

UNIVERSITY OF ROCHESTER
HAJIM SCHOOL OF ENGINEERING AND APPLIED SCIENCES
BIOMEDICAL ENGINEERING DEPARTMENT

**Petition for BME Undergraduate Curriculum Committee
Custom Concentration Request**

NAME _____

DATE _____

ID # _____

CLASS YEAR: _____

EMAIL: _____

ADVISOR: _____

I ask that the BME Undergraduate Curriculum Committee approve the following petition for a custom concentration. I have reviewed the rules below and discussed them with my advisor, who agrees that this petition is ready to be shared with the UGC.

Applicant Signature

Date

Adviser Comments: (Signature below provides evidence of your discussion of the petition with your advisee, not an “approval” per se. You may offer your own thoughts or suggestions below.)

Adviser Signature

Date

Undergraduate Committee Chair Signature

Date

☐

APPROVED

☐

DENIED

☐

NEED MORE INFORMATION

Comments: _____

Notes:

Approval of a custom concentration may be made only for students who are on track for admission to the major, thus is typically done during the spring of the sophomore year. All major declaration materials must be in place, (including the career planning form, a curriculum plan, and an online major declaration) so that the committee may review the petition in the context of the career plan provided and curricular

timeline proposed. Submissions may also be made during the junior year, but it will not be typical for petitions to be reviewed from seniors.

A custom concentration is intended to offer students a chance to tailor their engineering coursework for specific interests within Biomedical Engineering. *It is not intended to be used to swap out a single course in an existing concentration.* Using the checklist below, students should select a sequence of courses that create a cohesive theme and provide depth in engineering knowledge. All concentrations should include one Upper Level BME course, from the list included. These courses have been designed to include a targeted biomedical engineering topic, as well as specific coursework requirements related to research, problem solving and communication. Please note that for all of these courses, it is the student's responsibility to take the required pre-requisites.

Custom Concentrations Checklist

Upper Level BME Course:

Each concentration must include one Upper Level BME course, typically taken during the junior or senior year. Pre- and co-requisites are shown in parentheses.

- ☐ BME 251: Biomedical Ultrasound (MTH 163, MTH 164, PHY 122)
- ☐ BME 218: Introduction to Neuroengineering (BME 230, co-req BME 260)
- ☐ BME 253: Ultrasound Imaging (MATH164, MATH165, PHYS122 or Permission of Inst)
- ☐ BME 255: Translational Biomedical Optics (BME 221, BME 270, OPT 241, OPT 261)
- ☐ OPT 276: Biomedical Optics (MTH 163, MTH 164, OPT 241 and OPT 261)
- ☐ BME 272: Biomedical Microscopy
- ☐ BME 483: Biosolid Mechanics (BME 201, BME 201P, ME 226)
- ☐ BME 212: Viscoelasticity in Biological Tissues (ME 225 or CHE 243, ME 226)
- ☐ BME 262: Cell & Tissue Engineering (BME 245, CHE 243 or ME 225, CHE 244, BIO 210 or BME 411)
- ☐ BME 266: Bioprocess Engineering (BIO 110, CHM 132, CHE 243 or ME 225, CHE 244)

Must include at least three 4-credit engineering courses from an ABET accredited program in the Hajim School of Engineering & Applied Sciences (i.e., not EAS or CSC or AME courses). Note that some BME courses are not engineering courses (for example, BME 211 and 258).

Courses are typically at the 200-level.

Courses may not be considered equivalent to any courses in the BME core.

Courses should create a cohesive theme and show some depth in one area.

Courses may not include independent study credit or EAS 2 credit courses.

Course 1: _____ Semester planned or taken: _____

Course 2: _____ Semester planned or taken: _____

Course 3: _____ Semester planned or taken: _____

Title and Description: The proposed concentration must have a cohesive theme, and thus the student must provide a title (up to 25 characters) and description (up to 125 words) to explain why this proposed concentration is of interest and appropriate for career plans and interests.

Title: _____

Description: _____
