

## Department of Engineering Technology Overview

The primary goal of the Department of Engineering Technology is preparation of students for employment in engineering and technical fields. Our Bachelor of Science in Engineering Technology (BSET) programs are developed specifically for students who desire a technical undergraduate education with an emphasis on solving actual work place problems. These programs provide an exceptionally strong foundation for applications of scientific and engineering knowledge and methods in the work place.

Our faculty is dedicated to excellence in teaching and maintains knowledge of current technology by working closely with industry on applied research projects. As a result, our students are prepared with state of the art knowledge and the skills to contribute immediately to their profession whether serving in the military or in industry.

## Navy College Program Distance Learning Partnership (NCPDLP)

Old Dominion University is a proud participant in the NCPDLP. The University is fully accredited by the Southern Association of Colleges and Schools.

The NCPDLP offers qualified participants the opportunity to earn credits for college-level learning based on military experience and training, college level examinations, and through course work completed at other regionally accredited institutions. Classes are offered on campus and via distance learning media, primarily CD-ROM.

Old Dominion University offers low-cost tuition and fees. Combined with Navy Tuition Assistance and Veterans Educational Benefits, the NCPDLP is an affordable choice for those seeking career advancement, professional development, and personal growth. Courses are also available through the Navy's Program for Afloat College Education (NCPACE).

## The General Engineering Technology Program (Electromechanical Systems Option

For career and professional development in many technology driven fields in the military, business, and industry, it is often essential to complete a bachelors degree program. The diverse technical education background and career goals of technology career areas require a program with a work place focus. The BSET with a concentration in General Engineering Technology (GET) meets this educational need. A GET option area specifically developed for the NCPDLP is Electromechanical Systems.



### Electromechanical Systems Option

Advanced technical systems such as automated manufacturing and ship systems

require a unique blend of technical knowledge to enable understanding and analysis of the interrelated electrical and mechanical components. The Electromechanical Systems option is designed to support career interests related to design, operation, and repair of these critical systems and their interfaces. Graduates of this option pursue careers in operations engineering, technical support, maintenance engineering, automation, and automated system design. The table below describes the core 300- 400 level courses in the program:

<b>Electromechanical Systems Option</b>
MET 300 Thermodynamics
MET 305 Principles of Mechanics
MET 310 Dynamics
MET 330 Fluid Mechanics
EET 350 Fundamentals of Electrical Technology
EET 360 Electrical Power and Machinery
EET 415 Programmable Machine controls
EET 410 Communication Principles
EET 365W Electrical Power and Machinery Lab
MET 335 Fluid Mechanics Laboratory

Electromechanical System students work with both Electrical and Mechanical Engineering Technology faculty who possess a broad range of business and industrial experience. This collaboration with faculty along with interdisciplinary Electromechanical Systems courses provide the broad skill set required for both long - term advancement and entry-level success.

### Degree Completion Options

Electromechanical Systems students may pursue their studies on the main campus in Norfolk in a traditional four-year program of study or through distance education. Distant

students complete their lower division (100 and 200 level courses) through other regionally accredited colleges. Both local and distance students complete upper division (300 and 400 level courses) with credits obtained from ODU.

Credits may also be earned through CLEP or DANTEs testing services. Old Dominion University is a member of the Servicemembers Opportunity Colleges (SOC) network, a consortium of over 1500 colleges and schools to facilitate transfer credit among member institutions.



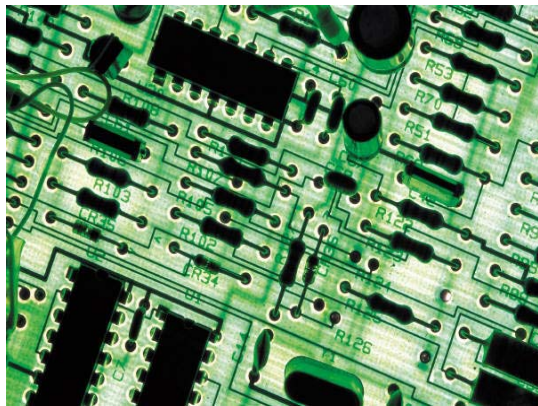
For students who are not able to come to the main campus to complete their degree, courses are available in CD-ROM format which means students can enroll whether stationed ashore or aboard ship. In addition, satellite links allow students to participate in live classes by television and two-way voice connections at selected military locations in Virginia, the District of Columbia, and Washington State.

Streaming video allows students on high - speed Internet connections at home or at work to participate in live or receive archived

classes directly to their desk-tops at the student's convenience.

In all cases, distance students maintain close interaction with faculty by a number of means including telephone, email, and Internet bulletin boards / study sessions.

After completion of the Calculus requirements, it is possible for distance students to complete the technical content of the BSET in two years depending on the semester load taken.



### Military Transfer Credits and Articulation

There are a number of articulation agreements that integrate the Electromechanical Systems option with a range of AAS degrees and Navy Ratings. The following table provides a general description of the required courses for the BS GET option in Electromechanical Systems.

The points below describe the Lower Division areas related to transfer credits:

- Lower Division Technical content and electives: Sailors will typically satisfy these requirements through military credit. Please view

<http://web.odu.edu/dl/navycollege> for roadmaps that show the military credits that are awarded for specific Navy rates and ratings.

- Mathematics: covers a total of ten credits including two semesters of pre-calculus and a semester of calculus that covers integral and differential topics.
- Natural science: Covers a two -semester college transfer sequence with laboratories (physics preferred).
- Speech and communications: should include English composition, technical writing, and oral communication.
- General education: ODU requires 15 credits of general education courses. Students should be sure to take the appropriate “transfer” courses or options listed on the web site: [www.odu.edu/navycollege](http://www.odu.edu/navycollege)

Electromechanical Systems	Required Credits
<b>Lower division (100-200)</b>	
Base technical content	24
Electives (lower)	3-9
Mathematics- Pre calculus	6
Mathematics- Calculus	4
Natural science	8
Speech/ communications	9
General education	15
<b>Total-lower division</b>	<b>75</b>
<b>Upper Division (300-400)</b>	
Base technical content	27
Engineering Management Minor	12
Electives (upper)	6
<b>Total- upper division</b>	<b>45</b>
<b>Degree Total</b>	<b>120</b>

Students should consult their community college for details on current transfer/ articulation agreements related to their location and program. Students should also consult closely with our advisor to select the appropriate transfer courses in areas such as mathematics, science, and general education.

### Engineering Management Minor

Electromechanical Systems students take a minor in Engineering Management. This is a four-course sequence that provides essential analytical skills for complex technical and business decisions: ENMA 301 Engineering Management, ENMA 302 Engineering Economics, ENMA 401 Project Management, and ENMA 420 Statistics.

### Additional Information

For further information:

- Contact your local Navy College Office about program articulation or visit our web site at [www.navycollege.navy.mil](http://www.navycollege.navy.mil).
- Contact ODU or visit our web site for more information and course schedules:

[www.et.odu.edu/dl/navycollege](http://www.et.odu.edu/dl/navycollege)  
1-800-968-2638

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# GENERAL ENGINEERING TECHNOLOGY OPTION IN ELECTROMECHANICAL SYSTEMS

*Navy College Program Distance Learning Partnership*

