

## Department of Engineering Technology Program Overview

The primary goal of the Department of Engineering Technology is to prepare students for technology based careers. Our Bachelor of Science in Engineering Technology (BSET) programs are developed specifically for students who desire a technical baccalaureate education with an emphasis on applications of engineering and technical knowledge to solve actual work place problems. There are two program alternatives leading to the BSET.

One alternative meets the needs of students who are interested in practice as professional engineers or land surveyors and includes concentrations in Mechanical (MET), Civil (CET), and Electrical (EET) Engineering Technology. The Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET) accredits these programs and graduates are eligible to take the Fundamentals of Engineering (FE) or the Fundamentals of Land Surveying (FLS) examination in Virginia and in most states.

The second program alternative is the BSET with a concentration in General Engineering Technology.

## The General Engineering Technology Program

Many students have technical career goals in business and industry areas that do not involve a professional practice license. For career and professional development in these technology driven fields, it is often essential to complete a bachelors degree program. The diverse technical education background and career goals of these students require a

program with a career focus and the BSET with a concentration in General Engineering Technology (GET) meets this educational need. One of the GET option areas is Construction Management.



## Construction Management Option

Success in the construction industry requires understanding of the complexity of schedules, budgets, and construction methods necessary to complete projects on time and under budget. The GET option in Construction Management supports careers in the execution of construction projects. A particular emphasis is on the concept of task integration in projects.

Construction Management program courses provide the broad skill set required for both long - term advancement and entry-level success. Students learn by examining problems and issues based on current construction approaches and concepts. Core courses are listed in the table below and include topics such as principles of mechanics, soils and foundations, and planning and scheduling.

Construction Management students work with Civil Engineering Technology program

faculty that possess a wealth of business and industrial experience and this knowledge is shared in the classroom.

A senior capstone project allows students to apply and demonstrate the practical knowledge they have gained to examine a real issue in the construction industry. Many projects are proposed and funded by construction related firms to solve real-world problems.

Graduates of the Construction Management option pursue careers as field engineers, estimators, project managers, construction superintendents, and job or area supervisors. The table below lists program courses and electives.

## **Construction Management Upper Level Courses / Electives**

<b>Core Technical Courses</b>
MET 305 Principles of Mechanics
EET 350 Fundamentals of Electrical Technology
CET 305 Elementary Surveying
CET 310 Fundamentals of Bldg. Construction
CET 340 Soils and Foundations
CET 360 Plans and Specifications
CET 440 Contract Documents
CET 445 Construction Planning and Scheduling
CET 460 Construction Estimating
CET 465 Construction Project Management
CET 475W Senior Project
<b>Construction Management Electives</b>
CET 313 Advanced Surveying
CET 420 Hydrology and Drainage
MET 480 Quality Control Systems
CET 452 Reinforced Masonry and Wood
FIN 331 Legal Environment in Business
CET 425 Land Design and Site Dev.

## Degree Completion Options

Engineering Technology students may pursue their studies on the main campus in Norfolk in a traditional four-year program of study. Alternatively, many students complete an Associate in Applied Science (AAS) degree in a community college and finish the last two years of baccalaureate study on campus or through the ODU TELETECHNET System.



For career and family bound students who are not able to come to the main campus to complete their degree, the ODU TELETECHNET system, a national leader in distance learning, provides an alternative. Through this system, courses are delivered to sites at community colleges and industry locations in Virginia and across the nation and directly to students at home or in the work place. There are three primary course delivery methods:

- Satellite links are the primary course delivery method and allow students to participate in live classes by television and two-way voice connections.
- Streaming video allows students on high - speed Internet connections at home or at

work to participate in live or receive archived classes.

- CD-ROM instruction is used to provide supporting information related to lectures delivered by satellite or streaming video.

When students miss class due to travel or business, these methods allow taped or digitized copies of class to be available for viewing at a later time. In all cases, distance students maintain close interaction with faculty by a number of means including telephone, email, and Internet bulletin boards / study sessions.

Using TELETECHNET, it is possible for distance students to complete the technical content of the BS in ET in three years from AAS completion depending on the semester load taken.



### AAS Transfer Credits and Articulation

There are a number of community college articulation agreements that integrate the Construction Management option with a

range of AAS degrees. Typically about half (55-60) of the credits toward a baccalaureate degree can be earned through completion of an AAS degree programs in areas such as Civil Engineering Technology, Architecture, Building Construction, or similar fields.

The following table provides a general description of the required courses for the BS GET option in Construction Management.

	Required Credits
<b>Lower division (100-200)</b>	
Base technical content	24
Technical Electives (lower)	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
Minor / cluster	12
Technical Electives (upper)	9
<b>Total- upper division</b>	<b>45</b>
<b>Degree Total</b>	<b>120</b>

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

- Lower Division Technical content: This section describes the core technical content plus electives for lower division courses and includes a total of 33 credits. Students who complete an AAS in construction related areas that includes CAD, introduction to building construction, and similar topics may receive all of these transfer credits.
- 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: typically include courses in English composition, technical writing, and oral communication.
- General education: ODU requires 15 credits of general education courses. Students completing an AAS should be sure to take “college transfer” courses in areas such as social science and humanities.

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 the advisors in these AAS programs to select the appropriate transfer courses in areas such as mathematics, science, and general education.

### Additional Information

For further information:

- Discuss program articulation with your local community college.
- Meet with your site director if you are at a TELETECHNET site.
- Contact us or visit our web site for more information and course schedules:

[www.et.odu.edu](http://www.et.odu.edu)

Department of Engineering Technology  
214 Kaufman Hall, Norfolk, VA 23529  
757-683-3775

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# GENERAL ENGINEERING TECHNOLOGY

## *Construction Management Program*

