

The College of Engineering's  
**Technology Entrepreneurship Certificate (TEC)**

The Technology Entrepreneurship Certificate (TEC) was developed to meet the need for a business management curriculum focused on the process of bringing new products to the market place. It was created in conjunction with the Deans of the College of Engineering, the College of Letters and Science, the Donald Bren School of Environmental Science and Management, and the Chair of the Department of Economics. Students from all disciplines at UCSB are encouraged to apply and enroll in the Technology Management Courses and earn a TEC. Successful completion will certify that you have a business education, focused on technology management with applied knowledge in finance, marketing, business plan creation, IP management, client presentations, group work and leadership.

**Requirements for the TEC:**

**A) Curricular Requirements:**

**Complete the following courses in a one-year period with a grade of 'B' or higher.**

1) Technology Business Skills

ENGR 185A/285A – The Art of the CEO: Business Skills for Future Leaders (4 units)

*Open to all upper division and graduate students.*

An introductory business course in strategic thinking, negotiations, marketing, finance and modeling skills which prepare engineering, science and non-technical students for successful entry into business. Course uses case studies, lectures, and computer simulation.

OR

ENGR 191A/291A Professional Seminar: Entrepreneurial Marketing (2 Units)

*Open to all upper division and graduate students.*

Introduces the student to the role of marketing in a total business strategy. The basic objective of this course is to provide students with a broad introduction to marketing concepts, the role of marketing in technology firms, and various factors that influence marketing decision-making.

AND

ENGR 191B/291B Professional Seminar: New Ventures Finance (2 Units)

*Open to all upper division and graduate students.*

Provides the tools necessary for the strategic analysis and understanding of financial information particular to new ventures. Provides insight into how financial information can be used to design optimal financing strategies, prepare valuation models for new ventures, and assist in strategic planning for the venture.

2) Entrepreneurial Courses

ENGR 185B New Venture Creation: Entrepreneurship (4 Units)

*Open to all upper division and graduate students.*

Overview of the new venture creation process. Analysis of new business opportunities, development of new business value propositions, team building, venture financing, new venture planning, managing and protecting intellectual property, business formation, and other topics relevant to the entrepreneurial process.

OR

ENGR 185D/285D Developing New Products for Market Success (4 Units)

*Open to all upper division and graduate students.*

Explores engineering and business topics important to the development of innovative customer-driven engineering products. Design optimization, innovative thinking and the principles and methodologies of product development are examined. Students are taught the tools, techniques and organizational structures that support new product development.

3) Business Planning and Practice Courses –

Additional TMP course (each must be 2 or more units) for a combined “Unit” total of at least 4.

For example, one could take ENGR 185/285C: Business Planning for New Technology Ventures (4 Units), or ENGR 191/291C: Professional Seminar – So You Want to be a Technology Manager? (2 Units) **AND** ENGR 191/291E: Professional Seminar – Project and Operations Management (2 Units).

4) Seminar Lecture Series:

Current topics and issues in Technology Commercialization and Entrepreneurship

ENGR 102/202A, B, C Lecture Series (Fall, Winter, Spring) (1 Unit)

*Open to all upper division and graduate students.*

This one-credit course is a series of weekly lectures given by university faculty and staff, and outside experts in all fields of technology management, entrepreneurship, ethics, and business and social responsibility.

**B) Student Club Membership Requirements**

In order to receive the Technology Entrepreneurship Certificate, the student must demonstrate that he or she has been active in a student association whose mission involves technology, business, or entrepreneurship.

**C) Application**

Students must submit the TEC application to the Technology Management Program Office (Harold Frank Hall, Room 1109) at least one quarter prior to graduation. Application may be found on-line at: [www.tmp.ucsb.edu/curriculum/tec\\_certificate.html](http://www.tmp.ucsb.edu/curriculum/tec_certificate.html).

### Technology Entrepreneurship Certificate Application

Today's Date:		Perm No.:	
Ms./Mr.	First Name:	Middle Initial:	Last Name:
<i>Local Address</i>			
Street		Apt:	
City:	State:	Zip:	
<i>Permanent Address</i>			
Street		Apt:	
City:	State:	Zip:	
Email:	Cell phone:	Home phone:	
Major:	Class Level:		

#### Proposed Schedule for Completion of Courses:

Course	Units	Quarter	Year	For office use: Grades	
				P	NP
ENGR 185A or ENGR 191A and ENGR 191B	4				
ENGR 185B or ENGR 185D	4				
ENGR 185C Or a combination of other TMP courses	4				
ENGR 102A or ENGR 202A	1			P	NP
ENGR 102B or ENGR 202B	1			P	NP
ENGR 102C or ENGR 202C	1			P	NP

Student Signature: \_\_\_\_\_ Date \_\_\_\_\_

Return form to: Technology Management Program Office  
 Harold Frank Hall (Engineering Building), Room 1109  
 University of California, Santa Barbara  
 Santa Barbara, CA 93106-5130

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Certificate Verification: \_\_\_\_\_ Date: \_\_\_\_\_