

**Computer Engineering 2016/17**

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 Mathematics1	Dr. Simcha Haber	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
		<b>Total</b>		<b>18</b>	<b>10</b>	<b>0</b>	<b>28</b>	<b>26</b>	<b>13</b>
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 Mathematics2	Ms. Shira Gilat	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
		<b>Total</b>		<b>20</b>	<b>8</b>	<b>2</b>	<b>30</b>	<b>27</b>	<b>13.5</b>
3	83206	Linear systems	Prof. Yosef Keller	3	1	-	4	4	2
3	83210	Harmonic analysis	Dr. Nir Lev	2	1	-	3	3	1.5
3	83211	Complex functions	Mr. Eyal Kaplan	2	1	-	3	3	1.5
3	83216	Introduction to probability and statistics	Prof. Reuven Cohen	3	1	-	4	4	2
3	83223	Object Oriented Programming	Dr. Yehuda Elmaliyah	2	2	-	4	4	2
3	83237	Intoroduction 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	Prof. Shmuel Wimer	2	1	1	4	3	1.5
		<b>Total</b>		<b>17</b>	<b>8</b>	<b>4</b>	<b>29</b>	<b>26.5</b>	<b>13.25</b>
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

		<b>Total</b>		<b>10</b>	<b>3</b>	<b>2</b>	<b>15</b>	<b>14</b>	<b>7</b>
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	Prof. Shmuel Wimer	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. Michal Halamis	3	1	-	4	4	2
		<b>Total</b>		<b>15</b>	<b>8</b>	<b>3</b>	<b>26</b>	<b>24.5</b>	<b>12.25</b>
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
		<b>Total</b>		<b>9</b>	<b>4</b>	<b>0</b>	<b>13</b>	<b>13</b>	<b>6.5</b>
7	83356	Introduction to coding theory	Dr. Osnat Keren	3	1	-	4	4	2
7,8	83401	Project	--	7	-	-	7	7	3.5
		<b>Total</b>		<b>10</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>11</b>	<b>5.5</b>
		<b>Total Required courses</b>		<b>99</b>	<b>42</b>	<b>11</b>	<b>152</b>	<b>142</b>	<b>71</b>
		<b>Computer Systems Track</b>							
		<b>Mandatory Courses</b>							
4	83214	Tools for numerical analysis	Mr. Idan Altar	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. Itamar Levy	2	-	2	4	0	0
6	83250	Automata and Computability	Dr. Carmit Hazay	3	1	-	4	4	2
		<b>Total</b>		<b>11</b>	<b>6</b>	<b>2</b>	<b>19</b>	<b>15</b>	<b>7.5</b>
		<b>Electives courses</b>							
4	83246	Introduction to Control Theory	Dr. Benjamin Zaidel	3	1	-	4	4	2
6	83313	Digital integrated circuit	Dr. Adam Teman	3	1	-	4	4	2
7	83315	Digital circuits laboratory	Prof. Alexander Fish	-	-	3	3	1.5	0.75
8	83456	Design and Analysis of Algorithms	Dr. Dror Rawitz	2	1	-	3	3	1.5
7	83458	Introduction to Cryptography	Dr. Carmit Hazay	2	1	-	3	3	1.5
7	83612	Digital VLSI circuits and systems	Prof. Shmuel Wimer	2	1	-	3	3	1.5

7	83629	Digital Image Processing	Prof. Jacob Goldberger	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	83655	Computational Geometry and Its Application to Robotics	Dr. Dror Rawitz	2	1	-	3	3	1.5
6,8	83656	Digital Geometry Processing	Dr. Ofir Weber	2	1	-	3	3	1.5
		<b>Cyber security Track</b>							
		<b>Mandatory Courses</b>							
4	83004	Verilog	Mr. Itamar Levy	2	-	2	4	0	0
4	83250	Automata and Computability	Dr. Carmit Hazay	3	1	-	4	4	2
6	83313	Digital integrated circuit	Dr. Adam Teman	3	1	-	4	4	2
6	83315	Digital circuits laboratory	Prof. Alexander Fish	-	-	3	3	1.5	0.75
8	83457	Reliable and Secure hardware	Dr. Osnat Keren	2	-	-	2	2	1
7	83458	Introduction to Cryptography	Dr. Carmit Hazay	2	1	-	3	3	1.5
		<b>Total</b>		<b>12</b>	<b>3</b>	<b>5</b>	<b>20</b>	<b>14.5</b>	<b>7.25</b>
		<b>Electives courses</b>							
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
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
		<b>Joint Elective courses</b>							
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
8	83652	Graph Theory with Engineering Application	Prof. Shmuel Wimer	2	-	-	2	2	1
8	83657	Secure Computation	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
							<b>182</b>		<b>83.25</b>
<ul style="list-style-type: none"> <li>• The Faculty reserves the possibility to make changes in the study program and update accordingly.</li> <li>• The student has to specialize in one of the two tracks (Computer Systems, Cyber security)</li> <li>• Each student must learn <b>Total 5 Electives</b></li> </ul>									