

Technical Innovation, Design Thinking and the Entrepreneurial Mindset

Minor Advising Form

Although this form is designed for advising purposes, a complete copy must be signed by the program director and provided to Student Records before the degree will be awarded.

Student Name: _____

E-mail address: _____ Expected Graduation Date: _____

Major: _____ Adviser: _____

Coursework toward minor:

| Class | Session (quarter/year) | Grade |
|---|------------------------|-------|
| <u>Product Innovation and Prototyping (5 units):</u> <input type="checkbox"/> Option A: MECH 144/L – Smart Product Design (5) <input type="checkbox"/> Option B: ENGR 121 - BioInnovation I (2) ENGR 122 - BioInnovation II (2) ENGR 2 - Intro to Engineering Design and Prototyping (2) | | |
| <u>Business Fundamentals (4 unit minimum):</u> <input type="checkbox"/> Option A: BUSN70 – Contemporary Business Issues (5) or BUSN170 – Contemporary Business for Non-Majors (5) <input type="checkbox"/> Option B: ENGR173- Intro to Business Fundamentals (1) and 3 additional 1-unit courses from the approved business list: _____ _____ _____ | | |
| <u>Design/Entrepreneurial Thinking Fundamentals (4 unit minimum):</u> <input type="checkbox"/> Option A: MGMT 164 Introduction to Entrepreneurship (5) <input type="checkbox"/> Option B: 4 1-unit courses from the approved design/entrepreneurial thinking list: _____ _____ _____ _____ | | |

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|---|--|--|
| <p><u>Experiential Activity (5 unit minimum):</u></p> <ul style="list-style-type: none"> □ Option A: ENGR 163 – Engineering and the Entrepreneurial Mindset (1) Performed over 3 qtrs in conjunction with an engineering senior capstone project course sequence (6-10) □ Option B: ENGR 163 – Engineering and the Entrepreneurial Mindset (1) Performed over 3 qtrs in conjunction with ENGR 199 – Directed Research (6 units) performed with a hands-on engineering component □ Option C: BUSN 145 – Entrepreneurship Practicum (5 unit option) performed as part of a placement that includes a significant technology focus relating to design/development, and approved by the Minor Program Coordinator | | |
| <p><u>Elective Component:</u> Complete any two of the following program opportunities</p> <ul style="list-style-type: none"> □ Option A: Complete the Design Thinking Pathway with an essay theme that specifically emphasizes a topic relating to developing a deep understanding of customer/market needs and opportunities and capitalizing on this to create value through the design of a technical system □ Option B: Participate in two extra-curricular design challenges approved in advance by the minor program coordinator (challenges may not have been used for credit in any other course). Challenge title/date: _____ _____ □ Option C: Complete an independent study project related to technical entrepreneurship, supervised by a faculty member and approved in advance by the program director □ Option D: Complete an additional 2 units of coursework from approved courses in the Engineering Innovation and Entrepreneurship Program. _____ _____ | | |
| <p>Final Grade Point Average in required courses (must be ≥ 2.0) _____</p> | | |

The requirements for the Design Thinking Minor have been met.

Signature of the Minor Program Coordinator

Date

Course Options for the Minor

Business-related 1-unit courses

- Engr 152 – Regulatory Pathways for Medical Devices and Technologies (1)
- Engr 153 – Risk Management during Medical Device Design and Development (1)
- Engr 164 – Financing New Ventures (1)
- Engr 167 – Go To Market Strategy (1)
- Engr 168 – Legal Considerations for New Ventures (1)
- Engr 173 – I Introduction to Business Fundamentals (1)
- Engr 174 – Financial Statements and Decision Making (1)
- Engr 175 – Business Model and Plan Development (1)
- Engr 176 – Introduction to Technical Marketing (1)
- Engr 178 - Intellectual Property for Engineers (1)

Design/Entrepreneurial Thinking 1-unit courses

- Engr 151 – Design Controls for the Medical Device Industry (1)
- Engr 154 – Usability Engineering for Medical Devices (1)
- Engr 156 – Conceptualizing Innovations in Healthcare (1)
- Engr 165 – Creativity: The Art of Innovation (1)
- Engr 166 – Introduction to Design Thinking (1)
- Engr 169 – Social Entrepreneurship (1)
- Engr 171A – Opportunity Recognition I (1)
- Engr 171B – Opportunity Recognition II (1)
- Engr 172A – Applied Entrepreneurship I (1)
- Engr 172B – Applied Entrepreneurship II (1)
- Engr 177 – Customer Ethnography (1)
- Engr 179 – Corporate Intrapreneurship (1)

Additional courses in the Engineering Innovation and Entrepreneurship Program:

- Engr 19 – Ethics in Technology (4)
- Engr 110 – Community-based Design (2)
- Engr 140 – Diversity (4)
- Engr 161 – Globalization and the Cultures of Innovation and Entrepreneurship (4)