

# **MECHANICAL AND PRODUCTION ENGINEERING DEPARTMENT**

COURSES, TIMETABLES AND ECTS GUIDE

# FIRST YEAR

## SEMESTER 1:

UE	CODE	Module	ECTS	Total	Courses	Tutorials	Practical work	Total/semester
UE11	M1101	Mechanical engineering: study	4	10	10	10	40	150
	M1102	Dimensioning of structures: testing the strength of materials	2		8	18	4	
	M1103	Mechanics: basic principle statics	2		6	20	4	
	M1104	Materials science: material property	2		9	9	12	
Total UE11					33	57	60	150
UE12	M1201	Production engineering: basis of the production process	3	9	7	10	28	120
	M1202	Organisation and Methods : Introduction on the production process	2.5		6	16	8	
	M1203	Metrology : measures and control	1		3	4	8	
	M1204	Electricity – Electronics and Automatism (EEA): basis concepts of electricity	2.5		6	12	12	
	M1214	EEA: basics of automatism						
Total UE12					22	42	56	120

UE13	M1301	Mathematics: mathematical tools	2.5	11	14	28	3	185
	M1302	Expression and Communication (EC): fundamental elements of communication	2		1	14	15	
	M1303	Personal and professional project: professional environment	1		6	6	8	
	M1304	Foreign languages: communication in foreign languages	2.5			15	15	
	M1306	Methodology and individual assistance: support the student	1		2	4	24	
	M1307	Informatics: spreadsheets and programming languages	2		5	10	15	
<b>Total UE13</b>					<b>28</b>	<b>77</b>	<b>80</b>	<b>185</b>
<b>TOTAL SEMESTER 1:</b>				<b>30</b>	<b>83</b>	<b>176</b>	<b>196</b>	<b>455</b>

FIRST YEAR								
SEMESTER 2:								
UE	CODE	Module	ECTS	Total	Courses	Tutorials	Practical work	Total/semester
UE21	M2101	Mechanical engineering: design	3	10	8	12	40	195
	M2102	Dimensioning of structures: testing of materials – torsion, bending	2		10	16	4	
	M2103	Mechanics: dynamics of solid: kinematics kinetics, PFD	3		18	38	4	
	M2104	Materials science: Material usage	2		15	14	16	
Total UE21					51	80	64	
UE22	M2201	Production engineering: production resources.	2.5	8	8	12	40	180
	M2202	Organisation and Methods: from the definition of the product to the manufacturing process	1.5		6	12	12	
	M2203	Metrology: three-dimensional metrology and surface processing	1.5		6	8	16	
	M2204	Electricity – Electronics and Automatism (EEA): electric motorisation	2.5		12	24	24	
	M2214	EEA: automatism of a workstation, security						
Total UE22					32	56	92	
UE23	M2301	Mathematics: integral and matrix calculation	3	12	19	35	6	180
	M2302	Expression and Communication: communication, information, argumentation	2		1	14	15	
	M2303	Personal and professional project: professional integration	1		5	4	6	
	M2304	Foreign languages: technical and professional foreign language – search and transfer data	2			15	15	
	M2305	Organization and industrial management: carry out a project	2		10	15	20	
	M2308	Synthesis works and project	2					100
Total UE23					35	83	62	280
TOTAL SEMESTER 2:				30	118	219	218	555

## SECOND YEAR

### SEMESTER 3:

UE	CODE	Module	ECTS	Total	Courses	Tutorials	Practical work	Total/semester
UE31	M3101	Mechanical engineering: power transfer	3	10	12	23	25	180
	M3111	Mechanical engineering: CAD / CAM process chain	1.5		1	4	25	
	M3102	Dimensioning of structures: elasticity – combined testing of materials	2		8	18	4	
	M3103	Mechanics: dynamics and energetics	2.5		9	28	8	
	M3104C	Material selection	1		2	9	4	
Total UE31					32	82	66	180
UE32	M3201	Production engineering: prepare production using a CN machinery	2	11	4	6	20	180
	M3202	Organisation and Methods : study and cost-optimization	2		6	12	12	
	M3203C	Metrology : metrology and advanced control	1		3	6	6	
	M3204	Electricity – Electronics and Automatism (EEA): data processing	3		8	15	22	
	M3214	EEA: integration of automated systems						
	M3205	Organization and industrial management: process management	3		14	18	28	
Total UE32					35	57	88	180

UE33	M3301	Mathematics: mathematical functions	2	9	9	18	3	115
	M3302	Expression and Communication: professional and academic communication	1		1	7	7	
	M3303	Personal and professional project: preparation for internship – graduation – international mobility	1		7	8	10	
	M3304	Foreign languages: technical and professional language – writing and speaking in an intercultural context	2			15	15	
	M3307C	Informatics: databases	1		3	4	8	
	M3308	Synthesis works and project	2					
<b>Total UE33</b>					<b>20</b>	<b>52</b>	<b>43</b>	<b>100</b>
<b>TOTAL SEMESTER 3:</b>				<b>30</b>	<b>87</b>	<b>191</b>	<b>197</b>	<b>475</b>

## SECOND YEAR

### SEMESTER 4:

UE	CODE	Module	ECTS	Total	Courses	Tutorials	Practical work	Total/semester
UE41	M4101C	Mechanical engineering: study	2	6	2	10.5	40	112.5
	M4102C	Dimensioning of structures: energy methods and final element modelling	1		8	18	4	
	M4105C	Mechanical engineering and dimensioning of structures	1			14	16	
	M4108	Synthesis works and project	2					50
Total UE41					10	42.5	60	162.5
UE42	M4201C	Production engineering: prepare production under industrial conditions	1	6		10	20	97.5
	M4202C	Organisation and Methods: multi-process industrialisation	2		8	12.5	32	
	M4212C	Organisation and Method : study CAD/CAM process chain	1		2	4	9	
	M4204C	Electricity – Electronics and Automatism (EEA): automation of a continuous system	2					
	M4208	Synthesis works and project						50
TotalUE42					10	26.5	61	147.5

UE43	M4301C	Mathematics: curves	1	6	5	10		105
	M4302C	Expression and Communication: communication in organizations	2		1	9	20	
	M4304C	Foreign languages: general, technical and professional language – integration in an international team	1.5			15	15	
	M4305C	Organization and industrial management: management in an organization	1.5		10	20		
Total UE43					16	54	35	105
UE44	M4409	Internship	12	12				
TOTAL SEMESTER 4:				30	36	123	156	315

<b>COURSE TOTAL:</b>				<b>108</b>	<b>324</b>	<b>709</b>	<b>767</b>	<b>1800</b>
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