
EDUC 230, 330, 430 Special Topics	(2, or 4 OD)
Depending on interest, demand and faculty availability, courses will be offered to allow students to consider issues and aspects of educational theory and practice which are not fully explored elsewhere in the curriculum.	
EDUC 191, -2; 291, -2; 391, -2; 491, -2 Independent Study	(2, or 4 OD)
EDUC 496 Honors in Education	(2, or 4 OD)

***IMPORTANT INFORMATION FOR STUDENT TEACHING**

Employment and Activities while Student Teaching:

The college seeks to provide each student with the greatest opportunity for success during student teaching. Students are **expected** to eliminate all employment during the student teaching semester. However, because students may have extenuating circumstances that necessitate exemption from this restriction, the Teacher Education Committee agrees that under the following guidelines, a student may be permitted to work:

- The student has shown a history of responsible behavior with respect to course requirements and Department of Education guidelines.
- The student presents a written request stating his/her financial need and the anticipated work responsibilities, including days and hours.
- The student provides a supporting letter from his/her advisor affirming the student's ability to meet student teaching responsibilities and work involvements with a high degree of success.
- The student can demonstrate that outside employment will not interfere with normal after-school responsibilities associated with the student teaching assignment.
- The student indicates willingness to abide by any restrictions concerning working that the Teacher Education Committee requires.

PLEASE NOTE: If outside employment hinders a student's teaching performance, the Teacher Education Committee reserves the right to require the student teacher to further limit or eliminate work hours. Failure to follow the appeal procedure may result in the student being removed from the field experience. Students may be members of intercollegiate teams and club sports only if they have received special approval from the Teacher Education Committee prior to placement. During the student teaching related classes, students may not enroll in other college classes with the exception of EDUC 411, 424, 425, 485 or 496.

Engineering

Department of Physics and Earth Science: Mark E. Yuly, chair. Keith A. Horn, Associate Dean

Faculty: Donell Brandon Hoffman, Christopher M. Wells, Mark E. Yuly

Web site: www.houghton.edu/academics/programs/physics

Phone: 585.567.9280

Applied Physics Major — Engineering Emphasis: BS (35 hours in major; 16 in prerequisites; 12 in co-requisites)

General Information

This major is for those students interested in the engineering applications of physics and is preparation for an engineering-related career or graduate school in engineering or physics.

The requirements for the engineering physics major are as follows:

Prerequisites (16):	
PHYS 151,152	General Physics I, II..... 8
MATH 181	Calculus I..... 4
MATH 182	Calculus II..... 4

Co-requisites (12):	
MATH 241	Differential Equations..... 4
MATH 225	Multivariate Calculus..... 4
CHEM 151	General Chemistry I <i>or</i>
CSCI 211	Programming I..... 4
Required (35):	
PHYS 215	Statics & Engineering Design 4
PHYS 251	Mechanics I 4
PHYS 258	Analog Electronics 4
PHYS 259	Digital Electronics 4
PHYS 212	Modern Physics..... 2
PHYS 275/276	Experimental Physics Lab 2
PHYS 353	Electricity and Magnetism I..... 4
PHYS 355	Thermal Physics..... 4
PHYS 471, 472	Physics Project Lab 2
PHYS 482	Senior Capstone: Physics Seminar 1
One advanced theory course selected from:	
PHYS 352	Mechanics II..... 4
PHYS 354	Electricity and Magnetism II 4
PHYS 356	Quantum Mechanics..... 4
Additional recommended supporting courses include:	
PHYS 260	Optics 4
CHEM 152	General Chemistry II 4
ECON 210	Microeconomics..... 2
BADM 303	Entrepreneurship 2

Dual-Degree Engineering Program

General Information

This is a cooperative program involving Houghton and Clarkson University. Clarkson University, located in Potsdam, NY, is well-known for its outstanding engineering curriculum, offering degrees in Aeronautical, Biomedical/Rehabilitation, Biomolecular, Chemical, Civil, Computer, Electrical, Environmental, Mechanical, and Software Engineering, as well as Engineering & Management.

In a typical dual-degree program, the student will spend three years at Houghton and two years at Clarkson University. At the conclusion of five years of study, a student making normal progress will have completed all requirements to receive degrees both from Houghton College and from Clarkson University. The Houghton College degree would be in an appropriate field of study, typically Applied Physics, general science, chemistry, or biology, and the degree from Clarkson University would be in the student's chosen engineering field. To be eligible to receive a Houghton degree, the student must satisfy the "senior in absentia" requirements (see Index for page number).

A typical course load during that time might include

MATH 181	Calculus I..... 4
MATH 182	Calculus II 4
PHYS 151, 152	General Physics I, II 8
PHYS 215	Statics and Engineering Design 4
PHYS 251	Mechanics I 4
CHEM 151, 152	Chemistry I, II..... 8
CSCI 211	Programming I..... 4
MATH 241	Differential Equations..... 4
MATH 321	Multivariate Calculus..... 4

Other courses may include:

PHYS 258	Analog Electronics..... 4
PHYS 259	Digital Electronics 4
PHYS 352	Mechanics II..... 4
BIOL 151, 152	General Biology I, II..... 8
CHEM 241,242	Organic Chemistry 8
CSCI 236	Data Structures and Algorithms..... 4

The remainder of a student's load at Houghton would consist of major requirements and integrative studies courses. The integrative studies requirements at Houghton would, of course, meet humanities and/or social science requirements at the partner school.

COURSE DESCRIPTIONS

See Biology, Business Administration, Chemistry, Computer Science, Economics, Mathematics, and Physics sections.

English (major and minor)

Department of English and Writing: James F. Wardwell, chair and Associate Dean
Faculty: Laurie A. Dashnau, Lori L. Huth, Susan Bruxvoort Lipscomb, James F. Wardwell, Linda Mills Woolsey, Stephen A. Woolsey, James A. Zoller
Web site: www.houghton.edu/academics/programs/english-writing
Phone: 585.567.9670

Major: 40 hours in the major
 The major in English provides students with strong liberal arts preparation for a variety of careers in fields including education, business, and the media. It is also appropriate for pre-seminary and pre-law students.

Required courses:	20 hrs
ENGL 207	Introduction to Literary Studies.....	2
ENGL 316	Literary Criticism	2
	One ENGL course before 1800.....	4
	One ENGL course after 1800	4
ENGL 335/350	Major Author	4
ENGL 418	Senior Capstone: Seminar	4

For the additional five courses, choose one of the following options:

Option One: <i>Literature Emphasis</i>	20 hrs
Three (ENGL) literature courses	12
One or two (ENGL) literature courses OR	8
One or two (WRIT) writing courses	
Option Two: <i>Writing Emphasis</i>	20 hrs
Two (ENGL) literature courses.....	8
Three writing courses distributed as follows:	
Required course: WRIT 214 Literary Non-Fiction	4
Two (WRIT) writing courses	8

Teaching English – Inclusive Childhood (Elementary) Education or Adolescence (Secondary) Education:
 See Education section in this catalog.

Minor: 16 hours
 Students electing a minor in English are required to take four courses:
 Required course: ENGL 207 Introduction to Literary Studies 2
 Other (ENGL) literature courses.14

COURSE DESCRIPTIONS

ENGL 202 **Literary Voices** (4, F&S)
 The principles of literary interpretation. Topical or thematic study of texts, the reading process, and critical perspectives to develop analytical thinking and appreciation. Culture: Literature.