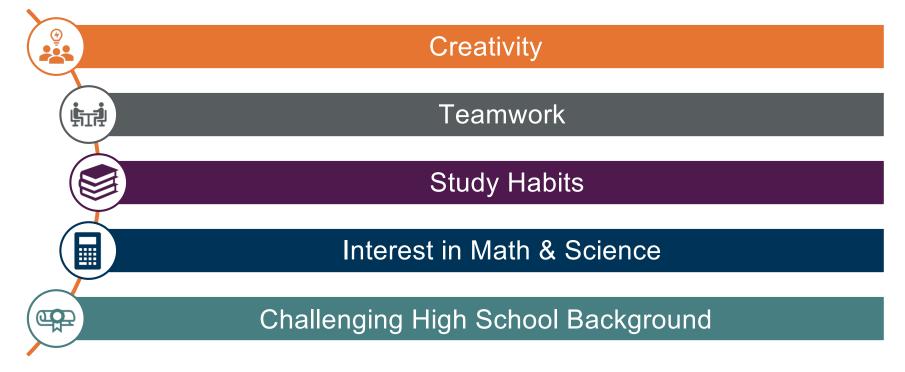
COLLEGE OF ENGINEERING INFORMATION SESSION

PRESENTED BY THE DEAN'S TEAM



What It Takes to be a Successful College of Engineering Student



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

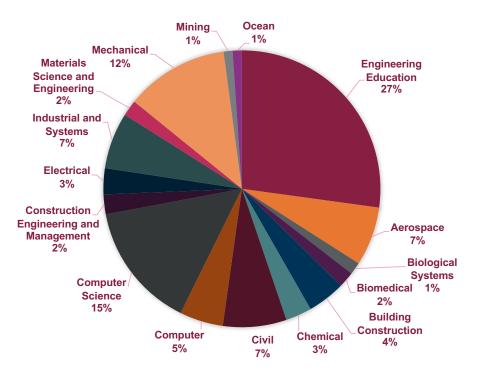
- Data collection & analysis
- Problem-solving
- Modeling & design tools
- Professional practices
- Engineering fields & majors

01 / OVERVIEW

(not inclusive of Building Construction)

2021 College of Engineering Overview

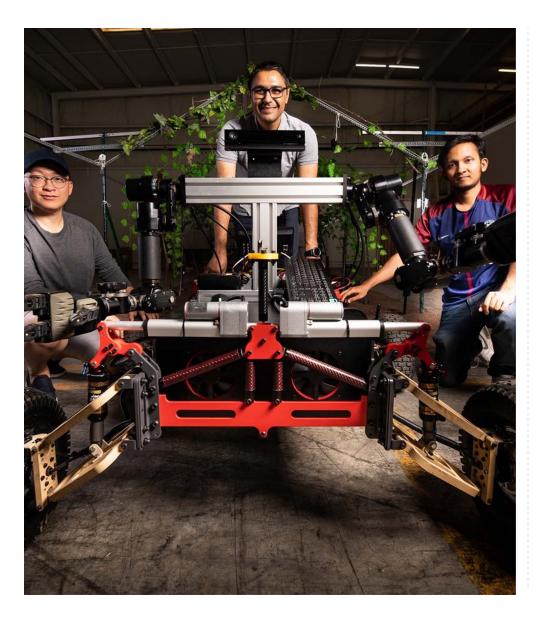
Engineering Education	2550
Aerospace	646
Biological Systems	134
Biomedical	173
Building Construction	417
Chemical	286
Civil	696
Computer	477
Computer Science	1384
Construction Engineering and Management	217
Electrical	285
Industrial and Systems	619
Materials Science and Engineering	174
Mechanical	1131
Mining	97
Ocean	101



02

OPPORTUNITIES

VALOR



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 a 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

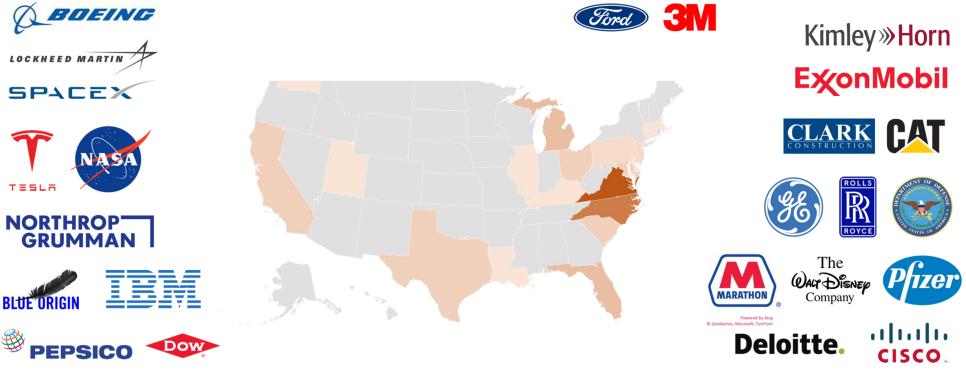
For more information:



Scan Me!

Or email rsap@vt.edu

Internships & Co-op Experiences



CAREER FAIRS

Г











GALILEO & HYPATIA



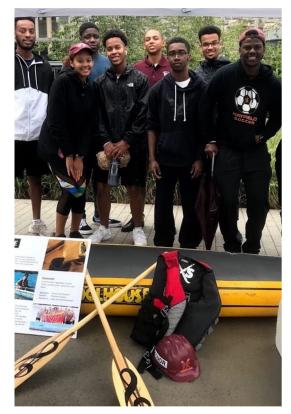


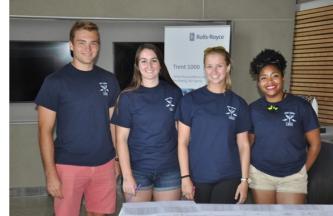






PEER MENTORING & STEP











^{02 /} OPPORTUNITIES

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

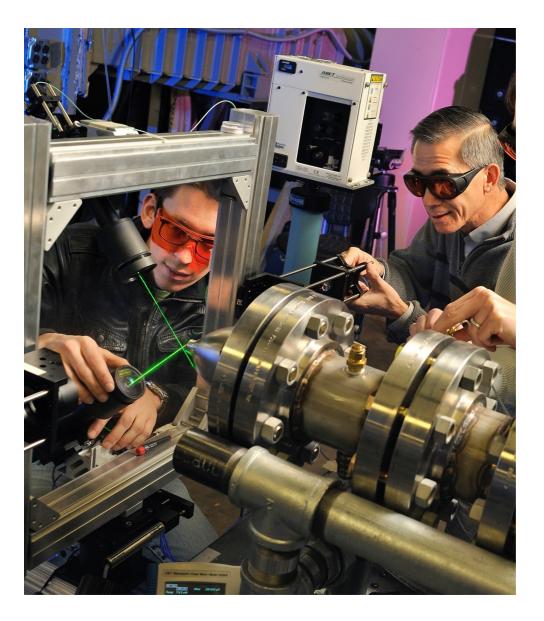








02 / OPPORTUNITIES



ENGINEERING RANKINGS

•

U.S. News & World Report

- #13 Best Undergraduate Program
 - #30 Best Graduate Program

 Among accredited engineering schools
 nationwide

American Society for Engineering Education (ASEE)

- #7 Producer of Engineers
- #8 Producer of Women Engineers Bachelors degrees



OUTCOMES (2021)

Freshman who continued to a second year in engineering

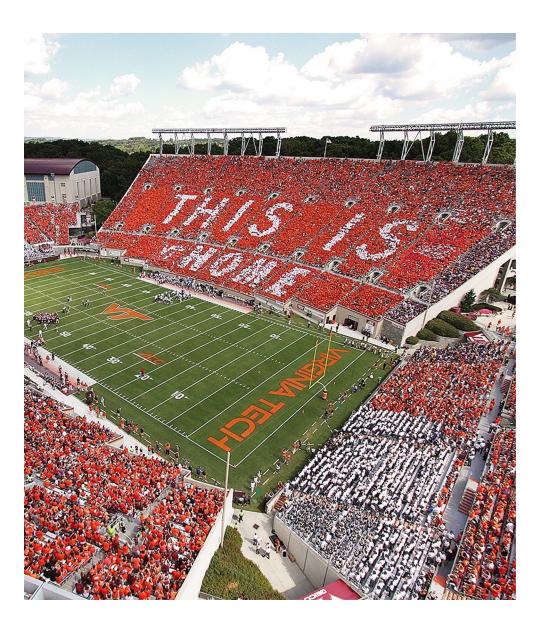
• 90% (Last 5 years averaged)

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

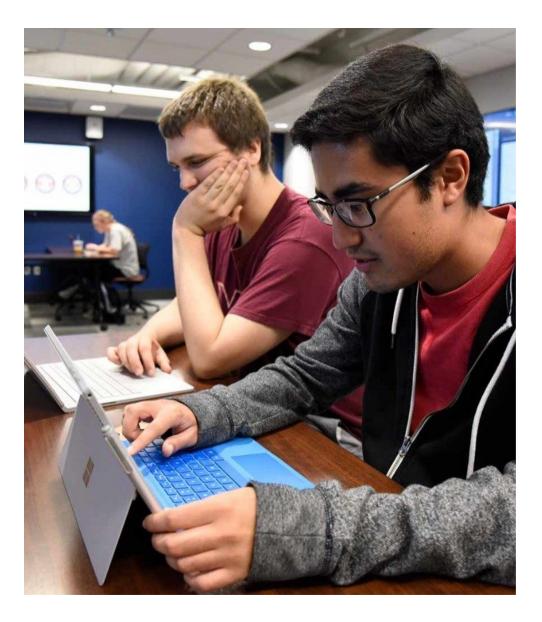
- Davenport Leadership Scholar
- Pratt Engineering Scholarship
- Financial Aid

VCCS Transfer Students

• Leo A. Padis Scholarship

For Upperclassmen

- College of Engineering Funds
- Departmental Scholarships
- One Application!



COMPUTER REQUIREMENTS

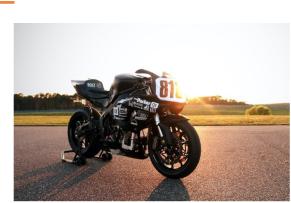
Laptop or 2-in-1 tablet

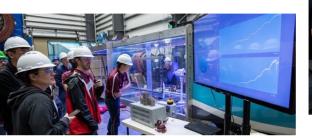
- Computer requirements listed <u>online</u>
 and updated yearly
- Windows 10 required
- Run advanced software & tools

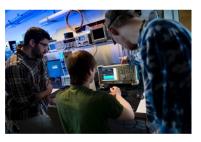
Digital Inking Benefits

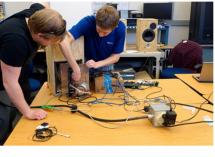
- Digital notetaking
- Drawing diagrams
- Writing equations
- Submitting/grading homework











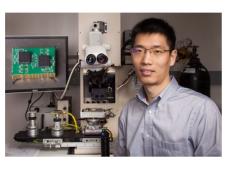
ELECTRICAL ENGINEERING

- 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



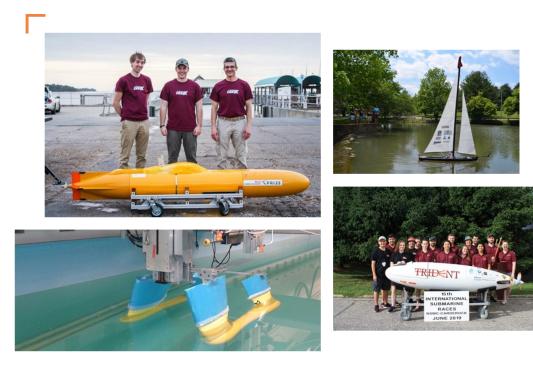






AEROSPACE ENGINEERING

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



OCEAN ENGINEERING

- Hydrodynamics
- Naval Engineering
- Propulsion
- Structures
- Vehicle Dynamics

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INDUSTRIAL & SYSTEMS ENGINEERING

- Human Factors Engineering and Ergonomics
- Management Systems
- Manufacturing Systems
- Operations Research

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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





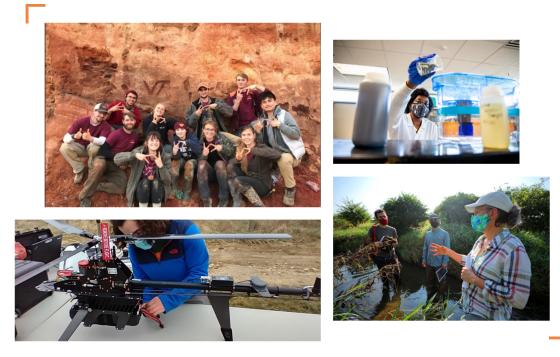






MINING & MINERALS ENGINEERING

- 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

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BIOMEDICAL ENGINEERING

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





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



