

2020-2021

*Regnier Institute for Entrepreneurship  
and  
Innovation Kansas City Region*

**Bio-Medical and Healthcare  
Technology Entrepreneurship Certificate Program**

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UMKC

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## Bio-Medical and Healthcare Technology Entrepreneurship Certificate Program

### Purposes of the Program/Intended Beneficiaries:

The Bio-Medical/Healthcare Technology Entrepreneurship Certificate Program (the “Program”) described in this syllabus/brochure is designed to provide a solid grounding in process of translating bio-medical and healthcare innovations into entrepreneurial ventures that can expeditiously bring the benefits of such innovations to society. It is designed to provide such education to clinical and other researchers whether or not they are currently working on a project with the intention of forming a company or otherwise commercializing their innovation. The Program curriculum has been designed with input from researchers, entrepreneurs, and entrepreneurship educator. It is structured to deliver to enrollees both (i) detailed examinations of key components of the entrepreneurial process through instruction and interactive discussion with experienced educators (ii) the perspectives of bio-med/healthcare entrepreneurs and opportunities to engage with them in discussions of the lessons they have learned through their endeavors.

This Program differs from initiatives that require that researchers enter the initiative with a refined innovation/prototype and seek help in developing a business model, business plan and/or financing plan specific to that project. This Program is meant to help researchers recognize the potential to get their innovations to society by engaging directly or indirectly in the startup venture process, and prepare them for the realities of such process to help them decide, as they develop innovations, whether to engage with that process actively.

### Overview of Program Structure:

The UMKC Regnier Institute for Entrepreneurship and Innovation is offering this Program. The Program consists of eight (8) two-hour workshop modules and seven (7) one-hour videos. The videos relate to Modules 1 through 7 in the Program. Enrollees in the Program (“Participants”) must review the video for each of those Modules in advance of the Module workshop and be prepared to discuss material from the video at the workshop. Module 8 involves presentations by Participants to a panel of evaluators (consisting of some of the Program instructors and one or more entrepreneurs or entrepreneurship facilitators) who will provide evaluation and feedback. The content and scheduling of each of the eight Modules are described below.

The first seven workshops will be interactive sessions among the participants, qualified instructors on subjects of technology entrepreneurship and commercialization, and experienced bio-medical/healthcare innovators and entrepreneurs. Module 8 will involve approximately 15-minute presentations of a final deliverable by the Participants in the Program; Participants will

be given the opportunity to do a dry run of their presentation with a mentor in advance of their presentation to the evaluators. The Program will coordinate with each Participant to set the date of their final deliverable presentation, which will be in April or May 2019 (currently the dates of April 25, May 9 and May 23 are being held for this purpose).

The in-person components of Modules 1 through 7 will be held from 9:00-11:00AM on one Thursday per month from July 30, 2020 through April 22, 2021, at a room to be determined at St. Luke's Hospital, 4401 Wornall Road, Kansas City, MO 64111, or possibly remotely by Zoom, etc. Enrollment is open to bio-med/health care researchers/professionals, up to a maximum enrollment of 20 Participants.

### Enrollment and other information:

- The registration fee for this Certificate Program is \$1,000 per enrollee.
- Upon successful completion of the Program the enrollee will receive a certificate of completion from the UMKC Regnier Institute for Entrepreneurship and Innovation and, if requested, a letter will be sent to an appropriate official at the enrollee's institution.

Anyone interested in more information about this Certificate Program or enrollment mechanics should contact Tony Mendes, at the UMKC Regnier Institute for Entrepreneurship and Innovation by email at [mendesa@umkc.edu](mailto:mendesa@umkc.edu) or phone at [816.235.2327](tel:816.235.2327)

### Schedule and Description of Modules:

**NOTE:** MANY, BUT NOT ALL OF THE INSTRUCTORS AND GUEST ENTREPRENEURS LISTED BELOW HAVE BEEN CONFIRMED AS PARTICIPATING. THIS PROGRAM SCHEDULE WILL BE UPDATED OTHERS ARE CONFIRMED.

### MODULE 1: Introduction to Technology Entrepreneurship and the Entrepreneurial Mindset (July 30, 2020)

On-Line Video Presenter:

- **Nathalie Duval-Couetil**, Director of the Certificate in Entrepreneurship and Innovation Program, Assoc. Director of the Burton D. Morgan Center for Entrepreneurship, and an Assoc. Professor in the Department of Technology Leadership and Innovation at Purdue University [https://engineering.purdue.edu/ENE/People/profile?resource\\_id=67709](https://engineering.purdue.edu/ENE/People/profile?resource_id=67709)

On-Site Lead Instructor(s):

- Bryan Boots, Assistant Director, Entrepreneurship Scholars Program Coordinator, and Entrepreneurship Instructor, UMKC/Regnier Institute for Entrepreneurship & Innovation [http://www.entrepreneurship.bloch.umkc.edu/about/institute\\_team.asp](http://www.entrepreneurship.bloch.umkc.edu/about/institute_team.asp)

Guest Entrepreneur:

- Lisa Stenho-Bittel, PhD. Founder Likarda, LLC <https://www.linkedin.com/in/lisa-stehno-bittel-091a0360/>

This module is the first offered in the series of eight modules that are required for completion of the Technology Entrepreneurship Certificate. It covers the aspects of the entrepreneurial mindset, which refers to a specific state of mind that orientates human conduct towards entrepreneurial activities and outcomes.

## OBJECTIVES:

The goals of this module are for Participants to understand and reflect on the “entrepreneurial mindset”. One (of many) summaries of observations on this subject describes attributes of entrepreneurs in the following terms which will be explored by instructors and guest entrepreneurs during the course of this initial program module:

Research on the psychology of entrepreneurs has shown that there is no single psychological typology (set of characteristics) that suggests an entrepreneur’s success is guaranteed. From my experience, I would like to highlight the following six characteristics out of the many shared by successful entrepreneurs:

**Perseverance:** The ability to withstand repeated rejection and disappointment is an essential part of an entrepreneur’s makeup. Successful entrepreneurs are able to draw lessons from rejection, as well as prevent it from damaging their self-esteem. Essentially, you must be able to deflect the rejection away from yourself and use it as a spur to fix flaws in your business ideas.

**Flexibility:** Entrepreneurship is a tough space to play in. Unexpected challenges and problems appear constantly. You must be flexible enough in your thinking to roll with the punches, solve problems as soon as they crop up, and recover quickly from setbacks.

**High internal locus of control:** Successful entrepreneurs have faith in their ability to determine their own success. They see that their own actions, decisions, and responses are what will make or break them – not what the outside world throws at them. This means that you need to take responsibility for doing the things that need to be done.

**Learning and iteration:** When a problem occurs, a successful entrepreneur sees it as a learning opportunity. The lessons an entrepreneur takes from any given situation are then used in successive iterations of the entrepreneur’s ideas to develop and refine them.

**Curiosity:** A wide-ranging curiosity about how the world works and where things tie together is extremely common among successful entrepreneurs. Always keep your mind active – this will strengthen your ability to see things from different angles and think laterally.

**Optimism:** Despite all the difficulties inherent in the entrepreneurial lifestyle, successful entrepreneurs maintain an optimistic view of life and the world. Being optimistic about a situation could mean the difference between seeing it as an unsolvable problem or an opportunity to be explored.

## MODULE 2: Creativity/Ideation/Innovation (August 27, 2020)

This workshop on the creative generation of innovation and entrepreneurial opportunities boosts the work of bio-medical university faculty and hospital physicians who seek to foster impactful change through science and/or technology-based entrepreneurial activities.

### OBJECTIVES:

The goals of this second module are for Participants to be exposed to examples of and understand:

- Developing an idea
- Evaluating an idea
- The components of creativity
- The concept of innovation

On-Line Video Presenter:

- **Alex Bruton**, Founder and President of The Innographer  
<https://theinnographer.com/about>

On-Site Lead Instructor:

- **Philip Gonsler**, Asst. Teaching Professor and Asst. Director of Mentor Programs, UMKC/Regnier Institute for Entrepreneurship & Innovation  
[http://www.entrepreneurship.bloch.umkc.edu/about/institute\\_team.asp](http://www.entrepreneurship.bloch.umkc.edu/about/institute_team.asp)

Guest Entrepreneur:

- **Tom Krol**, Chief Development Officer at Novadiol Inc.  
<https://www.linkedin.com/in/krolthomas1/>

## MODULE 3: Intellectual Property Strategies (September 24, 2018)

This third module in the program covers aspects of various types of intellectual property that are relevant to the development of bio-medical and healthcare innovations.

### OBJECTIVES:

The goals of this module are for Participants to understand and be able to identify and be prepared to work with:

- The basic definitions of various kinds of intellectual property (IP), including patent, copyright, trade secrets, trademarks, service marks, trade names;
- The importance of anticipating the creation of IP and taking steps to identify IP and to confirm who owns it and who can use it (including assigned, retained, exclusive and non-exclusive use rights);
- The need to avoid disclosures which could preclude or limit the ability to obtain protection of IP;
- Various considerations and cost/benefit analyses in developing strategic plans to protect IP, establish rights in it, and enforce such rights (in U.S. and internationally), considered in the context of the overall business plan for a venture;
- Avoidance of infringement of the IP rights of others; and

- Key aspects of negotiating license agreements (from both the licensor and licensee perspectives).

On-Line Video Presenter:

- **Megan Carpenter**, Director of the Center for Law and Intellectual Property (CLIP), and Faculty Director of the Entrepreneurship Law Clinic & IP and Technology Law Clinic, at Texas A&M University School of (and former chair of USASBE Law & Entrepreneurship Special Interest Group)  
<http://law.tamu.edu/faculty-staff/find-people/faculty-profiles/megan-carpenter>

On-Site Lead Instructor:

- **Christopher Holman**, Professor of Law, Drake Law School (formerly with UMKC School of Law), who also holds a Ph.D. in biochemistry and molecular biology and engaged in post-doctoral drug discovery research at Roche Biosciences  
<http://law.umkc.edu/directory/faculty-directory/name/christopher-holman/>

Guest Entrepreneur:

- **Shane Schaffer**, CEO at Cingulate Therapeutics  
<https://www.linkedin.com/in/shane-schaffer-b24653/>

## MODULE 4: Technology Transfer (October 29, 2020)

### OBJECTIVES:

This fourth module in the Technology Entrepreneurship Certificate program covers key aspects of university and hospital technology transfer that are relevant to the development of bio-medical and healthcare innovations.

Goals for this module are for Participants to understand, from the innovator's perspective in particular, and through a series of examples in various scenarios, issues related to planning to work with applicable rules, offices, entities and individuals involved in:

- Intellectual property policies
- Patent prosecution
- Copyright registration
- Trademark registration
- Managing conflicts of interest
- Industry sponsored research

On-Line Video Presenter:

- **James Baxendale**, Whiteboard 2 Boardroom program at UMKC Innovation Center and former Director of Technology Transfer at University of Kansas-Lawrence and KU Medical Center <http://www.kclifesciences.org/events/2016-regional-translational-medicine-meeting/regional-translational-medicine-speakers/jim-baxendale/>

On-Site Lead Instructor:

- **James Baxendale**, Whiteboard 2 Boardroom program at UMKC Innovation Center and former Director of Technology Transfer at University of Kansas-Lawrence and KU Medical Center <http://www.kclifesciences.org/events/2016-regional-translational-medicine-meeting/regional-translational-medicine-speakers/jim-baxendale/>

Guest Entrepreneur:

- **Steve O'Connor**  
<https://www.linkedin.com/in/steve-o-connor-0808513/>

## MODULE 5: Product/Service Development (December 3, 2020)

### OBJECTIVES:

This fifth module in the program's series provides an overview of the product and service development processes, and the components that are unique to product and service development.

Goals for this module are for participants to examine examples of and understand:

- Translating customer wants and needs into product and service requirements
- Practical aspects of applying a comprehensive approach to the development processes for products and services
- Prototyping throughout the design process
- Recognizing the legal and regulatory requirements inherent in product and service development
- Do's and don'ts advice from technology entrepreneurs who have successfully launched new products and/or services
- Identifying strategies for developing effective project plans tailored to the development of the a particular type of product or service

On-Line Video Presenter:

- **Peter Koulen**, Professor, Felix and Carmen Sabates / Missouri Endowed Chair in Vision Research, Director of Basic Research, Vision Research Center  
<https://med.umkc.edu/dir/koulen-peter/>

On-Site Lead Instructor:

- **Peter Koulen**, Professor, Felix and Carmen Sabates / Missouri Endowed Chair in Vision Research, Director of Basic Research, Vision Research Center  
<https://med.umkc.edu/dir/koulen-peter/>

Guest Entrepreneur: (possible Tyler Hillker at CREMA)

- **Darrin Clawson**, Founder Engage Mobile  
<https://www.linkedin.com/in/darrinclawson/>

## MODULE 6: Financing the Tech Startup (January 28, 2021)

### OBJECTIVES:

This module, the sixth offered in the series of modules required for completion of the Technology Entrepreneurship Certificate, will explore tech startup financing, the selection of a strategy and tactics of business structure, and the fundamentals of accounting for a tech startup.

The goals of this module are for participants to understand the following concepts and the roles of legal and other advisors in connection with:

- The basic considerations and strategies in starting and financing a technology-based enterprise including, topics such as choice of legal structure, considerations in initial equity issuance, capital raising strategies, and value creation driving entity valuation;
- The advantages and disadvantages to various business structures from myriad perspectives including control, liability, growth strategy, and taxation;
- Fundamental accounting statements that are important to the technology startup including the Income Statement, Balance Sheet, Cash Flow Statement, and Pro-forma, and how the entrepreneur uses these in financing and company growth
- Startup and company growth financing from perspectives of the opportunities and issues related to various capital sources, capital raising strategies, investor mindset and deal terms, entity equity structures, value creation, and valuation principles and methodologies; and
- Technology company capital structures including SBIR/STTR, equity classes, options and warrants, debt, hybrid and convertible investment, and business organizations, securities regulation, and tax law aspects of financing strategies and securities issuance cases.

On-Line Video Presenter:

- **Eric Sander**, Director of Engineering Innovation Institute, University of Florida  
<https://www.eng.ufl.edu/innovation/about/director/>

On-Site Lead Instructor:

- **Tony Luppino**, Professor of Law and Director of Entrepreneurship Programs, UMKC School of Law, and Senior Fellow, UMKC/Regnier Institute for Entrepreneurship & Innovation (and principal organizer and former chair of USASBE Law & Entrepreneurship Special Interest Group  
<http://law.umkc.edu/directory/faculty-directory/name/anthony-tony-luppino/>

Guest Entrepreneur:

- **Dr. Nick Franano**, MD President & CEO, Flow Forward Medical. Inc.  
<https://www.linkedin.com/in/nicholasfranano>

## MODULE 7: Managing the Venture (February 25, 2021)

### OBJECTIVES:

This next-to-last module in the program contains information on all aspects of “Managing the Venture,” including talent acquisition, leadership, ethics, development of interdisciplinary teams, team building strategies, and development of decision-making structures.

Goals of this module are for Participants to learn what is needed to develop the ability to:

- Identify core requirements for building high performance teams
- Recognize key personnel needs for developing and launching technology ventures
- Review team building strategies utilized by highly successful technology ventures
- Understand the process for inspiring commitment to new ventures and building a highly ethical organization
- Review negotiation strategies and incentives for high performance teams
- Develop strategies for building interdisciplinary/intercultural teams
- Work with legal counsel on the documentation of decision-making and authority aspects of company organizational structures

On-Line Video Presenter:

- **Jeff Hornsby**, Henry W. Bloch/Missouri Endowed Chair of Entrepreneurship and Executive Director, UMKC Regnier Institute for Entrepreneurship and Innovation  
<http://bloch.umkc.edu/faculty-staff/faculty-directory/profiles/hornsby-jeffrey.aspx>

On-Site Lead Instructor:

- **Jeff Hornsby**, Henry W. Bloch/Missouri Endowed Chair of Entrepreneurship and Executive Director, UMKC Regnier Institute for Entrepreneurship and Innovation  
<http://bloch.umkc.edu/faculty-staff/faculty-directory/profiles/hornsby-jeffrey.aspx>

Guest Entrepreneur:

- **Hao Li**, President Nanova, Inc.  
<https://goo.gl/XO6a4g>

## MODULE 8: Applying Tech Entrepreneurship for the Bio-medical Researcher and Physician (Mar 25, 2021 9-11AM, Apr 8, 2021 9-11AM, Apr 22, 2021 9-11 AM)

### OBJECTIVES:

This final module required for completion of the Technology Entrepreneurship Certificate serves as the “capstone” for the certificate and represents a synthesis and integration of content offered in the previous seven modules.

Goals of this module are for Participants to, with the assistance of one or more mentors assigned to them, prepare and present for assessment by and feedback from a panel of instructors and experienced innovators and entrepreneurs either:

- A case study that would involve the Fellow interviewing one or more bio-med entrepreneurs and reporting on what they learned about their experiences, relating that to issues addressed in the prior seven modules; or
- If the Fellow happens to be working on a particular innovation, a “business model canvas” for a proposed venture based on such innovation.

Evaluation Committee/Panelists:

- **James Baxendale**, Whiteboard 2 Boardroom program at UMKC Innovation Center and former Director of Technology Transfer at University of Kansas-Lawrence and KU Medical Center <http://www.kclifesciences.org/events/2016-regional-translational-medicine-meeting/regional-translational-medicine-speakers/jim-baxendale/>
- **Tony Luppino**, Professor of Law and Director of Entrepreneurship Programs, UMKC School of Law, and Senior Fellow, UMKC/Regnier Institute for Entrepreneurship & Innovation (and principal organizer and former chair of USASBE Law and Entrepreneurship Special Interest Group) <http://law.umkc.edu/directory/faculty-directory/name/anthony-tony-luppino/>
- **Tony Mendes**, Managing Director, UMKC/Regnier Institute for Entrepreneurship & Innovation <https://www.linkedin.com/in/tony-mendes-a224655>
- **Melissa Roberts**, Senior Program Officer, Entrepreneurship, Kauffman Foundation <https://www.linkedin.com/in/melissarobertskc/>
- **Dr. John Spertus**, UMKC Professor & Daniel J. Lauer/Missouri Endowed Chair, Metabolic & Vascular Disease Research, Department of Biomedical & Health Informatics <http://med.umkc.edu/directories/som-faculty/name/john-spertus/>; <http://www.saintlukeshealthsystem.org/doctor/john-spertus-md>