Requirements for a Concentration in Technology Innovation

Students planning to pursue a concentration in Technology Innovation should declare their intent as early as possible to facilitate course planning, and preferably no later than May 1 of the junior year.

The concentration in Technology Innovation can be earned by any student within the College of Engineering by fulfilling the following requirements.

Concentration requirements:

1. A sequence of four courses (16 credits) consisting of two required courses (8 credits) listed below and two courses (8 credits) chosen from the list of additional courses.

   **Required courses:**
   - QST SI 480 – Business of Technology Innovation - 4 cr (offered both semesters, but recommended that it be taken in junior year)
   - QST SI 482 – Strategy for Technology Based Firms - 4 cr (pre-requisite: SMG SI 480)

   **Additional Courses: (Choose two courses – 8 credits)**
   - ENG BE 428 – Device and Diagnostic Design – 4 credits
   - ENG EK 280 – Technology, Society and Policy – 4 credits
   - ENG EK 409 – Engineering Economy – 4 credits
   - ENG ME 502 ** – Invention: Technology Creation, Protection, and Commercialization – 4 credits
   - ENG ME 517 – Product Development – 4 credits
   - ENG ME 525 – Technology Ventures – 4 credits
   - ENG ME 583 – Product Management – 4 credits
   - QST SI 444 * – Entrepreneurship – 4 credits (F/S)
   - QST SI 445 * – Managing the Growing Enterprise – 4 credits (F/S)
   - QST SI 451 * – Organizing for Design & Innovation – 4 credits (S)
   - QST SI 453 * – Strategies for Environmental Sustainability – 4 credits (S)
   - QST SI 464 ** - Intellectual Property Strategies – 4 credits (pre-requisite: SMG SI 422 or SMG SI 480)
   - QST SI 471 * – International Entrepreneurship – 4 credits (S)
   - QST SI 475 - Global Management Experience – 4 credits

   *Students should check availability of courses each semester; not all courses are offered every semester.*

2. Deviations from department degree requirements must be approved by faculty advisor and department associate chairs prior to approval for TIC (i.e., a petition for a TIC course to satisfy a technical requirement).

3. Approval of alternate courses will be considered in the final semester if no alternates exist to courses approved in the TIC plan.

4. **Experiential Component Requirement:** Completion of a well-defined experiential component in the technology innovation area. A laboratory research, industrial internship, senior design project or directed study can satisfy this requirement. This requirement must be approved by the Concentration Coordinator and the Experiential Component Approval form must be submitted to the Undergraduate Records Office. For a list of other approved programs, see the Experiential Component Approval form or go to the link below.

   **Note:** The Experiential Component requires approval prior to doing the experience.

After its completion, a written summary of the experiential component must also be submitted for approval (see Experiential Component Approval form and/or college Technology Innovation concentration website: [http://www.bu.edu/eng/programs/technology-concentration/](http://www.bu.edu/eng/programs/technology-concentration/) for more information).

**Notes:**

* QST SI 444, 445, 451, 453 and 471 will satisfy the General Education Elective requirement. They cannot be used to satisfy a Technical/Advanced/Professional Elective.

** Students cannot receive credit for both ENG ME 502 and QST SI 464.
TIC Experiential Component Expectations

Senior Design requirements

A. Do the background work leading to an investor concept and marketing pitch for the product or technology (various, based on learning in SI480/SI482 and other TIC courses). This would be analogous to the output from a ‘start up weekend’ that would to this kind of pitch.
B. Produce the pitch as PPT in draft form, due before December 10, at the end of the fall semester (senior design/fall semester), or Feb. 1, for ME students.
C. Integrate the pitch into Sr. Design materials for the group effort (reports and presentation).
D. Produce a final, revised PPT at the end of the spring semester, no later than April 15 based on feedback from the draft, and updated input throughout the spring semester.
E. Integrate a subset slides into the Senior Design presentation in the final publically presented work.

Internships or research lab requirements

A. Produce a written summary of the internship or research experience as it relates to the TIC. Describe what elements of the TIC were applied and how, referencing topics from SI 480 and/or SI 482 (1p).
B. Develop slide deck (PowerPoint or equivalent) for an investor concept and marketing pitch for the product or technology of your internship or lab experience. The slide deck should show artifacts of the experience including detail in one or more dimensions of the business problem (marketing analysis or plan, customer survey information, customer requirements analysis, sales pitch, etc.).
C. Materials are to be provided within 2 weeks of the conclusion of the internship or research experience.

TISP

A. Produce a written summary of the internship or research experience as it relates to the TIC. Describe what elements of the TIC were applied and how, referencing topics from SI 480 and/or SI 482 (1p).

Start up weekend/hackathon etc.

A. Participate in the event.
B. Capture artifacts from the event (PPT, photos, sketches, mockups, etc.) and organize these into (a) an online portfolio, or (b) a PPT slide deck.
C. Materials are to be provided within 2 weeks of the conclusion of the event.