPHY 422	Undergraduate Research II (or transfer equivalent)	3
<b>Hours</b>		<b>15</b>
<b>Total Hours</b>		<b>160</b>