COLLEGE OF ENGINEERING
INFORMATION SESSION
PRESENTED BY THE DEAN’S TEAM
What It Takes to be a Successful College of Engineering Student

01 / OVERVIEW

- Creativity
- Teamwork
- Study Habits
- Interest in Math & Science
- Challenging High School Background
Freshman Engineering Class of 2021

- Average Reported GPA: 4.08/5.0
- Average SAT (Math/Reading): 695/659
- Females: 21.3%
- URM/US: 35.2%
General Engineering (not inclusive of Building Construction)

- Common Entry Point & Classes
- AP/IB/CLEP/Dual Enrollment
  - Transfer credit accepted
- Pathways for General Education Curriculum
- Select Major at end of Freshman Year
  - 3.0 guarantees first choice
FOUNDATIONS OF ENGINEERING

- Data collection & analysis
- Problem-solving
- Modeling & design tools
- Professional practices
- Engineering fields & majors

(not inclusive of Building Construction)
## 2021 College of Engineering Overview

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Education</td>
<td>2550</td>
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<tr>
<td>Aerospace</td>
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<tr>
<td>Biological Systems</td>
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<td>Biomedical</td>
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<tr>
<td>Building Construction</td>
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<tr>
<td>Chemical</td>
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<tr>
<td>Civil</td>
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<tr>
<td>Computer</td>
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<td>Computer Science</td>
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<td>Construction Engineering and Management</td>
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<tr>
<td>Electrical</td>
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<td>Industrial and Systems</td>
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<tr>
<td>Materials Science and Engineering</td>
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<tr>
<td>Mechanical</td>
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<tr>
<td>Mining</td>
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<tr>
<td>Ocean</td>
<td>101</td>
</tr>
</tbody>
</table>
Engineering Minors
- Computer Science
- Cybersecurity
- Green Engineering
- Microelectronics
- Naval Engineering
- Biomedical Engineering
- Interdisciplinary Engineering & Science (Scieneering)

Undergraduate Research
Study Abroad
Professional Societies
Engineering Organizations
Rising Sophomore Abroad Program

ENGE 1644: Global STEM Practice

- 3 credits during spring semester
- Fulfills Pathways 3 requirement
- Explores engineering in an international context, helping students to build skills to work in diverse teams and circumstances

Travel

- 2 weeks at the end of May
- 2023 Locations:
  - Argentina & Chile
  - Australia & New Zealand
  - Italy & Germany
  - Japan & South Korea
  - Norway & Finland,
  - Spain & Morocco
  - United Kingdom & Ireland

Program Fee includes international airfare, accommodations, in-country travel, breakfasts and some lunches and dinners, corporate visits, cultural visits, and international health insurance

For more information:
Or email rsap@vt.edu
Internships & Co-op Experiences

02 / OPPORTUNITIES
CAREER FAIRS
GALILEO & HYPATIA
PEER MENTORING & STEP
HANDS ON, MINDS ON

Ware Lab Design Teams

- AeroSAE
- AISC Steel Bridge
- ASCE Concrete Canoe
- Astrobotics
- Baja SAE
- BOLT
- Design, Build, Fly!
- Formula SAE
- Human Powered Sub
- Hybrid Electric Vehicle Team
- SailBOT
ENGINEERING RANKINGS

U.S. News & World Report
• #13 Best Undergraduate Program
• #30 Best Graduate Program

American Society for Engineering Education (ASEE)
• #7 Producer of Engineers
• #8 Producer of Women Engineers

Among accredited engineering schools nationwide

Bachelors degrees
OUTCOMES (2021)

Freshman who continued to a second year in engineering
• 90% (Last 5 years averaged)

After graduation (70% responded)
• 59% are employed
• 20% plan to attend graduate school or have accepted admission

Median Starting Salary
• $70,500 (compared to $63,000 median for the entire University)
SCHOLARSHIPS

For Freshmen
• Davenport Leadership Scholar
• Pratt Engineering Scholarship
• Financial Aid

VCCS Transfer Students
• Leo A. Padis Scholarship

For Upperclassmen
• College of Engineering Funds
• Departmental Scholarships
• One Application!
COMPUTER REQUIREMENTS

Laptop or 2-in-1 tablet
• Computer requirements listed online and updated yearly
• Windows 10 required
• Run advanced software & tools

Digital Inking Benefits
• Digital notetaking
• Drawing diagrams
• Writing equations
• Submitting/grading homework
MAJORS
ELECTRICAL ENGINEERING

- Communications & Networking
- Controls, Robotics, & Autonomy
- Energy & Power Electronics Systems
- Micro/Nanosystems
- Photonics
- Radio Frequency & Microwave
- Space Systems
COMPUTER ENGINEERING

- Chip-Scale Integration
- Controls, Robotics, & Autonomy
- Machine Learning
- Networking & Cybersecurity
- Software Systems
COMPUTER SCIENCE

- Computational Biology and Bioinformatics
- Human Computer Interaction
- Knowledge, Information and Data
- Media/Creative Computing
- Scientific Computing
- Software Engineering
- Systems and Networking
MECHANICAL ENGINEERING

- Automotive
- Design & Manufacturing
- Energy
- Materials
- Nuclear
- Robotics & Autonomy
AEROSPACE ENGINEERING

- Aerodynamics
- Flight Dynamics & Controls
- Propulsion
- Structures
- Space Engineering
- Vehicle Designs
OCEAN ENGINEERING

• Hydrodynamics
• Naval Engineering
• Propulsion
• Structures
• Vehicle Dynamics
INDUSTRIAL & SYSTEMS ENGINEERING

• Human Factors Engineering and Ergonomics
• Management Systems
• Manufacturing Systems
• Operations Research
CHEMICAL ENGINEERING

- Biotechnology
- Energy
- Environmental
- Manufacturing
- Marketing
- Polymers
- Research
MATERIALS SCIENCE & ENGINEERING

- Biomaterials
- Ceramics
- Composites
- Electronic Materials
- Metals
- Polymers
CIVIL ENGINEERING

- Construction
- Environmental
- Geotechnical
- Land Development
- Materials
- Structures
- Transportation
- Water Resources
CONSTRUCTION ENGINEERING & MANAGEMENT

- Smart Design and Construction
- Human-Centered Issues
- Project Management
BUILDING CONSTRUCTION

- Innovation and Emerging Technologies
- Focus on Business and Construction Management
- Creation of Vertical Structures, Spaces, and Systems
MINING & MINERALS ENGINEERING

- Critical minerals for new technologies
- Mine safety and miner health
- Minerals for construction and infrastructure
- Green engineering and pollution control
- Carbon capture and storage
- Energy production
BIOLOGICAL SYSTEMS ENGINEERING

- Biotechnology Engineering
- Environmental Health Engineering
- Food Engineering
- Watershed Science and Engineering
- Health Professions
BIOMEDICAL ENGINEERING

- Biomedical Devices
- Biomedical Imaging
- Biomechanics
- Biomaterials
- Cardiovascular Engineering
- Nanomedicine
- Tissue Engineering and Regenerative Medicine
- Translational Cancer Research
LEARN MORE AT

Explore Engineering Virginia Tech

03 / MAJORS
WHY DID I COME TO THE COLLEGE OF ENGINEERING AT VIRGINIA TECH?
QUESTIONS?
Where should I eat?

- Au Bon Pain - Squires
- Burger ‘37 - Squires
- D2
- Deet’s Express
- DXpress
- Owens Food Court
- Turner Place
- West End
- Off Campus