

# Virginia Tech Bachelor of Science in Aerospace & Ocean Engineering (Ocean Major)

## Associate Transfer Degree Plan in Engineering

### COURSE REQUIREMENTS

Complete at VCCS				Complete at Virginia Tech							
BACHELOR'S DEGREE REQUIREMENT		SATISFIED BY		BACHELOR'S DEGREE REQUIREMENT		1 <sup>st</sup> sem (fall)	2 <sup>nd</sup> sem (fall)	3 <sup>rd</sup> sem (spring)	4 <sup>th</sup> sem (fall)	5 <sup>th</sup> sem (spring)	
Course	Credits	CC Course	Notes	Course	Credits	Notes					
VT 1XXX	1-2	SDV 100 or 101		CS 1044, 1064, or 1114	3	can be taken at VCCS					
ENGL 1105	3	ENG 111		AOE 2074	2						
ENGL 1106	3	ENG 112		AOE 2204	3	Taught fall only					
Pathways Concept 2	3	Any UCGS Art or Humanities		AOE 2024	3						
Pathways Concept 2	3	Any UCGS Art, Humanities, or Lit	This course must come from a different group than prior requirement.	MATH 4564	3						
Pathways Concept 3	3	Any UCGS History		AOE 3014	3	Taught fall only					
ECON 2005 (Pathways Concept 3)	3	ECO 202		AOE 3034	3	Taught fall only					
MATH 1225	4	MTH 263		AOE 3214	3	Taught fall only					
MATH 1226	4	MTH 264		AOE 3224	3	Taught fall only					
MATH 2204	4	MTH 265		AOE 3234	3	Taught spring only					
MATH 2214	3	MTH 267		AOE 3264	3	Taught spring only					
PHYS 2305	4	PHY 241		AOE 3054	3	Taught spring only					
PHYS 2306	4	PHY 242		GEOS 3034	3						
CHEM 1035 + 1045	4	CHM 111		Track Technical Elective	9	3 courses, from one of 9 tracks (to be taken any term to fill schedule)					
ENGE 1215	2	EGR 121		AOE 4205	1	Taught fall only					
ENGE 1216	3	EGR 122		AOE 4265	AOE 4266	3 + 3	Year-long senior design (must begin in fall, and end in spring)				

ESM 2104 (+ESM 2204 will sub for AOE 2014)	3	EGR 240		STAT 4705	3	
ESM 2204 (+ESM 2104 will sub for AOE 2014)	3	EGR 246		Technical Elective	6	2 courses to be taken any term to fill in schedule
MATH 2114	3	MTH 266		AOE 4206	1	Taught spring only
ESM 2304	3	EGR 245		Free elective	0-3	If additional hours needed to reach 127 total
ECE 2054 (will sub for AOE 2054)	3	EGR 271		ENGR 3900	0	Career Bridge Experience
				Career Bridge Experiences help prepare students for post-graduation life and develop a professional identity. Internships, Co-ops, and Undergraduate Research are examples of possible Career Bridge Experiences. Because some of these experiences are not credit bearing, the ENGE 3900 course is used to track and assess student participation in Career Bridge and to record fulfillment of this degree requirement on the transcript. Students should enroll in ENGE 3900 during the semester (or one of the semesters) that they undertake the Career Bridge Experience. Enrollment in ENGE 3900 requires approval of a Career Bridge Plan. Further information about acceptable Career Bridge Experiences and the process for submitting a Career Bridge Plan are explained within your major courses.		
CREDITS PRE-TRANSFER: 66 - 67				CREDITS POST-TRANSFER: 64-67 (to reach degree total of 127 credits)		

## TRANSFER GUIDANCE

### Guaranteed Admission Agreement

**Students who complete the prescribed curriculum and meet the criteria below are guaranteed admission into Virginia Tech and directly into the OE Major:**

- Earn a transfer associate degree AS in Engineering (or AS/AA&S in Science with Specialization in Engineering)

- Earn a minimum of 3.2 GPA for the associate degree.
- Applicants for this major can be guaranteed for the Fall entry term.
- Complete all steps of the formal admissions application process by the appropriate deadlines for the intended term of entry. Most applicants pursuing guaranteed admission will apply as they are finishing their associate degree.

#### IMPORTANT LINKS & DATES:

- **Transfer Initiatives Office:** <https://advising.vt.edu/transfer-student-advising.html>
- **Admission Application:** Find full application instructions and applicable deadlines at: <https://vt.edu/admissions/transfer/checklist.html>
- **Financial Aid:** <https://www.finaid.vt.edu>
- **FAFSA** - Free Application for Federal Student Aid: March 1 for fall semester at <https://studentaid.gov>

#### WHAT SHOULD I CONSIDER WHEN SELECTING COURSES?

- Create a schedule for all required courses, pay attention to prerequisites and when courses are offered, complete your first math and English courses in your first year. For help, see Transfer Steps and Resource Center at <https://www.TransferVirginia.org>
- Connect with an advisor at your community college and Virginia Tech within your first year. College Connect available in your account of <https://www.TransferVirginia.org>
- Students entering VT in the fall semester following this plan will have their following spring semester open for a co-op

#### IS THIS DEGREE RIGHT FOR ME?

- The Bachelor of Science degree in Aerospace and Ocean Engineering is accredited by [ABET](#).
- At Virginia Tech, we provide a foundation in the physics of the ocean, but the major focus areas are ocean vehicles and structures, including ships, advanced marine vehicles, offshore platforms and submarines. Students have the ability to mix and match courses from nine Technical Tracks, or choose the foundational option, which spans the core areas in both ocean and aerospace engineering. <https://www.aoe.vt.edu/undergraduate/ocean-engineering.html>
- Students are encouraged to participate in undergraduate research with faculty at Virginia Tech

#### WHAT IS THE IMPACT ON MY DEGREE OF WORK I HAVE ALREADY COMPLETED?

- **Associate Transfer Degree Completion:** The completion of an Associate Degree results in all lower-division general education requirements being met when you transfer to Virginia Tech.
- **Credit for Prior Learning:** AP, IB, and CLEP are evaluated for credits <https://www.registrar.vt.edu/Advanced-Standing-Transferable-Credit.html>
- **Catalog Year:** Catalog year determined by first semester of attendance at Virginia Tech
- **Dual Enrollment – Completion of Associate Degree in HS:** The completion of an Associate Degree concurrent with high school results in up to half the required credits (127) towards a AE degree, with all general education courses satisfied. Students will be enrolled as a freshman for orientation and engagement purposes.

#### IS THIS COLLEGE RIGHT FOR ME?

- Virginia Tech's College of Engineering undergraduate programs are ranked 13th in the nation, according to U.S. News & World Report

- Located in rural area, with 2600-acre campus, 37,000 on and off campus students, and a 14:1 student-faculty ratio
- Transfer students have both on-campus and off-campus housing options, including a living community on campus just for transfer students (all majors). <https://llp.vt.edu/llc/transfer.html>
- Virginia Tech is a diverse campus with students from over 40 states and 115 countries.
- Students can attend full-time or part-time.
- Classes are most typically offered Monday – Friday, 8am – 5pm

Learn more about our university at <https://vt.edu/about/facts-about-virginia-tech.html>

#### DID YOU KNOW THAT...

- Completing your Associate transfer degree post-high school satisfies all lower division general education requirements and increases the chance of completing your bachelor's degree?
- Exceeding 3 years or 90 credits at your community college means you may have exhausted your financial aid at that college and have limited your future financial aid at Virginia Tech

#### WHAT CAN I DO WITH THIS DEGREE?

- The field focuses on the design, construction, and science of marine craft and instruments, including: Advanced marine craft, Autonomous underwater vehicles (marine robotics), Offshore platforms, Ships, Submarines. Ocean engineers must build vehicles, systems, instruments, and sensors to operate smoothly in the unpredictable, often hostile environment of the open seas, which means high winds, rough waves, strong currents, and moving ice.
- Explore possible careers, salaries, and job outlook at <https://www.TransferVirginia.org> and <https://eng.vt.edu/academics/undergraduate-students/explore-engineering.html>

#### PROGRAM SUCCESSES & HIGHLIGHTS

- 80% of undergraduate OE students expect full-time employment, most typically in the areas of Shipbuilding Industries, Federal Government Agencies (NASA, DOD, etc.), or Maritime Agencies
- The median starting salary of 22/23 AOE graduates was \$76,000

#### WHAT ARE MY CHANCES FOR GETTING ACCEPTED?

Each year around 400-450 VCCS transfer students apply for admission to a program in the Virginia Tech College of Engineering. Between 60-70% are typically offered admission. The average GPA of transfer students enrolling is 3.5.

Learn more about applying at <https://vt.edu/admissions/transfer.html>

#### DO MORE WITH YOUR DEGREE!

- Students may complete an accelerated Master's degree in one additional year of enrollment