SHENKAR: ENGINEERING. DESIGN. ART has established itself as one of the leading colleges in Israel. Every year, Shenkar's graduates find themselves in the forefront of research and industry, exhibit their works, participate in competitions and win prestigious awards.

The basis of this institution's uniqueness is its multidisciplinary nature, allowing students and professors from engineering and design to combine forces, yielding cutting-edge crossover technologies with contemporary design and artistic concepts. Each faculty has its own character, yet maintains fruitful collaborations with the other faculties, exposing students to a variety of disciplines and different fields of knowledge.

At Shenkar, the students eat and breathe innovation in every class. Shenkar not only teaches the students how to be professional, but also how to be creative and inventive in their fields as well as how to collaborate with students from other departments to achieve deeper and greater results to truly revolutionize the world through their unique combination of design and engineering.

Shenkar offers academic degrees in design and engineering and even joint PhD programs with leading international education institutions.

In the Pernick Faculty of Engineering, five departments offer a Bachelor's Degree in Science (B.Sc.): the Department of Industrial Engineering and Management, the Department of Plastics Engineering, the Department of Software Engineering and the Department of Electrical and Electronic Engineering. A Master's Degree program is offered in the Department of Plastics Engineering and the Department of Industrial Engineering and Management, and the DEED program – Design for Engineer's.

In the Azrieli Faculty of Design, six departments offer a Bachelor's Degree in Design (B.Des): The Department of Visual Communications, The Department of Textile Design, the Department of Interior - Building and Environment Design, the Department of Jewelry Design, the Department of Industrial Design and the Department of Fashion Design, considered one of the best of its kind worldwide.

The award-winning ACT innovation center at Shenkar is currently developing a program to promote entrepreneurship and leadership in the Israeli industry following a unique grant from the European Union. ACT also offers course on creative leadership and design thinking and operates its own accelerator program for students, alumni and staff of the College.

Program Details

Course Goals

1. To delve into the basic and applied aspects of human creativity, innovation and entrepreneurship.

2. To gain first-hand experience learning about the Israeli start-up ecosystem.

3. To learn and practice methodologies designed to help students come up with novel ideas and directions.

4. By the end of the course, students will be better able to come up with their own entrepreneurial ideas, formulate them and prepare an initial pitch.

Requirements

- Participation and presence in lectures
- Reading the e-book/s accompanying each lecture
- Participate in class exercises
- Submitting and presenting final project

Final Project

Students will be challenged to come up with an idea for a start-up (it could be preliminary), name the product or process, choose a .com website, describe in writing their path to market, their potential sources of income, and challenges.
Students will be required to pitch the project to the class in a four minute oral demonstration using tools such as powerpoint deck, video, etc.

Students will be able to work in pairs, describing the role of each student, or can work individually.

Grading:

- Active classroom participation 20%
- Class exercises 30% (10% ea) - 48 Create, Presentation night, Creativity: ten things that you cannot do with a black banana.
- Final project 50% (individual)
- Minimum grade to pass - 60%

Creative Spirit - Israel

#	Unit	Location	Details	hrs	Reading
1	What is success and how do you measure it?	Shenkar - Keter Innovation Center rooftop	Who would you consider to be highly successful entrepreneurial people? What is their 'secret formula'? What can one learn from success? Is everything just luck and timing?	2	https://www.ourboox.com/books/richard-st-john-and-the-dna-of-success/
2	Thinking Outside, Inside, and between the Boxes - Workshop		Why is creativity a two-step process? What critical step comes before 'problem solving'. Why is childlike thinking a critical component of creativity?	2	https://www.ourboox.com/books/createn-ten-secrets-of-creativity/
3	**Dr. Yigal David** - From idea to marketplace. Protecting your idea. Finding financial support. Finding a partner. Pivoting. Growth.	Shenkar - Keter Innovation Center rooftop	The business side of entrepreneurship. How you start your company. How your register it. How you look for investors. How you grow your business. How you grow your team	4	https://www.ourboox.com/books/start-up-checklist-are-you-ready/
4	Learning to fail elegantly		The importance of failure in entrepreneurship and innovation. A look at dozens of failures and almost-successes (including mine) and what can be learnt from them.	2	https://www.ourboox.com/books/mels-ten-tips-on-learning-from-failure-and-success/
5	Meet the Founders		A meet-up with an Israeli Entrepreneur at a startup`s HQ in Israel.	2	
6	**Dr. Alon Amit** - Entrepreneurship 101. How to promote and market your project from the idea stage to the final product. How to build your team and negotiate.	Visit to the Ran Vardi school in **Rishon Lezion,** meet with Didi Vardi	Having an idea is not enough. You have to be able to build a team, promote your product and negotiate with investors and collaborators.	2	https://www.forbes.com/sites/ericwagner/2015/02/04/entrepreneurship-101-your-blueprint-for-a-successful-startup/#17b654319553/
7	How did Israel become the 'start-up nation'	Mass Challenge Jerusalem	The Israeli startup ecosystem. Role of the coffeehouse. Role of the army. Role of the isolated nation mentality and lack of natural resources. Role of storytelling.	2	Start-Up Nation / Dan Senor

8	Learning from nature	Botanical gardens in Jerusalem	Most pharmaceuticals originate in plants. We can observe animal behavior to come up with new techniques for interacting with the environment. Learning from evolution.	2	https://www.ourboox.com/books/thinking-between-the-boxes/
9	Reaching to the stars / Food Innovation (El Arz)	Visit to the desert observatory Mitzpeh Ramon	Israel is a leader in sending satellites into space and navigation. Navigation and star gazing from biblical times to the modern age.	2	http://www.spaceil.com/videos/the-mission/
10	Making the desert bloom	Hura	From ancient times, water has been a scarce resource in the holy land. How Israel went from a water-hungry nation to a water conserving superpower. The story of reverse osmosis.	2	https://www.haaretz.com/science-and-health/how-israel-can-help-a-thirsty-world-1.5392651
11	Coming up with new ideas - workshop		How great ideas are generated. The importance of observation, curiosity and doubt. Making sense of nonsense. Techniques for hypothesis building, ideation **(random words, 48create)**	2	https://www.ourboox.com/books/what-is-48create-with-dr-alon-amit/
12	Networking Night		The ten secrets of first meetings and networking. Our students put the lesson into practice on the rooftop in a meeting with young Israeli entrepreneurs, mentors and investors	2	https://www.ourboox.com/books/mels-ten-tips-on-networking/ https://www.ourboox.com/books/mels-ten-tips-for-a-successful-first-meeting/
12	Work on final project	SNC	Work on final project	4	
13	Hacking your own career – **Presentation Night**		Each of us has skills we excel in and issues that we wish we could address, How do remarkable people take advantage of their gifts? How do they overcome their 'Achilles heel?', How will we succeed in the uncertain professional future?	2	https://www.ourboox.com/books/mels-ten-tips-for-students-in-academia-how-to-be-amazing/

Professor Mel Rosenberg - Mel@shenkar.ac.il

Prof. Mel Rosenberg is a scientist, inventor, educator, and writer.

Early Life and education

Mel Rosenberg (Hebrew: מל רוזנברג) was born in Winnipeg, Manitoba, Canada in 1951. He grew up in Ottawa and immigrated to Israel in 1969. He received his Bachelor of Science from Hebrew University (1973) and went on to pursue both his Masters of Science (1975) and Ph.D. (1982) at Tel Aviv University.

Academic professional

He currently manages the Keter Center for Innovation in Engineering and Design at Shenkar College, where he also serves as advisor to the President of the College on student affairs. Mel currently lectures on creative thinking and personal entrepreneurship at Shenkar College and has published numerous online resources dealing with creativity, storytelling, oral presentations and other skills.

After receiving his Ph.D. in microbiology in 1982, Rosenberg held faculty academic positions at the Sackler Faculty of Medicine and Goldschleger School of Dental Medicine at Tel Aviv University. He received honorary appointments at the University of Rochester, University of Pennsylvania, University College London (Eastman Dental Hospital) and University of Toronto. He has published over one hundred scientific articles and patents and has edited several books.

Rosenberg's interest in the diagnosis and treatment of bad breath (halitosis) led to the development of two-phase mouthwashes, now popular in the UK (under the name Dentyl pH) and more recently, the US (manufactured by Colgate). He is also the inventor or co-inventor of several other patents, including two microbial inoculation tools, the Quadloop and the Diaslide, an upside-down spray for treatment of shoe odor, a deodorant for use in the shower, and an anti-microbial flavor combination (Breathanol).

Mel Rosenberg pursues parallel careers as a jazz singer and musician, and author of children's books. He is co-founder of Ourboox, a platform for online publishing of digital picture books.

Role @ Shenkar

Professor Rosenberg manages the Keter Center for Innovation in Engineering and Design in memory of Joseph Sagol at Shenkar College, where Prof. Rosenberg also serves as advisor to the President of the College on student affairs.

Dr. Yigal David - Yigal.david@shenkar.ac.il

Curriculum Vitae
Area of Expertise: Consumer Behaviour
Education Degree: Practitioner Research Doctor (D.Prof)
Department: Business School
Academic Institution: Middlesex University London
Year Received: 2015

About Dr. David;
A 20 year career in the telecom and hi-tech industries. Between the years 2001 and 2015 I was acting in several senior Marketing and Technology roles as a board member VP in Pelephone Communications (a subsidiary of Bezeq Group), Mirs Communications (a subsidiary of Motorola USA) and Hot Mobile (a subsidiary of Altice Group France). He Was acting as a CEO of Speechview (a subsidiary of Noaber Ventures Holland) and Hot Net (a subsidiary of Altice Group France).

Dr. Alon Amit

Dr. Alon Amit has been involved in entrepreneurship, innovation in several fields, including Healthcare, Renewable Energy, Academic teaching,marketing, education, business development, advertising, R&D, Internet and more.

Since forming and selling his renewable energy company several years ago, Dr. Amit now serves as consultant to Israeli and international Healthcare companies and as a mentor at Shenkar College.

Mr. Oded Chai - Oded@shenkar.ac.il

Head of External and Further Studies at Shenkar

Work   Head of International Affairs @ Shenkar College of Engineering and Design

CEO @ Playlab

Head of Extension Studies and Art institute @ Tel Hai College

Education   B.Fa in Jewelry and Metal Design @ Bezalel Academy of Art and Design

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Daniel Altman - Project Coordinator - Altman@shenkar.ac.il

Daniel Altman (Dandush) is the former Chairperson of the Shenkar Engineering Design Art Students' Union college in Tel-Aviv. Daniel holds a B.Sc in Industrial Engineering & Management, studies a Master of Industrial Engineering and Management. Under his candidacy the Student Union led a reform on the college curriculums, improving the students' academic and social involvement.

Daniel is co-founder at Dots entrepreneurship & Innovation academic unit and collaborates on the international level with Ivy leagues institutes and local students.

He has been previously NUIS (National Union of Israeli Students) representiave in various forums such as the national forum on "Education of Engineers in the 21st century".

Executive Committee member of ESU - European students' union.

Bibliography

Extra Reading

1. Brown, T. (2008). Design thinking. Harvard business review, 86(6), 84.

2. Csikszentmihalyi, M., & Csikzentmihaly, M. (1991). Flow: The psychology of optimal experience (Vol. 41). New York: HarperPerennial.

3. Csikszentmihalyi, M. (1997). Flow and the Psychology of Discovery and Invention. HarperPerennial, New York, 39.

4. Cropley, D. H. (2015). Creativity in Engineering: Novel solutions to complex problems. Academic Press.

5. Runco, M. A. (2014). Creativity: Theories and themes: Research, development, and practice. Elsevier.

Watching

6. Human-Centered-Design (HCD) toolkit –

video: https://www.ideo.com/images/uploads/hcd_toolkit/IDEO_HCD_ToolKit.pdf

1. Mihaly Csikszentmihalyi: Flow, the secret to happiness – (flow):

http://www.ted.com/talks/mihaly_csikszentmihalyi_on_flow?language=en

2. Linda Hill: How to manage for collective creativity (leadership & org.):

http://www.ted.com/talks/linda_hill_how_to_manage_for_collective_creativity/transcript?language=en#t-11508

3. Shimpei Takahashi: Play this game to come up with original ideas

(ideation): http://www.ted.com/talks/shimpei_takahashi_play_this_game_to_come_up_with_original_ideas/transcript?language=en

4. Tim Harford: Trial, error and the God complex (trial and

error):

Http://www.ted.com/talks/mariana_mazzucato_government_investor_risk_taker_innovator/transcript?language=en

5. Steven Johnson: Where good ideas come from

(ideas):

Http://www.ted.com/talks/steven_johnson_where_good_ideas_come_from/transcript?language=en

6. Matt Ridley: When ideas have sex

(ideas):

http://www.ted.com/talks/mariana_mazzucato_government_investor_risk_taker_innovator/transcript?

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7. Don Norman: 3 ways good design makes you happy

(organizations):

http://www.ted.com/talks/don_norman_on_design_and_emotion/transcript?

language=he

8. Kirby Ferguson: Embrace the remix

(ideas): http://www.ted.com/talks/kirby_ferguson_embrace_the_remix/transcript?

language=en

9. David Kelley: How to build your creative confidence (leadership & org.):

http://www.ted.com/talks/david_kelley_how_to_build_your_creative_confidence/transcript?language=en