ENGINEERING SCIENCE

Graduate Program Head	Rafic Bachnak
Program Code	ESC
Campus(es)	Harrisburg (M.Eng.)
Degrees Conferred	Master of Engineering (M.Eng.)
The Graduate Faculty	View (https://secure.gradsch.psu.edu/gpms/index.cfm?searchType=fac&prog=ESC)

A program leading to the degree of Master of Engineering with a major in Engineering Science is offered at Penn State Harrisburg. The program is designed to provide a broad, advanced education in the engineering sciences with some specialization permitted in the area of the student's major interest. It is offered specifically to permit practicing engineers to pursue advanced studies through evening classes while in full-time employment in industry in the area. Courses offered for the program are all established and authorized by the resident departments at the University Park campus.

Admission Requirements

Applicants apply for admission to the program via the Graduate School application for admission (http://gradschool.psu.edu/prospective-students/how-to-apply). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (http://gradschool.psu.edu/graduate-education-policies).

Scores from the graduate Record Examinations (GRE) are not required for students holding baccalaureate degrees from accredited U.S. educational institutions. At the discretion of a graduate program, students may be admitted for graduate study in a program without these scores.

Students may be admitted to the program from a wide variety of disciplines. Students applying for admission are expected to have completed the following core courses:

1. physics through modern physics;
2. mathematics through differential equations;
3. one course in engineering thermodynamics;
4. one course in electrical circuits;
5. basic courses in engineering statics, dynamics, and strength of materials; and
6. computer programming.

Students with a 3.00 junior/senior grade-point average (on a 4.00 scale) and with appropriate course backgrounds will be considered for admission. The best-qualified applicants will be accepted up to the number of spaces that are available for new students. Exceptions to the minimum 3.00 grade-point average may be made for students with special backgrounds, abilities, and interests.

The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. See GCAC-305 Admission Requirements for International Students (http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/gcac-305-admission-requirements-international-students) for more information.

Completed International Application material must be submitted by the following deadlines:

- May 31 for the fall semester
- September 30 for the spring semester
- February 28 for the summer session

Applications received after these deadlines will be processed for the following semester.

Applicants should submit the following:

- A completed online Graduate School application (http://gradschool.psu.edu/prospective-students/how-to-apply) with the nonrefundable application fee;
- official transcripts from all post-secondary institutions attended (http://www.gradschool.psu.edu/prospective-students/how-to-apply/new-applicants/requirements-for-graduate-admission);
- Three (3) letters of reference, especially those from faculty who can evaluate academic potential;
- A personal statement of technical interest, goals, and experience.

NOTE: Test scores from the Graduate Record Examination (GRE) are required ONLY for those applicants indicating interest in an assistantship.

Degree Requirements

Master of Engineering (M.Eng.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-700 Professional Degree Policies (http://gradschool.psu.edu/graduate-education-policies).

The credit requirements in this major will be satisfied by an appropriate combination of core courses and elective courses. The core courses include offerings in mathematics and in several branches of engineering that have been selected because of their general character and breadth of applicability to all fields of engineering. A minimum of 30 credits is required, of which at least 18 must be at the 500 level. Of the 30 credits, 6 credits of mathematics and a scholarly written report (3 credits) must be completed.

Student Aid

Graduate assistantships available to students in this program and other forms of student aid are described in the Tuition & Funding (http://gradschool.psu.edu/graduate-funding) section of The Graduate School's website. Students on graduate assistantships must adhere to the course load limits (http://gradschool.psu.edu/graduate-education-policies/gsad/gsad-900/gsad-901-graduate-assistants) set by The Graduate School.

Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Engineering Science (ESC) Course List (https://bulletins.psu.edu/university-course-descriptions/graduate/esc)

Contact

Campus	Harrisburg
Graduate Program Head	Rafic A Bachnak
Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)	Scott Van Tonningen
Program Contact	Donna Griffith W215 Olmsted Bldg 777 W. Hbg Pike Middletown PA 17057 dlg47@psu.edu (717) 948-4344
Program Website	View (http://harrisburg.psu.edu/science-engineering-technology/engineering-science-management/master-engineering-engineering-science)
Campus	University Park
Program Contact	Donna Griffith 212 EES Building Pennsylvania State University University Park PA 16802 dlg47@psu.edu (717) 948-4344
Program Website	View (http://www.esm.psu.edu)