MECHANICAL ENGINEERING CAREER PATHS

Mechanical engineering is one of the oldest and broadest engineering disciplines. Traditionally, a mechanical engineer would be the expert in the production and usage of heat and mechanical power which are critical in the design, production, and operation of machinery. Today, mechanical engineers have taken on an expansive and critical role across all fields – from automobiles to energy to medical devices – and in the advancement of new technologies, such as nano-technologies and MEMS (Micro Electro Mechanical Systems).

As an undergraduate mechanical engineering student at UMBC-Shady Grove, you will gain a broad base of skills and knowledge that will prepare you for a wide variety of industrial applications. Importantly, you will have the option to explore valuable career opportunities before graduation through internships and co-ops.

UMBC

AT

The Universities
AT SHADY GROVE

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MECHANICAL ENGINEERING INDUSTRY PATHS

Examples of Industries:

TRANSPORTATION
- Transportation Industry Consultant
- Automotive Engineer
- Transportation Engineer
- Aerospace Engineer

ENERGY
- Thermal Engineer
- Solar Engineer
- Energy Specialist
- Applications Engineer

PRODUCTION OPERATIONS
- Plant Engineer
- Test Engineer
- Process Engineer
- Applications Engineer

MACHINES/MECHANICAL DESIGN
- Mechanical Engineer
- Mechanical Design Engineer
- Design Engineer

HEALTH
- Biomechanics Engineer
- Sanitary Engineer
- Public Health Engineer

OPERATIONS RESEARCH / MODELING
- Research Assistant
- Analyst Assistant
- Market Forecaster

PURCHASING & MATERIALS MANAGEMENT
- Operations Research Analyst
- Assistant Buyer
- Traffic Manager
- Inventory Manager
- Line Supervisor
- Production Manager
- Assistant Quality Assurance Manager
- Purchasing Agent
- Contract Agent/Manager
- Industrial/Wholesale Buyer
- Purchasing Price Analyst
- Cost Estimator

GOVERNMENT

- Project Engineer
- NIST Mechanical Engineer
- Peace Corps Volunteer
- Patent Reviewer
- Mechanical Engineer

HUMAN RESOURCES

- Technical Recruiter
- High Tech Head Hunter

PUBLISHING

- Technical Writer
- Editorial Assistant

SALES / MARKETING

- Sales Engineer
- Technical Sales Rep.
- Trade Show Organizer
- High Tech Marketing Specialist
- Product Engineer
- Technical Representative
- Applications Engineer
- Product Manager
- Market Research Analyst

A NOTE FROM OUR PROGRAM DIRECTOR

Charles Eggleton

Program Director

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I've always been interested in how things work and just amazed that we can build planes, rockets and satellites. My K-12 education spanned the late 60s and the 70s and I was inspired to dream by the lunar landings and the space shuttle.

If you are interested in Mechanical Engineering you may be curious about how things work or want to contribute to producing products that benefit society. Maybe a personal experience with a relative, friend or someone you know motivates your interest artificial limbs and organs. You may enjoy hands-on projects in shop class and renovating older cars or houses. You may be concerned about the environment and want to design systems to be more energy efficient. Whatever motivates you, know that mechanical engineers are a diverse group of people with a wide range of backgrounds and motivations. What we all have in common is our ability to apply physical principles to the design and manufacture of products for society.

My personal path began with pursuing a degree in naval architecture – the design of ships and boats – followed by graduate degrees in aeronautics and astronautics. Applying the skills acquired through these degrees, I advise students in my lab conducting research projects involving flow over biological cells. I have been a faculty member at UMBC for over 20 years and I have served in both the role of Undergraduate Program Director and Department Chair. I look forward to meeting with you and helping you launch your career path in mechanical engineering.

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