

**W Booth School of Engineering Practice and Technology
(SEPT)**

Technical Mentor Toolkit

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Technical Mentorship Program Overview

The SEPT Technical Mentorship Program is a face-to-face mentoring program whereby technical mentors and entrepreneurs are matched to establish an ongoing technical mentor-mentee relationship throughout the duration of the Master of Engineering Entrepreneurship and Innovation (MEEI) / Master of Technology Entrepreneurship and Innovation (MTEI) Enterprise Project Development.

The Program revolves around four guiding principles: Rational Matching, Quality Relationships, a Sense of Belonging and Ownership for both entrepreneurs and technical mentors, aimed at ultimately establishing a successful relationship that increases the technical success rate for the entrepreneur's enterprise project.

Technical mentors are made available to SEPT MEEI/MTEI students only and are a mandatory component of the SEPT MEEI/MTEI enterprise project development.

Technical Mentorship - The Big Picture

Mentoring is essentially about helping people to assume more responsibility for more effective career and project management. It is a relationship designed to build confidence and help a mentee to take increasing initiative for personal development. Mentoring differs from other forms of help, such as instructing, training, or tutoring. It helps both partners learn, enjoy the learning and apply the learning.

Mentoring is:

- a balanced partnership requiring equal commitment and investment from both partners
- a career accelerator for those who have already demonstrated the ability to invest in personal achievement
- a process to encourage mutual respect for the perspective of others

Mentoring is not:

- a one-way coaching initiative
- a process to encourage unmotivated people to take responsibility for self-directed career management
- a means of recruiting graduate students

Mentoring requires commitment from both partners. While it is an Informal alliance, it is nevertheless, a professional undertaking.

Assumptions of a Technical Mentor-Mentee Relationship

Deliberate learning is the cornerstone. The technical mentor's job is to promote intentional learning, which includes capacity building through methods such as instructing, coaching, providing experiences, modeling and advising.

Both failure and success are powerful teachers. The technical mentors, as leaders of a learning experience, certainly need to share their "how to do it so it comes out right" stories. They also need to share their experiences of failure, i.e., "how I did it wrong". Both types of stories are powerful lessons that provide valuable opportunities for analyzing individual and organizational realities.

Technical leaders need to tell their stories. Personal scenarios, anecdotes and case examples, because they offer valuable, often unforgettable insight, must be shared. Mentors who can talk about themselves and their experiences establish a rapport that makes them "learning leaders."

Development matures over time. Mentoring - when it works - taps into continuous teaming that is not an event, or even a string of discrete events. Rather, it is the synthesis of ongoing event, experiences, observation, studies, and thoughtful analyses.

Mentoring is a joint venture. Successful mentoring means sharing responsibility for learning, regardless of the facilities, the subject matter, the timing, and all other variables.

Successful technical mentoring begins with setting a contract for learning around which the mentor and the mentee are aligned.

SEPT Technical Mentor Requirements

- Technical expertise & capabilities in the technical subject area of the students Enterprise Project,
- Effective communicator and advisor,
- Available for in person meetings with entrepreneur contributing at least 2 hours of time monthly
- Available to serve on the entrepreneur advisory board and three (3) enterprise project tollgate reviews
- Eligible to act, and willing to serve as principal investigator for project funding proposals
- Capable of reviewing and assisting in the selection of appropriate advanced
- technical courses
- Willingness to permit, under the right arrangement, the use of his lab capabilities for the mentee's prototype activities

Roles and Responsibilities

I agree to participate as a technical mentor to SEPT MEEI/MTEI students. I understand that the mentor's advice or counsel is part of a coaching relationship and I pledge to use my best judgment independent of personal bias in my role as a SEPT technical mentor. I understand my protégé remains fully and solely responsible for any and all personal, technical and business decisions during his/her participation in MEEI/MTEI Enterprise Project Development program and my protégé shall not create any fiduciary or other obligation with respect to any outcomes of the advice or assistance provided by me or by other SEPT associates. I agree to support the enterprise project of my protégé by serving as the principal investigator on funding proposals and by reviewing and critiquing these proposals. I agree that I will provide technical advice and direction on the selection of Advanced Engineering courses that are relevant to the technical subject matter of my protégé's Enterprise project.

Confidentiality

I agree that I will not disclose the ideas, technical or business information or personal affairs of my protégé outside of the organization without my protégé's explicit consent. I agree that I will not publicly disclose technical information relevant to my protégé's enterprise project without consideration for the protection of intellectual property. In the case where intellectual property is not protected by patent application, I will agree to support such application where deemed necessary to the success of the project and will refrain from publication of such information until intellectual property protection is in place. Further, I agree I will discuss the personal and business affairs of my protégé only with those people within SEPT who have a reasonable need to the information in order to assist in its deliberations. I understand that discussions with SEPT will remain confidential, and that technical, marketing and business information received from the student will be documented and confidential records will be maintained. I further agree to take due care to safeguard all plans or other material entrusted to me by my protégé or any SEPT representative.

Conflict of Interest

I will disclose all financial investment in the business of my protégé. I will immediately report any real, potential, or perceived conflict of interest, personal interest, or competitive position of mentors or others involved with SEPT to a SEPT staff member such as the director or enterprise development manager.

Time Commitment

I will be available for one to two hours of dedicated time with my protégé each month to provide support consistent with the agreement we develop.

Reporting

In consultation with my protégé, I will report on the technical progress of the project to SEPT as requested by the Director. I further agree to provide program feedback through a survey that may occasionally be requested by SEPT.

Relationship Management

I agree to attempt to work through any relationship conflicts that may arise with my protégé. If my protégé and I are unable to design or maintain a constructive and beneficial working relationship within the context of the technical mentor program, I will advise the SEPT Director.

Code of Conduct

A technical mentor relationship is a unique partnership that requires the highest standards of frankness and openness. Therefore, the mentor and the mentee commit to the following Code of Conduct:

Technical mentorship communication is based on mutual trust. All discussions and other communications will be conducted in the utmost spirit of integrity and ethics. The technical mentor will approach the mentorship with an open mind. The mentor will provide frank feedback with no intent to insult or harm the mentee. The technical mentor will challenge the mentee to exceed his or her expectations and encourage him or her to grow personally and professionally.

The mentee will be as open as he or she feels able. The mentee commits to providing an honest presentation of technical issues and being forthcoming in discussions and answering questions. The mentee understands that the primary means of learning is from feedback provided by the technical mentor. The mentee trusts that the mentor is providing his or her opinions, observations and questions in the spirit of constructive critique and means no harm or insult.

Non-Disclosure Agreement

In wake of above, the following NDA needs to be signed:

Non-Disclosure Agreement

Between

Name:

Address:

Referred henceforth as “Mentor”

AND

Name: W Booth School of Engineering Practice and Technology,

Address: McMaster University, ETB 5th Floor, 1280 Main Street West, Hamilton, Ontario L8S 0A3,
Canada

Referred henceforth as “SEPT”

Acknowledgement

- The Mentor acknowledges, by signing below, that during the Mentor’s engagement with SEPT, the Mentor may become privy to certain projects (referred henceforth as: Projects) or parts of Projects created by students undertaking the SEPT programs (referred henceforth as: Program) or by members of staff supporting the Students (which includes other mentors) or by third party collaborators with SEPT (also referred henceforth as: Projects) which may include but shall not be limited to ideas, inventions, plans and concepts (referred henceforth as: Ideas) for which patent or other intellectual property and legal protection may be, or is being sought.
- The Mentor also acknowledges that the Ideas which form part of the Projects, together with any other information, disclosed by SEPT or by any other Students or members of staff or any third party collaborator in relation to the Projects or the Ideas to which the Mentor may become privy, constitute confidential information that may be of commercial value.

Clauses

1. In consideration of SEPT, Students, members of staff or third party collaborators disclosing any such information to the Mentor and administering the Course and subject to clauses 2 and 3 below, the Mentor agrees:
 - 1.1. To maintain as confidential, the Projects and the Ideas and any and all information that may be imparted to the Mentor obtained during the course of the Mentor’s engagement with SEPT or which may come into the Mentor’s possession whether it is disclosed orally, in writing, machine readable or in any other form (referred henceforth as: Confidential Information),

- 1.2. Not to use or copy the Confidential Information for any purpose other than in the normal course of the Mentor's engagement with SEPT and in particular not to make any commercial use of it for the Mentor's own benefit or for the benefit of any third party whether commercial or otherwise, and
- 1.3. Not to dispose of or publish (whether orally or in writing) any Confidential Information in any circumstances.
2. The undertaking in clause 1 shall not apply to information:
 - 2.1. In the public domain at the time of disclosure, or subsequently comes within the public domain without any fault on the Mentor's part,
 - 2.2. Known to the Mentor at the time of disclosure, provided there is adequate documentation to confirm such prior knowledge,
 - 2.3. Approved for release by written approval of SEPT,
 - 2.4. Disclosed to third parties by SEPT without similar restrictions on such third parties, or
 - 2.5. Required to be disclosed by government agency or law, provided that SEPT is provided with prior written notice of any such disclosure.
3. The obligations set out in clause 1, for the avoidance of doubt; do not prevent the Mentor from using, copying, disposing of or publishing in any way the Confidential Information upon the written instructions of SEPT.
4. The Mentor acknowledges that the obligations set out in clause 1 shall remain in force in respect of each piece of Confidential Information for period of five (5) years from the date on which such Confidential Information is disclosed to the Mentor.
5. If the Mentor ceases to be engaged with SEPT for any reason whatsoever, the Mentor agrees to return immediately upon request to SEPT any and all materials in the Mentor's possession that contain any Confidential Information.
6. The Mentor acknowledges that the Mentor is giving this undertaking to SEPT for its own benefit and for the benefit of its existing and future collaborators and their respective members of staff, students and other agents. Accordingly, the Mentor agrees that SEPT may assign the whole or any part of its rights to enforce this undertaking and its rights to claim damages as a result of any such entities or individuals suffering loss as a result of any breach of this undertaking.
7. This undertaking shall be governed, in all respects, by the laws of the province of Ontario, Canada.

Signatures

Mentor

SEPT

Sign:

Sign:

Name:

Name:



Date:

Date:

Appendix-I: Characteristics of a Good Mentor

The qualities that are essential in an effective mentor include:

A DESIRE TO HELP

- Individuals who are interested in and willing to help others

HAVE HAD POSITIVE EXPERIENCES

- Individuals who have had positive formal or informal experiences with a mentor tend to be good mentors themselves

GOOD REPUTATION FOR DEVELOPING OTHERS

- Experienced people who have a good reputation for helping others develop their skills

TIME & ENERGY

- People who have the time and mental energy to devote to the relationship

UP-TO-DATE KNOWLEDGE

- Individuals who have maintained current, up-to-date technological & Business knowledge and/or skills

LEARNING ATTITUDE

- Individuals who are still willing and able to learn and who see the potential benefits of a mentoring relationship

DEMONSTRATED EFFECTIVE MANAGERIAL (MENTORING) SKILLS

- Individuals who have demonstrated effective coaching, counseling, facilitating and networking skills

Appendix-II: Technical Mentorship Program Evaluation Guide

Following is a suggested guide that may be used by the Technical Mentor and the Mentee.

Technical Mentor's Name:

Name of Student (Mentee):

List Personal Observations & Learning

List Personal learning discovered during the mentorship

List Practical tips & suggestions from your mentor that fostered personal & professional development

List New/upgraded skills that developed as a result of the mentorship

How many times did you meet with your mentor? Was this adequate? Why or why not?

Overall, what was your impression of the mentorship partnership? What difficulties, if any, did you encounter in the new partnership?

How did you overcome challenges or roadblocks?

What would you have done differently to be a more effective mentee?

Would you recommend that your mentor continue in next year's mentorship program? If not, why not?

What suggestions can you provide to improve the quality of the program?