

2026-27 Academic Catalog/Class of 2027 Graduation Requirements

Master of Science in Medical Device Engineering (MSMDE)

Students in the MSMDE program are required to complete a minimum of 30.0 credits over the course of one year of study. The coursework is comprised of required courses, elective courses, and a capstone project.

Core Requirements

Fall Core Courses	Credits	Spring Core Courses	Credits
SCI 5700 Medical Diagnostics	3	ENG 5300 Medical Devices – Principles and Applications	3
ENG 6340 Device and Diagnostic Product Development	3	ENG 6350 Medical Device Production	3
PDEV 5000 Team Masters Project or PDEV 6000 Team Masters Project	3 or 6	PDEV 5000 Team Masters Project or PDEV 6000 Team Masters Project	3 or 6
		PDEV 5100 Professional Development	0
Common Electives REG 5000 Intro to US FDA	1.5	Common Electives REG 6120 Medical Device Regulation	1.5
ENG 5320 Computer Aided Design	1.5	RES 6000 / 6001 Independent Research	1.5 or 3
ENG 5330 Prototyping Methods	1.5		
Subtotal	13.5 or more	Subtotal	13.5 or more

Core Courses

All students must complete the named courses above to complete the MSMDE degree.

Elective Courses

All MSMDE students are required to complete additional credits of elective courses to meet the 30-credit minimum for the program. Not all electives are offered every year. Refer to the KGI Henry E. Riggs School of Applied Life Sciences course catalog for information.



Independent Study/Independent Research (IS/IR) Courses

Students may enroll in 1.5 or 3.0 credits of independent study or research per semester. To enroll in IS/IR, the student must complete the Independent Study/Research Contract and return it to the Registrar's Office before the last day to add courses. Independent study is the acquisition of skills, knowledge, or information that is known among professionals. For example, learning lab skills or preparing for a certification exam. Independent research is comprised of work aimed at generating novel techniques, knowledge, or synthesis of information.

Academic Petitions

Examples of requests include, but are not limited to, the following:

- Course overload: permission to take more than 19.5 credits
- Exceptions to registration deadlines (i.e., late add/drop)
- Variances in cross-registration and general education requirements
- Students requesting part-time status
- Exceptions to graduation requirements or other KGI academic policies

Please see the [Student Forms](#) page for more information.