

**ECON 399: Capstone Seminar in Economics (3)**

*Prerequisite:* ECON 398. This capstone course builds upon the foundations developed in ECON 398. The central element is a major independent research project. This project is carried out with continual mentoring by a faculty member. Each student documents research in a formal paper and offers an oral presentation summarizing his/her research results. *Staff.*

*Winter*

**ECON 401, 402, 403, 406:****Directed Individual Study (1,2,3,6)**

*Prerequisites:* Six credits in economics courses numbered 200 or above, either a cumulative grade-point average of 3.000 or of 3.000 in all economics courses, and permission of the instructor. The objective is to permit students to follow a course of directed study in some field of economics not presented in other courses, or to emphasize a particular field of interest. May be repeated for degree credit with permission for different topics. *Staff.*

**ECON 493: Honors Thesis (3-3)**

This course is required of Honors candidates in addition to the 21 credits in economics (courses numbered 200 and above) required of all economics majors.

*Fall-Winter*

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**EDUCATION (EDUC)**

ASSOCIATE PROFESSOR OJURE\*  
VISITING ASSOCIATE PROFESSOR DAILEY  
ASSISTANT PROFESSOR SIGLER

*(See "Students Preparing for Teaching" on page 94.)*

**EDUC 200: Foundations of Education (3)**

*Prerequisite:* *Sophomore standing.* An introduction to the issues relating to American public education in the 21st century. Students are introduced to information about teaching strategies and school policy upon which future courses can build. Emphasis is given to school efforts to create environments which promote equity and excellence within a multicultural system. Required for teacher licensure in Virginia. *Staff.*

*Fall*

**EDUC 210: Practicum (1-3)**

*Prerequisite:* *Sophomore standing. Intended as a corequisite for students taking education courses.* This course provides students with an opportunity to observe and assist in elementary and secondary classrooms in the local school systems. In addition, students study topics related to effective educational practice, such as classroom management, motivation, differentiation, standardized curriculum, and lesson planning. Students spend 30 hours per credit in a classroom setting and complete readings and written assignments analyzing their experience. Required for teacher licensure in Virginia. May be repeated for a maximum of three credits with permission. *Ojure, Sigler.*

*Fall, Winter, Spring*

**EDUC 280: Poverty and Education (4)**

This course examines the complex interaction between poverty and education through a variety of activities, including fieldwork in urban and rural settings, review of contemporary film on education in high poverty communities, and relevant policy research and journal readings. In addition, the course examines the challenges of education in high poverty settings or for individuals experiencing poverty, as well as schools and communities attempting to overcome the obstacles that poverty creates. Students visit public and private charter schools and innovative educational programs in Washington, D.C. and in rural West Virginia and become immersed in urban and rural culture. Students enrolled in the course must be able to be off-campus for one to two weeks during the term. *Dailey.*

*Spring (when interest is expressed and resources permit)*

**EDUC 302: Understanding Exceptional Individuals (3)**

*Prerequisites:* *Sophomore standing; EDUC 200 and/or POV 101.* This course addresses education for exceptional individuals by examining the key issues surrounding instruction for children and adolescents with disabilities or special talents. Students study the identification, etiology, and incidence of exceptionality. Through case-study review and individual research projects, students investigate the educational, social, and cultural dimensions of life in American society for exceptional individuals. Required for teacher licensure in Virginia. *Ojure.*

*Fall, Winter*

**ENGINEERING (ENGN)**

(Department of Physics and Engineering)

PROFESSORS **VAN NESS, WILLIAMS**  
ASSISTANT PROFESSORS KUEHNER, MAZILU

**MAJORS**

Reminder: Majors leading to a Bachelor of Science degree from The College require at least 50 credits total in the natural sciences, mathematics, and computer science.

A **major in physics-engineering** leading to a Bachelor of Science degree requires completion of at least 47 credits, no more than three of which may be from 400-level courses, and including the following:

1. ENGN 203, 204, 207 (PHYS 207), 225 (PHYS 225), 240 (PHYS 240), 301, 311, 351; MATH 332; and PHYS 111, 112, 113, 114
2. Three additional credits from 200-level courses in engineering
3. Three additional credits from 300-level courses in engineering
4. Six additional credits from courses numbered 200 or above in biology, chemistry, computer science, engineering, geology, or physics; from Mathematics 300 or above; or from CHEM 111, 112; CSCI 121.

Additional courses required as prerequisites for completion of the above include MATH 101, 102, and 221.

A **major in chemistry-engineering** leading to a Bachelor of Science degree requires completion of at least 47 credits, no more than three credits of which may be from 400-level courses, and including the following:

1. CHEM 241 or 241S
2. CHEM 242; ENGN 203, 204, 240 (PHYS 240), 311; MATH 221, 332; PHYS 111, 112, 113, 114
3. CHEM 260 or 261
4. Eight additional credits chosen from courses numbered 200 or above in biology, chemistry, engineering, and physics. No more than three of these credits may be numbered 400 or above.

Additional courses required as prerequisites for completion of the above include CHEM 111 and 112 and MATH 101 and 102.

*HONORS: An Honors Program in engineering is offered for qualified students; see department head for details.*

**ENGN 100 (PHYS 100): Computing in Physics and Engineering (1)**

*Pass/Fail only. Prerequisite: Permission of the instructor.* An introduction to the use of computing tools essential to degree work in physics and engineering. Students are instructed in the use of microcomputers, the university network, word processing, spreadsheets, computer algebra packages, and advanced symbolic mathematics tools. *Staff.*

*Offered when interest is expressed and departmental resources permit.*