Bachelor's/Master's Combined Degree Program

Department of Biomedical Engineering

Objectives

The goal of the BME Bachelor's/Master's Combined Degree Program (BME-CDP) is to allow academically qualified students to receive the B.S. and M.S. or M.Eng degrees in a compressed time frame. This highly intensive academic program gives students more research experience and better prepares them for research and development careers or further graduate study. Completing the BME-CDP is possible in as little as 5 years if the candidate takes graduate-level courses in the senior year **in addition to** completing all the undergraduate degree requirements. (Courses cannot double-count for both UG requirements and graduate credit)

Eligibility

To be considered for the BME-CDP, candidates must:

1. Have a GPA of 3.2 or higher and maintain at least a 3.2 GPA throughout Senior Year;
2. Have no more than 3 "C" grades or lower in ***any*** BME (14:125:xxx) class;
3. Have completed most, if not all, of the School of Engineering undergraduate degree requirements for General, Humanities and Social Science Electives by the start of the Senior Year;
4. Have at least one letter of recommendation and a personal statement. A 2nd letter is optional;
5. Apply after the end of Spring Junior Year exams but before July 1 prior to the fall semester of the Senior Year;

*There is no GRE requirement for the BME-CDP although the GRE's may be required to apply for any PhD program or for future funding or fellowships.

Curriculum

The BME-CDP requires the candidate to take the remaining undergraduate credits during the Senior Year and 33 Graduate level credits during Senior and Graduate Years (Years 5+). The general timeline for the BME-CDP is as follows:

Senior Year: Candidates will take 6-18 graduate (500+ level) credits along with the remaining BME undergraduate courses needed for the B.S. degree (Senior Design, DE, TE, etc.).
Fifth Year (1st graduate year): Remainder of master's courses and work on the M.S. thesis or M.Eng project. Candidates can take fewer graduate courses, but this could lengthen the duration of the master's degree.
Summer following the Fifth Year: If necessary, students will complete the M.S. thesis and defend it or present the M.Eng project.

Please Note:

1) Candidates need to graduate with the BME B.S. degree at the end of the spring semester of the 4th year to continue (officially) in the master's program, as a full-fledged graduate student, starting either in the summer or fall following the 4th year.
2) Graduate courses in the senior year will be billed at the lower undergraduate tuition rate.
3) The J.J. Slade Scholar Program can be, and is recommended to be, pursued along with the BME-CDP. *If applying to the J.J. Slade Scholar Program in conjunction with the BME-CDP, that program requires a separate application form: https://soe.rutgers.edu/slade. At least ONE of your recommendation letters should be from your intended J.J. Slade Research Advisor. Contact Lawrence Stromberg (les42@soe.rutgers.edu) for questions on this additional option.*
4) Continuation in the BME-CDP is contingent on receiving **no more than one "C" grade** in any of the BME graduate courses during the Senior Year.

** Revised April 19, 2022*

Sample Curriculum for the BME Bachelor's/Master's Combined Degree Program (BME-CDP)

Fall of Senior Year

14:125:401/421	Senior Design I	3 Credits
xx:125:xxx	Departmental Elective	3 Credits
xx:125:xxx	Departmental Elective	3 Credits
xx:xxx:xxx	Technical Elective	3 Credits
16:125:605	BME Seminar (zero credit) ***and/or***	
16:125:xxx	Graduate Core Course(s) ***and/or***	1-9 Credits (1-3 courses)
16:125:xxx	Graduate Elective Course(s)	

Spring of Senior Year

14:125:402/422	Senior Design II	3 Credits
xx:125:xxx	Departmental Elective	3 Credits
xx:125:xxx	Departmental Elective	3 Credits
xx:xxx:xxx	Technical Elective	3 Credits
16:125:605	BME Seminar (zero credit) ***and/or***	
16:125:xxx	Graduate Core Course(s) ***and/or***	1-9 Credits (1-3 courses)
16:125:xxx	Graduate Elective Course(s)	

Fall of 1st Master's Year (Official Graduate Student in the School of Graduate Studies)

16:125:501	BME Math Modeling Course	3 Credits
16:125:601	Engineering Ethics and Seminar	1 Credit
16:125:xxx	Graduate Core or Electives (as needed)	3-9 Credits (1-3 courses)
16:125:701	Research (MS Only)	3 Credits

Spring of 1st Master's Year

16:125:586	BME Cell Biology Course	3 Credits
16:125:602	Engineering Writing and Seminar	1 Credit
16:125:628	Clinical Practicum	1 Credit
16:125:xxx	Graduate Core or Electives (as needed)	3-9 Credits (1-3 courses)
16:125:699	Non-Thesis Study (M.Eng Only) ***OR***	3 Credits
16:125:702	Research (MS Only)	3 Credits

Late Spring-Summer of 1st Master's Year (or 6th year depending on progress)

Finish up writing M.S. Thesis to defend or finishing the M.Eng project for presentation

Summary:

Senior Year Bachelor's Curriculum

Senior Design I & II
Departmental Electives
Technical Electives
Other courses as needed for the B.S.

Master's Curriculum

3 Core Courses (out of 5)	9 credits
1 BME Math Methods Course	3 credits
1 BME Adult and Stem Cell Biology Course	3 credits
3 One-Credit Professional Developmental Courses	3 credits
3 Electives	9 credits
2 Seminar Courses (when not taking 601/602)	0 credit
If pursuing MS: 6 Research Credits	6 credits (MS Only)
If pursuing M.Eng: 3 Non-Thesis Study Credits	3 credits (M.Eng Only)
If pursuing M.Eng: 4th Elective Course	3 credits (M.Eng Only)
	33 Total Master's Credits

** Revised April 19, 2022*

Application for the Bachelor's/Master's Combined Degree Program (BME-CDP)

RUTGERS UNIVERSITY
DEPARTMENT OF BIOMEDICAL ENGINEERING

Instructions:

1) Fill out this application form, prepare a one-page personal statement, and include your Rutgers unofficial transcript to send via email to Lawrence Stromberg in BME-111 after Commencement but before July 1 before the start of the senior year.

2) Have one (or two) letters of recommendation sent to Lawrence Stromberg in BME-111. (YOU SHOULD NOT SEE YOUR OWN LETTERS). Have recommenders send letters via email to: les42@soe.rutgers.edu.

Please Type or Print Legibly

Name: _____ RUID: _____

Home mailing address: _____

_____

Campus mailing address (if any): _____

RU and Non-RU Email Addresses: _____

Overall GPA: _____ International Student (Y/N): _____

Term started at Rutgers: _____ Credits completed so far: _____

Expected graduation date (B.S. degree with or without minor): _____

Master's Degree Sought (Circle/Check): ___M.S. ___M.Eng

1) Name of first reference writer: _____

2) Name of second reference writer (optional): _____

"I have read and understood the description and requirements for the BME-CDP":

Student Signature: _____ Date: _____

For BME Use Only: Admit Conditional Admit Deny Date: _____

Comments/Reasons: _____

_____

Undergraduate Program Director Approval: _____

Graduate Program Director Approval: _____

** Revised April 19, 2022*