What can I do with a degree in...

ELECTRICAL & COMPUTER ENGINEERING TECHNOLOGY?

Why study **ELECTRICAL & COMPUTER ENGINEERING TECHNOLOGY?**

The B.S in Electrical and Computer Engineering Technology (BSECET) is designed for students who love computers and how they work and are more interested in applications than design. The ECET major builds on a background of applied mathematics, science, and computer engineering technology.

The BSECET program mission is to emphasize the application of microcomputers to the solution of industrial problems relating to automation, instrumentation and control in systems involving robotics, data communications, networks, and/or automated testing. In all cases, microcomputer hardware and software are used for data acquisition, transfer and analysis.

Graduates of the Electrical and Computer Engineering Technology Program will apply their technical knowledge as practicing professionals or engage in graduate education; work successfully in their chosen career individually and within a professional team environment; and engage in professional development in their profession by adapting to new technology and career challenges.

What is the **DEGREE OPTION?**

Bachelor of Science (B.S.) in Electrical and Computer Engineering Technology

NOTE: There is also an option to earn the Master of Science in Engineering Technology degree.

What is the **UNDERGRADUATE ADMISSION PROCESS?**

Any currently enrolled student at WCU may declare Engineering Technology as an undergraduate major Please make an appointment with your advisor via your MyWCU student portal.

What **JOBS ARE AVAILABLE?**

Depending on the area of focus and other qualifications, students with this degree often become system administrators, network specialists, system engineers, application engineers, software engineers, electrical engineers, information technologists, technical sales representatives, computer sales representatives, computer hardware engineers, systems designers, electrical and electronics engineers and technicians.

NOTE: Advanced degrees may be required for some of the above careers. Please speak with an advisor or career counselor for more information.

Who employs **ELECTRICAL & COMPUTER ENGINEERING TECHNOLOGY?** graduates?

Our graduates work in a variety of employers including computer companies, software companies, construction companies, energy companies, large corporations, federal, state, and local government agencies, educational institutions, hospitals, and private businesses.

MAJOR MAP

How to use this map: Review the four categories and suggestions of activities and when you should consider engaging in them. Remember, these are just suggestions! There is a fillable space for you to add in any other ideas you have to set yourself up for success in life after college.

	1st YEAR	2nd YEAR
EXCEL IN ACADEMICS	Coursework your first year will focus mostly on liberal studies requirements and foundational classes in math and physics courses. Check out the **8-semester plan** and make an appointment with your advisor.	The second year continues with more liberal studies requirements and ECET courses. Check out the **8-semester plan** and make an appointment with your advisor.
GET HANDS-ON EXPERIENCE	Check out **WCU's DegreePlus program** and choose which events in any of the four categories you want to attend. Categories include: Professionalism, Teamwork, Leadership, or Cultural Responsiveness. See what on-campus employment opportunities are available by logging in to JobCat via your MyWCU.	Consider joining clubs or organizations related to your major such as FEM in STEM or the student branch of the Institute of Electrical and Electronics Engineers (IEEE). If you are thinking about attending a graduate school, start engaging in hands-on experiences required in graduate school admissions. Engage deeper with **DegreePlus;** choose an additional competency to complete
BE PART OF THE COMMUNITY	Connect with the **Center for Community Engagement and Service Learning** and ask about the **Spark Award,** a program aimed to encourage and recognize students who are connected with their community.	Develop deeper relationships with the organizations for which you volunteer. Ask for special projects or responsibilities that you can highlight on a resume. If you want to **study abroad,** this is a good year to have that experience. The Study Abroad Office has excellent suggestions on places to go to study Construction Management specifically.
PREPARE FOR LIFE AFTER COLLEGE	Further explore your career options or career interests using the **Center for Career and Professional Development's** online resources, **Focus 2,** and **O*net Online.** Connect with a career counselor early on to explore opportunities and experiences you can do while in college to further develop your professional resume.	Check out **CCPD's list of career-building activities** and participate in an activity this year, such as attending Career Fair Plus. Start a spreadsheet of graduate schools you wish to apply to in a few years; label your spreadsheet with each school's admission requirements and application materials so that you are aware of the expectations.

Looking for a minor? Consider these options:

Accounting
Business Administration and Law
Computer Information Systems
Construction Management
Entrepreneurship
Management
Marketing
Mathematics

3rd YEAR

Courses in your third year will focus heavily on upper-level ECET as well as advanced math courses. Check out the **8-semester plan** and make an appointment with your advisor.

Complete an internship that will give you practical hands-on experience in your field. Contact the CCPD for help in your internship search.

Consider networking with professionals in your field. **IEEE Computer Society** and the **Association for Computing Machinery** has numerous networking events listed.

Volunteer with nonprofits that focus on your ideal career path.

Connect with alumni in your field through **LinkedIn**

Visit the CCPD to hone your professional resume and cover letter (Make an appointment through MyWCU)

Utilize the **Writing and Learning Commons** for GRE, and other professional exam preparation sessions. Take the GRE, etc. Use **Big Interview** to learn more about professional interviews.

Schedule a visit to tour graduate schools of your choice, if applicable.

4th YEAR

Courses in your final year will focus on finishing upper-level ECET courses and finalizing liberal studies requirements. Check out the **8-semester plan,** make an appointment with your advisor, and complete your degree audit, and **apply for graduation!**

Investigate requirements for full-time jobs or graduate school admissions. Assess what skills or experiences you're lacking and invest time in seeking additional opportunities such as certification programs, classes, or professional development workshops during your last year to fill that gap. Connect with your faculty advisor or career counselor.

Join professional organizations such as the **National Society of Professional Engineers** or **IEEE Computer Society.**

Network with employers and non-profits at the annual Career Fair Plus event, held each October and February.

Apply to graduate schools, if applicable.

Look for and apply for jobs between 4 and 6 months before graduation.

Polish your resume, cover letter, and interview skills by vising the **CCPD.**

DID YOU KNOW? Internships are still the number-one educational experience employers look for in a recent college graduate resume. (Chronicle of Higher Education's study on 50,000 employers)

MORE INFORMATION

INTERNSHIP Information

At Western Carolina University there are numerous internship opportunities for students. In some cases internships are established through a faculty member in the student's major. Oftentimes students find part-time jobs in an area related to their field of study. When this happens, students should discuss with their academic advisor the possibility of receiving college credit. Generally, three hours of general elective credit can be earned for a minimum of 200 hours of experience. Upon completion of this course, students will have gained experience in project-based work in the construction industry and will have learned how to:

- Apply engineering concepts to engineering projects
- Work in a project-team environment
- Meet deadlines and work under pressure
- Interface with the various different members of the engineering industry

SKILLS LEARNED in the classroom

The core competencies will center on developing skills, knowledge, and attitudes such as:

- safety protocols
- quality control
- information handling and organization
- critical thinking skills
- problem solving
- teamwork
- leadership

KNOWLEDGE Base

This program will prepare students to:

- identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- communicate effectively with a range of audiences
- recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- acquire and apply new knowledge as needed, using appropriate learning strategies.

Professional **RESOURCES**

- Association of Computing Machinery: acm.org
- Computing Research Association: cra.org
- IEEE Computer Society: computer.org
- National Society of Professional Engineers: nspe.org

QUESTIONS?

For questions, please call the Construction Management program at 828-227-2775 or visit **et.wcu.edu**.

To schedule an appointment with a career counselor, contact the Center for Career and Professional Development, 828-227-7133 or careerservices@wcu.edu.

Western Carolina UNIVERSITY