



FAIRFIELD UNIVERSITY GRADUATE PROGRAMS



ELECTRICAL AND COMPUTER ENGINEERING

PROGRAM DESCRIPTION

The Master of Science in Electrical and Computer Engineering (MSECE) program has courses in biomedical engineering, hardware and software design, communications, control systems, computer architecture, visualization, multimedia systems, embedded software for real-time microcontrollers, mixed signal circuit board design, microelectronics system design, power electronics and nanotechnology.

Our graduates help to start new businesses and help existing businesses thrive through innovation. The ECE program has strong ties to the local inventor and entrepreneurship community. Our students are active in business plan competitions and in the commercialization of innovation through collaboration.

The ECE program is multidisciplinary and enables students to take graduate electives from other departments (even other schools). Our students take graduate courses in all disciplines including science, math, business and engineering.

The newest courses are in biomedical engineering. Biomedical engineering is the application of engineering principles and design concepts to medicine and biology. In biomedical engineering, you'll build a foundation for a future that could take many directions while serving humanity. This field seeks to close the gap between engineering and medicine: It combines the design and problem solving skills of engineering with medical and biological sciences to improve healthcare diagnosis, monitoring and therapy. Connecticut is very strong in the area of biomedical device development and our faculty is actively involved with placement in this area.

Nanotechnology has the potential to change every part of our lives. Nanotechnology affects all materials: ceramics, metals, polymers, and biomaterials. New materials are the foundation of major technological advances. In the coming decade nanotechnology will have an enormous impact. Future advances could change our approaches to manufacturing, electronics, IT and communications technology.

The thesis option enables students to do research. This is important for people who want to direct research and take the technical lead in projects. Thesis students work closely with a thesis advisor who will help them through the process. Many of our thesis students go on to publish papers and attend conferences. Our instructors have very strong ties to industry and are active in placement of our graduates.

COURSE OF STUDY

Students in the MSECE program must complete either 33 credits, including a thesis, or a non-thesis option comprising 36 credits. Required courses build a foundation for the discipline; students may select a core area among ten subject areas. All courses are assigned 3 credits each. Laboratory courses are assigned 1 credit.

THESIS OPTION (6 CREDITS)

Students may choose the thesis option provided they earn an A- or better in the Readings class, ECE 420, and secure the approval of the program director.

REQUIRED COURSES

- SW 407 Java for Programmers
- SW 409 Advanced Java Programming
- Restricted Math Elective
- Readings in Electrical and Computer Engineering

GRADUATE PROGRAM DIRECTOR

Dr. Douglas Lyon

Phone: (203) 254-4000, ext. 3155

E-mail: dlyon@fairfield.edu

Dr. Lyon is the chairman of the Electrical and Computer Engineering department. He is available to answer any questions you have about the program.

For a complete faculty listing, see
www.fairfield.edu/dsbfaculty.

ADMISSION REQUIREMENTS

Applicants for a master's degree must hold a bachelor's degree from a regionally accredited college or university (or the international equivalent) in science or engineering or its equivalent. Those with work experience in a technology environment, whose academic and professional record suggest the likelihood of success in a demanding graduate program will also be considered. Applicants should demonstrate aptitude in some programming and some electric circuits and electronic circuits and devices or begin their studies by registering for one or more of these bridge courses as judged suitable by the program director.



Fairfield University

School of Engineering

FORMAL ADMISSION PROCESS

Applications to the graduate program are accepted on a rolling basis. Applications are reviewed by the Graduate Admission Committee. Students seeking admission must complete and submit the following online:

1. A completed application.
(Apply online at www.fairfield.edu/soeapp.)
2. A non-refundable \$60 application fee.
3. A professional résumé.
4. Personal statement describing intent for studying in the program.
5. Official transcripts from all universities/colleges attended.
(All foreign transcripts must be evaluated by an approved evaluating service. A list of approved evaluators is available at www.fairfield.edu/eval.)
6. Two recommendation letters, one of which must be from a current supervisor or professor, completed online.
7. All international students whose native language is not English must demonstrate proficiency in the English language by taking either TOEFL or IELTS exams. For admission to the graduate school, a TOEFL composite score of 550 for the paper test, 213 for the computer-based, 80 on the internet based test or an IELTS score of 6.5 is strongly recommended. Scores must be sent directly from the Educational Testing Service (TOEFL) or IELTS.org. Fairfield's ETS code is 3390.

Submit transcripts and any other documents that cannot be uploaded to:

Fairfield University
Office of Graduate & Continuing Studies Admission
Kelley Center
1073 North Benson Road
Fairfield, CT 06824

TRANSFER STUDENTS

Transfer credit will be considered for graduate coursework earned with a grade of B or better. No more than six credits may be transferred.

MANDATORY IMMUNIZATIONS

Connecticut State law requires each full-time or matriculated student to provide proof of immunity or screening against measles, mumps, rubella, varicella (chicken pox), meningitis and tuberculosis. Certain exemptions based on age and housing status apply. Matriculating students are defined as those enrolled in a degree seeking program. More detailed information and the required downloadable forms are available online at www.fairfield.edu/immunization. Completed forms should be submitted directly to the Student Health Center. Although this is not required to complete an application, you must provide proof of immunity/screening prior to course registration. Please consult your private health care provider to obtain the necessary immunizations. Questions may be directed to the Student Health Center: (203) 254-4000 ext. 2241 or e-mail health@fairfield.edu.

NON-MATRICULATED STUDENT STATUS

Non-matriculated status may be granted to individuals who have not completed the admission process but wish to begin taking courses, or who are not seeking a degree or certification. Individuals wishing to enroll as non-matriculated students must submit:

1. A completed application.
(Apply online at www.fairfield.edu/soeapp.)
2. A non-refundable \$60 application fee.
3. A written request to the Graduate Program Director, specifying the semester for which this status is requested.
4. Official transcripts verifying that a baccalaureate (or higher) degree with a grade point average of 3.0 or higher has been earned.

Non-matriculated student status is granted for 9 credits only. Students seeking admission must complete the formal application process by the end of their 9 credit limit in order to continue with their studies. Individuals enrolled as non-matriculated students cannot enroll for more than six credits each term, cannot register on a full-time basis, and are not eligible for any tuition aid or financial support. Upon formal admission to the Graduate Program, credits earned while a non-matriculated student will be applied toward the master's degree, provided the courses were approved by the faculty advisor and the grade received in each course was a B or better. Successful completion of coursework does not automatically guarantee formal admission.

NON-DEGREE STUDENTS

Students who hold master's degrees and who are interested in taking courses for professional and/or personal continuing education may be admitted as non-degree students. Individuals wishing to enroll as non-degree students must submit:

1. A completed application.
(Apply online at www.fairfield.edu/soeapp.)
2. A non-refundable \$60 application fee.
3. A written request to the Graduate Program Director, specifying the semester for which this status is requested.
4. Official transcripts verifying that a master's degree has been earned.

Courses taken under this status will not be considered toward fulfillment of degree requirements.

TUITION/FINANCIAL AID

Academic Year 2014/2015

Tuition: \$750 per credit hour

A graduate education can provide countless professional and personal rewards in the future. However, the costs associated with earning a master's degree may be challenging. Many students need to look beyond their own financial resources or the resources of their employer for assistance. There are many ways to finance a graduate education, including graduate assistantships, federal direct loan programs and our Veterans Pride Program, which are all discussed at www.fairfield.edu/gradfa.

SCHOLARSHIPS

The School of Engineering provides modest scholarships to select students on the basis of need and merit.

OFFICE OF FINANCIAL AID

Advisors from the Office of Financial Aid are committed to helping students find the options that best suit each of their needs. We encourage all Fairfield University graduate students to contact the Financial Aid office with any questions or to make an appointment to speak with a counselor.

FINANCIAL AID CONTACT INFORMATION

Phone: (203) 254-4125

Fax: (203) 254-4008

E-mail: finaid@fairfield.edu

FINANCIAL AID OFFICE OPERATIONS

Days: Monday-Friday

Hours: 8:30 a.m.-4:30 p.m.

Location: Aloysius P. Kelley, S.J. Center

MORE INFORMATION

ADMISSION QUESTIONS

Questions about the application process should be directed to the **Office of Graduate & Continuing Studies Admission.**

Phone: (203) 254-4184

Fax: (203) 254-4073

E-mail: gradadmis@fairfield.edu

OFFICE OPERATIONS

Days: Monday-Friday

Hours: 8:30 a.m.-4:30 p.m.

Location: Aloysius P. Kelley, S.J. Center

SCHOOL OF ENGINEERING WEBSITE

www.fairfield.edu/engineering

ONLINE CATALOG

For detailed course descriptions and other University information, please refer to our online catalog

www.fairfield.edu/catalogs.