

Computer Engineering 2017/18

Semester	Course Number	Course	Name of lecture	Lecture	Exercise	Lab	Hours per semester	Semster Credits	Yearly Credits
1	83102	Physics 1	Dr. Stas Borov	4	2	-	6	6	3
1	83110	linear algebra	Dr. Meital Eliyahu	4	2	-	6	6	3
1	83112	Calculus 1	Mr. Erez Shainer	4	3	-	7	7	3.5
1	83116	Discrete Mathematics 1	Ms. Shira Gilat	2	1	-	3	3	1.5
1	83120	Introduction to computing	Dr. Hillel Kogler	2	2	-	4	4	2
1	83002	Window to engineering	Prof. Orit Shefi	2	-	-	2	0	0
		Total		18	10	0	28	26	13
2	83103	Physics 2	Prof. Aviad Fridman	4	2	-	6	6	3
2	83105	Physics laboratory	Dr. Noa Kurzweil	-	-	2	2	1	0.5
2	83114	Calculus 2	Dr. Ronny Bitan	4	2	-	6	6	3
2	83115	Ordinary differential equations	Dr. Yonatan Beck	2	1	-	3	3	1.5
2	83118	Discrete Mathematics 2	Mr. Erez Shainer	2	1	-	3	3	1.5
2	83119	Data Structures & Algorithms 1	Dr. Hillel Kogler	3	1	-	4	4	2
2	83140	Digital logic systems	Dr. Ofir Weber	3	1	-	4	4	2
2	83002	Window to engineering	Prof. Orit Shefi	2	-	-	2	0	0
		Total		20	8	2	30	27	13.5
3	83206	Linear systems	Prof. Yosef Keller	3	1	-	4	4	2
3	83210	Harmonic analysis	Prof. Jeremy Shife	2	1	-	3	3	1.5
3	83211	Complex functions	Prof. Gil Ariel	2	1	-	3	3	1.5
3	83216	Introduction to probability and statistics	Prof. Gidi Amir	3	1	-	4	4	2
3	83223	Object Oriented Programming	Dr. Yehuda Elmaliyah	2	2	-	4	4	2
3	83237	Introduction to electrical engineering	Prof. Aryeh Weiss	3	1	-	4	4	2
3	83238	Introduction to electrical engineering laboratory	Prof. Aryeh Weiss	-	-	3	3	1.5	0.75
3	83253	Logic Design and Computer Introduction	Dr. Ran Gelles	2	1	1	4	3	1.5
		Total		17	8	4	29	26.5	13.25
4	83224	Data Structures & Algorithms 2	Dr. Dror Rawitz	2	1	-	3	3	1.5
4	83244	Fundamentals of semiconductor devices	Dr. Doron Naveh	3	1	-	4	4	2
4	83245	Signals and systems	Dr. Anelia Somekh-Baruch	3	1	-	4	4	2
4	83255	Micro-Processors and Assembler	Dr. Ran Gelles	2	-	2	4	3	1.5
		Total		10	3	2	15	14	7
5	83302	Random signals and noise	Prof. Shraga Bross	3	2	-	5	5	2.5
5	83305	Micro-computer laboratory	Dr. Avrahamov Benjamin	1	-	3	4	2.5	1.25
5	83308	Digital electronic circuits	Prof. Alexander Fish	3	2	-	5	5	2.5
5	83381	Operating Systems	Dr. Igor Ruchlin	2	1	-	3	3	1.5
5	83455	Computer networks and internet 1	Dr. Dror Rawitz	3	2	-	5	5	2.5
5	83459	Software Engineering	Dr. Igor Ruchlin	3	1	-	4	4	2
		Total		15	8	3	26	24.5	12.25
6	83301	Computer structure and Architecture	Prof. Shmuel Wimer	3	1	-	4	4	2
6	83310	Digital communications 1	Prof. Ephraim Zehavi	3	2	-	5	5	2.5
6	83320	Digital signal processing 1	Dr. Yair Noam	3	1	-	4	4	2
		Total		9	4	0	13	13	6.5
7	83356	Introduction to coding theory	Dr. Osnat Keren	3	1	-	4	4	2
7,8	83401	Project	--	7	-	-	7	7	3.5
		Total		10	1	0	11	11	5.5
		Total Required courses		99	42	11	152	142	71
		Computer Systems Track							
		Mandatory Courses							
4	83214	Tools for numerical analysis	Dr. Michael Michaeli	2	2	-	4	4	2
4	83256	Advanced Logic Design	Dr. Osnat Keren	2	2	-	4	4	2
5	83218	Algebraic Structures	Dr. Natan Keller	2	1	-	3	3	1.5
6	83004	Verilog	Mr. Yonatan Shushan	2	-	2	4	0	0
6	83250	Automata and Computability	Dr. Carmit Hazay	3	1	-	4	4	2
		Total		11	6	2	19	15	7.5
		Electives courses							
4	83246	Introduction to Control Theory	Dr. Benjamin Zaidel	3	1	-	4	4	2
6	83313	Digital integrated circuits	Dr. Adam Teman	3	1	-	4	4	2
7	83315	Digital circuits laboratory	Prof. Alexander Fish	-	-	3	3	1.5	0.75
7	83458	Introduction to Cryptography	Dr. Carmit Hazay	2	1	-	3	3	1.5
7	83612	Digital VLSI circuits and systems	Dr. Adam Teman	2	1	-	3	3	1.5
7	83633	Digital geometry processing 2	Dr. Ofir Weber	2	-	-	2	2	1
8	83651	Embedded systems Design	Dr. Eli Kolberg	2	-	2	4	3	1.5
7	83654	Computer Graphics	Dr. Ofir Weber	2	1	-	3	3	1.5
6,8	83656	Digital Geometry Processing	Dr. Ofir Weber	2	1	-	3	3	1.5
		Cyber security Track							
		Mandatory Courses							
4	83004	Verilog	Mr. Yonatan Shushan	2	-	2	4	0	0
4	83250	Automata and Computability	Dr. Carmit Hazay	3	1	-	4	4	2
4	83256	Advanced Logic Design	Dr. Osnat Keren	2	2	-	4	4	2
6	83313	Digital integrated circuits	Dr. Adam Teman	3	1	-	4	4	2
6	83315	Digital circuits laboratory	Prof. Alexander Fish	-	-	3	3	1.5	0.75
7	83458	Introduction to Cryptography	Dr. Carmit Hazay	2	1	-	3	3	1.5
		Total		12	5	5	22	16.5	8.25

Electives courses									
5	83218	Algebraic Structures	Dr. Natan Keller	2	1	-	3	3	1.5
6	83625	Attacks on Hardware	Dr. Yoav Weizman	2	-	2	4	3	1.5
6	83452	Design methods for secure hardware	Dr. Yoav Weizman	2	-	-	2	2	1
8	83457	Reliable and Secure hardware	Dr. Osnat Keren	2	-	-	2	2	1
7	89509	Secure programming	Prof. Benjamin Pinchas	2	2	-	4	4	2
7	89690	Introduction to Cyber Security	Prof. Amir Hertzberg	2	1	-	3	3	1.5
7	89550	Secure communication	Prof. Amir Hertzberg	2	2	-	4	4	2
Joint Elective courses									
4	83003	MatLab programming and applications	Dr. Smadar Satz	2	-	2	4	0	0
7	83622	Introduction to machine learning	Prof. Jacob Goldberger	2	1	-	3	3	1.5
7	83650	Efficient Secure Computation	Dr. Carmit Hazay	2	-	-	2	2	1
7	83655	Robotic Applications of Computational Geometry	Dr. Dror Rawitz	2	1	-	3	3	1.5
8	83658	Foundations of Cryptography	Dr. Carmit Hazay	2	-	-	2	2	1
8	83659	Error Control Coding for Computer systems	Dr. Osnat Keren	2	-	-	2	2	1
7	83691	Formal Verification and synthesis	Dr. Hillel Kogler	2	1	-	3	3	1.5
8	83670	Biological Computation	Dr. Hillel Kogler	2	1	-	3	3	1.5
8	83627	Advanced Topics in Protocols for Interactive Communication	Dr. Ran Gelles	2	1	-	3	3	1.5
							182		83.25
<ul style="list-style-type: none"> • The Faculty reserves the possibility to make changes in the study program and update accordingly. • The student has to specialize in one of the two tracks (Computer Systems, Cyber security) • Each student must learn Total 5 Electives 									