

# Career Paths & Industries



**VCU**

College of Engineering  
Career Services

## Nuclear



### Companies to Consider

**In Virginia:** Dominion Energy, Framatome, BWXT, Newport News Shipbuilding/Huntington Ingalls Industries, Norfolk Naval Shipyard

**Outside Virginia:** Southern Corp, Florida Power & Light/NextERA

**Student Org's:** American Nuclear Society (ANS), INMM, SWE, NSBE, SHPE, oSTEM

**VIP Teams:** Developing Neutron Transport Code Framework

**Hot Tip:** Take ENGM 351 Nuclear Engineering Fundamentals during the fall of your sophomore year. Declare the nuclear concentration in the spring of your sophomore year.

## Automotive



**Companies to Consider:** BMW, Ford, GM, Yanfeng, Toyota

**Student Org's to join:** Formula SAE at VCU, Hyperloop, SHPE, SWE, NSBE, oSTEM

**VIP Teams:** Autonomous Robotics Team, Formula SAE

**Hot Tip:** BMW's co-op program is a good way to enter the industry. Most co-op's start sophomore or junior year.

## Manufacturing



**Companies to Consider:** DuPont, Altria, WestRock, AdvanSix, Sabra, Tredegar

**Student Org's to join:** ASME, AIChE, SHPE, NSBE, SWE, oSTEM

**VIP Teams to join:** Any, but not as key if you are going to co-op

**Hot Tip:** Manufacturing offers more Co-op's than any other industry. Consider a co-op if you want to work in manufacturing.

## Aerospace



**Companies to Consider:** Lockheed Martin, Northrop Grumman, Boeing, BAE Systems

**Student Org's:** RamRocketry, American Institute of Aeronautics & Astronautics (AIAA)

**VIP Teams:** Collaborative UAVs, Ram Rocketry

**Hot Tip:** Consider attending the BEYA Career Fair in northern VA that occurs annually in February. Many VCU engineering students have connected with these companies at that fair.

## Design Engineering



**Companies to Consider:** Design/Build Firms (WSP, CMTA, Wiley|Wilson), Dept of Defense Contractors (Boeing, Lockheed Martin, Northrop Grumman, BAE Systems), Hamilton Beach, Porvair Filtration

**Student Org's:** ASME, Hyperloop, oSTEM, NSBE, SHPE, SWE

**VIP Teams:** 4D Printing & Beyond, Medical Device Development

**Hot Tip:** You can get certified in SolidWorks by taking an online test. Share some of your better designs with employers on your LinkedIn profile.

## Environmental



**Companies to Consider:** WestRock, CMTA, Dominion, Florida Power & Light, DuPont

**Student Org's:** ASME, AIChE, SHPE, NSBE, SWE, oSTEM

**VIP Teams:** Sustain Lab, Intelligent Green-Powered Cities, Magnetocaloric Devices for Energy Harvesting

**Hot Tip:** Be creative to find experiences for this job function. It can look like renewable energy, or sustainable manufacturing practices, or design for sustainability, or Environmental Health & Safety, and much more. Define what interests you by joining labs, VIP teams, & interning.



## Computer Science/Software/Data/Cyber



**Companies to Consider:** Many! Remote and local opportunities abound. CGI, CoStar, Capital One, Federal Reserve Bank of Richmond, Vectrus, Brightspot, SimVentions, Amazon

**Student Org's:** RamDev, LUG, Computer Coding Club, CyberSecurity@VCU, Women in Cybersecurity

**VIP Teams:** Nanoinformatics (data), End User Programming, Cyber Physical Systems

**Hot Tip:** Grow your skills outside the classroom by participating in hackathons. See MajorLeagueHacking or DevPost websites for lists of hackathons to join.

## Medical Device/BioTech



**Companies to Consider:** Stryker, Canon Medical Systems, Boston Scientific, Medtronic, Cook Medical, Thermo Fisher, Zimmer Biomet

**Student Org's to join:** BMES, SHPE, SWE, NSBE, oSTEM

**VIP Teams:** Bioreactors for Mech Training of Engineered Tissues, Medical Device Design & Prototyping, Countermeasures for Microgravity Induced Musculoskeletal Dysfunction, Translational Engr Approaches for Pulmonary Health

**Hot Tip:** Most medical device work is outside VA, so go to a national career fair with one of the affinity based engr student org's. Consider a co-op!

## Pre-Professional (MD, Dentist, Veterinarian, etc.)



Check out the: [Pre-Health page from VCU](#)

**Student Org's:** BMES, Search VCU RamsConnect by the keywords "medical" or "health"

**VIP Teams to join:** Only join if you have a big interest in it. Not critical for med school admission.

**Hot Tip:** Visit a pre-health advisor in the VCU Career Services center each semester to keep your efforts on track!



Scan to check out the VCU Pre-Health page



For general Engineering Career Services information, scan the QR code above.

## Computer Hardware



**Companies to Consider:** TORC Robotics, Government related (Boeing, Lockheed Martin, Northrop Grumman, BAE Systems), Automotive (Ford, GM, etc.)

**Student Org's:** IEEE, SWE, SHPE, NSBE, oSTEM

**VIP Teams to join:** Autonomous Robotics, Smart Cities, Intelligent Vision Technology, Cyber Physical Systems

**Hot Tip:** From this major you can either go into software engineering or a mix of hardware and software engineering. Try both and see what you prefer!

## Research/Teaching/Engr PhD



**Companies to Consider:** PhD's can go into teaching or industry. Look for large companies with research components.

**Student Org's to join:** Any related to your major

**VIP Teams to join:** Any! Or Volunteer/Work in a lab

**Hot Tip:** It's critical to have lots of research experience before you apply to grad school. You will also need 2 strong recommendations from professors. That usually happens based on working in their labs. So, get into a lab!

