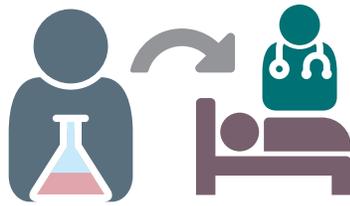


**HENRY E. RIGGS SCHOOL OF APPLIED LIFE SCIENCES**

# Master of Science in Medical Device Engineering

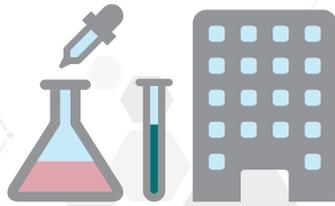
## MSMDE

The **MSMDE program** was created in response to the needs of the medical device industry. The program prepares students for engineering roles in functional areas such as invention, development, and production of medical devices in specialties such as in-vitro diagnostics, drug delivery, assistive technology, and wearables. Students will have authentic experiences with patients, healthcare providers, and industry leaders.



**CLINICAL EXPERIENCE**

Interact with patients and healthcare providers to gain a true understanding of the clinical setting and user needs.



**DEVELOPMENT, PRODUCTION, AND MANUFACTURING**

Learn and apply industry practices to develop and manufacture viable medical devices.



**AUTHENTIC INDUSTRY EXPERIENCE**

Work in teams with industry sponsors to solve problems.

### About the Program

The Master of Science in Medical Device Engineering program is a four-semester program with small-section, in-person classes.

**Year 1**

- Core coursework covering the entire medical device product life cycle from identifying a need, through design and development, to production and manufacturing.

**Summer**

- MSMDE students are encouraged to do an internship or summer research.

**Year 2**

- Students will participate in teams on a year-long industry sponsored project with support from a faculty advisor and liaison from the sponsoring company.
- Additional courses in business and regulatory affairs provide industry insight.
- Advanced elective courses allow students to specialize in an area of interest.

**What sets KGI's MSMDE apart from other master's programs?**

- Visiting speakers
- Case-based course work
- Industry sponsored projects
- Alumni network
- Advisory Board connections
- Culminating capstone experience

## Curriculum

- The two-year curriculum requires 48 course credits to complete over four semesters.
- Core coursework will cover the entire **medical device product life cycle** from identifying a need, through design and development, to production and manufacturing.
- **Clinical Experience for Engineers** is a unique opportunity to experience and learn to identify the needs of patients and healthcare providers.
- Supporting courses cover a **broad knowledge of the medical device industry** including business, regulatory, and ethics.
- **Active learning** is regularly applied in the classroom emphasizing critical thinking, teamwork, and communication, while using relevant industry cases. Example classes include medical diagnostics and product development.
- The curriculum emphasizes industry sponsored projects. The 12 credit capstone is a year-long industry sponsored consulting style project in which teams of students work directly with an industry liaison to solve an important problem identified by the sponsoring company.

## Career Options

Medical device engineering continues to be a rapidly growing and evermore relevant field with nearly 9,000 positions currently listed in California alone. The MSMDE program will help develop the most requested skills for those positions including:

- Product development
- Project management (planning, scheduling, budgeting)
- Quality assurance/quality control
- Data analysis
- Product manager

MedTech is a vast and steadily growing industry with a need for qualified engineers. The MSMDE program helps develop the most requested skills including:

- Communication
- Teamwork/collaboration
- Problem solving
- Creativity
- Organizational skills

## How to Apply

### Dates and Deadlines

**Start Terms:** Fall

**Application Deadline:** December 15 (priority), rolling admissions thereafter

### Application Requirements

An online application form is required that contains questions about your personal and educational background. Additional requirements can be submitted along with your online application or separately:

- Personal Statement
- Resume
- Letter of Recommendation
- Transcripts
- Standardized Test Scores (GRE, MCAT, or GMAT)
- English Language Proficiency (TOEFL, PTE, IELTS, iTEP)
- \$75 non-refundable application fee

**Admission Interviews:** A phone, Skype, or on-campus interview is a requirement for admission. The Office of Admissions schedules individual interviews after an application is complete.

**Application Review:** The Admissions Committee is made up of faculty and senior administrators who will thoroughly and conscientiously review each application.

**Admitted Students:** Admitted students are required to submit a \$400 non-refundable enrollment fee to hold their spot in the program.

## Contact Us

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