The digital health revolution: from idea to bedside.

מרעיון קליני לפתרון 338002#

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Credits: 1 point.

In this course you will learn to design novel engineering and business solutions to some of the most pressing challenges encountered in modern healthcare. The course is a running collaboration between the Technion, Cornell Tech, MindState[1], and leading Israeli medical centers.

The course is open to graduate students and also to outstanding undergraduate students (סטודנטים מצטיינים) with approval of the course instructor.

Mixed teams of Technion and Cornell Tech students will collaborate during the semester. Students will propose and prototype a solution that involves engineering and product development, accompanied by a business strategy for possible commercialization. The course will finish with an Ideation Hackathon. The major highlights of this course are:
- Focus on Human Health.
- Mixed team Technion-Cornell Tech.
- The Ideation Hackathon.

This year's projects will focus on creating digital health solutions to address the various challenges in healthcare, including:
- A Second Chance (Fighting Opioid Addiction)
- The Second Half (Approached to Aging and Longevity)
- The Second Sense (Improving Sight and Seeing)
- The Second Brain (Considering the Gut)

The course has two aims:
(1) to understand the opportunities of digital health in addressing medical challenges and,
(2) to learn how to work in a cross-cultural and cross-functional team to suggest and prototype a solution to the challenge at hand.

The course will include an initial meeting where the students will be exposed to a set of healthcare challenges. Students will rank their project choices and joint Technion-Cornell teams will be formed based on rankings and skillset. Students will visit partnering medical centers during a day long tour which will include meeting with medical staff facing the challenge of their specific project. Prior to this visit, the student teams must work closely with their Cornell Tech counterparts to align the objectives and potential outcomes of the visit.

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[1] **MindState** is a not-for-profit organization that provides a platform to explore societal challenges through working with teams made up of diverse participants, attempting to achieve innovative change, first locally, then globally.

Teams will then conduct research to inform potential solutions to their challenge up to the end of the course in December.

Date	Time (Israel Time)	Milestone
Sun, Nov 5	17:00 – 20:00	Session 1: Course Introduction
Sun, Nov 12	18:00 – 21:00	Session 2: Team Assignments
Nov 20 – Dec 4	Self-scheduled	Mentor check-in
Nov 20 – Dec 4	Self-scheduled	MindState office hours
Sat, Dec 16	23:59 EST	Research proposal due

This course is highly collaborative and mostly team-managed that involves team members located in different parts of the world. It is expected that work, research, and team meetings (including concept presentations) are primarily completed outside of typical work and school hours. Students are expected to communicate and involve every team member in team decisions. Staff will do its best to schedule live meetings at the most optimal times.

Following the course, students will be automatically included in the **MindState Ideation Hackathon Program**. This 2-day event will combine Technion students with participants from Cornell Tech in New York, Tel Aviv University, Health-Tech Venture Investors, and Design Professionals. These teams will compete to create practical and innovative solutions to these medical problems. A few of the Judges for the competition as well as program mentors include: Israel Coronavirus Czar and President of Ichilov Medical Center, **Professor Ronni Gamzu**, the WHO European Medical Director, **Dr. Dorit Nitzan** and leading angel investors.

The winning team is expected to receive prizes that could include cash prizes, exclusive meetings with VC firms to further develop their idea, premium subscriptions to software related to their solution, and/or travel grants to Cornell Tech – all dependent on availability of funds at the time of the competition.

Past winners went on to receive pre-seed to jumpstart their venture into real solutions for medical institutions around the world. Others, had been considered for an opportunity to implement their solution at Ichilov Medical Center.