Minor in International Engineering

The U.S. engineer of the future will need the knowledge, skills and abilities to help find solutions to a variety of concerns such as poverty, environmental problems, transportation issues, and security. The U.S. Engineer of 2020 and beyond "will be based abroad, will have to travel (physically or virtually) around the world to meet customers, and will have to converse proficiently in more than one language." (Katechi, p 152) Engineers will need to be open to different cultures and different thought processes, as well as have an awareness of the impact of socioeconomic changes on the U.S. and abroad.

The Minor in International Engineering prepares engineering students to practice engineering in a global economy by contributing to a greater understanding of the impact of engineering solutions in global, economic, environmental, political, and societal contexts. The requirements are designed to provide for the acquisition of knowledge and practical skills pertaining to engaging in cross-cultural business situations in the engineering and technology fields; direct experience with the study and practice of engineering outside of the U.S.; and an increased knowledge base related to the country or region where the student gains his/her global experience.

Minor requirements

- ENES472: International Business Cultures for Engineering and Technology (3 credits).
- Global Studies Minor Program Signature Course (3 credits). The current list of courses is provided on the back.
- MIE electives chosen in consultation with the minor advisor and related to a student’s location for his/her international engineering experience (3-9 credits): ENES474 (Global Perspectives of Engineering) and/or foreign language, culture studies, internationally-related studies or international engineering-related courses.
- International engineering experience (0-6 credits): study abroad, research abroad, service learning, or internship. Up to six (6) credits of engineering courses completed as part of an engineering study abroad program may count to fulfill requirements for the minor and may also apply to the student’s engineering major.

Additional requirements

- 15 to 18 credits required for the minor (allowing flexibility to accommodate 4-6 credit language classes).
- At least nine (9) credits must be at the upper level (300 or 400 level) and at least six (6) of the upper level credits must be resident credits at the University of Maryland.
- No more than six (6) credits may be transferred from another institution to count toward the minor.
- No more than six credits can double count between a student’s major and minor.
- No courses can double count between two minors.
- Students must earn a grade of “C-” or better in all courses used for the MIE.

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Global Studies Minor Program Signature Courses

- **AREC345. Poverty, Public Policy and Economic Growth (3 credits)** Examination of public policy toward poverty in countries around the world. The role of economic incentives and the relation between poverty and income distribution, natural resources and the environment, and economic growth.

- **AREC365. World Hunger (3 credits)** Introduction to the problem of world hunger and possible solutions to it. World demand, supply, and distribution of food. Alternatives for leveling off world food demand, increasing the supply of food, and improving distribution. Environmental limitations to increasing world food production.

- **BSST330. Terrorist Motivations and Behaviors (3 credits)** This course explores theories explaining the formation of terrorist groups and the motivations behind terrorist behavior, building upon theories from social psychology, sociology, political science, criminology, and history. This course draws heavily from historical examples as well as current examples of international and domestic terrorist groups around the world.

- **GEOG130. Developing Countries (3 credits)** Introduction to the geographic characteristics of the development problems and prospects of developing countries. Spatial distribution of poverty, employment, migration and urban growth, agricultural productivity, rural development, policies and international trade. Portraits of selected developing countries.

- **GEOG330. As the World Turns: Society and Sustainability (3 credits)** Cultural geography course on society and sustainability. Culture is the basic building block that is key to sustainability of societies. Course will cover sustainability of societies on different scales, examining local, regional, and worldwide issues. Sustainability will be examined as a key element of environmental sustainability. How societies adjust to rapid world change will be examined as a positive and/or negative factor in sustainability.

- **GVPT306. Global Ecopolitics (3 credits)** Consideration of global problems such as the growth controversy, agricultural productivity, pollution, resource depletion, the energy crisis, and the general impact of science and technology on the world ecological, socio-economic, and political system with particular emphasis on such matters as objects of public policy.

Sample Programs

**Semester study abroad in China (18 credits)**
- ENES472: International Business Cultures for Engineering and Technology (3 credits)
- GEOG330: As the World Turns: Society and Sustainability (3 credits)
- CHIN101: Intensive Elementary Chinese I (6 credits)
- ENxx 4xx: Engineering courses (6 credits) [completed in China]

**Study abroad in the Israel (15 credits)**
- ENES472: International Business Cultures for Engineering and Technology (3 credits)
- BSST330: Terrorist Motivations and Behaviors (3 credits)
- ISRL349D: Investigating Topics in Israel Studies: Israeli Society (3 credits)
- ENxx 4xx: Engineering courses (6 credits) [completed in Israel]

**Engineers Without Borders (EWB) Service Project in Burkina Faso (16 credits)**
- ENES472: International Business Cultures for Engineering and Technology (3 credits)
- ENES474: Global Perspectives of Engineering (3 credits)
- GEOG130: Developing Countries (3 credits)
- HIST123: Sub-Saharan Africa since 1800 (3 credits)
- AREC345: Poverty, Public Policy and Economic Growth (3 credits)
- ENES458I: EWB implementation project [completed in Burkina Faso] (1 credit)