



A. JAMES CLARK
SCHOOL OF ENGINEERING

TO APPLY, CONTACT:

A. James Clark School of Engineering
Transfer Coordinator
transfer_engr@umd.edu

TO CREATE AN INTERNSHIP, CONTACT:

Deborah Vidmar
dvidmar@umd.edu
301-405-3863

**TO SPONSOR A STUDENT
OR PROGRAM COMPONENT, CONTACT:**

Cornelia Kennedy
ckennedy@umd.edu
301-405-1364



B.S. in Mechanical Engineering

SOUTHERN MARYLAND PROGRAM

**A degree program
to meet the needs of
Southern Maryland
students and industries**



DEPARTMENT OF MECHANICAL ENGINEERING
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COLLEGE PARK, MD 20742

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Why Mechanical Engineering?

Do you have sharp analytical and problem-solving skills? Are you interested in creating solutions to help address some of the world's most pressing concerns? Then you should consider a degree in mechanical engineering from a nationally recognized program that allows you to complete the initial two years of coursework in Southern Maryland.

EARN YOUR DEGREE CLOSE TO HOME

The University of Maryland A. James Clark School of Engineering is now offering a four-year B.S. in Mechanical Engineering program to students in the Southern Maryland region in a convenient, student-friendly format. Through the College of Southern Maryland or another college or university, you can take credits to complete general coursework. To review full program requirements, visit www.eng.umd.edu/advising/transfer.

For the remaining two years of the program, you will take courses at the Southern Maryland Higher Education Center and at the University of Maryland College Park. Each semester you will enroll in one course on the College Park campus, which means you travel to College Park only a few days or evenings per week. The remaining courses will be taught by faculty on site in Southern Maryland or through distance education technologies.

The program provides a quality engineering education to the region's residents and builds technical expertise for industries as diverse as the Naval Air Warfare Center-Aircraft Division, Northrop Grumman, Lockheed Martin Corporation and others.

LEARN FROM FACULTY WITH HANDS-ON EXPERIENCE

Engineering courses at the Southern Maryland Higher Education Center are taught by experienced part-time faculty members with strong connections to the Patuxent River Naval Air Station. Courses taught at the University of Maryland are led by full-time faculty who are recognized as leaders in the field.

Why the UMD Program is Right For You

- Earn a degree from a quality, accredited program close to home. The B.S. in Mechanical Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., the Accreditation Board for Engineering and Technology. ABET is the recognized accreditor of college and university programs in applied science, computing, engineering and technology.
- Small class sizes allow you greater access to faculty members and more individualized attention.
- The curriculum is designed to equip you with the skills to successfully pursue a career with any number of regional organizations.
- By pursuing valuable internships and research, you can gain hands-on engineering experience that will differentiate you to employers.

Why Employers Should Partner with the Clark School of Engineering

- Strengthen your connection with one of the nation's top public research universities.
- Through internship and research opportunities, you can give high-achieving students a "trial run" at your firm, broaden your recruiting base, and identify students with the greatest potential to become successful employees at your organization.
- Gain access to students trained specifically to meet the technical needs of your industry.
- Support the development of a high-technology workforce and enhance the economic viability of the region.

Your Course of Study

The program begins by providing you with a solid background in mathematics, physics, chemistry and basic engineering science. This strong foundation prepares you for advanced classes and research projects in your final two years. Based on your specific area of interest, you can choose from a menu of electives that are unique to the program and focus on those skills required by many local industries. Students are encouraged to complete an internship during the summer of their sophomore and junior years and during junior- and senior-year winter breaks. A minimum of 120 credits and completion of all degree requirements are required to obtain a B.S. in Mechanical Engineering at the University of Maryland.

TYPICAL CURRICULUM FOR INITIAL TWO YEARS OF STUDY IN SOUTHERN MARYLAND

YEAR ONE

Fall

Introduction to Engineering
Calculus I
English
General Education course
Chemistry for Engineers

Spring

Statics
Calculus 2
Physics I
General Education course
General Education course

YEAR TWO

Fall

Mechanics of Materials
Calculus 3
Physics 2
Introduction to MatLab for Engineers
General Education course

Spring

Dynamics
Differential Equations
Physics 3
Thermodynamics

TYPICAL CURRICULUM FOR FINAL TWO YEARS THROUGH CLARK SCHOOL OF ENGINEERING

YEAR THREE

Fall

Fluid Mechanics
Electronics & Instrumentation I
Statistical Methods for Product & Process Documentation
Technical Writing OR General Education course

Spring

Transfer Processes
Electronics & Instrumentation II
Product Engineering & Manufacturing
Vibrations, Controls & Optimization I
General Education course OR Technical elective

YEAR FOUR

Fall

Atmospheric Flight Aerodynamics
Fatigue
Senior Capstone Design
Aerospace Structures
General Education course

Spring

Atmospheric Flight Mechanics
Reliability Engineering
Vibrations, Controls & Optimization II
Engineering Materials & Manufacturing Processes
Technical elective

NAVAL AIR WARFARE CENTER INTERNSHIP

The Naval Air Warfare Center-Aircraft Division (NAWC-AD) offers a competitive internship program for students receiving degrees in mechanical engineering. Students accepted into the B.S. in Mechanical Engineering program at the University of Maryland are eligible to apply to this internship program. This program includes hands-on experience through summer and holiday employment and may offer tuition reimbursement. The internship requires U.S. citizenship.

For more information, contact David Barrett at David.Barrett@navy.mil, 301-342-9360.



Experience Matters

Students

GET REAL-WORLD EXPERIENCE

You are encouraged to pursue valuable hands-on experience by applying to a competitive vacancy job announcement at NAWC-AD, which has developed an academic partnership with the University of Maryland to provide students with hands-on experience in conjunction with their academic studies. The NAWC-AD program may offer tuition and provides employment during the summers and holidays.

Other companies may offer internships, which include full-time employment during the summer that may lead to part-time internships during the academic year or during winter break. The majority of positions are paid. An internship position can help you:

- Get the job you want following graduation by working as you complete your degree. Serious engineering experience will ensure that you and your resume attract attention from employers.
- Save money for school, car or other priorities.
- Make connections with people in your field and in the region.
- Gain the confidence, knowledge and skills that are essential to succeed in the work world and in life.
- Receive a job offer if you perform well with your current employer.

APPLY TODAY

You can apply to the University of Maryland Clark School of Engineering in January of your sophomore year in the program. By June 1, you will learn of your acceptance into the Clark School program. You must complete all of the Gateway requirements to enroll in the program. See a full list of requirements at www.eng.umd.edu/advising/transfer.

Students interested in applying to the program or getting more information about the transfer process, evaluation of credits or admission criteria, should contact **A. James Clark School of Engineering Transfer Coordinator at transfer_engr@umd.edu**.

Employers

GIVE REAL-WORLD EXPERIENCE

Employers that partner with the A. James Clark School of Engineering through the internship program offer invaluable career-related work experience that enhances students' academic training, professional growth and personal development. Large and small companies can participate in the internship program and help cultivate the next generation of engineers serving the Southern Maryland region. In partnership with the Clark School's Engineering Co-op and Career Services Office, companies can also participate in campus interviews, career fairs and job postings. Through student internships, employers can:

- Reduce the cost of recruitment by previewing potential future hires and identifying candidates for full-time job opportunities when they graduate.
- Pre-train future employees and supplement your work force.
- Instill new energy into your organization through the enthusiasm of student employees.
- Provide management development opportunities for current employees by giving them supervisory roles with students.
- Build a network of campus ambassadors as students return to their studies after work and spread the good word about your organization.

INQUIRE TODAY

Employers interested in providing internships for students should contact **Deborah Vidmar in the Engineering Co-op and Career Services Office at dvidmar@umd.edu, 301-405-3863**.

Organizations or individuals interested in sponsoring a student or supporting a component of the academic program should contact **Cornelia Kennedy at ckennedy@umd.edu, 301-405-1364**.