Office of the Registrar

جامعة الملك عبدالله للعلوم والتقنية
King Abdullah University of Science and Technology

Course Addition / Change Request

New Courses		
Program:		
Course Number:	Course title: New Venture and Product Innovation Challenge	Credits: 6
Course Description: This intensive 8 week module will give a small select group of students, the opportunity and time to develop a detailed value proposition for a product based on an existing piece of intellectual property. This technology may be from the KAUST IP portfolio or potentially from a corporate partner. As part of the program, students will be provided with an overview of key creative subjects related to new product development including; key aspects of intra/entrepreneurship, innovation management including new product development, Go-to-Market strategies as part of commercialization roadmaps, as well as general knowledge on relevant creativity and design thinking. It will also students to develop these skills in full time, heavily mentor-led and experiential learning environment that includes regular pitches and feedback from a wide range of pre-selected mentors from both inside and outside KAUST including international experts.		
Pre-requisites: None	Co-requisites: None	Core Requirement: No ☐ Yes ☐

Existing Courses		
Program:		
Course Number:	Course title:	Credits:
Proposed Changes:		

Signature of Program Chair:	Date: (mm/dd/year)
Signature of Division Dean:	Date: (mm/dd/year)

Registrar's Office Use Only:	
Curriculum Committee Approval: No ☐ Yes ☐ Date: (mm/dd/year)	Processed by:
	Signature:
	Date:

Date Program Notified: Date Added to curriculum:	

*Required **Syllabus:**	
Division*:	Innovation and Economic Development
Course Number:	
Course Title (Limited to 40 characters)*:	New Venture and Product Innovation
Expected Starting Academic Semester*:	Summer 2018 (replacement for internship)
Expected Starting Academic Year*:	2018
Course proposer(s)*:	
Name(s) *:	Hattan Ahmed
Phone:	8082170
Email*:	Hattan.ahmed@kaust.edu.sa
Instructor(s) information*:	
Name(s) *:	Wesley Sine
Phone:	+16072798398
Email*:	wesley.sine@cornell.edu
Prerequisite Course Number*:	None
Comprehensive Course Description*:	This module is a six-credit intensive 'elite' elective course during the summer internship period for students with strong academic standing. This would act as a full summer internship and/or capstone replacement. It is designed to give students the opportunity to develop and refine a business model and value proposition for a new venture or a corporation innovation project based around the commercialization of an existing technology. This would be based on an existing piece of intellectual property pre-selected by I&ED which could be from KAUST or a corporate partner. The program will provide students with an overview of key subjects that will aid the new product development process, such as intra/entrepreneurship, innovation management & new product development, positioning and customer analysis - all leading to a strong commercialization planning and Go-to-Market strategy as a deliverable. The program will also allow students to develop a number of 'soft' skills such as leadership and team development in an intensive, experiential learning environment that includes regular pitches and feedback from mentors. Mixed interdisciplinary teams will be created and mandated, as the aim is not to work on the 'science' of the technology but on the value proposition and business model. This would include a strong understanding of the resources, milestones and timelines necessary for launching a new product or service through a new or existing venture in the Kingdom of Saudi Arabia. Knowledge is acquired through the process of doing, including understanding a technology's potential competitive advantage, business sustainability, revenue and cost streams deriving from commercialization, and knowledge of the industry value chain. Adopting a technology from the KAUST intellectual property portfolio will be coordinated with KAUST Technology Transfer Office by the Entrepreneurship Center, while there is also the potential to adopt an 'intrapreneurship' project from industry partners would be coordinated with the KAUST Industry Engagement Office

	(IEO). The art of successfully communicating the idea is critical (initial elevator pitch, business summary for investment, business plan, full pitch) throughout the program and in particular during the final pitches in the final week.
Course Description for Program Guide*:	Through a mentor-led experiential program, this course will enable students to learn-by-doing leading to the development a fully formed business proposition for a real piece of intellectual property that has been developed in the Kingdom. The objective is to create a plan for commercialization and launch of a new product, and the process will include students learning: **The Creative Process:** Ideation, management of innovation, design thinking based on a particular technology. **Opportunity Identification and Research–** opportunity seeking and identification, feasibility analysis, business model development, and understanding the needs of the customer and the market. **Strategy, Planning & Team Building** – forming a venture or project team, introduction to creating business plans, legal and financial issues of starting and maintaining a new venture, strategic planning for a new product, issues around the commercialization of intellectual property and new technology transfer models. **Structuring and Packaging a Commercial idea** – The value propositions, sustainable positioning, competitive advantage, presenting the idea in multiple formats, formulating new product development timelines and analyzing strategic options. **Integrating Continuous Feedback and Communicating Concepts to Different Audiences** – Obtaining and integrating key feedback from multiple mentors, constantly adjusting the relevant information into a variety of communications options and to ability to identify relevant gaps.
Goals and Objectives*:	• The creation of a working knowledge in students of the process of taking a technology to market including the following areas: **New Business Understanding** - Within the context of new venture development, critically evaluate the role of the entrepreneur and his/her team in new venture creation either as a startup or as a new product development within a corporate setting - Critically examine the components of a new project or venture plan and aspects of the planning process. - Critically examine the role of creativity and innovation in opportunity identification and the challenges of protecting new ideas. **Intellectual Qualities** - Gain significant experiential learning from developing a real world technology from a new venture perspective. - Experiment with creative thinking techniques in seeking market validation outcomes from a particular new technology, including new product/service development and/or the development of new processes/systems. - Acquire an understanding of the importance of acting, thinking and behaving in an entrepreneurial manner through the development of a new venture on a daily basis. **Professional/Practical Skills** Integrate entrepreneurship theory and practice through the development of an effective, plan either to progress a new venture or to develop an existing organization, through an organizational change opportunity based around the commercialization of a new technology. - Demonstrate the ability to communicate effectively through regular class and mentor pitch sessions. - Understand how new ventures fit into the wider value chain of society **Transferable/Key Skills** - Critically examine and appreciate the importance of the resources needed to effectively exploit the potential of an entrepreneurial opportunity, including financial, human and physical resources.

Required Knowledge*:	Students with an interest in the commercialization and technology transfer aspect of the university, a strong work ethic, ability to work in a new team and the ability to leave their comfort zone.
Reference Texts*:	**Essential Reading List** • Osterwalder, A. and Pigneur, Y. Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers • Thiel, P. Zero to One: Notes on Startups, or How to Build the Future • Christenson, Clayton, The Innovator's Dilemma Additional readings will be emailed or posted to the students at no extra cost. **Recommended Reading List** • Ries, E. The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses • Drucker, P. F. Innovation and Entrepreneurship: Principles and Practice
Method of evaluation (Percentages & Graded content such as Assignments, Oral quizzes, Projects, Midterm exam, Final Exam, Attendance and participation, etc.):	• 30% Initial Pitch presentation and Deck (Mid-Program) • 40% Detailed Go-to-Market Business Summary (Final) • 30% Final Pitch presentation and workable slide deck (Final) This program is based on a team – the experiential learning is partly due to the team-development nature of the workload, so the marking will be by team. Evaluation will be done on the basis of a specific grading for each team in totality, A-F grades as per KAUST system.
Nature of the assignments (assigned reading, case study, paper presentation, group project, written assignment, etc.):	This program is a largely experiential activity centered on creating and validating a business model, commercialization plan and new product development process for a technology–based new venture. Due to the experiential nature, there is no examination and marking will occur during a number of times across the 8 weeks of the program. Mixed interdisciplinary teams will be created and mandated, as the aim is not to work on the 'science' but on the value proposition and business model of the technology, including understanding the resources, milestones and timeline necessary for developing a new product, service new venture in the Kingdom of Saudi Arabia. Students will be based in teams at the KAUST Entrepreneurship Center and will be selected (or self-selected with agreement from faculty) in interdisciplinary teams of 2-4. The assignments are all related to creating a full business case for the technology assigned, as a team, and presenting that during various pitches and a final Executive Summary Business plan at the end of the course.
Course Policies (Absences, Assignments, late work policy, etc.):	Standard KAUST policies. As this is seen as an elite program, a replacement for an internship, it is mostly aimed at non-thesis Masters students and therefore each student must get their supervisor to recommend them and to sign a simple agreement form. Although this is a high-level program it must be noted that in terms of getting 'the best students'' for this course, the ability to be creative, innovative or entrepreneurial does not necessarily follow a 'highest grade point average' style traditionally. Therefore we are seeking students that are interested in a career that involves technology transfer and in particular commercialization strategies. They must be enthusiastic about the subject matter and are willing to commit to the full period of the program on a work day basis.
Additional Information:	The course requires students to spend time preparing and completing weekly progress assignments including at least once weekly feedback sessions with mentor. Students will be based in teams at the KAUST Entrepreneurship Center over the eight weeks of the program, and will receive mentoring from the EC team as well as visiting mentors (international) and selected visiting faculty.

This is designed as a replacement for a summer internship for Masters students and is therefore open to students across all three divisions where applicable. It is open to PhD students only with written confirmation from the student's supervisor.
- The Entrepreneurship Center is relatively flexible on the teaching time structure, and from weeks 1-3 there will be three structured classes per week, weeks 4-6 there will be two structured classes per week, with one in weeks 7-8. We recommend these classes are delivered in the early part of the week (Sunday/Monday) but as this is a full time course, there should be no timing issues.
- Hattan Ahmed, the Head of the Entrepreneurship Center, is the principal lecturer and coordinator of this module. He has taught a variety of similar courses over the years in universities and colleges. Hattan runs national entrepreneurship programs in partnership with local and international institutions.
- As per best practice in the field, we would hope to have three weeks to be taught by visiting faculty or mentors, similar to the current teaching practice in the non-accredited corporate innovation programs that the EC delivers in the Kingdom. The following paragraphs introduces two faculty members who will contribute in the course.

Wesley D. Sine, Director of the Institute for Entrepreneurship and Innovation Institute at the Johnson Graduate School of Management, Cornell University.

Professor Sine studies entrepreneurship and innovation and teaches courses on this topic. He has consulted for both start-ups as well as Fortune 500 companies. Professor Sine's students have started and grown dozens of successful new ventures. His research examines entrepreneurship in multiple regions and industries with a focus on technology entrepreneurship. Professor Sine has extensive international experience. He has and studied entrepreneurs and new ventures in the Middle East, Latin America, and has taught entrepreneurship courses in both contexts. He has also lectured on entrepreneurship throughout Asia and Europe. His research investigates various topics including university technology commercialization, the emergence of new economic sectors, and the composition of founding teams. His teaching interests include creating new ventures, commercializing university technology, new venture growth, the management of technology and innovation, and international entrepreneurship.

This form of experiential learning in entrepreneurship and innovation is very much based on a mentor-led process. Therefore the Entrepreneurship Center will use its existing mentor pool (from inside and outside of KAUST) for this process
This would also include mentors from across the Innovation & Economic Development, in areas directly related to building this kind of business case including:

- Entrepreneurship Center including the International mentor group where applicable
- Industry Engagement Office (IEO) mentors for understanding the business value chains of different industries and connecting with relevant corporate connections during the 'customer discovery' work.
- Technology Transfer Office mentors on matters related to patents, technology transfer, positioning and defensibility.
- Innovation Fund mentors where applicable including feedback on the investment needs, valuation and financials
- Any academic staff or non-academic staff who would like to participate where their backgrounds are relevant.

*Required Tentative Course Schedule: (Time, topic/emphasis & resources)	
Week/Lecture	Topic
1	June 10th to 11th from 2pm to 5pm Classes: Creative Problem Solving; Introduction to Technology New Ventures & Lean Startup Experiential Actions: Ideation & Project Mapping processes started
2	June 24th to 27th from 9am to 12pm and 1pm to 4pm Classes: The concept of entrepreneurship; The entrepreneur as an individual and as a team; Creativity and innovation; Opportunity and the value proposition; The role of networking in value creation & Customer Discovery; Technology Commercialization Roadmap; Experiential Actions: Opening Pitches, Tech Nav positioning for IP, initial business modeling
3	July 1st to 4th from 9am to 12pm Classes: Business Model Innovation; Innovation Management & Design Thinking, Art of Storytelling Experiential Actions: Customer Interviews, Journey Mapping, customer discovery
4	July 8th to 11th from 9am to 12pm Classes: Markets & Segmentation; Experiential Actions: Mentor Pitch Sessions, Initial Financial Planning
5	July 15th to 18th from 9am to 12pm Classes: Elements of Business Planning; Strategy Planning & Positioning; Financial Planning (Costs and Revenue) Experiential Actions: Finalize Customer & Industry Interviews, Initial business model planning and summary Mid Term Week
6	July 22nd to 25th from 9am to 12pm Classes: Competitive Analysis & Partnerships; Further develop Funding Models & Financial Plan Experiential Actions: Revised Pitches, detailed Market Analysis, group mentor panel feedback session
7	July 29th to Aug 1st from 9am to 12pm Classes: Communicating Value Proposition (Pitching & Exec Summary) Experiential Actions: Continue Mentor Pitch Sessions, revise business planning elements
8	Aug 5th to 8th from 9am to 12pm Classes: Raising money, types of capital, negotiating the deal & Legal Aspects of New Ventures Experiential Actions: Final Pitches to a select audience including mentors, industry experts, entrepreneurs Final pitch and finalize business plan for delivery

NOTE: The instructor reserves the right to make changes to this syllabus as necessary.