Boston University Technology Development

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Doctoral Student & Post-Doc Lean Launch Educational Program
Concept Document

What's it all about:
Introducing a new OTD Program, in conjunction with Professional Development and Postdoctoral Affairs, designed to teach doctoral students and post-doctoral scholars a suite of business skills that will serve the participant for the remainder of their careers, whether that career be in academia, non-profit or for-profit. The catalyst for this Program is an interest in bringing a BU idea to market (see requirements below). Too often, we embark on a market-destined idea (a desire to bring our idea to market) without engaging in the laborious, sometimes less exciting, but ultimately vital, work of determining the need for the idea. While that idea will be the focus of this Program, the larger suite of taught and implemented skills transcends any given idea, job or profession (I know, BIG words, but I mean it).
Doctoral students' and post-docs' priority is their research. We've designed this Program to minimize distraction from that priority.

The Program will be guided by a seasoned, certified trainer and also involves peer learning. Our instructor, Alice Nichols, is certified by the NSF as a National level I-Corps Instructor. Participants will work on an idea conceptualized with their PI, and implement a process known as Lean Launch over the course of a year. Lean Launch is a method, endorsed and implemented by the NSF in their now world famous I-Corps program: https://www.nsf.gov/news/special_reports/i-corps/.

Panel discussions and guest speakers will also enrich the experience for participants.

Participants will learn an array of analytical techniques and business skills. Even more, it will give participants an opportunity to exercise their professional, communication and leadership skills. These are attributes future employers will value.

Empowerment Through Education: We want to teach participants how to solve a different type of problem:
- Teach the Lean Launch method to a small cohort of doctoral students and post-doctoral scholars who meet the below criteria. By learning this method, participants will learn and implement multiple levels of business skills. They'll:
    - Be made aware how needs drive technology and product adoption
    - Learn multiple business skills and concepts, e.g. business models, revenue, costs, distribution channels, market segments
    - Understand a most vital concept of Product-Market Fit and why that concept supports a successful product introduction
    - Validate and/or invalidate their assumptions about who are the right customers and what portion of their technology truly has value
    - Identify a first market segment with a clear pain in which to introduce their solution
    - Apply several new techniques including interviewing, listening, hypothesizing (as it applies to a market need) and finding potential customers

- Guide the Students in determining market need and customer segments for their idea
- Identify the value proposition (why they'll buy) for those market segments
- Clarify through customer discovery what the most viable business model for their idea will be (i.e. who wants this? will they pay money for it? if so how much? And through what channels would customers like to purchase this product or service?)
- Learn by listening to and consulting with colleagues in this small cohort of doctoral students and post docs.

Who can participate:
An entrepreneurial lead (EL) – this is the doctoral student or postdoc who drives, and is responsible for, the process

Who's eligible:
Recognizing any given PI & participant pair may have their own timing constraints, this program does not prescribe when in the participant's career he or she may enroll. That is a decision left to the PI and their trainee. Under all circumstances, the student or post-doc must have the permission of the PI to enroll to take the idea forward.

What are you signing up for? What's the structure of the Program:
- Day-Long training to launch the Program
- Expected weekly activity: two to three in-person interviews
- Monthly commitment: Two hour Zoom meeting with instructor and cohort colleagues
- Day-Long training at sixth month interim
- End-of-training presentation (panel TBD) at Twelfth month

Additional Q&A (questions PIs asked):

How will the PI see clear benefit from this?
This is an educational program. The objective is to teach a new set of skills to doctoral students and postdocs. The first answer to this question is that the PI will be exposing the participant to a new set of skills he or she may otherwise not learn during their time at BU. These are business, analytical and people skills that can serve them for the remainder of their career, be it academic or commercial. The focus of the exercise is to identify (market) needs. Therefore, regardless of the participant's chosen path (e.g. research, business, other), learning how to identify needs is invaluable. Second and more tactical, the participant will identify the market need(s) for the idea in question. Since the PI's interest in the idea "going to market" is a requirement for this program, this effort will advance that notion OR determine there is no market for it! In some cases a "pivot" to a variation of the technology or a newly considered market may be appropriate.

How much time, really, will the participant spend on this Program?
The first day-long training is an eight hour day.
Weekly, participants will hold 2-3 interviews of 20 minutes each.
Monthly, we'll have a two-hour Zoom session in which all participants will report their findings to the Trainer, Alice. In that Zoom session, the participants will consult to each other with Alice's guidance, consider the customer segments on which to focus more deeply, write value propositions that are based directly on customer data, and consider next

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customers interviews. The assignment is to conduct two to three interviews per week. My total time estimate is one to three hours per week.

Will the participants receive any sort of certification upon completing the Program?
Yes, but that will be a certificate with a small "c". We will brand this program and issue a certificate to participants that they can mention on their CVs.

What if I'm not so interested in a startup but I am interested in licensing my technology (to an existing company). How does this Program apply?
Ah, excellent question. The vehicle by which your idea goes to market is secondary to identifying a need. You'll be able to score a license to an existing player that much faster and with greater value if you can approach those corporations with the need and value proposition already identified. Now you'll be licensing a solution with a target market, not just a technology. Think of this Program as creating the packaging for that licensing overture and deal.

Alice Nichols: Trainer
Alice Nichols consults and coaches senior teams and academics to better educate and economically grow. With corporate and non-profit teams, she facilitates resolution of complex issues – working with a group or individuals, to reach solutions that must be built, supported and implemented by a team that may not be highly-performing. With faculty, post docs and R&D professionals, she works to guide them to commercialize their work through a lean start up process. With corporate executives she guides them to create plans that are actionable, measurable and ongoing.
Ms. Nichols has more than twenty five years of experience in partnering with leaders to align and integrate such initiatives as vision creation, innovation in designing a pursuit, implementation planning, role definition, decision-making protocols, and executive level conflict resolution. She works internationally and domestically in the U.S. and has worked to forge interdependent alliances between and within organizations. Managing contentious situations is a specialty, as is thoughtfully moving to swift, adaptable, deployment, whether this is a lean business model canvas or a strategic plan. She is a National Science Foundation nationally acreditted I Corps instructor www.nsf.gov/news/special_reports/i-corps/   and serves as faculty to cohorts of teams across the U.S. Currently Ms. Nichols chairs the Mentor Committee for Cleantech Open, the world's largest cleantech accelerator for funding and fostering startups http://www2.cleantechopen.org/ . She has served as industry champion for Mass Challenge in Clean Technology and Energy Efficiency and is one of the I Corps Instructors for teams of all disciplines at MIT.