

# University of North Georgia

## Dual Degree - Physics and Engineering

Name:

ID#:

Catalog:

Grad. Semester:

### Institutional Priority (7 hrs.)

Course	Sem.	Hrs.	Grd.
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1. Modern Lang.\*
2. Global

*\*Modern language courses at the 1001 and 1002 level are 4 credit hours.*

### Mathematics & Quantitative Skills\* (3 hrs.)

1. Math\*\*\*

*\*Complete by 30 hours.*

*\*\*Physics students must take MATH 1113 or MATH 1450.*

### Political Science and U.S. History (3 hrs.)

1. Citizenship

### Arts, Humanities, and Ethics (6 hrs.)

1. Lit. or Lang.
2. Fine Arts/Phil.

### Communicating in Writing\* (6 hrs.)

1. English 1101
2. English 1102

*\*A grade of C or higher is required.*

*\*Complete by 30 hours.*

### Technology, Mathematics, & Sciences (11 hrs.)

1. Lab Science
2. Lab Science
3. Math & Tech.

### Social Sciences (6 hrs.)

1. Behavioral Sci.
2. Social Science

### Field of Study (18 hrs.)

- 1.
- 2.
- 3.
- 4.
- 5.

### Graduation Requirements:

US History	GA History
US Constitution	GA Constitution
39 Hours at 3/4000 Level	30 Residency Hours
Minimum 2.0 Institutional & Cumulative GPA	
Minimum 60 Core Hours & 120 Semester Hours	
21 Hours at the 3000/4000 Level in Major	

**Signatures (original only)**

**Date**

Student:

Advisor:

### Major Courses (13-21 hrs.)

Course	Sem.	Hrs.	Grd.
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*CHEM 1211/L & 1212/L can be taken to fulfill IMPACTS requirements.*

### Other Requirements (3 hrs.)

### Electives (to bring total hours to at least 90hrs.)

### Engineering Programs:

- Clemson University
- Georgia Southern University
- Georgia Tech
- Kennesaw State University
- University of Georgia

Students must meet Admissions requirements for Engineering programs, and are not guaranteed admission to a program. Please speak with your advisor regarding transferring.

### Comments:

### Military Science - Cadets Only

Course	Hrs.	Chk.	Course	Hrs.	Chk.
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### PME Requirement for Contracting Cadets

Course	Sem.	Hrs.	Grd.
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# UNIVERSITY OF NORTH GEORGIA CORE IMPACTS

Courses may have prerequisites or registration restrictions.  
Review course descriptions in the Academic Catalog before registering.  
**Courses may appear in multiple areas, but cannot be applied to more than one area.**

INSTITUTIONAL PRIORITY (7 HOURS)		
<b>MODERN LANGUAGE (3-4 HOURS). CHOOSE ONE:</b>		
Any Non-English Language at the 1001, 1002, 2001, or 2002 Level		3-4
<b>GLOBAL (3-4 HOURS). CHOOSE ONE OR TWO:</b>		
ANTH 1102	Introduction to Anthropology	3
CGLO 1503	Contemporary Global Topics	3
COMM 1503	Intercultural Communication	3
DVRS 1503	Studies in Diversity Issues	3
ENGL 2111	World Literature I	3
ENGL 2112	World Literature II	3
ENGL 2160	Multicultural American Literature	3
ENST 2030	Environmental Studies & Sustainability	3
GEOG 1101	Introduction to Human Geography	3
GEOG 1102	World Regional Geography	3
HIST 1111	World History I	3
HIST 1112	World History II	3
HIST 2860/RELG 2860	History of World Religions	3
INED 2902/2903	Special Topics in International Perspectives	2-3
PHIL 2200	Ethics from a Global Perspective	3
POLS 1153	Global Citizenship	3
POLS 2301	Introduction to Comparative Politics	3
POLS 2401	Global Issues	3
SOCI 1160	Introduction to Social Problems	3
MATHEMATICS & QUANTITATIVE SKILLS (3 HOURS)		
<b>MATHEMATICS (3 HOURS). CHOOSE ONE:</b>		
MATH 1001	Quantitative Skills & Reasoning	3
MATH 1101	Mathematical Models	3
MATH 1111	College Algebra	3
<b>MATH 1113</b>	<b>Pre-Calculus</b>	<b>3</b>
<b>MATH 1450 (1501)</b>	<b>Calculus I (1 hour can be used elsewhere)</b>	<b>4</b>
<i><b>MATH 1111 or higher</b> required for Nursing majors.</i>		
<i><b>MATH 1111</b> recommended for Business majors (required for BBA degrees).</i>		
<i><b>MATH 1113 or 1450 required</b> for BIOL, CHEM, CSCI, MATH, REP, PHYS majors.</i>		
POLITICAL SCIENCE AND U.S. HISTORY (3 HOURS)		
<b>CITIZENSHIP (3 HOURS). CHOOSE ONE:</b>		
HIST 2111	U.S. History I	3
HIST 2112	U.S. History II	3
POLS 1101	American Government	3
ARTS, HUMANITIES, & ETHICS (6 HOURS)		
<b>LITERATURE OR LANGUAGE (3 HOURS) CHOOSE ONE:</b>		
Any Non-English Language at the 2001 or 2002 Level		3
ENGL 2111	World Literature I	3
ENGL 2112	World Literature II	3
ENGL 2115	Gender and Literature	3
ENGL 2121	British Literature I	3
ENGL 2122	British Literature II	3
ENGL 2131	American Literature I	3
ENGL 2132	American Literature II	3
ENGL 2143	African American Literature	3
ENGL 2145	Native American Literature	3
ENGL 2150/MDST 2150	Literature and Film	3
ENGL 2160	Multicultural American Literature	3
ENGL 2165	Survey of Latina/o U.S. Literature	3
<i>Note: A "C" or better in ENGL 1102 is a prerequisite for ENGL 21XX and MDST 2150.</i>		
<b>FINE ARTS OR PHILOSOPHY (3 HOURS). CHOOSE ONE:</b>		
ART(S) 1100	Art Appreciation	3
ART 2510	Introduction to Art History I	3
ART 2520	Introduction to Art History II	3
COMM 1110	Public Speaking	3
COMM 2050	Media, Culture, and Society	3
MDST 1110	Film Appreciation	3
MUSC 1100	Music Appreciation	3
PHIL 2010	Introduction to Philosophy	3
PHIL 2200	Ethics from a Global Perspective	3
THEA 1100	Theatre Appreciation	3

COMMUNICATING IN WRITING (6 HOURS)		
<b>WRITING (6 HOURS). TAKE BOTH:</b>		
ENGL 1101	English Composition I	3
ENGL 1102	English Composition II	3
<i>Note: A "C" or better is required in both ENGL 1101 &amp; ENGL 1102.</i>		
TECHNOLOGY, MATHEMATICS, & SCIENCES (11 HOURS)		
<b>NURSING MAJORS (8 HOURS). A CHEMISTRY SEQUENCE IS REQUIRED:</b>		
<b>STEM MAJORS (8 HOURS). CHOOSE TWO, IN A SEQUENCE:</b>		
ASTR 1010/L	Astronomy of the Solar System and Lab	4
ASTR 1020/L	Stellar and Galactic Astronomy and Lab	4
BIOL 1101K/1011K	Biology: A Human Perspective/Intro. to Biology I and Lab	4
BIOL 1102K	Introduction to Ecology and Lab	4
BIOL 1107K	Principles of Biology I and Lab	4
BIOL 1108K	Principles of Biology II and Lab	4
BIOL 1101K/1011K	Biology: A Human Perspective/Intro. to Biology I and Lab	4
BIOL 1260K	Environmental Sciences and Lab	4
CHEM 1151/L (1151K)	Survey of Chemistry I and Lab	4
CHEM 1152/L (1152K)	Survey of Chemistry II and Lab	4
<b>CHEM 1211/L (1211K)</b>	<b>Principles of Chemistry I and Lab</b>	<b>4</b>
<b>CHEM 1212/L (1212K)</b>	<b>Principles of Chemistry II and Lab</b>	<b>4</b>
ENVS 2111K	Physical Environmental Science and Lab	4
ENVS 2112K	Environmental Management & Sustainability and Lab	4
GEOG 1111K	Introduction to Physical Geography and Lab	4
GEOG 1112/L	Introduction to Weather & Climate and Lab	4
GEOL 1121K	Physical Geology and Lab	4
GEOL 1122K	Historical Geography and Lab	4
PHYS 1111/L (1111K)	Introductory Physics I and Lab	4
PHYS 1112/L (1112K)	Introductory Physics II and Lab	4
PHYS 2211/L (2211K)	Principles of Physics I and Lab	4
PHYS 2212/L (2212K)	Principles of Physics II and Lab	4
<b>MATHEMATICS AND TECHNOLOGY (3 HOURS). CHOOSE ONE:</b>		
MATH 1113	Pre-Calculus	3
MATH 1401	Elementary Statistics	3
MATH 1450 (1501)	Calculus I (1 hour can be used elsewhere)	4
MATH 2040	Brief Calculus	3
MATH 2460	Calculus II (1 hour can be used elsewhere)	4
MATH 2510	Introduction to Discrete Mathematics	3
CSCI 1250	Information Technologies (non-science majors)	3
CSCI 1301 (1301K)	Computer Science I	4
CSCI 1371	Computing for Scientists and Engineers**	4
DATA 1501	Introduction to Data Science (non-science majors)	3
GISC 2011/L	Geographic Information Science and Lab	3
<i>*Designed for students majoring in Physics or Dual Degree Engineering Programs.</i>		
SOCIAL SCIENCES (6 HOURS)		
<b>BEHAVIORAL SCIENCE (3 HOURS). CHOOSE ONE:</b>		
ANTH 1102	Introduction to Anthropology	3
ECON 2105	Principles of Macroeconomics	3
PSYC 1101	Introduction to Psychology	3
SOCI 1101	Introduction to Sociology	3
<b>SOCIAL SCIENCE (3 HOURS). CHOOSE ONE:</b>		
ENST 2030	Environmental Studies & Sustainability	3
GEOG 1101	Introduction to Human Geography	3
GEOG 1102	World Regional Geography	3
HIST 1111	World History I	3
HIST 1112	World History II	3
HIST 2111	U.S. History I	3
HIST 2112	U.S. History II	3
POLS 1101	American Government	3
POLS 2301	Introduction to Comparative Politics	3
POLS 2401	Global Issues	3
FIELD OF STUDY (18 HOURS)		
<b>COURSES RELATED TO YOUR MAJOR PROGRAM OF STUDY, CHOSEN WITH YOUR ADVISOR.</b>		

## **Notes**

- Students pursuing a Bachelor's degree are encouraged to begin taking 3/4XXX level courses once they have met the prerequisites to do so.
- IMPACTS courses can be taken in any order and/or can be taken later to allow students to take major courses sooner.
- All students must complete Writing and Math IMPACTS requirements within the first 30 credit hours.
- A "C" or better grade is required in ENGL 1101 and ENGL 1102.
- Check all courses for prerequisites to ensure eligibility to enroll.
- Minimum 120 hrs. required to complete a Baccalaureate degree.
- Minimum institutional GPA and overall GPA of 2.0 required for graduation. Specific majors and degrees may have higher GPA requirements for graduation.

## **Major Information**