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>
<thead>
<tr>
<th>Stream</th>
<th>Goal is to build fluency in...</th>
<th>Main target audience (SBME)</th>
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<tbody>
<tr>
<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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<tr>
<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 (in red font) and content (in dark font) 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 well advertised to the SBME community, along with registration instructions. Our community consists of 412 students, 35 core faculty members (10 of which are early-career researchers), as well as 42 associate and 3 affiliate faculty members.

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

1. Why Partnered Research?
   Timing: September & October 2021 (2 sessions)
   - Introduction to series
   - Value of external partners to research
   - Value to external partners
   - Overview of UBC’s resources to support partnered research
   - Roundtable discussion with researcher-partner pairs

2. Identifying, Approaching, and Securing a Partner
   Timing: November & December 2021 (2 sessions)
   - Types of external partners (industry, local & international, clinical, not-for-profit, communities)
   - Outreach strategies
   - Crafting a value proposition and positioning the win-win
   - Identifying potential synergies and challenges researchers can address
   - Building a strong, interdisciplinary research team

3. UBC’s Policies and Procedures
   Timing: January 2022 (1 session)
   - UBC’s research and inventions policies
   - Conducting intellectual property discussions
   - UBC’s research agreements process for partnered research projects
   - Understanding your collaborative research agreement
   - Managing a collaboration with a UBC spin-off company

4. Partnership Funding Opportunities
   Timing: February 2022 (1 session)
   - 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
   - Case study: A researcher’s journey from partnership formation through to funding and beyond
**Stream 2: Translating Your Innovation**

1. **Getting Your Ideas into Practice**  
   Timing: September & October 2021 (2 sessions)  
   - Technology transfer, company creation, knowledge translation/exchange  
   - Panel of researchers who have taken each path

2. **Commercialization Considerations for Early-stage Academic Project Design**  
   Timing: November 2021 (1 session)  
   - 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**  
   Timing: December 2021 & January 2022 (2 sessions)  
   - Clinical needs and applications of technologies in medicine; the target product profile  
   - Clinical trial design considerations for the preclinical stage  
   - “Where to play” process (Mark Gruber)

4. **Company Creation 101**  
   Timing: February 2022 (1 session)  
   - Identifying the problem you seek to address  
   - Competitive analysis and market research  
   - Business models  
   - Risk assessment  
   - Pitching 101

5. **Investing in Innovations**  
   Timing: March 2022 (1 session)  
   - Government funds, Angel investors, VC, corporate partnering/investing  
   - Incubators and accelerators

6. **Understanding BC’s Healthcare Business Ecosystem**  
   Timing: April 2022 (1 session)  
   - Inventors, supporters, funders, partners, clinical implementers/receptors  
   - entrepreneurship@UBC’s ecosystem mapping exercises

7. **BME University Spin-off Companies**  
   Timing: May 2022 (1 session)  
   - Panel discussion with founders
Stream 3: BME Career Pathing and Practical Skills for Trainees

**Career Pathing**

1. **Career Paths in Biomedical Engineering**
   Timing: October & November 2021 (2 sessions)
   - Career paths: clinical, research, industry, VC, not-for-profit
   - Panel with Canadian BME program graduates who have followed different career paths

2. **Setting Yourself Up for Success: Extracurriculars and Trainee Jobs**
   Timing: December 2021 (1 session)
   - Making extracurriculars count
   - Co-op and internships
   - Summer research programs

3. **Smart Networking**
   Timing: January 2022 (1 session)
   - Effective networking practices and tools
   - Fostering and maintaining your professional network
   - LinkedIn basics & other platforms

4. **Landing Your First BME Job**
   Timing: February and March 2022 (2 sessions)
   - Marketing yourself effectively as a biomedical engineer
   - Creating a strong application: CV and cover letter basics
   - Interview preparation and best practices
   - Negotiation skills

5. **Embarking on Your Career**
   Timing: April 2022 (1 session)
   - Mentors and mentees
   - Continued professional development

**Practical Skills**

6. **Time & Project Management Essentials**
   Timing: September & October 2021 (2 sessions)
   - Overcoming overwhelm, perfectionism, and procrastination
   - Project management practices in the private sector

7. **Effective Lay Scientific Writing and Presentations**
   Timing: November & December 2021 (2 sessions)
Stream 4: Leadership: PIs as CEOs

1. What is leadership?
   Timing: September 2021 (1 session)
   • Leading vs. managing a team
   • Leadership best practices

2. Effective PI-trainee relationships
   Timing: September & October 2021 (2 sessions)
   • Fostering a positive and effective PI-trainee relationship
   • Establishing authority while being supportive
   • Giving and receiving feedback
   • Championing difficult conversations and conflict resolution
   • Running effective lab meetings

3. Creating a culture
   Timing: December 2021 (1 session)
   • Crafting and sharing a vision
   • Implementing REDI principles in your team and culture
   • Trainee and staff recruitment best practices

4. Time Management as a Leader
   Timing: January 2022 (1 session)
   • Essentials of productive teams
   • Project management basics
   • Prioritizing and time management

5. Mental Health Support for Yourself and Your Team
   Timing: February 2022 (1 session)
   • UBC mental health resources and support
   • Overcoming impostor syndrome and perfectionism

6. Nurturing the Next Generation
   Timing: March 2022 (1 session)
   • Supporting diverse career aspirations and paths
   • Encouraging professional development and extracurriculars
   • Leveraging your network to support your team

7. Enriching Your Lab’s Resources
   Timing: April 2022 (1 session)
   • Participating in fundraising for your lab