SBME PROPELS

Professional Development Series

Built in partnership with entrepreneurship@UBC, SBME PROPELS is an extracurricular series of workshops, seminars and panels for trainees and faculty at UBC’s School of Biomedical Engineering (UBC). The virtual series will run throughout the 2021-2022 academic year, and will include 4 streams, offered in parallel from September 2021 to April 2022:

<table>
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<th>Stream</th>
<th>Goal is to build fluency in...</th>
<th>Main target audience (SBME)</th>
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<td>Research Partnerships</td>
<td>The benefits, types and processes of research partnerships, and related supports available within UBC</td>
<td>All faculty and students</td>
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<tr>
<td>Translating Your Innovation</td>
<td>Knowledge translation and commercialization of research innovations</td>
<td>All faculty and students</td>
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<td>BME Career Pathing &amp; Practical Skills for Trainees</td>
<td>Career pathing and essential professional skills</td>
<td>All students and postdoctoral fellows</td>
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<td>Leadership: PIs as CEOs</td>
<td>Effective leadership of a research group and program</td>
<td>Early-career researchers</td>
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Outline: The following pages present an outline of our vision for the topics and content for each of the four streams.

Format: Individual sessions will take place at 12-1pm PT (lunch-and-learns), virtually via Zoom. We look forward to working with our partners, speakers and panelists to define the format of each session (seminar, workshop, panel discussion).

Audience: The series, as well as individual sessions, will be open to the entire SBME community.

Contact: Raquel De Souza, SBME Partnerships Manager – raquel.desouza@ubc.ca
Stream 1: Research Partnerships

1. Why Partnered Research?
   Topics: Introduction to series; value of external partners to research; value to partners; overview of UBC’s resources to support partnered research

2. Identifying, Approaching, and Securing a Partner
   Topics: Types of external partners (industry, local & international, clinical, not-for-profit, communities); outreach strategies; identifying potential synergies and challenges researchers can address; crafting a value proposition and positioning the win-win

3. UBC’s Policies and Procedures
   Topics: UBC’s research and inventions policies; conducting intellectual property discussions; UBC’s research agreements process for partnered research project; understanding your collaborative research agreement; managing a collaboration with a UBC spin-off company

4. Partnership Funding Opportunities
   Topics: Making a case to your industry partner (SR&ED credits, government matching funds, comparisons to in-house research costs); leveraging government funding to match partner investments (Innovate BC, CDTS, NSERC, MITACS, MSFHR, NRC IRAP); funding projects with international partners; effective grantsmanship for partnered projects
Stream 2: Translating Your Innovation

1. Getting Your Ideas into Practice
   Topics: Technology transfer, company creation, knowledge translation/exchange; panel of researchers who have taken each path

2. Commercialization Considerations for Early-stage Academic Project Design
   Topics: Engaging commercialization experts early in the research process; protecting your innovation & UBC’s disclosure process; creating a successful start-up from a research program

3. Success Starts with the End in Mind: Human-centered Design, Clinical Applications, and Target Market Considerations
   Topics: Case study of integrating engineering and medicine throughout the research process; clinical needs and applications of technologies in medicine; “Where to play” process (Mark Gruber) and the target product profile

4. Company Creation 101
   Topics: Identifying the problem you seek to address; competitive analysis and market research; business models; risk assessment

5. Pitching 101
   Topics: Pitching formula; what not to do; 15min panel, 45min workshop (including 30-60s presentations/pitches by attendees)

6. Investing in Innovations
   Topics: Government funds, Angel investors, VC, corporate partnering/investing; incubators and accelerators

7. Understanding BC’s Healthcare Business Ecosystem
   Topics: Inventors, supporters, funders, partners, clinical implementers/receptors; e@UBC’s ecosystem mapping exercises

8. BME University Spin-off Companies
   Topics: Panel discussion with founders
Stream 3: BME Career Pathing and Practical Skills for Trainees

**Career Pathing**

1. Career Paths in Biomedical Engineering
   Topics: Career paths: clinical, research, industry, VC, not-for-profit; panel with Canadian BME program graduates who have followed different paths

2. Setting Yourself Up for Success: Extracurriculars and Trainee Jobs
   Topics: Making extracurriculars count; co-op and internships; summer research programs

3. Smart Networking, negotiating, and conflict resolution
   Topics: Effective networking practices and tools; fostering your professional network; negotiation skills; conflict resolution

4. Landing Your First BME Job
   Topics: Marketing yourself effectively as a biomedical engineer; creating a strong application: CV and cover letter basics; interview prep and best practices

5. Embarking on Your Career
   Topics: Mentors and mentees; continued professional development

**Practical Skills**

6. Time & Project Management Essentials
   Topics: Overcoming overwhelm and procrastination; project management best practices in the private sector; taking control of your week; when making plans doesn't materialize

7. Getting the Most out of Your Grad School Experience
   Topics: “Design your life” principles

8. Wellbeing in Intellectually-Demanding Careers
   Topics: TBD

9. Effective Lay Scientific Writing and Presentations
   Topics: The “why” and the “how”; hands-on workshop and pre-work.
**Stream 4: Leadership: PIs as CEOs**

Complementary component: Leadership Coaching Services, UBC

1. **What is Leadership?**
   Topics: Leading vs. managing a team; leadership best practices

2. **Effective PI-Trainee Relationships**
   Topics: What is excellent graduate supervision? Building a strong student supervisor relationship

3. **Creating a Culture**
   Topics: Crafting and sharing a vision

4. **Time Management as a Leader**
   Topics: Essentials of productive teams; project management basics; prioritizing and time management; running effective lab meetings

5. **Overcoming Impostor Syndrome and Perfectionism**
   Topics: Overcoming impostor syndrome and perfectionism

6. **Nurturing the Next Generation**
   Topics: Supporting diverse career aspirations and paths; encouraging professional development and extracurriculars; leveraging your network to support your team

7. **Enriching Your Lab’s Resources**
   Topics: Participating in fundraising for your lab