



OFFICE OF THE FACULTY COUNCIL

THE UNIVERSITY OF TEXAS AT AUSTIN

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March 28, 2018

Provost Maurie McInnis
The University of Texas at Austin
MAI 201
Campus Mail Code: G1000

Dear Provost McInnis,

Enclosed for your consideration and action are proposed changes to the Cockrell School of Engineering chapter in the *Undergraduate Catalog, 2018-2020*. The proposals are classified as being of *exclusive* interest to one college or school and were approved by the Faculty Council on a no-protest basis on March 27, 2018. The authority to grant final approval of this legislation resides with your office on behalf of the President with formal notification to UT System.

- Proposal to create an Integrated BS in Biomedical Engineering and Master of Science in Engineering Degree (D 16337-16340)
- Proposal to create an Integrated BS in Mechanical Engineering and Master of Science in Engineering Degree (D 16341-16344)

Please let me know if you have questions or if I can provide other information concerning these items.

Sincerely,

A handwritten signature in cursive script that reads "Alan W. Friedman".

Alan W. Friedman, Secretary
General Faculty and Faculty Council
The University of Texas at Austin
Arthur J. Thaman and Wilhelmina Doré Thaman Professor of English and Comparative Literature

AWF:dlr Enclosures

ec: Lydia A. Cornell, Administrative Program Coordinator, Provost's Office
Michelle K. George, Administrative Manager for Faculty Affairs, Provost's Office
Gerald E. Speitel, Associate Dean for Academic Affairs, Cockrell School of Engineering
Sonya D. Shaffer, Executive Assistant, Cockrell School of Engineering

DOCUMENTS OF THE GENERAL FACULTY

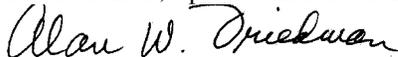
PROPOSAL TO CREATE AN INTEGRATED BACHELOR OF SCIENCE IN BIOMEDICAL ENGINEERING AND MASTER OF SCIENCE IN ENGINEERING DEGREE PROGRAM IN THE COCKRELL SCHOOL OF ENGINEERING CHAPTER IN THE *UNDERGRADUATE CATALOG 2018-2020*

Dean Sharon L. Wood in the Cockrell School of Engineering has filed with the Secretary of the Faculty Council the following proposal to create an integrated Bachelor of Science in Biomedical Engineering and Master of Science in Engineering degree program in the Cockrell School of Engineering chapter in the *Undergraduate Catalog, 2018-2020*. The Biomedical Engineering faculty approved the proposal on April 27, 2017; the Degrees and Courses Committee approved it on May 24, 2017, and the Dean and the College faculty approved it on September 18, 2017. The Secretary has classified this proposal as legislation of exclusive interest to one college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the proposal on March 7, 2018, and forwarded it to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval of this legislation resides with the Provost on behalf of the President with notification to UT System.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a protest must be received in the Office of the General Faculty by March 27, 2018.



Alan W. Friedman, Secretary of the General Faculty and Faculty Council
The University of Texas at Austin
Arthur J. Thaman and Wilhelmina Doré Thaman Professor of English and Comparative Literature

If yes, Undergraduate Studies must be informed of the proposed changes and their response included:

Person communicated with: Date of communication: Response:

- f. Will this proposal change the number of hours required for degree completion? No Note: THECB Semester Credit Hour Change Form required, download from URL:
<http://www.thecb.state.tx.us/reports/DocFetch.cfm?DocID=2419&format=doc>
 If yes, explain: Yes; we are replacing a required three-hour upper division natural science elective with a four- hour math course, for a net increase of one credit hour.

3. COLLEGE/SCHOOL APPROVAL PROCESS

Department approval date:	April 27, 2017	Biomedical Engineering Faculty
College approval date:	May 24, 2017	CSE Degrees and Courses Committee
Dean approval date:	September 18, 2017	CSE Faculty; Sharon L. Wood, Dean

PROPOSED NEW CATALOG TEXT:

BACHELOR OF SCIENCE IN BIOMEDICAL ENGINEERING

Integrated Bachelor of Science in Biomedical Engineering and Master of Science in Engineering Program

The integrated degree program results in simultaneously awarding a Bachelor of Science in Biomedical Engineering (BSBME) and a Master's of Science in Engineering (MSE) degree offered by the graduate program in biomedical engineering. The objective of the Integrated BSBME/MSE Program is to enable prepared undergraduates in Biomedical Engineering to earn two degrees in a shortened time period. By applying AP and Credit by Exam courses, having students take recommended summer courses, and allowing seniors to enroll in graduate-level engineering courses reserved for graduate credit, the program enables graduates to complete both degree requirements five years.

Admissions. Current undergraduate biomedical engineering (BME) students may begin the application process to the Integrated BSBME/MSE Program option in the first term of their third year. Admission includes the two steps outlined below. Undergraduate students not in the biomedical engineering major are not eligible to apply. It is expected that all students selected for the program in Step 1 and who have been successful in their first graduate-level coursework will be selected for admission in Step 2. Successful completion of coursework will be evaluated and determined by the department's Domestic Graduate Admission Committee and the Graduate Advisor.

Step 1. Students go through the first step in application for admission to the Integrated BSBME/MSE Program in the first term of the third year. The Step 1 application is internal through the department and includes a resume, statement of purpose, and letters of recommendation. Qualified applicants will be selected based on the applicant's progress to degree completion, grade point average, and other qualifications included in the application materials. Selected students will be notified early in the second term of the third year of their admission status for the integrated program, allowing them to meet with an Academic Advisor to plan graduate coursework in the first term of their fourth year.

Step 2. Students go through the second step in the application after the first term of their fourth year. The Step 2 application is formal through the Graduate and International Admission Center (GIAC) and includes a resume, statement of purpose, letters of recommendation, and a TOEFL score (if required). Qualified applicants will be selected based on success in graduate-level engineering courses in the first term of their fourth year, grade point average, and other qualifications included in the application materials. Graduate Record Exam (GRE) test scores are not required for admission to the integrated program, however students interested in continuing on to a doctoral program are strongly encouraged to take the GRE.

If students in their fourth year are taking graduate courses and would be on track to complete the integrated program but did not apply in their third year through Step 1, they may also choose to apply in Step 2 and formally apply through GIAC. These students will be evaluated for admission on the same criteria.

Degree Requirements. In order for integrated program students to complete both the BSBME and MSE degrees in five years, the department waives six semester credit hours (SCH) of technical area electives in lieu of six SCH of graduate engineering coursework reserved for graduate credit taken in the fourth year. This reduces the total BSBME degree requirements for integrated program students from 133 to 127 SCH. The remaining required six SCH of technical area electives required for the BSBME degree must be taken in engineering (see Technical Area Options section below).

Students in the integrated program complete twelve SCH of graduate coursework in their fourth year and eighteen SCH of graduate coursework in their fifth year to complete a total of thirty SCH of graduate coursework for the MSE degree as described in the Graduate Catalog. Students have the option of choosing the coursework or thesis options for the MSE degree as described in the Graduate Catalog. Which courses the students take will be determined with the Graduate Advisor and Academic Advisor to ensure compliance with degree requirements and meet the students' career goals.

Students unable to successfully complete the integrated program, or who wish to terminate pursuit of the MSE for any reason, may obtain a BSBME degree by satisfying all of the requirements for the standalone degree. Two of the graduate courses (six SCH) taken in the fourth year may count toward the twelve SCH of technical area electives required to complete the entire 133 SCH requirements. An undergraduate student leaving the integrated program will be on a trajectory to graduate with the regular BSBME degree in the same timeframe prior to admission to the integrated program.

Graduates of the integrated program will receive the BSBME and MSE degrees simultaneously after successfully completing the 127 SCH for the BSBME and thirty SCH for the MSE, a total of 157 SCH. It is expected that students in this program will graduate with both degrees in a total of five years to completion.

Advising. Once admitted, students will be advised each semester by the Graduate Advisor and an Academic Advisor to complete coursework required for the BSBME degree in their fourth year, and completion of the coursework required for the MSE degree in their fourth and fifth years.

Information regarding the integrated program requirements and policies may be obtained from the BME Academic Advising Office in BME 3.308.

DOCUMENTS OF THE GENERAL FACULTY

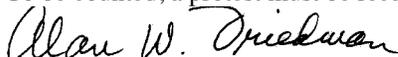
PROPOSAL TO CREATE AN INTEGRATED BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING AND MASTER OF SCIENCE IN ENGINEERING DEGREE PROGRAM IN THE COCKRELL SCHOOL OF ENGINEERING CHAPTER IN THE *UNDERGRADUATE CATALOG 2018-2020*

Dean Sharon L. Wood in the Cockrell School of Engineering has filed with the Secretary of the Faculty Council the following proposal to create an integrated Bachelor of Science in Mechanical Engineering and Master of Science in Engineering degree program in the Cockrell School of Engineering chapter in the *Undergraduate Catalog, 2018-2020*. The Mechanical Engineering faculty approved the proposal on May 18, 2017; the Degrees and Courses Committee approved it on August 31, 2017, and the Dean and the College faculty approved it on September 18, 2017. The Secretary has classified this proposal as legislation of exclusive interest to one college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the proposal on March 7, 2018, and forwarded it to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval of this legislation resides with the Provost on behalf of the President with notification to UT System.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a protest must be received in the Office of the General Faculty by March 27, 2018.



Alan W. Friedman, Secretary of the General Faculty and Faculty Council
The University of Texas at Austin
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If yes, Undergraduate Studies must be informed of the proposed changes and their response included:

Person communicated with: Date of communication: Response:

- f. Will this proposal change the number of hours required for degree completion? No Note: THECB Semester Credit Hour Change Form required, download from URL:
<http://www.thecb.state.tx.us/reports/DocFetch.cfm?DocID=2419&format=doc>
 If yes, explain: Yes; we are replacing a required three-hour upper division natural science elective with a four- hour math course, for a net increase of one credit hour.

3. COLLEGE/SCHOOL APPROVAL PROCESS

Department approval date:	May 18, 2017	Mechanical Engineering Faculty
College approval date:	august 31, 2017	CSE Degrees and Courses Committee
Dean approval date:	September 18, 2017	CSE Faculty; Sharon L. Wood, Dean

PROPOSED NEW CATALOG TEXT:

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Integrated Bachelor of Science in Mechanical Engineering and Master of Science in Engineering Program

The integrated degree program results in simultaneously awarding a Bachelor of Science in Mechanical Engineering (BSME) and a Master of Science in Engineering (MSE) degree offered by the Department of Mechanical Engineering. The objective of the Integrated BSME/MSE Program is to enable prepared undergraduates in Mechanical Engineering to earn two degrees in a shortened time period. By applying AP and Credit by Exam courses, having students take recommended summer courses, and By allowing seniors to enroll in graduate-level engineering courses reserved for graduate credit, the program enables graduates to complete both degree requirements within five years.

Admissions. Current undergraduate mechanical engineering (ME) students may begin the application process to the Integrated BSME/MSE Program option in the first term of their third year. Admission includes the two steps outlined below. Undergraduate students not in the mechanical engineering major are not eligible to apply. It is expected that all students selected for the program in Step 1 and who have been successful in their first graduate-level coursework will be selected for admission in Step 2. Successful completion of coursework will be evaluated and determined by the department's Domestic Graduate Admission Committee and the Graduate Advisor.

Step 1. Students go through the first step in application for admission to the Integrated BSME/MSE Program in the first term of the third year. The Step 1 application is internal through the department and includes a resume, statement of purpose, and letters of recommendation. Qualified applicants will be selected based on the applicant's progress to degree completion, grade point average, and other qualifications included in the application materials. Selected students will be notified early in the second term of the third year of their admission status for the integrated program, allowing them to meet with an Academic Advisor to plan graduate coursework in the first term of their fourth year.

Step 2. Students go through the second step in the application in the second term of their fourth year. The Step 2 application is formal through the Graduate and International Admission Center (GIAC). Admission to the integrated program will be based on a review of the applicant's undergraduate record and GPA, GRE scores, performance in graduate coursework, letters of recommendation, personal statement, TOEFL score (if required), and research experience.

If students in their fourth year are taking graduate courses and would be on track to complete the integrated program but did not apply in their third year through Step 1, they may also choose to apply in Step 2 and formally apply through GIAC. These students will be evaluated for admission on the same criteria.

Degree Requirements. In order for integrated program students to complete both the BSME and MSE degrees in five years, the department waives six semester credit hours (SCH) of technical area electives in lieu of six SCH of graduate engineering coursework reserved for graduate credit taken in the fourth year. This reduces the total BSME degree requirements for integrated program students from 126 to 120 SCH.

Students in the integrated program complete twelve SCH of graduate coursework in their fourth year and eighteen to twenty-four SCH of graduate coursework in their fifth year to complete a total of thirty to thirty-six SCH of graduate coursework for the MSE degree as described in the Graduate Catalog. Students have the option of choosing the coursework, report, or thesis option for the MSE degree as described in the Graduate Catalog. The selected degree option determines the number of hours required to graduate with the MSE degree. Courses the students take will be determined with the Graduate Advisor and Academic Advisor to ensure compliance with degree requirements and meet the students' career goals.

Students unable to successfully complete the integrated program, or who wish to terminate pursuit of the MSE for any reason, may obtain a BSME degree by satisfying all of the requirements for the standalone degree. Six SCH of the graduate courses taken in the fourth year may count toward the twelve SCH of CGEs required to complete the entire 126 SCH requirements. An undergraduate student leaving the integrated program will be on a trajectory to graduate with the regular BSME degree in the same timeframe prior to admission to the integrated program.

Graduates of the integrated program will receive the BSME and MSE degrees simultaneously after successfully completing the 120 SCH for the BSME and thirty to thirty-six SCH for the MSE, a total of 150-156 SCH. Ideally students in this program will graduate with both degrees in a total of five years to completion.

Advising. Once admitted, students will be advised each semester by the Graduate Advisor and an Academic Advisor to complete coursework required for the BSME degree in their fourth year, and completion of the coursework required for the MSE degree in their fourth and fifth years.

Information regarding the integrated program requirements and policies may be obtained from the ME Academic Advising Office in ETC 5.224.