
artistic and communication mode of discourse. Presentations, demonstrations, and intensive group critiques offer a chance for students wishing to pursue more advanced skills in using the computer as an expressive imaging tool. Pre-requisite: COMM 284 Introduction to Digital Imaging. This course has a lab fee.

COMM 410 Media Arts: Advanced Projects (4, S12)

This is a single-project course tailored to the individual interests, vision and production decisions of the student. The course is adapted for individual mentoring and one-to-one faculty-student interaction. Project-based instruction explores the advanced needs of a student while honing digital production and editing skills. Features of the course include single short production, extensive group critiques, field trips and guest lectures, study of advanced motion graphics, and discussion of career applications. This course has a lab fee.

COMM 417 Senior Capstone: Seminar in Public Communication (4, S)

Analysis of specific public communication situations, such as social reform movements, political discourse, campaign rhetoric, war rhetoric, the documentary, and the role of media in shaping discourse in contemporary society.

COMM 295, 395 Special Topics in Communication: Lecture-Based or Studio-Based (2-4, F&S)

Opportunity for study of issues and problems not covered elsewhere in the curriculum.

COMM 291, -2, 391, -2, 491, -2 Independent Study (1-4, F&S)

COMM 496 Honors in Communication (4, S)

Courses listed under other departments and counted for communication:

ART 245 Graphic Design I (4, F&S)

(See course description under art major.)

ART 314 The Art and History of Film (4, S13)

(See course description under art major.)

BADM 212 Principles of Management (4, F&S)

(See course description under business administration major.)

MIN 324 Principles of Expository Preaching (4, S)

(See course description under religion major.)

WRIT 214 Literary Non-Fiction (4, F&S)

(See course description under writing major.)

WRIT 304 Screenwriting (4, S13)

(See course description under writing major.)

WRIT 312 Creative Writing in Public Life (4, S12)

(See course description under writing major.)

Computational Physics (major)

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

Computational Physics Major: BS (35 hours in major; 16 in prerequisites; 12 in co-requisites)

General Information: Traditionally, the study of physics has been divided into two areas: experimental physics, which deals with the design of experiments and measurement, and theoretical physics, which deals

with theoretical models and predictions. More recently a third area has gained importance, namely, computational physics, which involves the use of computers in modeling and analyzing complex systems. This major is available to those students interested in studying physics with an emphasis on the use of computers. It provides students with highly sought-after computer and problem solving skills in a growing area of interdisciplinary study.

The requirements for the computational 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
MATH 261	Linear Algebra 4
Required (35) which must include:	
PHYS 251	Mechanics I..... 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
CSCI 211	Programming I..... 4
CSCI 218	Programming II..... 4
CSCI 236	Data Structures and Algorithms..... 4
MATH 331	Numerical Analysis 4
Additional recommended supporting courses include:	
PHYS 258	Analog Electronics..... 4
PHYS 259	Digital Electronics..... 4
CSCI 226	Computer Architecture..... 4
CSCI 245	Software Engineering..... 4

COURSE DESCRIPTIONS:

See Mathematics, Physics and Computer Science sections.

Computer Science (major and minor)

Department of Mathematics and Computer Science: Kristin A. Camenga, chair.
Keith A. Horn, Associate Dean

Faculty: Wei Hu

Web site: www.houghton.edu/academics/programs/math-computer-science

Phone: 585.567.9280

The computer science major emphasizes the theoretical foundations and application techniques for solving problems in today’s technological environment. It is a necessary preparation for those who plan to create the technology of tomorrow whether in the pursuit of graduate study or in information management leadership positions in business, industry, or government. The major provides the flexibility to be tailored to the student’s particular career interests. The Senior Project provides an opportunity to gain valuable pre-graduation experience while working with current computer theories and applications. It is this flexibility and the broad exposure to computer concepts, together with a liberal arts education, that has been appreciated by and will continue to appeal to employers of computer professionals.

Major: 52 hours (44 in major, 8 in pre/co-requisites)

Pre/co-requisites:

MATH 181	Calculus I..... 4
MATH 182	Calculus II <i>Or</i>
MATH 183	Science Honors Calculus 4