

**„GHEORGHE ASACHI” TECHNICAL UNIVERSITY OF IASI**  
**FACULTY OF MACHINE MANUFACTURING AND INDUSTRIAL MANAGEMENT**

Field of study: **Industrial Engineering**

Programme of Study: **MICROMECHANICAL SYSTEMS**

Conferred title: Master degree

Study duration: 4 *semesters*

Form of education: *full-time*

**CURRICULUM**

**YEAR 1**

**2019/2020**

TYPE	No.	Course name	Course code	Prerequisites	Semester 1						Semester 2										
					No of hours / week / course						Eval	K	No of hours / week / course						Eval.	K	
					C	S	L	P	PA	SI*			C	S	L	P	PA	SI*			
MC	1	Mathematical Basis of Finite Element Method	CFAC, MFA, SMM-IA-101		2	1	0	0		78	C	5									
MC	2	Elements of Technological Physics	CFAC, MFA, MTP, SMM-IA-102		2	0	1	0		78	E	5									
MC	3	Computer Integrated Manufacturing Systems	CFAC, SMM-IA-103		2	0	1	1		112	E	7									
MC	4	Computer-Aided Modelling and Simulation in Manufacturing Systems	CFAC, SMM-IA-104		2	0	1	1		88	E	6									
MC	5	Design-Research Laboratory 1	SMM-PA-105						12	0	VP	7									
MC	6	Finite Element Analysis in Mechanical Engineering	CFAC, MFA, SMM-IA-106										2	0	2	0		64	E	5	
MC	7	Quality and Reliability in Precision Mechanics	SMM-IA-107										2	0	1.5	0		78	C	5	
MC	8	Tooling for Technological Equipment	SMM-IA-108										2	0	1	1		88	E	6	
MC	9	Ethics and Integrity	CMMI-IA-111										1	1	0	0		20	C	2	
MC	10	Design-Research Laboratory 2	SMM-PA-112													10	28	VP	7		
OC	11	Concurrent Engineering	SMM-IA-113										2		1.5			78	E	5	
		Process Equipment for Precision Mechanics	SMM-IA-114																		
FC	12	Industrial Design	SMM-IA-115		2	0	1	1		88	E	6									
FC	13	Applications of Advanced Sensors in Precision Mechanics	SMM-IA-116										2		1.5			102	E	6	
					<b>8</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>12</b>		<b>3E</b>		<b>8</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>10</b>		<b>3E</b>		
			<b>Total hours per week, total evaluations and credits per semester</b>							<b>14</b>		<b>12</b>	<b>356</b>	<b>1C</b>	<b>30</b>		<b>16</b>	<b>10</b>	<b>356</b>	<b>2C</b>	<b>30</b>
										<b>26</b>							<b>26</b>			<b>1VP</b>	

**Abbreviation:** *MC* - Mandatory Course; *OC* - Optional Course; *FC* - Free Course; *SI* - Individual (Non Assisted) Study;

*PA* - Partially Assisted; *C* - Course; *S* - Seminary; *L* - Laboratory; *P* - Project

**„GHEORGHE ASACHI” TECHNICAL UNIVERSITY OF IASI**  
**FACULTY OF MACHINE MANUFACTURING AND INDUSTRIAL MANAGEMENT**

Field of study: **Industrial Engineering**

Programme of Study: **MICROMECHANICAL SYSTEMS**

Conferred title: Master degree

Study duration: 4 *semesters*

Form of education: *full-time*

**CURRICULUM**

**YEAR 2**

**2020/2021**

TYPE	No.	Course name	Course code	Prerequisites	Semester 1						Semester 2										
					No of hours / week / course						Eval	K	No of hours / week / course						Eval.	K	
					C	S	L	P	PA	SI*			C	S	L	P	PA	SI*			
MC	1	Methods and Equipment in Experimental Data Analysis	SMM-IA-201		2	0	2	0		112	E	7									
MC	2	Bioengineering and Prosthetics	SMM-IA-202		2	0	1.0	0		78	E	5									
MC	3	Synthesis of Micro Electro-Mechanical Systems	SMM-IA-203		2	0	1	0		102	E	6									
MC	4	Innovation and Creativity Techniques	SMM-IA-204		1	1				20	C	2									
MC	4	Design-Research Laboratory 3	SMM-PA-205						12	0	VP	7									
MC	5	Professional Practical Training	SMM-PA-206												12	72	VP	10			
MC	6	Master's Thesis Elaboration	SMM-PA-207												14	284	VP	20			
OC	7	High Performance Hydro-Mechatronics Systems	SMM-IA-208		1	0	1	0		44	C	3									
		Optimization Techniques and Methods in Precision Mechanics	SMM-IA-209																		
FC	8	Computer-Aided Experimental Research	SMM-IA-210		2	0	2	0		88	E	6									
					8	1	5	0	12		3E		0	0	0	0	26				
					Total hours per week, total evaluations and credits per semester					14	12	356	2C	30	0			26	356	2VP	30
					26							1VP		26							
MC	9	Master's Thesis Exam	CFAC-ED															E	10		

**Abbreviation:** *MC* - Mandatory Course; *OC* - Optional Course; *FC* - Free Course; *SI* - Individual (Non Assisted) Study;

*PA* - Partially Assisted; *C* – Course; *S* – Seminary; *L* – Laboratory; *P* - Project