



Université Libre de Tunis
Bouebdelli Education Group



**Plan
d'études**

**Génie
Informatique**

STUDY PLAN

Computer Engineering Year 1 (Semester 1)										
Code	UNIT	Modules	Semester Credit Hours				COEFFICIENT		ECTS Credits	
			Lecture	Workshop	Project	Self-Study	Module	Unit	Module	Unit
U1.1	Engineering Tools	Applied mathematics	42	0	0	35	3	7	3	7
		Probability and Statistics	21	0	0	30	2		2	
		Automata Theory	21	0	0	30	2		2	
U1.2	Algorithms, Modelling and Programming	Data Structure and Algorithms I	30	12	0	35	3	9	3	9
		Software Modelling	42	0	0	35	3		3	
		Web Programming Workshop I	0	21	21	35	3		3	
U1.3	Network and Architecture	Network Architectures and Functions	42	0	0	14	2	4	2	4
		Computer Architectures and Microprocessors	21	0	0	30	2		2	
U1.4	Systems and Database	Operating Systems	21	21	0	14	2	5	2,5	5
		Database fundamentals	42	0	0	35	3		2,5	
U1.5	Languages and Communication	Communication Techniques	21	0	0	21	1,5	3	1,5	3
		Technical English I	21	0	0	21	1.5		1.5	
U1.6	Project	Supervised Project I	0	0	21	30	2	2	2	2
SUB TOTAL			324	54	42	365	30	30	30	30
Total Semester Workload			785							

Computer Engineering Year 1 (Semester 2)

Code	UNIT	Modules	Semester Credit Hours				COEFFICIENT		ECTS Credits	
			Lecture	Workshop	Project	Self-Study	Module	Unit	Module	Unit
U2.1	Algorithms and Operational research	Algorithmic Complexity	21	0	0	21	1,5	6	1,5	6
		Operational Research and Optimization	21	0	0	21	1,5		1,5	
		Algorithms and Data Structure II	30	12	0	35	3		3	
U2.2	Web and Object Oriented Programming	Object-Oriented Programming (Java)	9	12	21	35	3	7,5	3	7,5
		Python Programming Language	9	12	0	21	1,5		1,5	
		Web Programming Workshop II	0	21	21	35	3		3	
U2.3	Computer Systems	Database Management Systems (DBMS)	21	21	0	35	3	5	2,5	4,5
		Software Engineering Workshop I	0	9	12	35	2		2	
U2.4	Signal and Telecommunication	Digital Transmission Techniques	21	0	0	21	1,5	3	1,5	3
		Signal Processing	21	0	0	21	1,5		1,5	
U2.5	Preparing to Certification	Preparing for the LPI 101 certification	9	12	0	21	1,5	3,5	1,5	3,5
		Preparing for the CCNA 1 certification	21	21	0	14	2		2	
U2.6	Languages and Communication	Computer Engineering Ethics	21	0	0	21	1,5	3	1,5	3
		Technical English II	21	0	0	21	1,5		1,5	
U2.7	PROJET	Supervised Project II	0	0	21	30	2	2	2	2
SUB TOTAL			225	120	75	387	30	30	30	30
Total Semester Workload			807							

Computer Engineering Year 2 (Semester 3)

Code	UNIT	Modules	Semester Credit Hours				COEFFICIENT		ECTS Credits	
			Lecture	Workshop	Project	Self-Study	Module	Unit	Module	Unit
U3.1	Software Engineering	Compiling Techniques	21	0	0	30	2	6	2	6
		Graph Theories and Applications	21	0	0	30	2		2	
		Software Engineering Workshop II	0	0	21	30	2		6	
U3.2	Programming I	Advanced Web Technologies	9	12	21	35	3	9	3	9
		.Net Technology Workshop	9	12	21	35	3		3	
		JEE Technology Workshop	9	12	21	35	3		3	
U3.3	Computer Systems	System Administration	21	21	0	14	2	7	2	7
		Introduction to Embedded Systems	21	0	0	35	2		2	
		Information System Security	42	0	0	35	3		3	
U3.4	Networks and Databases	Advanced Database Technologies	9	12	0	21	1.5	3.5	1.5	3.5
		Preparing for the CCNA 2 certification	21	21	0	14	2		2	
U3.5	Languages and Management I	Project Management	21	0	0	21	1.5	4.5	1.5	4.5
		English TOIEC I	21	0	0	21	1.5		1.5	
		Scientific Writing	0	0	21	21	1.5		1.5	
SUB TOTAL			225	90	105	377	30	30	30	30
Total Semester Workload			797							

Computer Engineering Year 2 (Semester 4)										
Code	UNIT	Modules	Semester Credit Hours				COEFFICIENT		ECTS Credits	
			Lecture	Workshop	Project	Self-Study	Module	Unit	Module	Unit
U4.1	Software Engineering	Test and Validation	21	0	0	30	2	6	2	6
		Software Quality Management	21	0	0	30	2		2	
		Preparing for the LPI 102 certification	9	12	0	30	2		2	
U4.2	Artificial Intelligence	Artificial Intelligence	9	12	0	30	2	4	2	4
		Data Mining and Analysis	9	12	0	30	2		2	
U4.3	Programming II	JEE Framework Project	0	21	21	14	2	6	2	6
		Advanced .Net Technology	0	21	21	14	2		2	
		Mobile Programming	21	0	21	14	2		2	
U4.4	Languages and Management II	English TOIEC II	42	0	0	35	3	6	3	6
		Business Management	21	0	0	21	1.5		1.5	
		Lean Management	21	0	0	21	1,5		1,5	
U4.5	Project	End of Year Project	0	0	21	30	2	2	2	2
U4.6	**Select one Elective Unit from List Below	Elective Module 1	42	0	0	35	3	6	3	6
		Elective Module 2	21	21	0	35	3		3	
SUB TOTAL			237	99	84	369	30	30	30	30
Total Semester Workload			789							

****List of Electives for Semester 4:**

Elective UNIT	Elective Module
Elective Unit 1:Software Architecture	Software Architecture
	Design Patterns
Elective Unit 2: Embedded Systems	Introduction to Embedded Systems
	Embedded Programming

Computer Engineering Year 3 (Semester 5)

Code	UNIT	Modules	Semester Credit Hours				COEFFICIENT		ECTS Credits	
			Lecture	Workshop	Project	Self-Study	Module	Unit	Module	Unit
U 5.1	Decision Support Systems	Data Science	21	0	21	21	2.5	5.5	2.5	5.5
		Business Intelligence (BI)	21	21	0	35	3		3	
U 5.2	Advanced Programming	Development Frameworks Project	0	21	21	35	3	8	3	8
		ERP/CRM Project Management	42	0	0	35	3		3	
		Mobile Programming Project	0	0	21	30	2		2	
U 5.3	Big Data and Cloud Computing	Big Data	9	12	21	14	2	4	2	4
		Virtualization and Cloud Computing	21	21	0	14	2		2	
U5.4	Databases	Distributed Databases	21	0	0	30	2	4	2	4
		Database Administration	21	0	0	30	2		2	
U5.5	Management and Corporate Culture	Digital Law	21	0	0	21	1.5	4.5	1.5	4.5
		Business Creation	21	0	0	21	1.5		2	
		Team building and leadership	21	0	0	21	1.5		2	
U5.6	**Select one Elective Unit from List Below	Elective Module 1	21	0	0	30	2	4	2	4
		Elective Module 2	9	12	0	30	2		2	
SUB TOTAL			249	90	84	367	30	30	30	30
Total Semester Workload			790							

****List of Electives for Semester 5:**

Elective UNIT	Elective Module
Elective Unit 1:Software Architecture	Computer System Management
	Service Oriented Architecture (SOA)
Elective Unit 2: Embedded Systems	Image Processing and Computer Graphics
	Internet of Things (IoT)

Computer Engineering Year 3 (Semester 6)				
Code	UNIT	Credit Hours	COEFFICIENT	ECTS Credits
U 6.1	Graduation Research Project (4-6 months)	560		20
U 6.2	Internship 1 (1-2 months)	140		5
U 6.3	Internship 2 (1-2 months)	140		5
Total Semester Workload		840		30

The Average Workload during Internship is 35H/Week