ENGINEERING

U.S.C.

1801

INNOVATION STARTS AT MOLINAROLI

GAME COCKS

goooooo...

CODE 101

COMPUTING

USC

SPURS UP!!
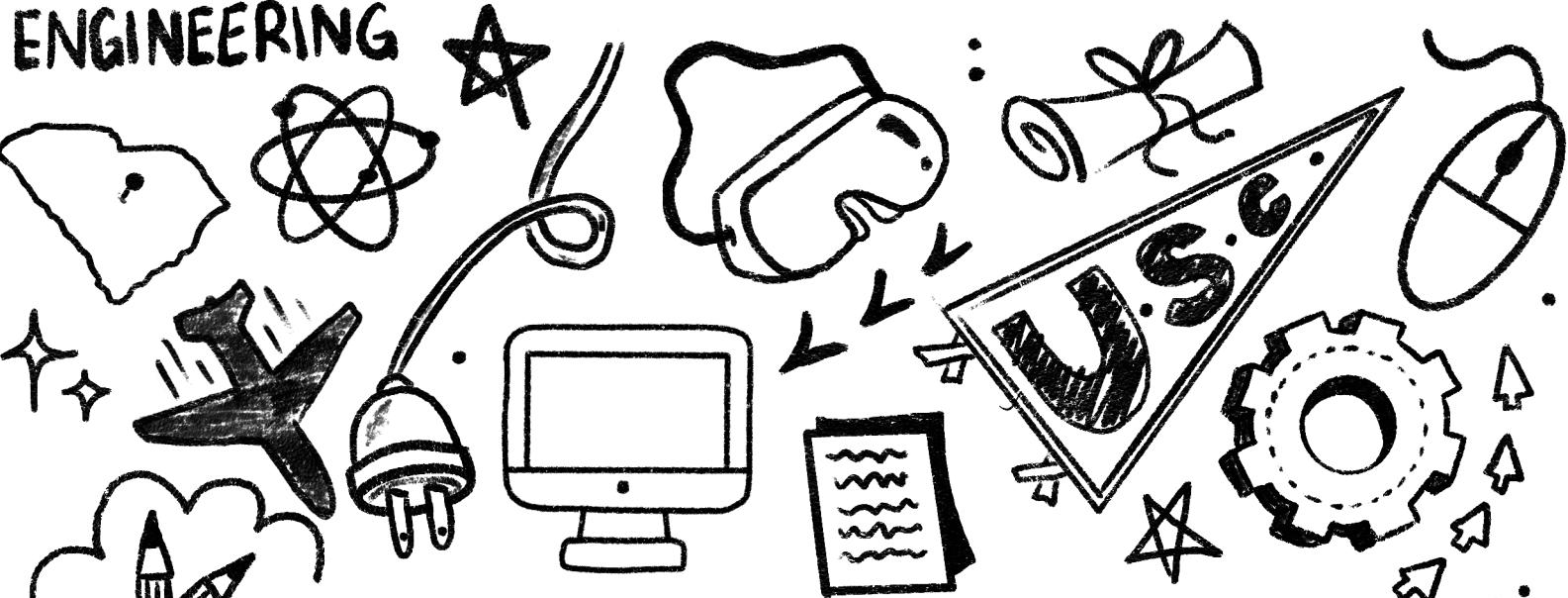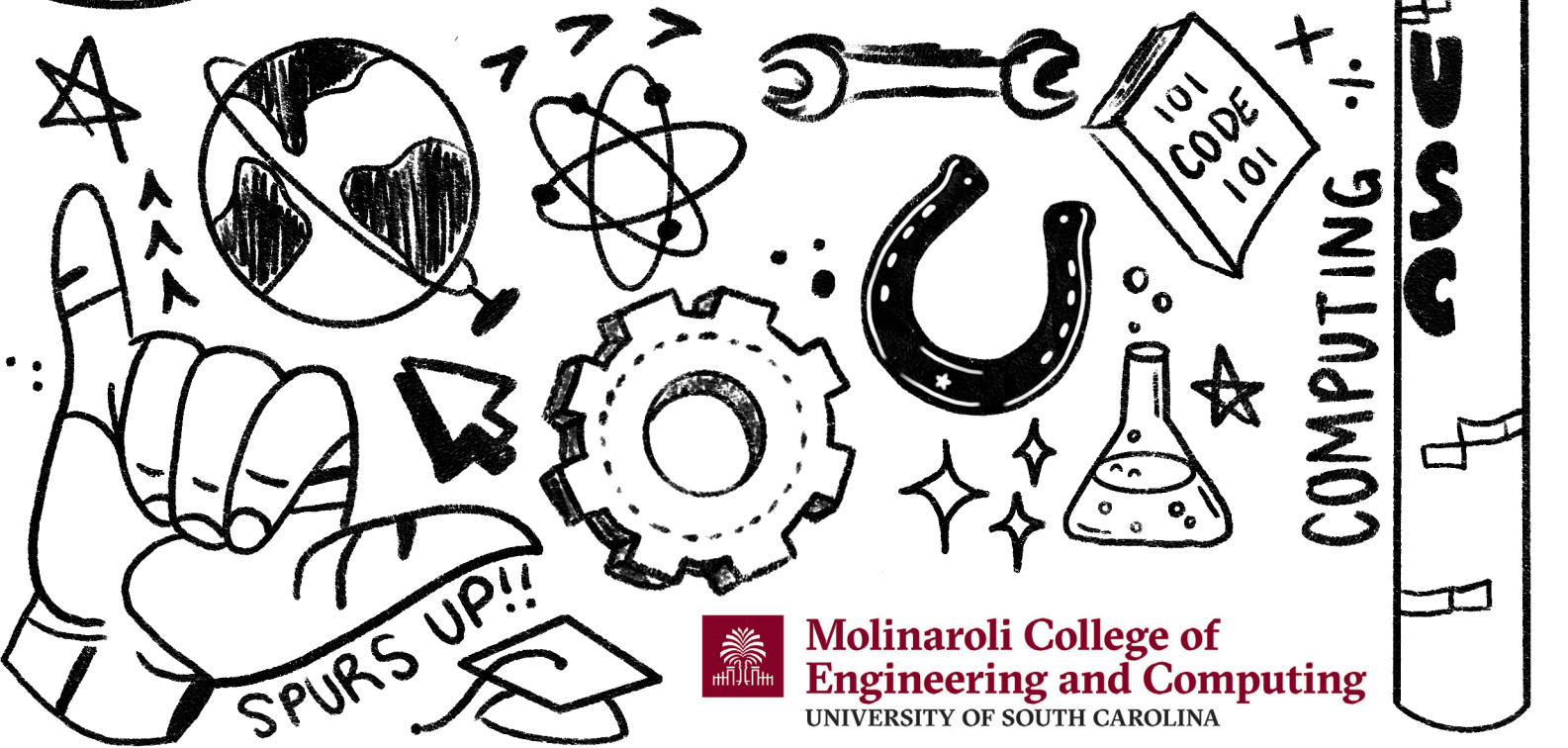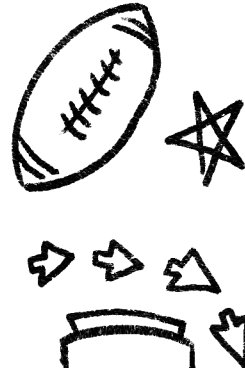
Molinaroli College of Engineering and Computing
UNIVERSITY OF SOUTH CAROLINA

Molinaroli

College of Engineering
and Computing

301 Main Street

Letter from the Dean

Dear Future Leaders,

Welcome to the Molinaroli College of Engineering and Computing at the University of South Carolina!

We're excited that you're exploring everything our college has to offer. Whether you dream of becoming an innovative leader or tackling global challenges, we're here to help you turn those aspirations into reality. As you learn more about our college, you'll discover a dynamic, student-focused environment where students, faculty, and industry partners collaborate to push boundaries to advance **further, faster, together.**
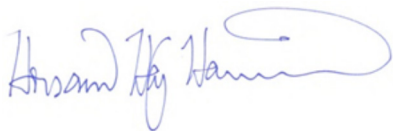
You can look forward to:
- Modern academic programs designed to launch successful careers in engineering, computing or further studies.
- Supportive and expert faculty who are passionate about teaching and your success.
- Hands-on research, independent study, and opportunities to study abroad.
- A community of over 40 student organizations where you'll build connections and friendships.
- Dedicated career services to help you land internships, co-ops, and jobs after graduation.
- Gamecock sports and a school spirit second to none!

As a member of the Gamecock family and a student at the Molinaroli College of Engineering and Computing (MCEC), you'll have access to college-specific scholarships ranging from $1,000 to $5,000 annually. Plus, don't miss the opportunity to join the Engineering and Computing Living and Learning Community—a unique experience where you'll live, learn, and grow alongside fellow engineering and computing students.

Go Gamecocks!

Sincerely,

H. Haj-Hariri, Dean
Molinaroli College of Engineering and Computing

MAJORS IN ENGINEERING AND COMPUTING:

Aerospace Engineering

Biomedical Engineering

Chemical Engineering

Civil Engineering

Computer Engineering

Computer Information Systems

Computer Science

Electrical Engineering

Industrial Engineering

Integrated Information Technology

Mechanical Engineering

MINORS IN ENGINEERING AND COMPUTING:

Aerospace Engineering

Applied Computing

Computer Science

Cybersecurity Operations

Data Science

Electrical Engineering

Environmental and Sustainable Engineering

Integrated Information Technology

Mechanical Engineering

Nuclear Engineering

BUILD A BETTER TOMORROW TODAY

From advanced energy manufacturing to breakthroughs in aerospace and biomedical engineering, students at the Molinarolio College of Engineering and Computing at the University of South Carolina are addressing the biggest challenges of our time though innovative research, education, and training.

Here, you will develop the skills and expertise to help shape the future like many of our alumni are doing now at leading organizations like Apple, Tesla, NASA, Boeing, and more.

With **$70 million** in sponsored research, and over 115 faculty with actively funded projects, you'll be part of a team that's making an impact in South Carolina **and beyond**, providing industry partners with innovations that affect **more than the bottom line.**
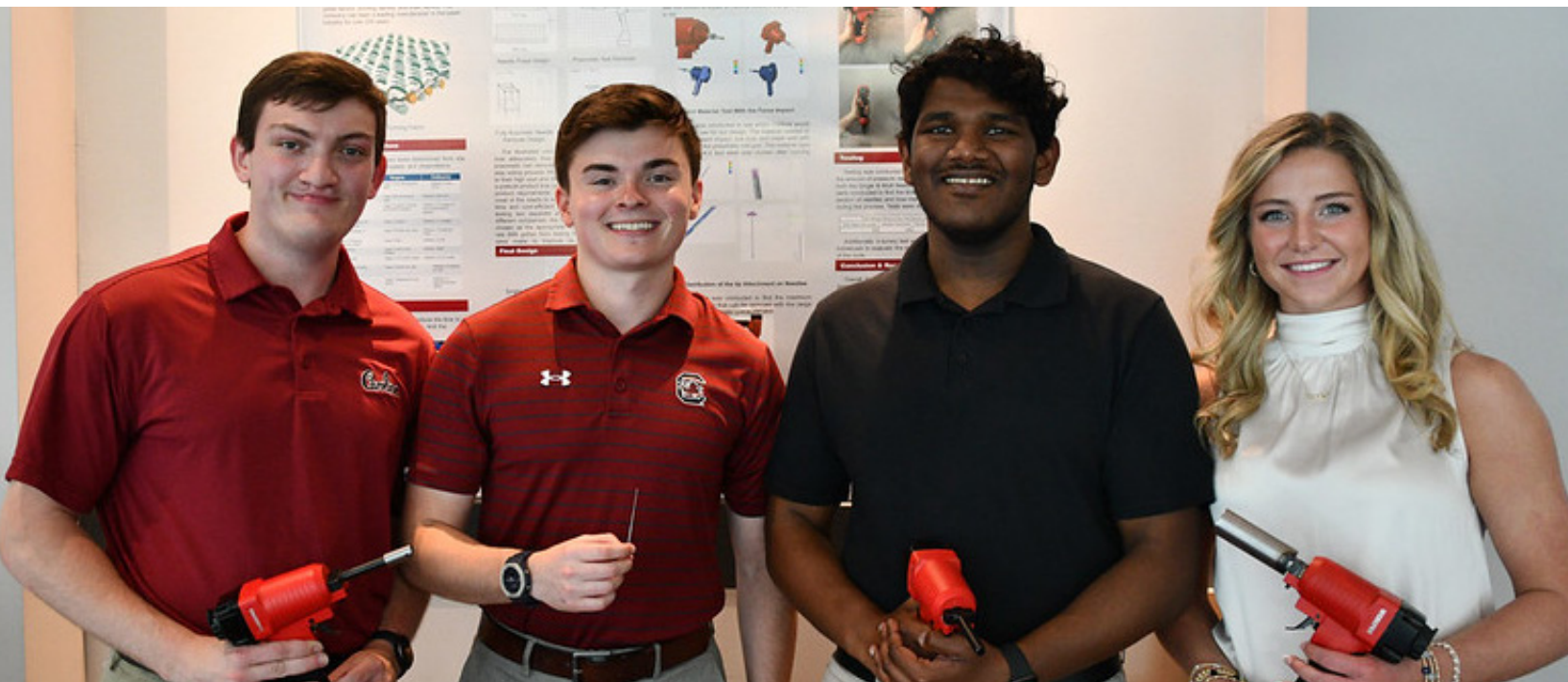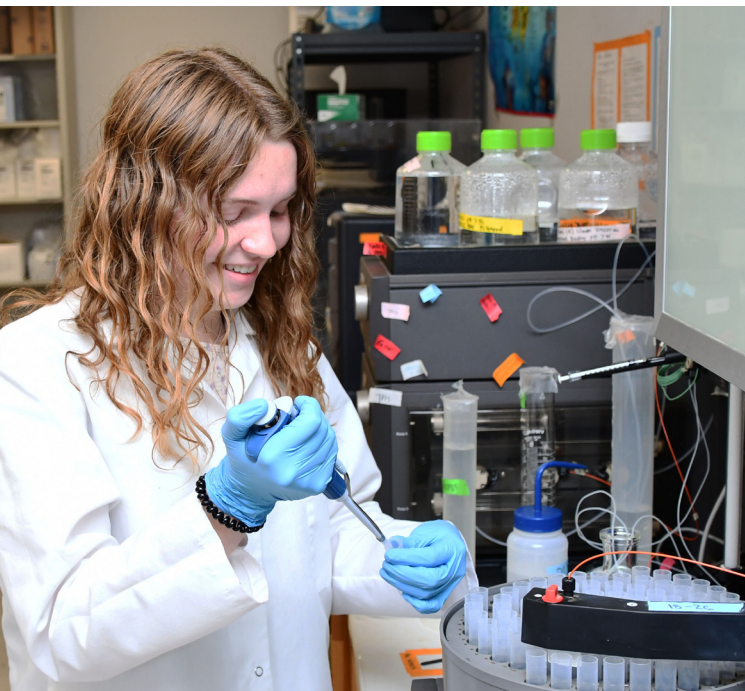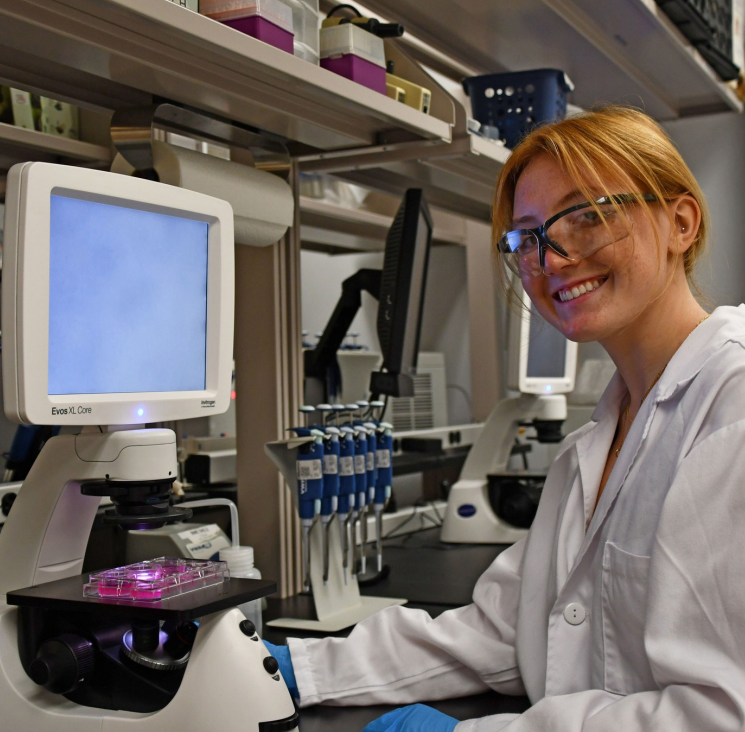
ENHANCE YOUR EDUCATION

- **Scholarships:** Incoming freshmen may apply separately to Molinaroli College of Engineering Scholarships in addition to university scholarships.

- **Capstone Design**: Students form teams and combine theory and practice to find innovative solutions while gaining valuable experience.

- **Accelerated graduate programs**: complete both bachelor's and master's degrees in as few as five years.

- **One year MBA**: Our partnership with the Darla Moore School of Business can give you direct admission when criteria is met.
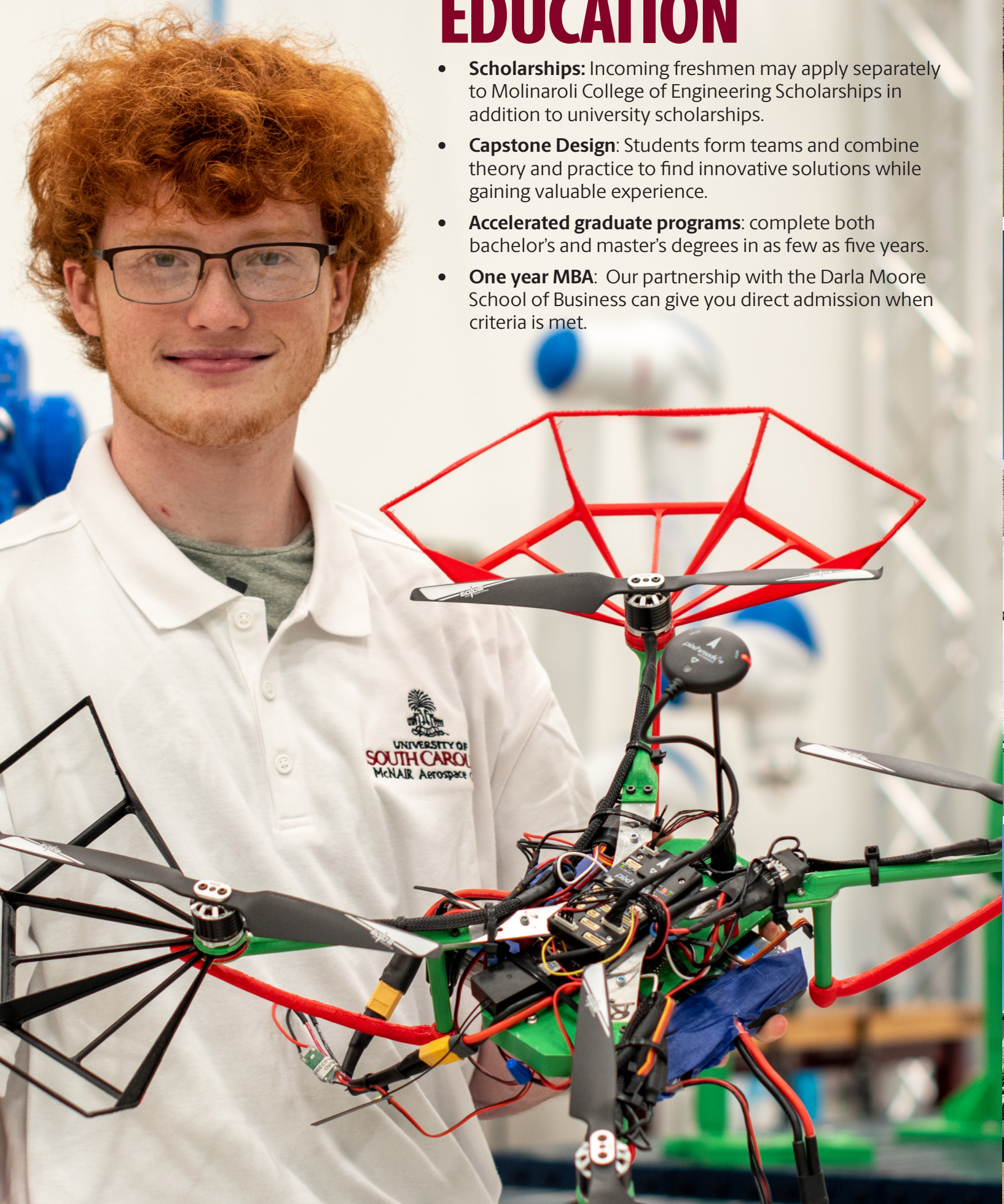
EDUCATION ABROAD

Leave the traditional classroom setting and take off to a new country to learn. Explore Australia, Spain, or the United Kingdom with our exchange partner institutions. Take a Maymester (2-6 weeks) to focus on sustainable and renewable energy and earn general engineering credits.

According to Dr. Gatzke, Associate Professor of Chemical Engineering and Biomedical Engineering, "The whole experience of being abroad has a huge impact. Students get to see a different perspective on everything. Some students had never flown before and many had never been to another country. They are exposed to a lot of technical material, but the biggest impact is from the whole cultural experience."

YOUR HOME AWAY FROM HOME

To foster success and promote collegiality, students in the college can be chosen to live in the Engineering and Computing Community (ECC), a state-of-the-art, on-campus residential community designed to enrich the educational and residential environment.

The living experience focuses on collaborative learning, student-faculty interaction, and engagement in academic opportunities both inside and outside the classroom, including access to academic success programs like study groups and faculty mentoring.

WHO HIRES US?

HANSEN TECHNOLOGIES
NORFOLK NAVAL SHIPYARD
FAST ENTERPRISES, LLC
CLARIANT CORPORATION
GCC SUPPLY & TRADING
NEPHRON
EXXON MOBIL
POLY-MED, INC
FLUOR CORP
U.S AIR FORCE
GOOGLE
LOCKHEED MARTIN
DOMINION ENERGY
TRANE
AECOM
WESTROCK
DAVIS & FLOYD
NASA
BAE SYSTEMS
SHAW INDUSTRIES
BOSCH
EAB GLOBAL
SAMSUNG
TIAA
CHA CONSULTING, INC
U.S. PATENT AND TRADEMARK OFFICE
BOEING
MCKINSEY & COMPANY
TESLA
APPLE
MESSER
VERIZON
INTERNATIONAL PAPER
GEOENGINEERS, INC
PALMETTO STATE ARMORY
BMW
BCC ENGINEERING, INC
NUCOR
GULFSTREAM AEROSPACE
BLUE CROSS BLUE SHIELD
CAPITAL ONE
JTEK NORTH AMERICA
GERDAU
MITSUBISHI CHEMICAL GROUP
GEOENGINEERS
MICHELIN
FSAE
U.S. ARMY
EY-US
U.S. NAVY
JOHN DEERE
MERCK
STANTEC
IBM
WESTINGHOUSE
IFA
INFRASTRUCTURE CONSULTING & ENGINEERING
SAVANNAH RIVER MISSION COMPLETION
RED VENTURES
BLUE ORIGIN
PHILIPS
HAZEN & SAWYER
VANGUARD
DAVIS & FLOYD
THOMAS & HUTTON
MICHAEL BAKER INTERNATIONAL
NAN YA PLASTIC CORPORATION
TEXTRON SPECIALIZED VEHICLES
LOWE'S
SANTEE COOPER
ALTEC INDUSTRIES
BROWNSTONE CONSTRUCTION GROUP
CHATHAM ENGINEERING COMPANY, LLC

GAIN REAL WORLD EXPERIENCE

At the Molinaroli College of Engineering and Computing, there are many opportunities to gain work experience before you graduate. These could take the form of summer internships as well as co-ops during the school year. Read on to learn about the different resources the college provides to get you on the right track!

CAREER CENTER

Right inside Swearingen Center, you can find resources like resume preparation, interview skills, STEM-focused job fairs, an online career management platform for job searches, and more.

200+ employers at STEM Career Fair

$72,600 average starting salary

RESEARCH

The University of South Carolina is the only institution in the state that has received the highest ranking by the Carnegie Foundation as an institution with "very high research activity." Undergraduate students make important contributions to our research efforts by completing independent study courses, working in grant-funded research positions, and participating in University-sponsored undergraduate research scholarships and educational programs.

Discovery for every discipline. Start as early as your first semester to build your resume, gain hands-on experience, earn academic credit, and get paid.

$70 Million in research funding

TOP100 patent-producing university, 11 years in a row

GET INVOLVED

40+ Student led organizations
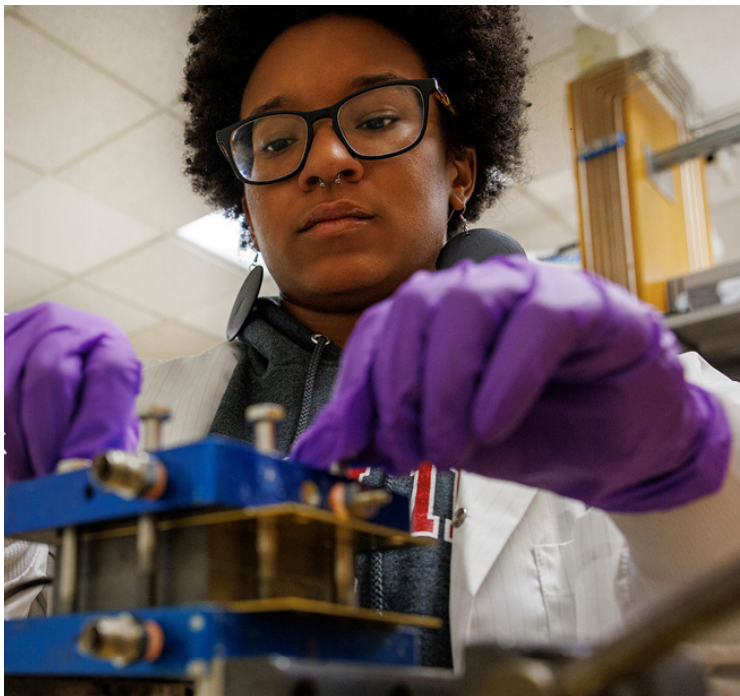
1,000 Active students in our organizations
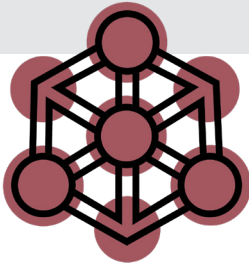
Joining clubs, organizations, and teams is a great way to connect with other students who share your interests and major. The friendships and bonds you form through these activities can have a lasting impact on both your college experience and future career. We encourage you to get involved and make the most of these opportunities!

Here at the Molinaroli College of Engineering and Computing, our student organizations do more than just meet in a classroom. You can find our students helping construct the tiger for the Annual Tiger Burn, racing man-made boats at Strom, or smashing cars with Theta Tau in front of Swearingen! We love to take our organizations on the road and compete in conferences all around the U.S in places like Nashville, Indianapolis, Anehiem, New York City, and so many more! The possibilities are endless, all you have to do is **get involved!**

ALL THE SUPPORT YOU NEED TO SUCCEED

Peer Mentorship matches first-year students with continuing students, setting you up with a support network from day one.

**Academic and Faculty Advisors** assist you in curriculum planning and professional development.

Drop-in Tutoring Center provides the resources you need for success in your classes.

Industry Partners collaborate with the college on research, capstone design projects, recruitment, and information tables. to fule innovation.

Boeing - ALS Program.

INTERNSHIP SPOTLIGHT
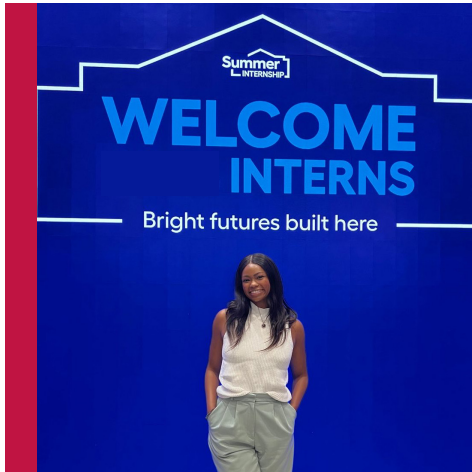
Tessa Neal, '25, Computer Science
Software Engineering, Lowe's - Charlotte, NC

"As a software engineering intern, I have joined a development team and will participate in three sprints for developing and testing functionalities to add to a web application for store planning by utilizing several application programming interfaces and databases.

I look forward to seeing how what I learned from USC can combine with what I'm learning here to make me a more well-rounded developer."

Payton Vereen, '26, Civil and Environmental Engineering
Transportation Engineering, Cox and Dinkins, Inc - Columbia, SC

"I've had the opportunity to work on many projects, including designing plans for sidewalks, using dirt to pave roads, and road extensions. I've learned how to use MicroStation (CAD software), make an estimated summary for a project, and how to design and make plan sheets in a clear and concise fashion. I've also gone on site visits, allowing me to apply my knowledge while seeing the projects I am working on be constructed in real time. I am able to shadow different engineers daily and get an idea of what kind of work I will be doing in the future.

Leeon Israel, '26, Computer Information Systems
Software Engineering, John Deere - Moline, IL

"I work on the platform engineering team and operate the John Deere Sales Center app that dealers use to make sales to our customers. My team is responsible for the infrastructure, pipelines, and deployments for our web application. We are working on implementing artificial intelligence into the sales center application using a Compound AI System.

This internship gives me the opportunity to learn from different professionals and get an understanding for different responsibilities and technologies."

1. Molinaroli College of Engineering and Computing Semester Kick-off

2. Alex Molinaroli pictured with students and Cocky at the Molinaroli College naming celebration

3. Students at the on campus STEM Fair, where 200+ companies meet with students to discuss internship and job opportunities

4. Pal, the Molinaroli College robotic dog

5. Students and Parents at Family Weekend Meet and Greet in the lobby of Swearingen Building

6. Campus Village Engineering and Computing Living and Learning Community
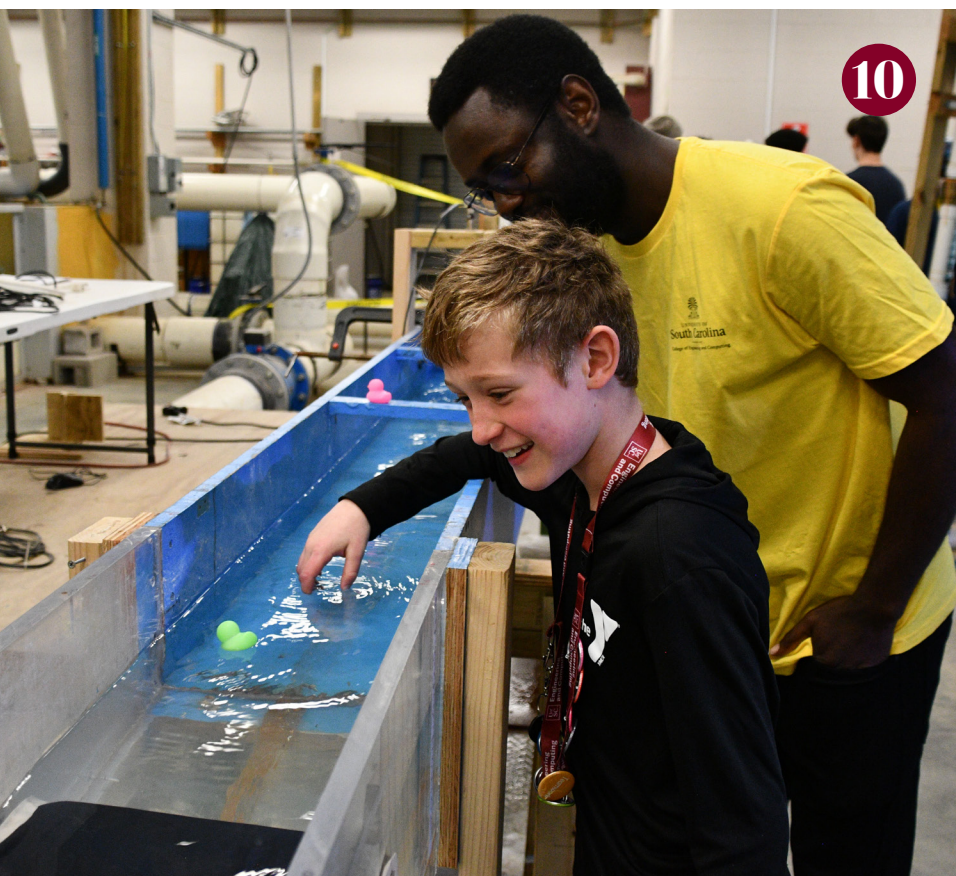
7. Structural Engineer and CEO Ashraf Habibullah speaking during eWeek

8. Tiger Burn: The massive tiger constructed by the engineering students burned before the annual Carolina vs. Clemson football game

9. Students at the Wired Cafe in Swearingen, where students can eat, study, and socialize between classes

10. Annual Open House for middle and high school students
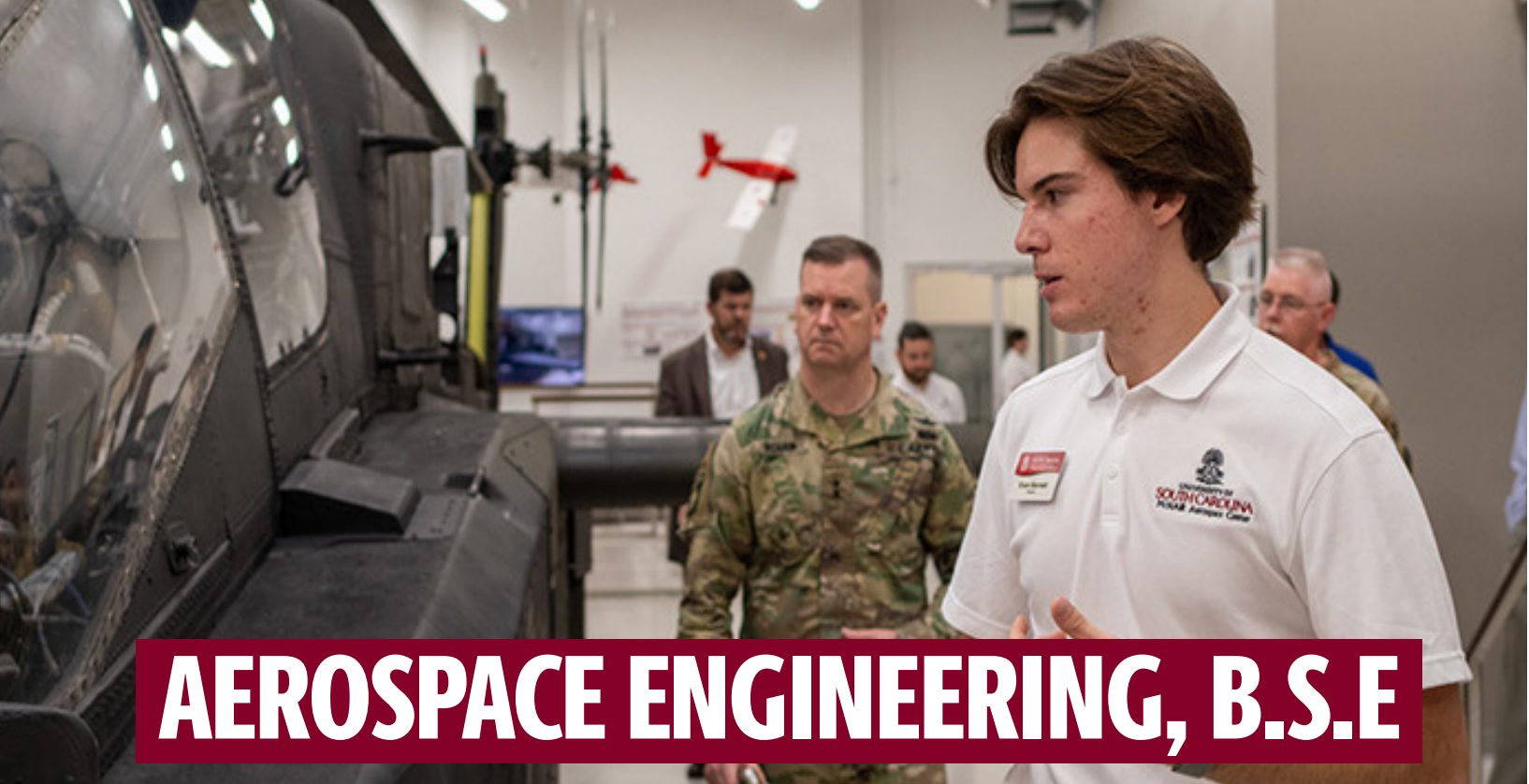
AEROSPACE ENGINEERING, B.S.E

Prepare for an exciting career when you study the design, construction and science behind the behavior of aircraft, rockets and spacecraft in the state's only undergraduate aerospace engineering program.

PROGRAM HIGHLIGHTS

ABET Accreditation

Be confident you'll be prepared to enter a global workforce with the program's ABET accreditation.

Engaging Activities

Join student clubs like the American Institute of Aeronautics and Astronautics and Society of Manufacturing Engineers.

Undergraduate Research

Study alongside our world-class faculty, and gain research experience in the laboratory.

Authentic Experiences

Develop a solution to an aerospace engineering problem to master techniques for managing, planning and executing projects.

WHAT YOU'LL STUDY

Learn to apply principles of engineering, science, and mathematics and make informed judgments. Study computer-aided design, thermodynamics, and mechanics of solids. Choose from a number of electives like robotics in mechanical engineering, circuits, electronics, and more. Work in project groups to acquire social and presentation skills for effective communication.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.

More info here!

Computer Modeling
Using simulations to analyze, predict, and optimize performance, behavior, or outcomes.

Project Management
Organizing and overseeing tasks to achieve specific goals.

Analytical Reasoning
Breaking down the complex problems or situations to identify patterns, connections, and solutions.

Collaboration
Working with others to achieve a common goal or objective.

Technical Writing
Creating clear and concise documents, such as manuals or instructions, for technical or scientific topics.

Research
Gathering and analyzing information to increase knowledge or solve problems.
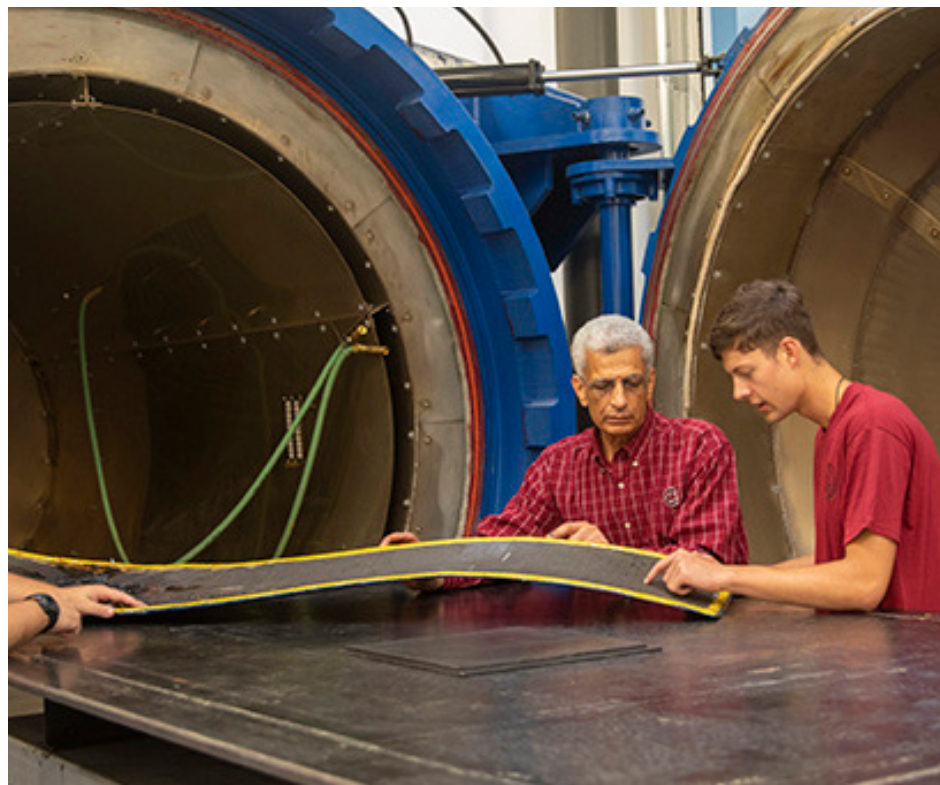
USING YOUR DEGREE

Make your college experience the foundation for a successful future.
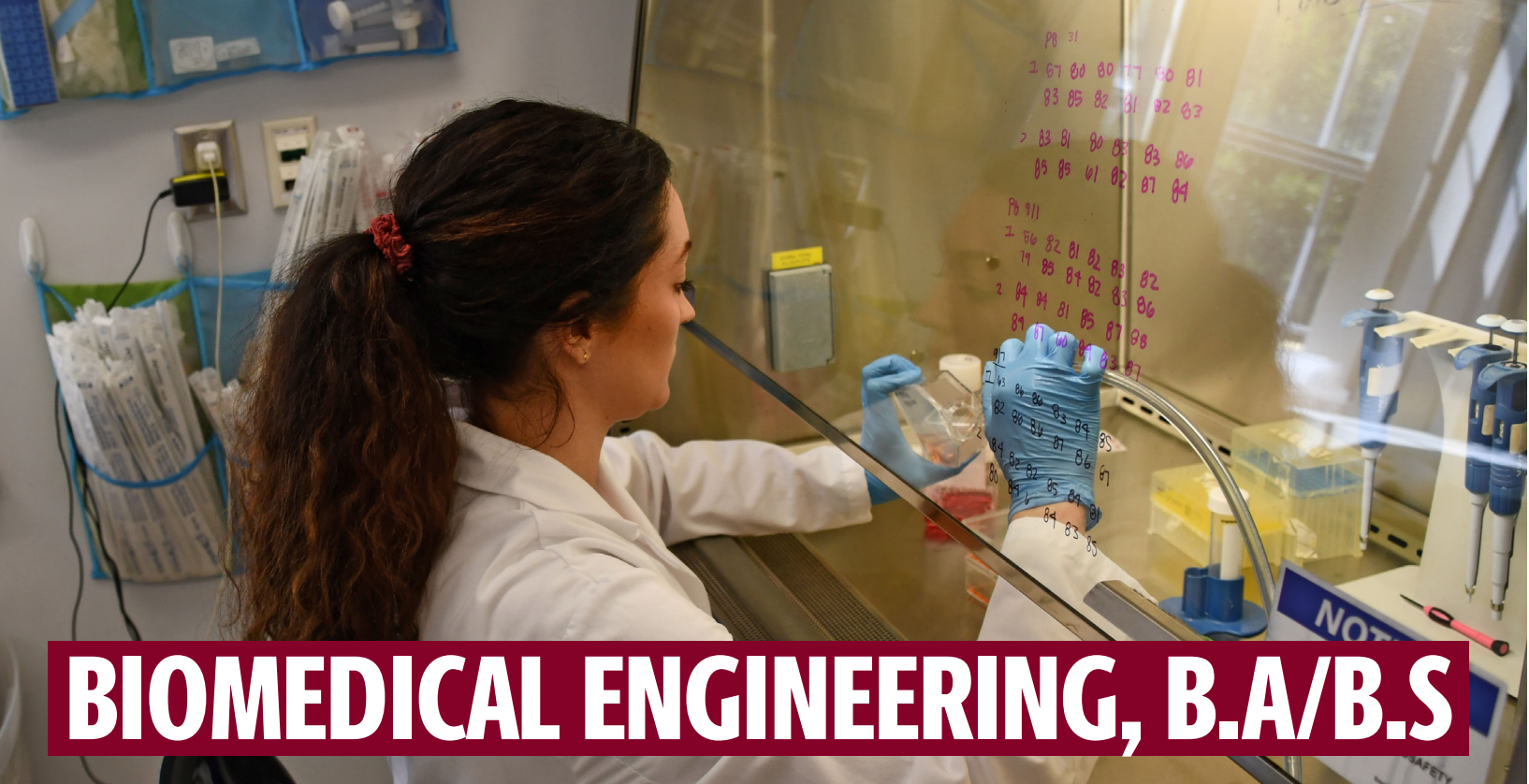
Potential Careers
- Aerodynamic Engineer
- Aeronautical Engineer
- Flight Test Engineer
- Mechanical Engineer
- Aircraft Designer
- Astronautical Engineer

Workplace Settings
- Aerospace
- Entrepreneurship
- Government
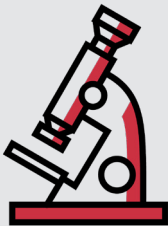- Manufacturing
- Research and Development

BIOMEDICAL ENGINEERING, B.A/B.S

Our interdisciplinary biomedical engineering program is perfect for students who wish to enhance their education in both engineering and biological sciences to improve health care.

PROGRAM HIGHLIGHTS

Interdisciplinary Research
Participate in research in our laboratories across campus, such as our Cardiovascular Translational Research Center.

Hands-On Experience
Take advantage of experiential learning opportunities through laboratories, internships, and design opportunities.

Wide-Ranging Electives
Enhance your education with courses in the fields of science, engineering, computing, public health, psychology, economics, and more.

Campus Connections
Collaborate with the School of Medicine and other science and engineering departments through education and research.

WHAT YOU'LL STUDY

Gain a thorough foundation in mathematics, anatomy, sciences, and engineering disciplines, and choose from an array of electives to tailor your studies to your interests in biomedical engineering. You can choose from a B.S. degree leading to licensure as an engineer or a flexible B.A. degree.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.

More info here!

Data Analysis
Examining and interpreting information to uncover insights and make informed decisions.

Research
Gathering and analyzing information to increase knowledge or solve problems.

Problem Solving
Identifying, analyzing, and resolving problems or challenges using creative and effective strategies.

Collaboration
Working with others to achieve a common goal or objective.

Technical Writing
Creating clear and concise documents, such as manuals or instructions, for technical or scientific topics.

Product Design
Creating new or improved products that meet customer needs and expectations.

USING YOUR DEGREE

Make your college experience the foundation for a successful future.
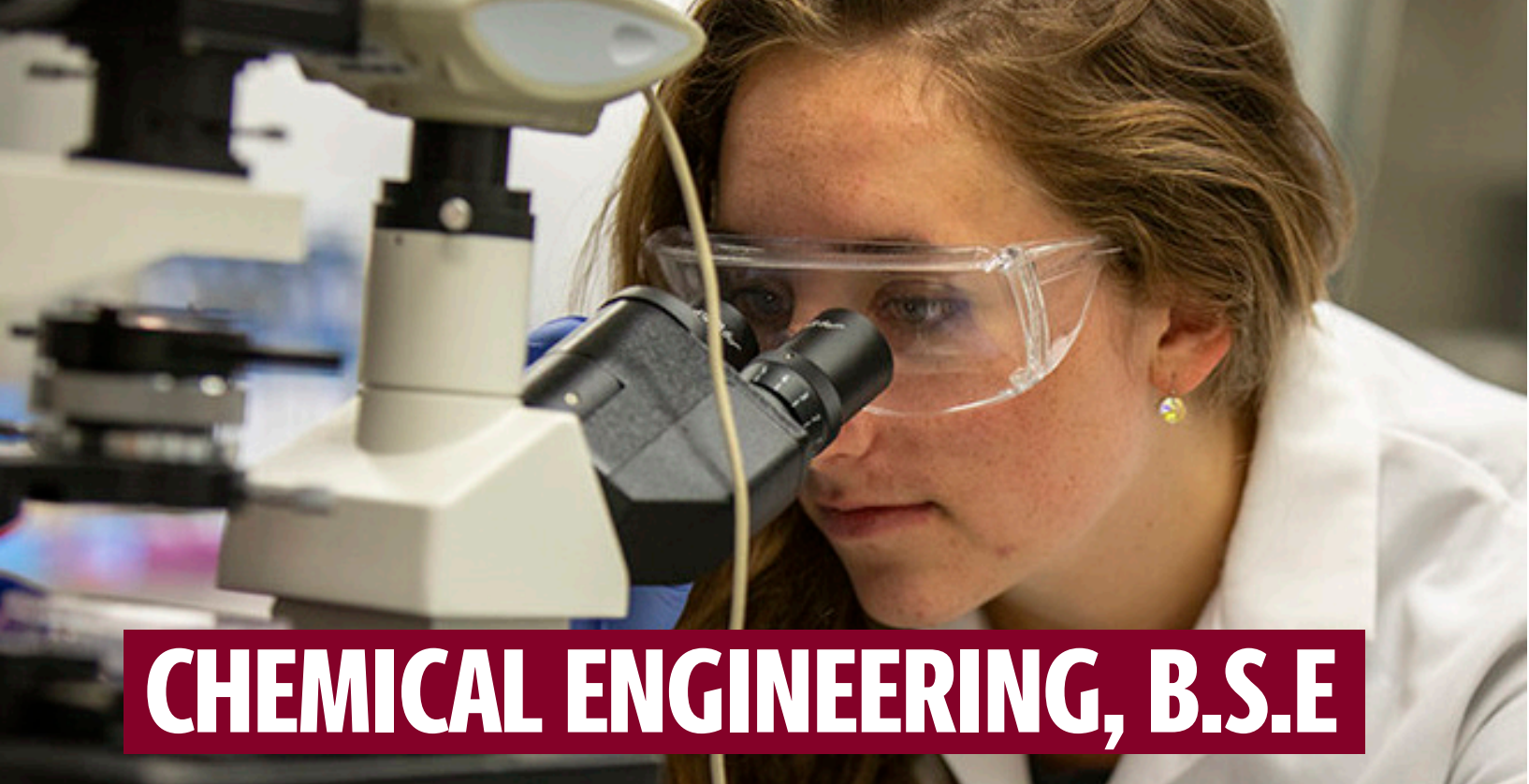
Potential Careers
- Research Engineer
- Development/Design Engineer
- Product/Project Manager
- Clinical Engineer/Coordinator
- Regulatory Affairs Specialist
- Quality Control/Assurance Manager

Workplace Settings
- Research and Development
- Biotech Industry
- Pharmaceutical Industry
- Medical Device Industry
- Health Care and Hospitals
- Government
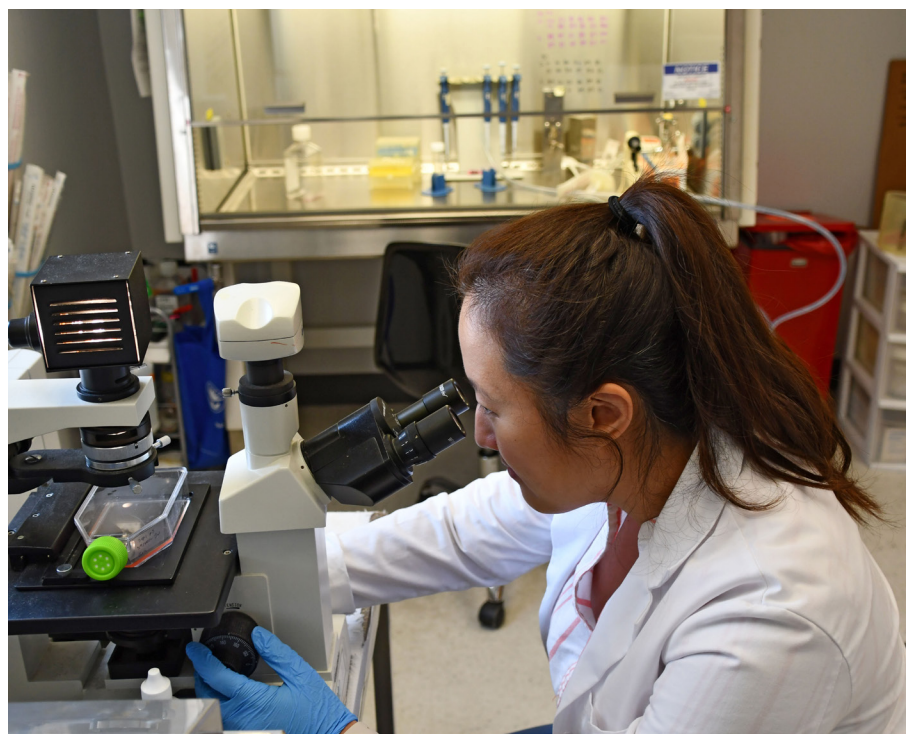
CHEMICAL ENGINEERING, B.S.E

Make an impact in the world and set yourself up for a high-paying career through our chemical engineering program, where you'll use math, science and engineering to solve problems.

PROGRAM HIGHLIGHTS

Flexibility and Customization
Create a curriculum that fits your career plans by choosing from six concentrations and a variety of minors.

Work Experience
Join more than 90 percent of our undergraduate students who enhance their education with a paid industrial internship.

Engagement
Experience a student-to-faculty ratio below the national average for close interactions throughout your college tenure.

Experiential Learning
Study abroad through one of two Maymester courses, or conduct research that examines real-world problems.

WHAT YOU'LL STUDY

Our Next Energy elective, which explores renewable energy and sustainability, is one of our most popular courses. Next Energy offers a full semester or Maymester opportunity in Germany and other popular electives offer Maymester experiences in Thailand. You can also combine a major here with our top-ranked Honors College for a unique and well-rounded educational experience.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.

More info here!

System Design
Creating or improving complex systems to meet specific requirements.

Research
Gathering and analyzing information to increase knowledge or solve problems.

Scientific Writing
Communicating scientific research and findings in a clear, accurate, and compelling manner.

Problem Solving
Identifying, analyzing, and resolving problems or challenges using creative and effective strategies.

Collaboration
Working with others to achieve a common goal or objective.

Leadership
Inspiring and guiding others to achieve common goals and reach their full potential.
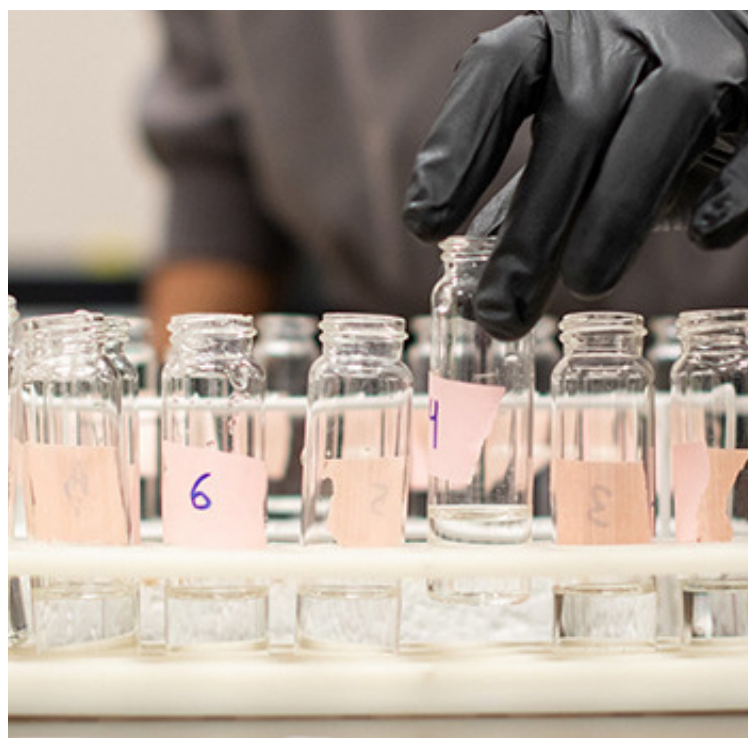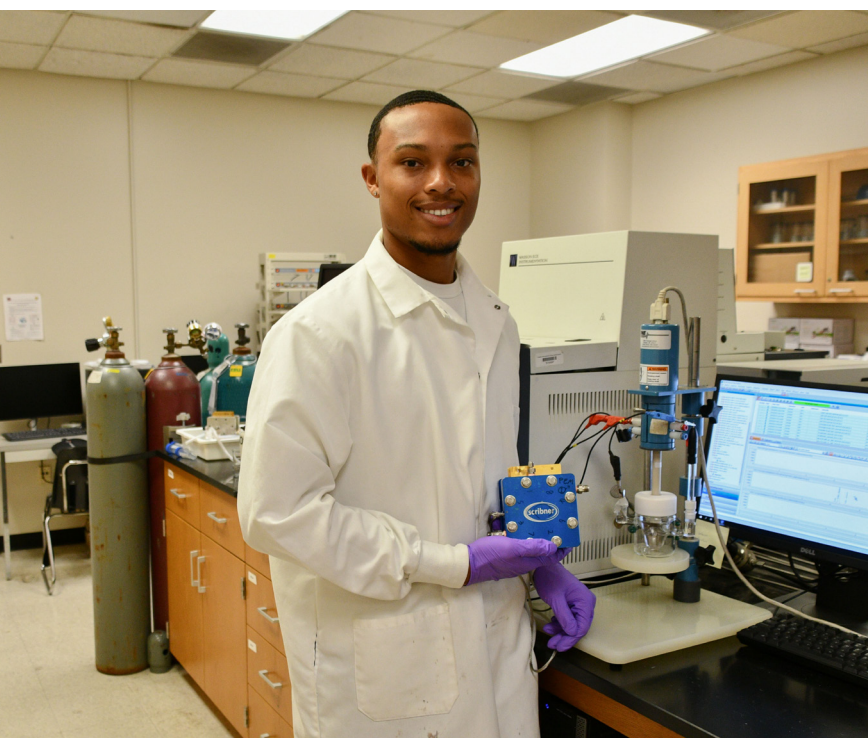
USING YOUR DEGREE

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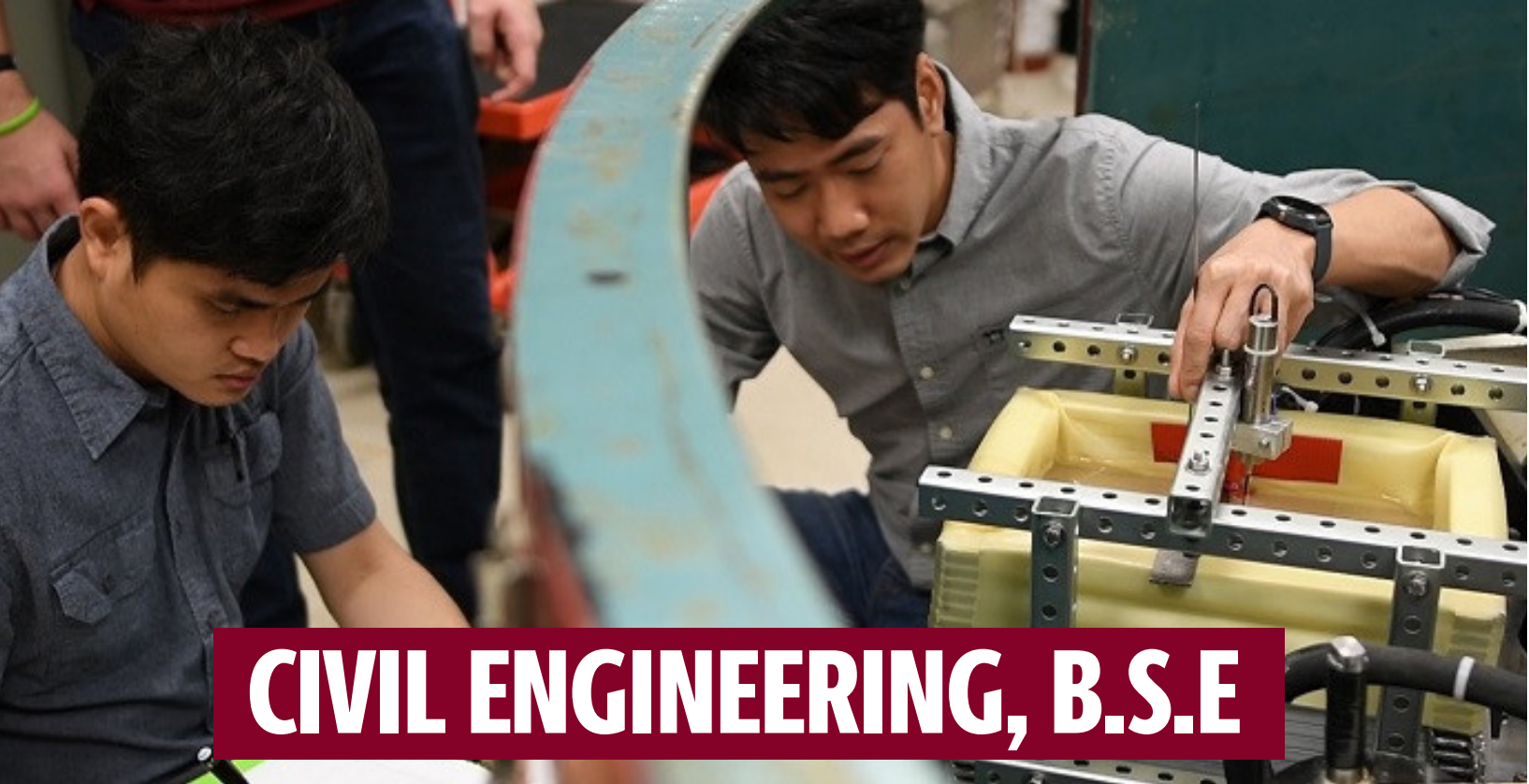
Potential Careers
- Chemical Engineer
- Researcher
- Educator

Workplace Settings
- Energy/Chemicals
- Pharmaceuticals/Biotech
- Semiconductors/Microelectronics
- Transportation
- Paper/Packaging
- Environment

CIVIL ENGINEERING, B.S.E

Make a direct impact on people and their communities by planning, designing and constructing projects that define the world around us and shape our future.

PROGRAM HIGHLIGHTS

Experiential Learning
Learn outside the classroom through undergraduate research, student organizations, or study abroad options.

Accelerated Graduate
Get a head start on your master's degree as an undergraduate through our accelerated master's program.

Flexible Curriculum
Enhance your education by taking minors across the university, in business, math, environmental engineering, and more.

Employment Opportunities
Open up your career through internships at engineering companies across Columbia, which may lead to job offers.

WHAT YOU'LL STUDY

Some of the courses in this program include Introduction to Civil Engineering and Senior Design, where students will be paired with an industrial mentor who advises their projects. Our department also features large-scale laboratories where students can complete experiential learning projects.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.
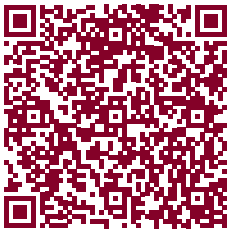
More info here!

Analytical Reasoning
Breaking down complex problems or situations to identify patterns, connections, and solutions.

Decision-making Expertise
Applying critical thinking and analytical skills to make informed and effective decisions.

Problem Solving
Identifying, analyzing, and resolving problems or challenges using creative and effective strategies.

Teamwork
Working collaboratively with others to achieve a shared goal or objective.

Communication
Exchanging information and ideas through speaking, writing, or other means of expression.

Critical Thinking
Analyzing and evaluating information to make informed decisions or judgments.

USING YOUR DEGREE

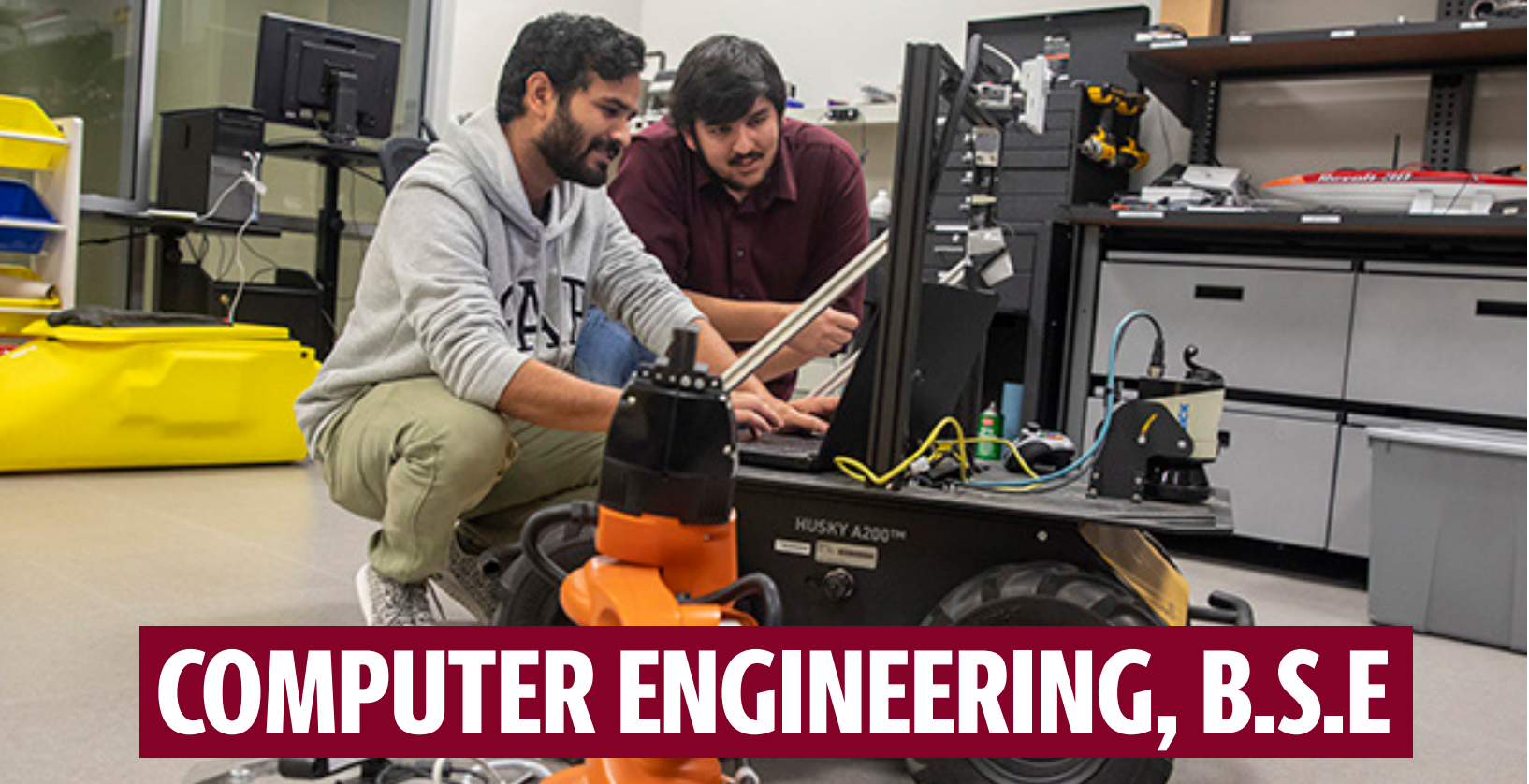Make your college experience the foundation for a successful future.

Potential Careers
- Structural Engineer
- Geotechnical Engineer
- Transportation Engineer
- Environmental Engineer

Workplace Settings
- Consulting
- Government
- Transportation
- Structural Engineering
- Environmental Engineering
- Nonprofits

COMPUTER ENGINEERING, B.S.E

Our computer engineering program is perfect for students interested in both programming and computer hardware, and it can help open doors for high-paying careers.

PROGRAM HIGHLIGHTS
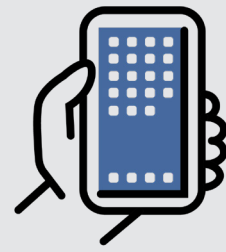
ABET and SACS Accredited
Have peace of mind that you're getting a quality and certified education in STEM topics.

Specialized Concentrations
Expand your education by taking optional concentrations in either artificial intelligence or cybersecurity.

Capstone Project
Work with clients by developing software through our two-semester capstone project class to complete your major.

WHAT YOU'LL STUDY

The classes for this program cover software engineering, computer science, and electric and digital circuit designs. One of our classes is the two-semester Capstone Computing Project, where all computer science, computer engineering, and computer information systems majors can design and develop software applications.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.

More info here!

Leadership
Inspiring and guiding others to achieve common goals and reach their full potential.

Project Management
Organizing and overseeing tasks to achieve specific goals.

Organizational Skills
Planning, prioritizing and managing tasks and resources to achieve specific objectives.

Teamwork
Working collaboratively with others to achieve a shared goal or objective.

Public Speaking
Delivering a message or presentation to an audience effectively and persuasively.

Data Analysis
Examining and interpreting information to uncover insights and informed decision making.

USING YOUR DEGREE

Make your college experience the foundation for a successful future.
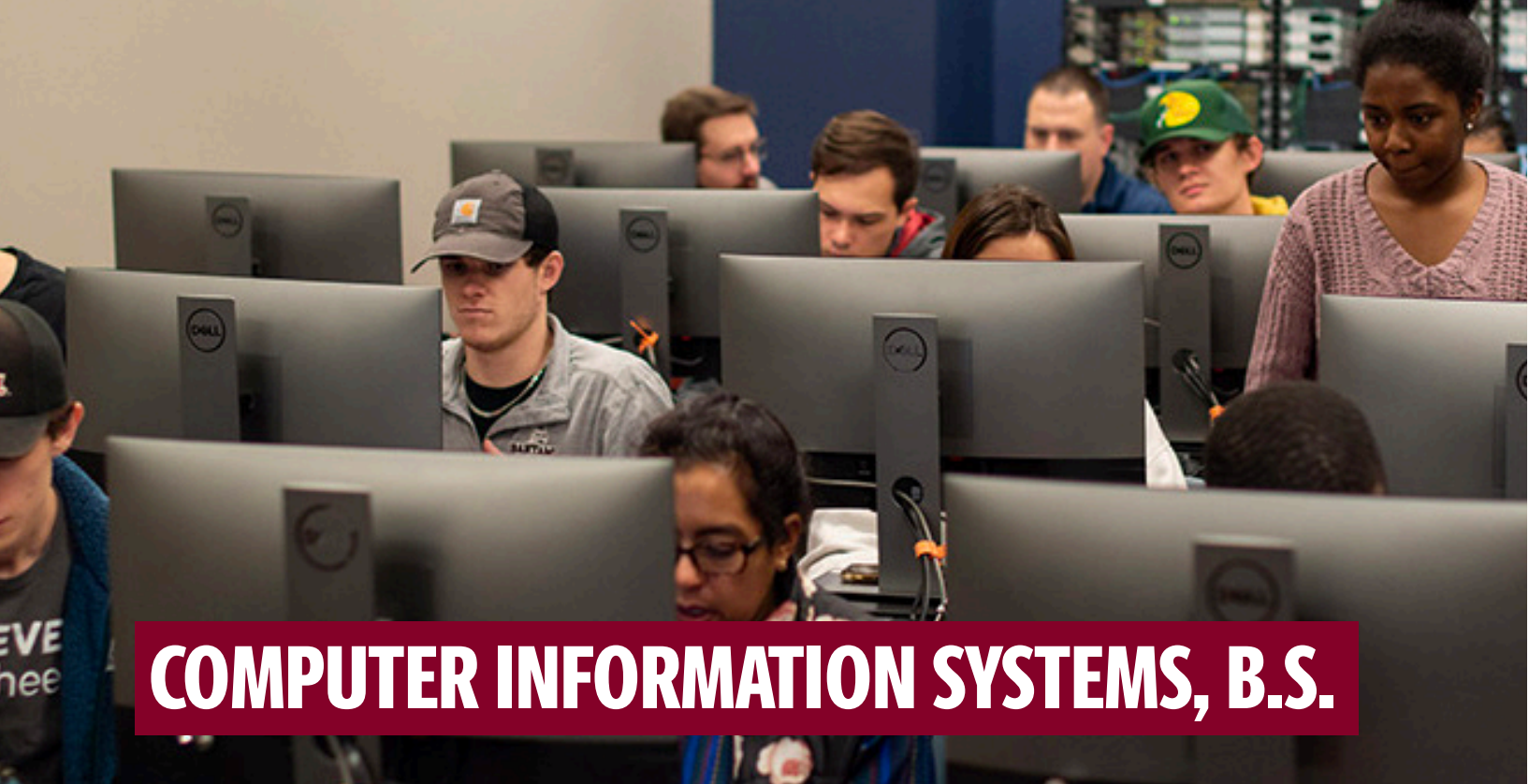
Potential Careers
- Advisory Analyst
- Compliance Specialist
- Product Design Engineer
- Software Engineer
- User Interface Engineer
- Cloud Computing Engineer

Workplace Settings
- Computer Engineering
- Engineering Research and Development
- Manufacturing
- Government

COMPUTER INFORMATION SYSTEMS, B.S.

Become an expert in managing computing and business. Open up more opportunities with your career through our Computer Information Systems program.

PROGRAM HIGHLIGHTS

ABET and SACS Accredited
Earn peace of mind that you're receiving a quality and certified education through our program.

Optional Concentrations
Supplement your education by taking concentrations specializing in either cybersecurity or artificial intelligence.

Capstone Project
Complete your major through our two-semester Capstone computing project where you will design and develop software.

WHAT YOU'LL STUDY

As a computer information systems major, you are required to take two cybersecurity classes – CSCE 201 and CSCE 522 – which are both well-liked. The final course of the major is a two-semester Capstone Computing Project where you will design software applications, sometimes working with outside clients that need a new application built for them.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.

More info here!

Software Engineering
Applying systematic approaches to design, develop, test and maintain software systems to meet specific requirements.

Artificial Intelligence
Developing intelligent systems that can perform tasks and make decisions that typically require human intelligence.

Cybersecurity
Protecting computer systems and networks from unauthorized access, data breaches and other security threats.

Data Structure and Algorithms
Creating efficient ways to store and manipulate data for optimal computational performance.

Business Applications Programming
Developing software solutions tailored to meet specific business needs and enhance operational efficiency.

Computer Hardware Foundations
Studying the fundamentals of computer components and systems to understand their principles and operation.
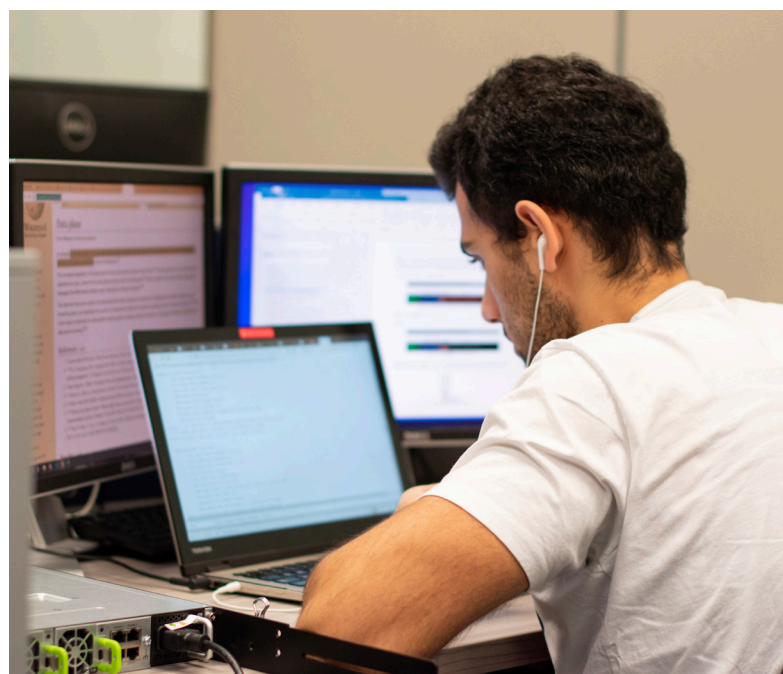
USING YOUR DEGREE

Make your college experience the foundation for a successful future.

Potential Careers
- Data Intelligence Engineer
- Digital Consultant
- IT Auditor
- Lifecycle Systems Engineer
- Network Analyst
- Software Develope

Workplace Settings
- Education
- Technology
- Media
- Health Care
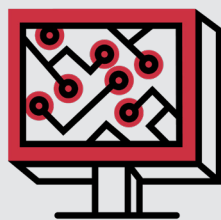- Government
- Insurance

COMPUTER SCIENCE, B.S.C.S.

Get a step ahead of everyone in learning about the latest technologies as you develop large, complex software through our computer science program.

PROGRAM HIGHLIGHTS

ABET and SACS Accredited
Receive peace of mind by obtaining a quality education from a program that meets industry standards.

Specialized Concentration
Supplement your education by taking courses that specialize in either artificial intelligence or cybersecurity.

Capstone Project
Complete your education with a two-semester course where you will design, develop and deploy software applications.

WHAT YOU'LL STUDY

In this program, you'll be able to specialize in your preferred domain or technologies. You'll take a set of classes from another major along with computer science electives to form a cluster of expertise that will be important in finding employment in your chosen career field. These clusters include game design, data science, and bioinformatics.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.

More info here!

Leadership
Inspiring and guiding others to achieve common goals and reach their full potential

Programming
Writing code, developing software, and creating applications for automation and problem-solving

Software Engineering
Applying systematic approaches to design, develop, test, and maintain software systems to meet specific requirements

Cybersecurity
Protecting computer systems and networks from unauthorized access, data breaches, and other security threats

Database Management
Organizing and maintaining data in a computer system, including storage, retrieval, and security

Computer Architecture
Creating the structure and organization of computer systems to ensure efficient hardware and software integration

USING YOUR DEGREE

Make your college experience the foundation for a successful future.
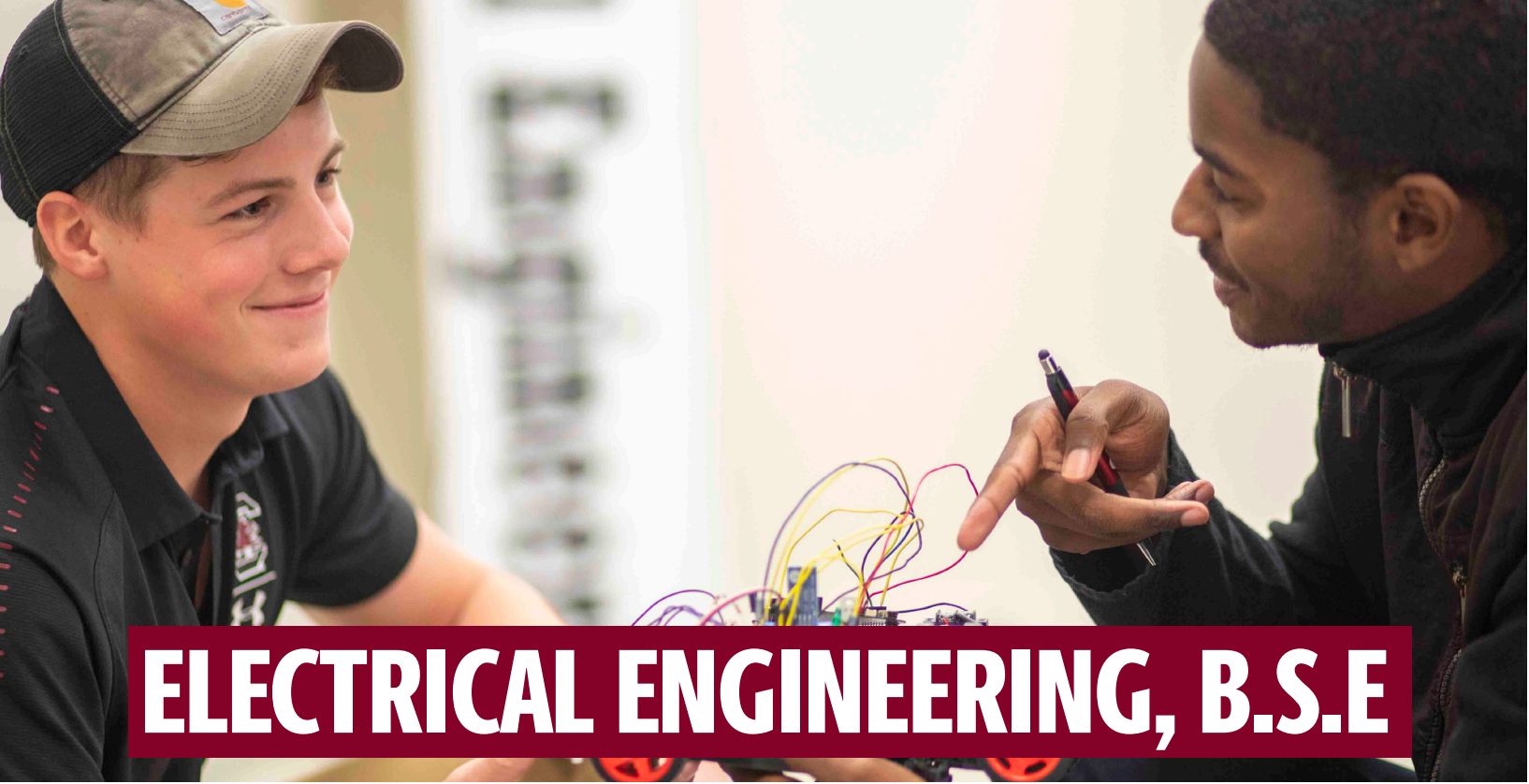
Potential Careers
- Computer Programmer
- Software Developer
- Systems Manager
- Information Researcher
- Video Game Developer-Web Designer

Workplace Settings
- Health Care
- Finance
- Energy
- Information Technology

ELECTRICAL ENGINEERING, B.S.E

Help create impactful technology by designing highly compact, efficient electronics, advanced microchips and novel computer codes through our electrical engineering program.

PROGRAM HIGHLIGHTS

Experiential Learning
Enhance your learning by conducting research in three laboratories and through two senior design courses.

Internships and Research
Sharpen your skills outside the classroom through internships at leading industries across South Carolina.

ABET and SACS Accredited
Receive a quality education that has been certified in teaching you what you need to know about electrical engineering.

University 101
Get acquainted with life as a Gamecock in your first semester with our award-winning University 101 course.

WHAT YOU'LL STUDY

One of the most enjoyable courses is our Senior Design course, where students work on industry-sponsored projects. Students focus on technical requirements, standards, and communication skills culminating in a presentation to our industry advisory board. We also offer hands-on experience through modern labs, facilities, and simulation tools.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.

More info here!

Artificial Intelligence
Developing intelligent systems that can perform tasks and make decisions that typically require human intelligence.

Communication
Exchanging information and ideas through speaking, writing, or other means of expression.

Interpersonal Skills
Communicating and interacting effectively in a variety of social and professional situations.

Leadership
Inspiring and guiding others to achieve common goals and reach their full potential.

Organizational Skills
Planning, prioritizing, and managing tasks and resources to achieve specific objectives.

Problem Solving
Identifying, analyzing, and resolving problems or challenges using creative and effective strategies.

USING YOUR DEGREE

Make your college experience the foundation for a successful future.

Potential Careers
- Electrical Engineer
- Systems Engineer
- Controls Engineer
- Electrical Project Manager
- Electronics Engineer

Workplace Settings
- Aerospace
- Automotive and Industrial Manufacturing
- Power Systems
- Wireless Communication
- Medical/Telehealth
- Radio Frequency Systems

INDUSTRIAL ENGINEERING, B.S.

Industrial engineering equips you with the skills to improve complex systems involving people, information, materials, and energy.

PROGRAM HIGHLIGHTS

Flexible Curriculum
Choose from extensive elective options that allow you to create a curriculum that fits your career goals and plans.

Make Connections
Join student professional orgs like the International Society for Pharmaceutical Engineering and Society of Manufacturing Engineers.

Transfer Friendly
Enhances transfer success by optimizing prerequisite sequences and options for fundamental math and science coursework.

Promising Career
Join a group of the engineering workforce's most sought-after professionals to position yourself for advancement.

WHAT YOU'LL STUDY

The industrial engineering undergraduate curriculum combines engineering fundamentals, design, and management with computer modeling and real-world problem solving. Expand your engineering mindset towards optimization, ergonomics, manufacturing, planning, economics, operations research, quality, supply chain, systems simulation, and more.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.

More info here!

Problem Solving
Identifying, analyzing, and resolving problems or challenges using creative and effective strategies.

Data Analysis
Examining and interpreting information to uncover insights and informed decision making.

System Design
Creating or improving complex systems to meet specific requirements.

Collaboration
Working with others to achieve a common goal or objective.

Critical Thinking
Analyzing and evaluating information to make informed decisions or judgments.

Ethics
Understanding and practicing professional and ethical responsibility.

USING YOUR DEGREE

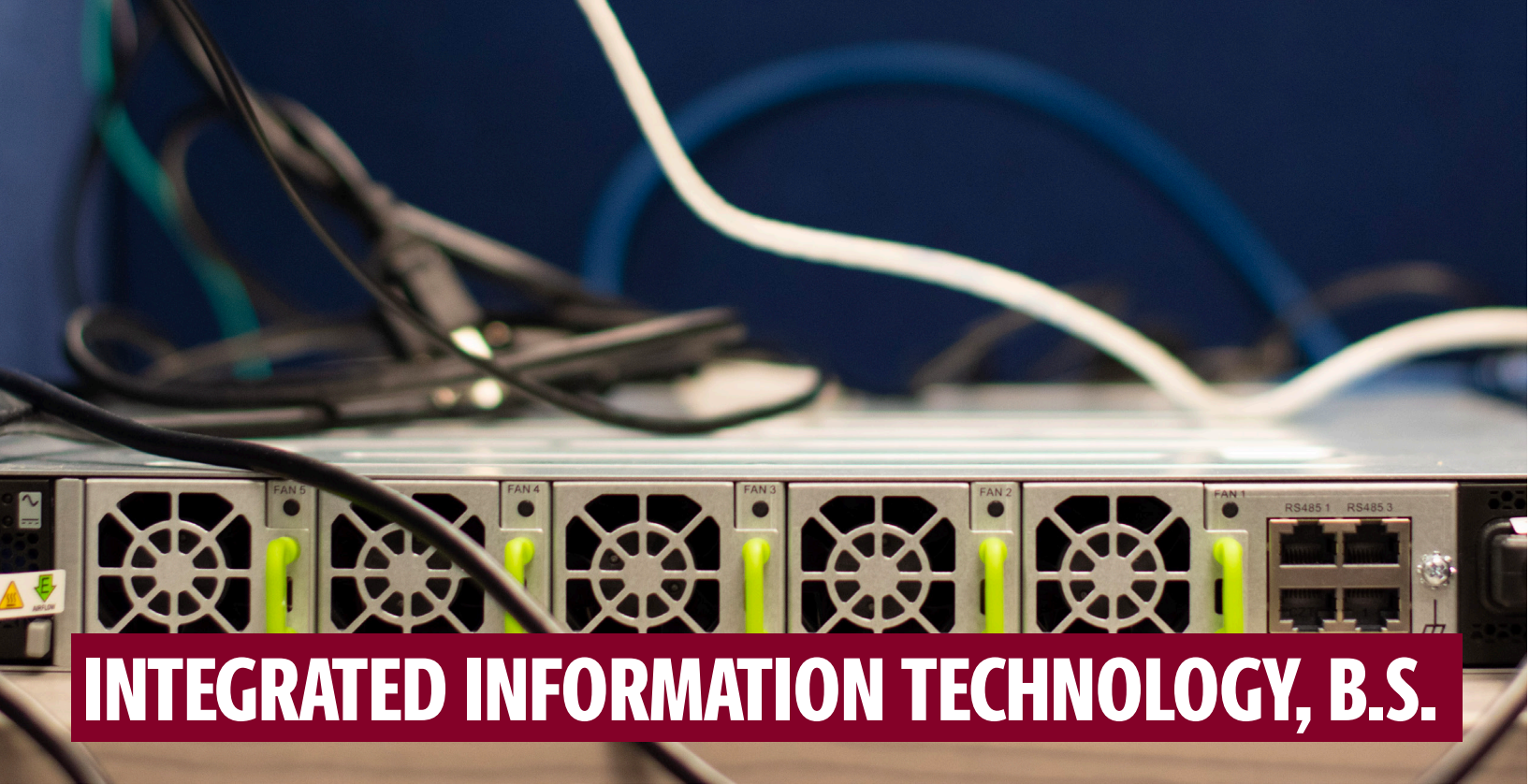Make your college experience the foundation for a successful future.

Potential Careers
- Industrial Engineer
- Logistics Engineer
- Quality Engineer
- Supply Chain Analyst
- Operations Analyst
- Project Manager

Workplace Settings
- Manufacturing
- Transportation and Logistics
- Health Care Facilities
- Government Agencies
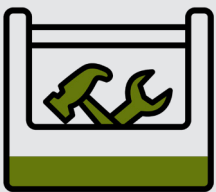- Consulting Firms
- Hybrid Environments

INTEGRATED INFORMATION TECHNOLOGY, B.S.

Become a leader in project management, system design and implementation, networking and cybersecurity infrastructure with our integrated information technology program.

PROGRAM HIGHLIGHTS

Industrial Internship
Supplement your education with valuable work experience through a required industrial internship.
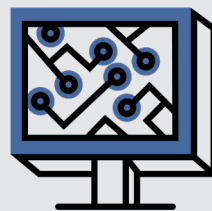
Hands-on Learning
Take classes inside our cyberinfrastructure lab to enhance hands-on learning.

Capstone Group Project
Work in teams on a capstone project addressing real problems from external business partners.

Online Options
Enjoy the convenience of taking the program 100 percent online or as a traditional on-campus major.

WHAT YOU'LL STUDY

Some of the courses in this program include our Professional Internship Seminar, which will prepare students to succeed in a 400-hour internship working in an IT environment, and our capstone class, where students work in teams to solve problems. You will also be required to take a set of business courses to fulfill this degree.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.

More info here!

Agile Project Development
Iterative project management, emphasizing collaboration, adaptability, and customer satisfaction.

Database Management
Organizing and maintaining data in a computer system, including storage, retrieval, and security.

Network Security
Protecting computer networks from unauthorized access, attacks or data breaches.

Project Management
Organizing and overseeing tasks to achieve specific goals.

Collaboration
Working with others to achieve a common goal or objective.

Teamwork
Working collaboratively with others to achieve a shared goal or objective.

USING YOUR DEGREE

Make your college experience the foundation for a successful future.

Potential Careers
- System Analyst
- Database Administrator
- Network Manager
- Project Manager
- Cyber Security Analyst

Workplace Settings
- Information Technology
- Finance
- Health Care
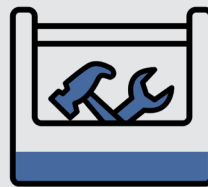
MECHANICAL ENGINEERING, B.S.E.

Learn how to design technology that is more accessible and equitable while building a solid foundation for your career in our mechanical engineering program.

PROGRAM HIGHLIGHTS

ABET Accreditation
Receive a quality education that has been certified to teach the fundamentals of technical disciplines.
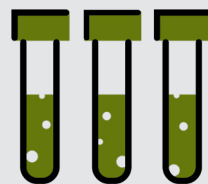
Real Experiences
Work with faculty leaders to develop a plan to solve problems for businesses in our senior capstone course.

Specialized Expertise
Enhance your major with expertise from more than 90 minor options across the university.

Undergraduate Research
Get hands-on experience working alongside our faculty in our many world-class laboratories across campus.

WHAT YOU'LL STUDY

Study the design, development and manufacture of both mechanical and thermal systems. Gain a foundational education in the application of mathematics, science and engineering principles for solving mechanical engineering problems. Prepare to practice engineering in a global and societal context.

BUILDING SKILLS

Gain the professional and personal intelligence it takes to have a successful career.

More info here!

Project Management
Organizing and overseeing tasks to achieve specific goals.

Technical Writing
Creating clear and concise documents, such as manuals or instructions, for technical or scientific topics.

Programming
Writing code, developing software, and creating applications for automation and problem-solving.

System Design
Creating or improving complex systems to meet specific requirements.

Organizational Skills
Planning, prioritizing, and managing tasks and resources to achieve specific objectives.

Product Design
Creating new or improved products that meet customer needs and expectations.

USING YOUR DEGREE

Make your college experience the foundation for a successful future.

Potential Careers
- Engineer
- Systems Engineer
- Product Engineer
- Design Engineer
- Project Manager
- Technical Salesperson/ Manager

Workplace Settings
- Transportation
- Manufacturing
- Biotechnology
- Energy Conversion
- Robotics

FURTHER, FASTER, TOGETHER, AT MOLINAROLI

For more information

Molinaroli College Student Services
803-777-4177
studentservices@cec.sc.edu

cec.sc.edu/experience