



## Medical Device Recycling & Reprocessing Certificate Program Example Plan of Study (MS-thesis in BIOE)

The **Medical Device Recycling and Reprocessing Certificate** program is an internship immersion and training program for engineers. It aims to train engineers to optimize medical device designs for sustainability in healthcare, to gain skills in reprocessing validation methods for industry to assure patient safety while maintaining regulatory compliance, and to promote commercialization of medical devices.

### Required Courses in the Medical Device Recycling and Reprocessing Certificate Program

Courses (15 cr)	Course Name	Semester
BIOE 8110 (3)	Sterilization & Cleaning Engineering for Medical Devices	Summer minimester A
BIOE 8130 (3)	Industrial Bioengineering	Spring
BIOE 8140 (3)	Medical Device Commercialization	Fall
BIOE 8150 (3)	Design, Manufacturing & Validation Methods for Reusable Medical Devices	Spring
BIOE 8900 (3)	Industry Practicum	By arrangement

The **Medical Device Recycling and Reprocessing Certificate** program can fit into a variety of study plans. Below is an example for students enrolled in Bioengineering (MS-thesis).

### Example Plan of Study for 1.5 years MS-thesis degree in Bioengineering

*italic font* = recommended courses for BIOE students  
( ) indicates any elective could be chosen

May-mester	3	<b>BIOE 8110 Cleaning &amp; Sterilization</b>
Summer	3	<i>Research BIOE 8910</i>
2 <sup>nd</sup> Summer	(4)	<i>STAT 8010 Statistical Methods I (also offered in fall &amp; spring)</i>
Fall	3	<b>BIOE 8140 Medical Device Commercialization</b>
	1	<i>BIOE 8000 Seminar</i>
	1	<i>BIOE 6150 Research Principles</i>
	3	<i>BIOE 8010 Biomaterials</i>
	3	<i>BIOE 8460 Biomed Eng Replacements</i>
	(3)	<i>elective (BIOE 8200 Biomechanics or BIOE 8700 Bioinstrumentation)</i>
Spring	3	<b>BIOE 8150 Medical Device Design</b>
	1	<i>BIOE 8000 Seminar</i>
	(3-4)	<i>elective (BIOE 8470 Transport or other course)</i>
	3	<b>BIOE 8130 Industrial Engineering</b>
	3	<i>Research BIOE 8910</i>
Summer	3	<b>BIOE 8900 Practicum</b> (135 contact hours, or ~9 hrs/week)
<b>TOTAL</b>	<b>40-41</b>	meets 30 credit minimum required for MS (thesis)