TABLE OF CONTENTS

Welcome from Our Dean .................................................................................................................3
Preview 2020 Registration Preparation Information .................................................................4
The Engineering First Year Program .............................................................................................4
Batten College of Engineering and Technology Programs of Study ...........................................5
Engineering First Year Program Curriculum ...............................................................................6
Alternative First Year Program Curriculum Plans ......................................................................7
General Education Requirements Worksheet .............................................................................9
Placement Testing .........................................................................................................................11
Visualization Course ..................................................................................................................11
Course Load ................................................................................................................................12
Working while in School .............................................................................................................12
Achieving Academic Success at ODU .........................................................................................12
Planning your Ideal Workload ....................................................................................................13
Recommended Computer Model Options for Engineering Students .......................................14
Notes ...........................................................................................................................................15
Contact information ....................................................................................................................16
Social media and website of the college ......................................................................................16
Welcome from Our Dean

Welcome Engineering Monarch! we are pleased that you chose the Batten College of Engineering and Technology at Old Dominion University for your professional studies. We have a team of highly capable and service-oriented faculty and staff ready to help you at every stage of your college journey. Please use every service that we have available to transform you into a successful engineer. Our engineering major and minor programs, student organizations, and career development internships and projects will give you the ability to customize your education through different set experiences ranging from hands-on and highly technical to theoretical and highly mathematical. Therefore, I urge you to use your orientation event to learn about the vitality of the College and engage in the whole experience. If there is anything my staff or I can do to assist you, please do not hesitate to ask.

Welcome!!

Ben Stuart, Ph.D., P.E.
Welcome to Old Dominion University and the College of Engineering and Technology!

The information in this packet is designed to help you in preparing for class registration. We have compiled information about your general education requirements and Engineering Fundamental Courses for your review in order for you to be prepared to register for classes during preview.

Engineering First Year Program

All freshman and transfer students without an Associate Degree are admitted into this division until they are prepared to take courses in their major. The Engineering First Year Program prepares first-year engineering students for success in their engineering and technology education by providing a key experience through its fundamentals of engineering course series and individualized advising. Exposure to different engineering disciplines during this period will help in making well-informed decisions when choosing their majors.

Students assigned to the Engineering First Year Program are considered “intended” until eligible to be “declared” in their engineering or engineering technology major.

All engineering and engineering technology majors have to meet the following requirements:

- Earn an overall GPA of at least 2.00 or better (refer to departmental requirements)
- Earn at least 30 credit hours applicable to your major
- Complete ENGN 110 and XXX 111**
- Complete ENGL 110C with a "C" or above
- Complete freshman-level math courses with a "C" or above
- Complete any other departmental requirements
- Complete all these requirements in 4 semesters (not including summer)

** Students must take ENGN 110 first before being eligible to register for a major specific Information Literacy & Research course such as CEE 111, MAE 111, ECE 111, ENGT 111, or MSIM 111.
# Batten College of Engineering and Technology Programs of Study

## Engineering Programs

<table>
<thead>
<tr>
<th></th>
<th>Bachelor’s</th>
<th>Master’s</th>
<th>Doctoral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Biomedical</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Civil</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Computer</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Design &amp; Manufacturing</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Electrical</strong></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Electrical and Computer</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Engineering Management</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Experimental Methods</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mechanical</strong></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Modeling &amp; Simulation</strong></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Motorsports</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systems Engineering</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Engineering Technology Programs

<table>
<thead>
<tr>
<th></th>
<th>Bachelor’s</th>
<th>Master’s</th>
<th>Doctoral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil (CET)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical (EET)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical (MET)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***This program has been recommended for closure by the State Council of Higher Education for Virginia. Pending their approval and SACSCOC approval, all degrees for the program must be earned by August 2025. Current students will not be able to select the program as their major after August 27, 2021.
## ENGINEERING FIRST YEAR CURRICULUM

### ENGINEERING FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 110**</td>
<td>Engineering &amp; Tech I</td>
<td>2</td>
<td>_____</td>
<td>Co-MATH 162M or higher</td>
</tr>
<tr>
<td>CHEM 121N</td>
<td>Chemistry I Lecture</td>
<td>3</td>
<td>_____</td>
<td>P-MATH 102M/103 M with “C” or better and Pass chemistry placement exam</td>
</tr>
<tr>
<td>CHEM 122N</td>
<td>Chemistry I Lab</td>
<td>1</td>
<td>_____</td>
<td>Co-CHEM 121N</td>
</tr>
<tr>
<td>MATH 211*</td>
<td>Calculus I</td>
<td>4</td>
<td>_____</td>
<td>P-MATH 163 with “C” or better</td>
</tr>
<tr>
<td>ENGL 110C</td>
<td>English Comp I</td>
<td>3</td>
<td>_____</td>
<td>P-Pass WSPT</td>
</tr>
<tr>
<td>GEN ED REQ</td>
<td></td>
<td>3</td>
<td>_____</td>
<td>(your choice – see pg. 9-10)</td>
</tr>
</tbody>
</table>

### ENGINEERING SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXX 111**</td>
<td>INFO LITERACY AND RSRCH (Major specific)</td>
<td>2</td>
<td>_____</td>
<td>P – ENGN 110 P-MATH 162M</td>
</tr>
<tr>
<td>CHEM 123N</td>
<td>Chemistry II (lecture only)</td>
<td>3</td>
<td>_____</td>
<td>P-CHEM 121N with “C” or better</td>
</tr>
<tr>
<td>MATH 212</td>
<td>Calculus II</td>
<td>4</td>
<td>_____</td>
<td>P-MATH 211 with “C” or better</td>
</tr>
<tr>
<td>CS 150</td>
<td>Intro to Programming</td>
<td>4</td>
<td>_____</td>
<td>P-MATH 102M/103 M</td>
</tr>
<tr>
<td>PHYS 231N</td>
<td>University Physics I</td>
<td>4</td>
<td>_____</td>
<td>P-MATH 211 with “C” or better</td>
</tr>
</tbody>
</table>

* Math Placement is based on a proctored placement test.
* Students that do not take the proctored test will be directly placed into MATH 103M

** Students must take ENGN 110 first before being eligible to register for a major specific information literacy and research course such as CEE 111, MAE 111, ECE 111, ENGT 111, or MSIM 111.

### ENG. TECHNOLOGY FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGN 110**</td>
<td>Engineering &amp; Tech I</td>
<td>2</td>
<td>_____</td>
<td>C-MATH 162M or higher level</td>
</tr>
<tr>
<td>MATH 162</td>
<td>Pre-Calculus I</td>
<td>3</td>
<td>_____</td>
<td>P-MATH 102M/103 M</td>
</tr>
<tr>
<td>ENGL 110C</td>
<td>English Comp I</td>
<td>3</td>
<td>_____</td>
<td>P-Pass Writing Sample Placement test</td>
</tr>
</tbody>
</table>

** Additional courses for MET or CET **

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MET 120 or CET 120</td>
<td>Computer Aided Drw</td>
<td>3</td>
<td>_____</td>
<td>no prerequisites</td>
</tr>
<tr>
<td>CHEM 121N</td>
<td>Chemistry I Lecture</td>
<td>3</td>
<td>_____</td>
<td>P-MATH 102M/103 M with “C” or better and pass chemistry placement exam</td>
</tr>
<tr>
<td>CHEM 122N</td>
<td>Chemistry I Lab</td>
<td>1</td>
<td>_____</td>
<td>Co-CHEM 121N</td>
</tr>
</tbody>
</table>

** Additional courses for EET or CpET **

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>EET 120</td>
<td>Logic Circuits &amp; Micro</td>
<td>3</td>
<td>_____</td>
<td>C-EET 125</td>
</tr>
<tr>
<td>EET 125</td>
<td>Logic Circuits Lab</td>
<td>2</td>
<td>_____</td>
<td>C-EET 120</td>
</tr>
</tbody>
</table>

### ENG. TECHNOLOGY SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGT 111**</td>
<td>INFO LITERACY AND RSRCH</td>
<td>2</td>
<td>_____</td>
<td>P – ENGN 110 C-MATH 162</td>
</tr>
<tr>
<td>MATH 163</td>
<td>Pre-Calculus II</td>
<td>3</td>
<td>_____</td>
<td>P-MATH 162M</td>
</tr>
<tr>
<td>PHYS 111N</td>
<td>General Physics</td>
<td>4</td>
<td>_____</td>
<td>P-MATH 102M/103 M</td>
</tr>
</tbody>
</table>

** Additional courses for MET **

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MET 240</td>
<td>Computer Solid Mod</td>
<td>3</td>
<td>_____</td>
<td>P-MET 120</td>
</tr>
<tr>
<td>GEN ED REQ</td>
<td></td>
<td>3</td>
<td>_____</td>
<td>(your choice – see pg. 9-10)</td>
</tr>
</tbody>
</table>

** Additional courses for CET **

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEN ED REQ</td>
<td></td>
<td>6</td>
<td>_____</td>
<td>(your choice – see pg. 9-10)</td>
</tr>
</tbody>
</table>

** Additional courses for EET or CpET **

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>EET 110</td>
<td>Electrical Circuits I</td>
<td>3</td>
<td>_____</td>
<td>P-MATH 162M</td>
</tr>
</tbody>
</table>
# ALTERNATE FIRST YEAR ENGINEERING CURRICULUM PLANS

Students have 4 semesters (not including summer sessions) to complete their freshman year requirements. Full-time students, for financial aid purposes, please add an eligible major specific course to allow for a full course load.

## Math 102M/103M Start

<table>
<thead>
<tr>
<th>Course</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 102M/103M* College Algebra</td>
<td>3</td>
<td></td>
<td>Math Placement Score</td>
</tr>
<tr>
<td>ENGL 110C*** English Comp I</td>
<td>3</td>
<td></td>
<td>P-Pass WSPT</td>
</tr>
<tr>
<td>COMM 101R*** Public Speaking</td>
<td>3</td>
<td></td>
<td>(your choice – see pg. 9-10)</td>
</tr>
<tr>
<td>GEN ED REQ</td>
<td>3</td>
<td></td>
<td>(your choice – see pg. 9-10)</td>
</tr>
</tbody>
</table>

**SEMESTER TOTAL CREDIT HOURS: 15**

Students that do not pass the chemistry placement exam with a 3 or higher, must register for CHEM 103/105N.

## Math 162M Start

<table>
<thead>
<tr>
<th>Course</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 162M* Precalculus I</td>
<td>3</td>
<td></td>
<td>P-MATH 102/103 with “C” or better</td>
</tr>
<tr>
<td>ENGN 110** Engineering &amp; Tech I</td>
<td>2</td>
<td></td>
<td>Co-MATH 162M or higher</td>
</tr>
<tr>
<td>CHEM 121N Chemistry I Lecture</td>
<td>3</td>
<td></td>
<td>P-MATH 102M/103M with “C” or better and Pass CHEM placement exam</td>
</tr>
<tr>
<td>CHEM 122N Chemistry I Lab</td>
<td>1</td>
<td></td>
<td>Co-CHEM 121N</td>
</tr>
<tr>
<td>GEN ED REQ</td>
<td>3</td>
<td></td>
<td>(your choice – see pg. 9-10)</td>
</tr>
<tr>
<td>GEN ED REQ</td>
<td>3</td>
<td></td>
<td>(your choice – see pg. 9-10)</td>
</tr>
</tbody>
</table>

**SEMESTER TOTAL CREDIT HOURS: 15**

## Math 163 Start

<table>
<thead>
<tr>
<th>Course</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 163* Precalculus II</td>
<td>3</td>
<td></td>
<td>P-MATH 162 with “C” or better</td>
</tr>
</tbody>
</table>

## SEMESTER TOTAL CREDIT HOURS: 14

## SEMESTER TOTAL CREDIT HOURS: 13
### ENGINEERING SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 163*</td>
<td>Precalculus II</td>
<td>3</td>
<td></td>
<td>P-MATH 162 with &quot;C&quot; or better</td>
</tr>
<tr>
<td>XXX 111**</td>
<td>INFO LITERACY AND RSRCH</td>
<td>2</td>
<td></td>
<td>P-ENGN 110 and MATH 162M or higher</td>
</tr>
<tr>
<td>CHEM 123N</td>
<td>Chemistry II (lecture only)</td>
<td>3</td>
<td></td>
<td>P-CHEM 121N with “C” or better</td>
</tr>
<tr>
<td>CS 150</td>
<td>Intro to Programming</td>
<td>4</td>
<td></td>
<td>P-MATH 102M/103M</td>
</tr>
<tr>
<td>GEN ED REQ</td>
<td></td>
<td>3</td>
<td></td>
<td>(your choice – see pg. 9-10)</td>
</tr>
</tbody>
</table>

**SEMESTER TOTAL CREDIT HOURS: 15**

### ENGINEERING SUMMER SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 211*</td>
<td>Calculus I</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEMESTER TOTAL CREDIT HOURS: 16**

### ENGINEERING THIRD SEMESTER

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Grade</th>
<th>Pre/Co-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 212*</td>
<td>Calculus II</td>
<td>4</td>
<td></td>
<td>P-MATH 211 with &quot;C&quot; or better</td>
</tr>
<tr>
<td>PHYS 231N</td>
<td>University Physics I</td>
<td>4</td>
<td></td>
<td>P-MATH 211 with &quot;C&quot; or better</td>
</tr>
<tr>
<td>GEN ED REQ</td>
<td></td>
<td>3</td>
<td></td>
<td>(your choice – see pg. 9-10)</td>
</tr>
<tr>
<td>ENGL 211C/231C</td>
<td>English Composition or Intro. To Technical Writing</td>
<td>3</td>
<td></td>
<td>P-ENGL 110C with &quot;C&quot; or better</td>
</tr>
</tbody>
</table>

**SEMESTER TOTAL CREDIT HOURS: 14**

---

**Any student may challenge his/her placement by participating in the ALEKS PPL Placement Program.**

**Students must take ENGN 110 first before being eligible to register for a major specific information literacy and research course such as CEE 111, MAE 111, ECE 111, ENGT 111, or MSIM 111.**

**Honors College students may register for ENGL 126C or COMM 126R (see advisor with questions regarding Honors College classes).**
GENERAL EDUCATION REQUIREMENTS WORKSHEET
2020-2021
Engineering and Engineering Technology Majors

You can view your full curriculum sheet (HERE)
Detailed course descriptions in the Undergraduate University Catalog (HERE)

WRITTEN COMMUNICATION SKILLS
Select Two (3 credits each):
☐ ENGL 110C – English Composition (pre-req: Score of 3 on Writing Sample Placement Test)

NOTE: UNIV 150 – Writing for College Success **Does not meet General Education requirements.

☐ ENGL 211C or *ENGL 231C – English Composition or Intro to Technical and Scientific Writing (pre-req: complete with a “C” or above ENGL 110C)  * ENGL 231C for CompE, EE, EET, CpET and ME Majors only.

ORAL COMMUNICATION SKILLS
☐ COMM 101R  Public Speaking

MATHEMATICAL SKILLS
Your proctored ALEKS placement test will determine your class placement.
☐ MATH 103M– College Algebra with Supplemental Instruction
☐ MATH 102M– College Algebra
☐ MATH 162M – Pre-calculus I
☐ MATH 163 – Pre-calculus II
☐ MATH 211 – Calculus I

*Engineering Majors up to MATH 307 required / Technology Majors up to MATH 211 with a “C” or above required.

FOREIGN LANGUAGE SKILLS
Select One Language (3-6 credits each):
☐ ARAB 111F – Beginning Arabic (6 credits)
☐ CHIN 111F – Beginning Chinese (6 credits)
☐ FR 101F-102F – Beginning French I and II (3 credits each semester)
☐ GER 101F-102F – Beginning German I and II (3 credits each semester)
☐ ITAL 101F-102F – Beginning Italian I and II (3 credits each semester)
☐ JAPN 111F – Beginning Japanese (6 credits)
☐ FARS 111F – Beginning Farsi (6 credits)
☐ LATN 101F-102F – Beginning Latin I and II (3 credits each semester)
☐ RUS 101F-102F – Beginning Russian I and II (3 credits each semester)
☐ SPAN 101F-102F – Beginning Spanish I and II (3 credits each semester)

*Students with 3 yrs of 1 language or 4 yrs of 2 different languages (i.e. 2 yrs of Spanish and 2 of French) in high school are exempt from this requirement if they are earning a Bachelor of Science (BS) degree; Bachelor of Arts (BA) degree programs require proficiency through the 202 or 212 (“Intermediate”) level.

INFORMATION LITERACY AND RESEARCH*
(You must complete ENGN 110 and be eligible for MATH 163 or higher to register for the following courses)
☐ CEE 111- CEE Information Literacy and Research
☐ ECE 111- ECE Information Literacy and Research
☐ ENGT111- Engineering Technology Information Literacy and Research
☐ MAE 111- MAE Information Literacy and Research
☐ MSIM 111- MSIM Information Literacy and Research

*Refer to departmental requirements
## LITERATURE
Select ONLY One (3 credits each):
- ENGL 112L – Introduction to Literature
- ENGL 114L – American Writers, American Experiences
- FLET 100L – Understanding World Literature

## INTERPRETING THE PAST
Select ONLY One (3 credits each):
- HIST 100H – Interpreting the World Past Since 1500
- HIST 101H – Interpreting the Asian Past
- HIST 102H – Interpreting the European Past
- HIST 103H – Interpreting the Latin American Past
- HIST 104H – Interpreting the American Past
- HIST 105H – Interpreting the African Past

## HUMAN BEHAVIOR
Select ONLY One (3 credits each):
- AAST 100S – Introduction to African American and African Studies
- ANTR 110S – Introduction to Anthropology
- COMM 200S – Intro to Human Communication
- CRJS 215S – Introduction to Criminology
- ECON 200S – Basic Economics
- ECON 201S – Principles of Macroeconomics
- ECON 202S – Principles of Microeconomics
- FIN 210S – Personal Financial Literacy
- GEOG 100S – Cultural Geography
- GEOG 101S – Environmental Geography
- POLS 100S – Introduction to International Politics
- POLS 101S – Introduction to American Politics
- PSYC 201S – Introduction to Psychology
- PSYC 203S – Lifespan Development
- SOC 201S – Introduction to Sociology
- WMST 201S – Women in a Changing World
- ENTR 201S – Intro to Entrepreneurship

## HUMAN CREATIVITY
Select ONLY One (3 credits each):
- ARTH 121A – Introduction to the Visual Arts
- ARTS 122A – Visual Communication
- DANC 185A – Dance and Its Audience
- MUSC 264A – Music in History and Culture
- THEA 241A – The Theatre Experience
- COMM/THEA 270A – Film Appreciation

## PHILOSOPHY AND ETHICS
- ENMA 480 Ethics and Philosophy in Engineering *(not eligible to take until the Junior year of your curriculum).*

## THE IMPACT OF TECHNOLOGY
(only for Civil Engineering Technology (CET) and Modeling & Simulation Engineering majors have to take a “T” course in this category. For all other engineering and engineering technology majors this requirement is absorbed in your curriculum)

## NATURE OF SCIENCE
Met in the major with:
- CHEM 121N – Foundations of Chemistry I Lecture
  (pre or co-requisite: MATH 162M)
- CHEM 122N – Foundations of Chemistry I Lab
  (pre or co-requisite: CHEM 121N)
  * CHEM 121N and 122N are recommended for Electrical Engineering Technology (EET) Majors, but not required. They can choose another Nature of Science course.
- CHEM 123N – Foundations of Chemistry II Lecture
  (pre-req: CHEM 121N and 122N both with C or higher)
  *Required for Engineering Majors only
- PHYS 111N-112N – Introductory General Physics
  (pre or co-req: MATH 162M)
  *Required for Engineering Technology Majors
- PHYS 231N-232N – University Physics
  (Prerequisite: MATH 211 with C or higher)
  *Required for Engineering Majors
**PLACEMENT TESTING**

Some college courses require a placement test to ensure you are in the best-fit class for your current ability level. It is important to represent your honest ability on the following assessments so that you can be successful in your freshman year. You have four required placement tests you should complete over the summer as a freshman engineering student: ALEKS-PPL for math, the Chemistry Placement test, the Visualization test, and the Writing Success Placement Tool (WSPT).

**Recommended Placement Test Order**

**VISUALIZATION TEST AND COURSE**

The spatial-visualization test evaluates the student’s ability to think in three dimensions. Spatial visualization skills have been strongly suggested to impact engineering education. The results of this test will inform engineering advisors and allow them to recommend students to enroll in the zero-credit ENGN 195 Spatial-Visualization course. There is no tuition cost for the student. How to take the test: [https://odu.edu/content/dam/odu/col-dept/eng/docs/psvtr-bb-directions.pdf](https://odu.edu/content/dam/odu/col-dept/eng/docs/psvtr-bb-directions.pdf)

**MATH PLACEMENT & PREPARATION PROGRAM (ALEKS-PPL)**

ALEKS-PPL is a computer-adaptive assessment system that uses artificial intelligence to help determine the best level of math coursework for each student. ALEKS’s programming uses an unproctored pre-test (Test 1) to determine the topics in which students need to work to be better prepared to take the proctored math placement test. ALEKS-PPL will create a set of online learning modules customized to the preparation needs of the student defined in Test 1. A minimum of 20 hours of work on the learning modules is needed as pre-requisite to take the math proctored placement test.

**CHEMISTRY PLACEMENT TEST**

The Chemistry Placement exam is a 50 minute, 50 question, multiple choice, online exam that tests your math and chemistry background. It covers content that is typically covered in a high school chemistry course. The purpose of the exam is to determine if you are prepared to take and be successful in CHEM 121N. How to take the test: [https://www.odu.edu/chemistry/academics/undergraduate/placement-exam](https://www.odu.edu/chemistry/academics/undergraduate/placement-exam)

**WRITING SUCCESS PLACEMENT TOOL**

All undergraduate students who have not earned credit for ENGL 110C through dual enrollment, Advanced Placement (AP), the College Level Examination Program (CLEP) or transfer from another institution are required to earn a passing score on the Writing Success Placement Tool (WSPT) to be cleared to enroll in ENGL 110C. How to take the test: [https://www.odu.edu/englishdept/general-education/writing-placement.html](https://www.odu.edu/englishdept/general-education/writing-placement.html)
COURSE LOAD

College courses are measured in credit hours. A three-credit course meets for three hours per week. Balancing your course load each semester is very important to academic success. In addition to time spent in class, some courses (usually science) require additional laboratory and recitation attendance.

- **Laboratories**: practical application of what has been taught in the classroom. Laboratories can carry 0-3 credit hours and are often as time-consuming as a lecture class.
- **Recitations**: extra time for instruction and help session. Recitations are required for some Math and Computer Science courses.

“Full-time” Course Load:
12 credit hours is the minimum number of hours required to be a full-time student. Full-time status is often required for students to remain on their parents’ auto and health insurance.

Course Load Limit:
18 credit hours is the maximum number of credit hours a student is allowed to carry without a waiver.

College Numbering System:
- 100 – Freshman level
- 200 – Sophomore level
- 300 – Junior level
- 400 – Senior level
- 500/600/700 – Masters level
- 700/800/900 – Doctorate level

Average Course Load:
15 credit hours is the average load carried by most students. To graduate in four years, with no summer attendance, a student must average 15 hours per semester.

WORKING WHILE IN SCHOOL...

Be realistic! Students who plan on working while in school should follow the guidelines below to ensure that they do not overload themselves.

<table>
<thead>
<tr>
<th>A student enrolled for...</th>
<th>Should plan on working no more than...</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-18 credit hours</td>
<td>Student should not be working!</td>
</tr>
<tr>
<td>14-16 credit hours</td>
<td>10-15 hours per week</td>
</tr>
<tr>
<td>12-13 credit hours</td>
<td>15-20 hours per week</td>
</tr>
<tr>
<td>7-11 credit hours</td>
<td>20-30 hours per week</td>
</tr>
<tr>
<td>6 credit hours or less</td>
<td>30-40 hours per week</td>
</tr>
</tbody>
</table>

ACHIEVING ACADEMIC SUCCESS at ODU

ODU offers students many resources to help them achieve academic success – be sure to take advantage of them!
Math and Science Resource Center: Learning Commons @ Perry Library Room 1312 for Math tutoring and Oceanography Building Room 146 for Chemistry tutoring; [http://sci.odu.edu/msrc](http://sci.odu.edu/msrc)

Testing Center: 757.683.3697, [http://uc.odu.edu/elt](http://uc.odu.edu/elt)
Offers placement testing including those for Foreign Language and Math (COMPASS).

Coordinates tutoring for many subjects and keeps a listing on their website of current tutoring hours and locations by subject.

Academic Skills Center: 757.683.3699, [http://uc.odu.edu/academicskills/](http://uc.odu.edu/academicskills/)
Coordinates the testing and grading of the **Writing Sample Placement Test**. If you need to take this test, contact them!

Writing Center: 757.683.4013, [http://al.odu.edu/writingcenter/](http://al.odu.edu/writingcenter/)
Assists students with all stages of the writing process (for any subject). A GREAT resource!!
Planning Your Ideal Course Load

First, consider your circumstances for the upcoming semester:

- What subjects do you enjoy? With what do you tend to struggle?
  - Consider trying to balance the difficulty levels of your course selections so that you have a good mix of challenging and not-so-challenging classes.

- Will you be commuting?
  - Consider the peak traffic times on various roadways in Hampton Roads!
  - Do you have an alternate means of getting to school if your car breaks down?

- Will you be working? If so, how often?
  - Full-time workers should not attempt to do school full-time coursework as well – see chart on p. 12!

- Are there any courses listed on your curriculum sheet that you are worried about taking?
  - (e.g., you must take 2-6 MATH courses, but tend not to do well in Math)
  - If so, discuss this with your advisor early!

Proposed Schedule:

Engineers need a math course (i.e., MATH 103M/102M, 162M, 163, 211, etc.), a science course (i.e., CHEM, PHYS, and/or CS), an English composition course (ENGL 110C or higher), and a general education course (your choice) at least. Please refer to pages 6-8 of this packet for reference.

**Remember:** 12 credits is the minimum to be considered a full-time student.

Students will be pre-registered in: MATH, ENGL, PHYS, CHEM, and ENGN110

(Example) Class: MATH 162M Pre-calculus I Credit Hours: 3 (Example)

Class: ___________________________ Credit Hours: ___
Class: ___________________________ Credit Hours: ___
Class: ___________________________ Credit Hours: ___
Class: ___________________________ Credit Hours: ___
Class: ___________________________ Credit Hours: ___
Class: ___________________________ Credit Hours: ___
Class: ___________________________ Credit Hours: ___

Alternate Options:

Class: ___________________________ Credit Hours: ___
Class: ___________________________ Credit Hours: ___
Recommended Computer Model Options Fall 2020
for Students of the Batten College of Engineering & Technology

**Dell Inspiron 17 7000:**
17.3-in. touch display
10th Generation Intel® Core™ i7-10510U Processor
Windows 10 Home 64bit English
16GB 2x8GB DDR4 2666MHz
NVIDIA® GeForce® MX250 with 2GB GDDR5 graphics memory
Intel Optane Memory H10 32GB with 512GB Solid State Storage
$1,175

**Dell Precision 5540:**
15.6" UltraSharp FHD IGZO4 (1920x1080) Wide Anti-Glare LED-Backlit non-touch
9th Gen Intel Core i7-9750H (2.6 GHz Six Core, 4.5 GHz Turbo, 12MB Smart Cache 45W)
16GB, DDR4-2666MHz Non-ECC (1x16GB)
NVIDIA Quadro T1000 with 4GB GDDDR5
512GB M.2 PCIe NVMe Class 40 Solid State Drive (SSD)
$1,899

When you purchase one of these computers from the University Village Bookstore you enter the Mobile Monarch program. These computers are specially selected to meet ODU's computing requirements and get you through your academic career. You'll get: • Discount Pricing: Prices include ODU's higher education discount. • On-Campus Repair Center: Loaner computer available while warranty repairs are completed right here on campus. • Peace of Mind: High quality components designed to last for 4+ years. University Village Bookstore 4417 Monarch Way, Norfolk. (757) 423-2609. **odu@bkstr.com** https://www.odu.edu/techstore