

**Weekly Programming**

Week	Session	Main Lecture Topic	Group		Special Room For Session (Computer Room, Audio-Visual Room)	Indicate Yes/No If The Session Needs 2 Teachers (Max. 4 Sessions)	Weekly Homework		
			Lecture	Seminar			Description	Class Hours	Homework
1	1	Presentation. Introduction to information technology and Programming. Data Representation, Binary Code.	X				Presentation Video (Computer Programming A short interesting film) Brief history of computers Computer Architecture: HW & SW	1.66	Individual work 5h
1	2	Lab 01 Introduction to the MATLAB environment.		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
2	3	Basic elements of programming. Base instruction. Scalar data type. Arithmetic and logic expressions	X				Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
2	4	Lab 02. Numbers (int, float), Characters, Variables. Arithmetic, Relational and Boolean Expressions. Built-in functions.		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	

3	5	Structured Programming. Theorem of Structured Programming. Flow Charts. Conditional Instructions. IF and Switch instruction	X		X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
3	6	Lab 04. Selection Instruction		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
4	7	Loops. For, While, Nested Loops	X			Yes	Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
4	8	Lab 05. Loop Instructions		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
5	9	Loops. Debug I. Arrays. Vectors (one-dimensional array)	X				Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
5	10	Lab 05. Loop Instructions Lab 06. Debug I		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
6	11	Matrices and multi-dimensional arrays.	X				Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
6	12	Lab 07. Data: arrays and matrices		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
7	13	Functions. Definition and function call.	X				Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
7	14	Lab 08. Functions		X	X	Yes	Review theoretical concepts, exercises and problems	1.66	
8	15	<b>MIDTERM EXAM 1 (MAX. GRADE: 25%)</b>	X				Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
8	16	(Lab 04 – 07) => Lab 08. Functions		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
9	17	Functions. Recursion					Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
9	18	(Lab 04 – 07) => Lab 08. Functions		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	

10	19	Structs and array of structs.	X				Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
10	20	Lab 09. Data Structures Lab 06. Debug II		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
11	21	Structs and array of structs. Debug II	X				Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
11	22	Lab 09. Data Structures Lab 06. Debug II		X	X	Yes	Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
12	23	Search, Sort and Merge	X				Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 5h
12	24	Lab 10. Search, Sorting, Merge		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
12	29	Files: binary files, plain text files, writing and reading.					Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
13	25	Problems and Exam Exercises	X			Yes	Detailed Readings & schemes shown in the slides Complete Exercises	1.66	Individual work 3h
13	26	Lab 11. Files (plain text files)		X	X		Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
14	27	<b>MIDTERM EXAM 2 (MAX. GRADE: 25%)</b>					Detailed Readings & schemes shown in the slides Complete Exercises	-	Individual work 5h
14	28	Lab 04 – 11 & Exam Problems		X			Detailed Readings & schemes shown in the slides Complete Exercises	1.66	
<b>Total 1 (face –to–face sessions and individual work for weeks 1-14)</b>								<b>116,3</b>	
15		Additional Sessions, Office Hours, Study, Exercises, etc							8.3
16		Individual work for the Final Exam, and Final Exam							4
17								21	
18									
<b>Subtotal 2</b>								<b>4</b>	<b>29.3</b>
<b>Total 2 (Face-to-Face hours and individual for weeks 15-18)</b>								<b>33.3</b>	
<b>TOTAL (Total 1 + Total 2. Max 180 horas)</b>								<b>150</b>	