Introduction
The Department of Materials Science at the University of California, Berkeley, will be offering a new five year combined Bachelor of Science/Master of Science program. The existing four year undergraduate program will be augmented with a fifth year of graduate study that provides a professionally oriented component, preparing students for careers in engineering or engineering management within the business, government, and/or industrial sectors. This five-year program emphasizes interdisciplinary study through an independent project coupled to coursework.

In this program, students will earn their Bachelor’s degree first and then their Master of Science degree under Plan II of the Academic Senate. It is not a concurrent program. Careful planning during the undergraduate program will allow motivated students to begin a research project and complete some Master's course requirements while still in undergraduate standing. Depending on how quickly a student progresses through the undergraduate program, the additional graduate year may come sooner than the fifth year at Berkeley. The Five-Year Program is not intended for those who wish to pursue a Ph.D.

Academic Program
The academic curriculum for the Master of Science is flexible and interdisciplinary, allowing students to tailor coursework and/or their independent project to individual interests and backgrounds. Areas of study/emphasis include the traditional materials science and engineering areas, as well as energy science and technology, nanoscience and technology, engineering management and biomaterials.

- A minimum of 24 credits for the M.S. is required. Of the 24 units, at least 12 must be strictly 200-level graduate units in the major subject (University requirement) and of these 12 units, there shall be at least 1 unit/semester (2 units total) and no more than 2 units/semester (4 units total) of credit for individual study or research (new MSE296A and B). The remaining 12 units may be letter graded upper-division or graduate courses approved by the major field advisor. Students must earn a grade of B or better in three of the five core course categories that include thermodynamics, structure or phase transformations, characterization, processing and properties at the 200 level and also maintain a minimum
GPA of 3.0 required by the College.¹ No single course may be used to satisfy more than one category. The balance of the coursework should establish a coherent program in the area of emphasis, approved by the BS/MS Academic Advisor.²

- An independent project will be performed as part of a required two course sequence, MSE 296A&B, under the supervision of a faculty member. Students are encouraged to identify faculty supervisors as soon as possible, but no later than the beginning of the ninth semester. Students will be required to complete both a project report and an oral presentation. Possible independent projects may include but are not limited to:
  - Traditional independent research project.
  - In-depth follow-up to MSE 199 or H194 project.
  - Product development with business plan.
  - Industry collaborative project.

- A comprehensive exam is required as part of a Master’s Plan II and will be administered as a written examination at the end of the first semester of the fifth year (first semester of the Master’s program). This exam will assess the student's proficiency in the basic concepts of an undergraduate MSE curriculum as well as graduate coursework.

  NOTE: Only course units taken in the FINAL undergraduate semester that are not applied towards the Bachelor’s degree may be petitioned to fulfill the Master's degree requirements. Students therefore have at most three consecutive semesters to fulfill all Master’s requirements.

Criteria for Admission into the Program:
1. Academic record in good standing as an MSE major, MSE/ME, MSE/NE, MSE/BioE, MSE/ChemE, or MSE/EECS joint major. A cumulative GPA of 3.0 is required and a GPA of 3.3 or higher is recommended.
2. A well-written statement describing the reasons for pursuing a combined BS/MS program.
3. If selected, a faculty interview in which the student's technical background and communication skills are assessed.
4. One letter of recommendation, from a faculty member or industrial supervisor who knows the applicant well and has seen evidence that he or she will benefit significantly from a program of this kind.

¹ In order to complement the undergraduate curricula of the double majors, particular graduate courses are required. MSE/ME majors must choose MSE201A as one of their core courses. MSE/ChemE majors must choose MSE201A and MSE 204 as two of their courses
² Areas of emphasis

For the Engineering Management emphasis, these courses should include at least two from MBA 263, MBA 264, MBA 290A, MBA 290C/ EECS C201/ INFO C224, MBA 290E, MBA 290G, MBA 290I, MBA290N, MBA 290T.
5. A non-binding "draft" course of study plan, indicating that the applicant has carefully considered areas of technical depth and breadth that he or she wishes to pursue if admitted to the program.
6. Recommended, but not required, is the identification of a project supervisor.

**Admissions**

*The admissions process will be as follows:*

(1) Application packets will be due the *third Friday in September*. Paper applications will be due in the Department of Materials Science and Engineering main office, 210 Hearst Mining Building.

(2) Selected applicants will be interviewed by the Graduate Admissions and Fellowship Committee in *mid October*.

(3) The Graduate Admissions and Fellowships committee will evaluate applicants on the basis of their application packets and faculty interview reports.

(4) The Graduate Admissions and Fellowships committee will inform successful applicants in November that they are being recommended to the Graduate Division for admission.

(5) Formal admission to the BS/MS program will require application to the Graduate Division for an M.S. degree in Materials Science and Engineering by the advertised deadline in December. Please note: Graduate Division admission is contingent on the student being in good standing (a 3.0 GPA and no disciplinary or conduct issues that may be an obstacle).

*The application packet includes:*†

(1) departmental application form
(2) a statement of purpose
(3) a draft “course of study” plan
(4) transcript with grades through 2nd semester junior year (may be unofficial but the official version will be required when applying to Graduate Division)
(5) one letter of recommendation in a signed and sealed envelope (The recommender should be someone who can attest to the student's suitability for an accelerated MS program)

*INCOMPLETE APPLICATION PACKETS WILL NOT BE CONSIDERED.*

†No GREs are required for this program.
### Application for the 5 Year BS/MS Program
in the Department of Materials Science & Engineering
University of California, Berkeley

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<td>E-mail address</td>
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**Academic Information**

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<th>Major (Circle one)</th>
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<th>MSE/ME</th>
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**Research Information**

| Proposed area of concentration |  |
| Research supervisor (if already identified) |  |
| Undergraduate research or work experience (add extra sheet if necessary) |  |