HENRY E. RIGGS SCHOOL OF APPLIED LIFE SCIENCES

Master of Science in Medical Device Engineering
MSMDE

What if you could save someone’s life by inventing a groundbreaking medical device? At KGI, our one-year accelerated Master of Science in Medical Device Engineering (MSMDE) program prepares students for engineering roles in inventions, development, and production of medical devices in specialties like in-vitro diagnostics, surgical instruments, assistive technology, and biosensors. Students learn how to design devices that diagnose and treat medical needs, develop these next-generation transformative devices, and plan and manage production to improve worldwide healthcare. Our graduates are passionate about medical devices and diagnostics and apply their engineering backgrounds to solve real healthcare problems.

About the Program
The two-semester accelerated master’s program is designed to prepare students for careers in medical devices based on the needs articulated by industry key-opinion leaders.

- **Breadth** – Courses in Medical Diagnostics and Medical Devices expose students to the breadth of technology in the industry.
- **Depth** – Courses in Product Development and Production Methods cover the path of a product from idea to commercialized device.
- **Practice** – The Industry sponsored Team Master’s Project provides students specific and authentic experience working with high level industry professionals in a consulting format.
- **Specialty** – Elective courses allow for students to choose more knowledge in their area of interest such as in-vitro diagnostics, product ideation, business and innovation, and regulatory affairs.

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 curriculum covers the essential areas of expertise to apply engineering skills into the specialized field of medical devices. It is a two-semester program with small-section, in-person classes; 30 credits are required to complete the program. The curriculum covers the essential areas of expertise to apply engineering skills into the specialized field of medical devices, and provides authentic experiences with the industry.

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<thead>
<tr>
<th>Fall Courses</th>
<th>Spring Courses</th>
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<tbody>
<tr>
<td>Medical Diagnostics</td>
<td>Medical Devices</td>
</tr>
<tr>
<td>Product Development</td>
<td>Production Methods</td>
</tr>
<tr>
<td>Industry Sponsored Team</td>
<td>Industry Sponsored Team</td>
</tr>
<tr>
<td>Master’s Project</td>
<td>Master’s Project</td>
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<tr>
<td>Specialty electives</td>
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</tbody>
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Elective options allow for broadening knowledge including data analysis, business of bioscience, and regulatory affairs.

Career Options
100% of the program’s graduates are currently placed as an engineer, scientist, or medical student. Students receive personal coaching and mentoring to select courses, prepare for interviews, and identify fulfilling career directions.

MedTech is a vast and steadily growing industry with a need for qualified engineers. In addition to the specialized technical knowledge, the MSMDE program helps develop the most employer requested personal skills, including:

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

Medical and Assistive Device (MAD) Lab
In support of their courses, students have access to the Medical and Assistive Device (MAD) Lab, which is equipped with modern prototyping equipment for electronics and mechanical work, such as a laser cutter, vacuum former, electronic testing equipment, and 3D printers.

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
535 Watson Drive, Claremont, CA 91711
Phone: 909.607.8590 | Fax: 909.607.8086
Email: admissions@kgi.edu
Website: kgi.edu

Student Affairs
909.607.8896 | student_affairs@kgi.edu

Financial Aid
909.607.9928 | financial_aid@kgi.edu

International Students and Scholars
909.607.8586 | international@kgi.edu