

DOUBLE MAJOR IN MATERIALS SCIENCE AND NANOTECHNOLOGY ENGINEERING FOR MECHANICAL ENGINEERING STUDENTS

Course Code	Course Name	C	L/P	C	ECTS
TOTAL					

Course Code	Course Name	C	L/P	C	ECTS
MSN 101	Introduction to Materials Science and Nanotechnology Engineering	2	0	2	4
TOTAL		2	0	2	4

Third Semester

Course Code	Course Name	C	L/P	C	ECTS
MSN 201	Materials Science I	3	1	3	5
MSN 203	Mechanics of Materials	4	0	4	5
MSN 207	Nanoscience and Physical Theory in Engineering	4	1	4	6
TOTAL		11	2	11	16

Fourth Semester

Course Code	Course Name	C	L/P	C	ECTS
MSN 202	Materials Science II	3	1	3	6
MSN 208	Chemical Abstract Nano Science and Engineering	3	0	3	6
PHY 201	Introduction to Quantum Physics	4	0	4	6
MSN 200	Summer Practice I	0	0	0	1
TOTAL		10	1	10	19

Fifth Semester

Course Code	Course Name	C	L/P	C	ECTS
MSN 302	Introduction to Solid State Physics	3	0	3	6
MSN 305	Phase Transitions and Diagrams	3	0	3	6
TOTAL		6	0	6	12

Sixth Semester

Course Code	Course Name	C	L/P	C	ECTS
MSN 304	Nanomaterials and Manufacturing Methods	3	0	3	6
MSN 312	Material Selection and Design	4	0	4	6
MSN 303	Mass Transfer	3	0	3	6
TOTAL		10	0	10	18

Seventh Semester

Course Code	Course Name	C	L/P	C	ECTS
MSN 403	Nano-scale Characterization Methods	3	1	3	6
MSN 405	Experimental Methods	2	3	3	6
TOTAL		5	4	6	12

Eighth Semester

Course Code	Course Name	C	L/P	C	ECTS
MSN 400	Graduation Project	2	4	4	12
TOTAL		2	4	4	12

TOTAL	Contact Hs	Lab/Practice Hs	Credit	ECTS
	46	11	49	93