MATERIALS SCIENCE AND ENGINEERING AT CLEMSON

Our program introduces students to the atomistic origin of physical properties and structure-property-processing relationships of metals, ceramics and polymers. We build upon our history of both textile development and ceramic processing to offer students unique technical electives (color science and optical materials) in addition to foundational courses. Students gain hands on experience working with particles, thin films, fibers and bulk materials.

clemson.edu/mse
In Materials Science and Engineering, approximately 10% of our BS students participate in the cooperative education program (ABET Self Study 2017). Recent co-ops chosen by students include GE Aviation, BorgWarner, ZF Transmissions, Eurokera, Ulbrich, Ascend, First Quality, AFL and Parker Hannefin.

**PROGRAM DETAILS:**

Many MSE undergraduate students transition directly into industry positions. The remaining students often pursue either graduate school to earn an M.S. or Ph.D. in engineering or a professional school for an MBA, law or medical degree.

**LABS AND FACILITIES FOR HANDS-ON TRAINING**

Students will work in laboratories located both on the main Clemson Campus and out at the Advanced Materials Research Laboratory. Students will gain exposure to advanced characterization techniques (such as x-ray diffraction and electron microscopy) as well as current fabrication techniques.

**CLUBS AND ORGANIZATIONS**

All undergraduate students are invited to join the Material Advantage student chapter. This group seeks to provide students with professional development experiences and is affiliated with the four major national societies for materials engineers: ASM, TMS, AIST, and ACerS. In addition, students have the opportunity to join either a professional fraternity (Keramos) or an honor fraternity (Phi Psi). These organizations are open to students who have good scholarship, interest in the discipline of ceramics or textiles, and have strong personal character.

**GLOBAL ENGAGEMENT**

While students are encouraged to take part in Clemson study abroad opportunities, we do not have a formalized program with a partner institution. Instead, students meet with an academic advisor to discuss the type of abroad experience (study abroad, research abroad, service abroad) and the advisor helps the student identify specific opportunities that match the student’s interest and fit within the MSE curriculum.

**GRADUATE AND PROFESSIONAL SCHOOL OPPORTUNITIES**

Approximately 15% of MSE students attend a range of graduate programs such as the University of Minnesota, Colorado School of Mines, Purdue, Ohio State University and the University of Tennessee.

**SCHOLARSHIPS AND AWARDS**

There are several individual scholarship opportunities that exist in the Department of Materials Science and Engineering along with the many State and Federal financial aid and scholarships that are available. Current scholarships for undergraduate students include:

- AVX Scholarship
- Brockington G. Woodham Memorial Scholarship
- Charles A. Grant Family Scholarship
- DK & BC Norris Textile Scholarship
- Efland Textile Scholarship
- Fram Nonwoven Fellowship
- Frank E. & Reba Bobo Endowed Scholarship

**UNDERGRADUATE RESEARCH**

All undergraduate students participate in research as they matriculate through the MSE undergraduate program. Students complete MSE 3910/4910 which is a required research course sequence where students are paired with faculty to complete a 1 year research project. Students may choose to pursue additional research through the Creative Inquiry program, or a paid research position with faculty, or while working during the summer as an undergraduate researcher at another academic institution.

**CO-OPS AND INTERNSHIPS**

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**EMPLOYERS**

A materials science and engineering degree allows graduates a broad range of industry careers with companies like Boeing, Corning Glass, Michelin, Milliken and General Electric.

More info at: clemson.edu/cecas/psu