

SABANCİ UNIVERSITY - FACULTY OF ENGINEERING AND NATURAL SCIENCES Materials Science and Nano engineering PROGRAM RECOMMENDED COURSE PROGRAM																						
Year - 1 Freshman Semester 1							Year - 1 Freshman Semester 2															
Course Grade	Course Name	Course Type	Prerequisite Courses	Std Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ACTS (Total)	Course Grade	Course Name	Course Type	Prerequisite Courses	Std Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ACTS (Total)							
MAP1001	Math101	lecture		4	4	0	4	MAP1002	Math102	lecture		4	4	0	4							
MAP1003	Math103	lecture		4	4	0	4	MAP1004	Math104	lecture		4	4	0	4							
MAP1005	Computer Integrated Project 1	university C		0	0	0	0	MAP1006	Academic Literatures	university C		0	0	0	0							
MAP1011	Principles of Materials and the Science of the Turkish Revolution 1	university C		2	2	0	2	MAP1012	Principles of Materials and the Science of the Turkish Revolution 2	university C		2	2	0	2							
MAP1013	Principles of Materials and the Science of the Turkish Revolution 3	university C		2	2	0	2	MAP1014	Principles of Materials and the Science of the Turkish Revolution 4	university C		2	2	0	2							
MAP1015	English Language and Literature 1	university C		2	2	0	2	MAP1016	English Language and Literature 2	university C		2	2	0	2							
MAP1017	English Language and Literature 3	university C		2	2	0	2	MAP1018	English Language and Literature 4	university C		2	2	0	2							
MAP1019	Computational Approaches to Product Design	university C		0	0	0	0	MAP1020	Computational Approaches to Product Design	university C		0	0	0	0							
MAP1021	Project 1	university C		0	0	0	0	MAP1022	Project 1	university C		0	0	0	0							
TERM TOTAL							32	TERM TOTAL							32							
The student has to take "Computer Integrated Project 1" and "Computer Integrated Project 2" and "Principles of Materials and the Science of the Turkish Revolution 1" and "Principles of Materials and the Science of the Turkish Revolution 2" and "Principles of Materials and the Science of the Turkish Revolution 3" and "Principles of Materials and the Science of the Turkish Revolution 4" and "Academic Literatures" and "English Language and Literature 1" and "English Language and Literature 2" and "English Language and Literature 3" and "English Language and Literature 4" and "Computational Approaches to Product Design" and "Project 1" as必修课 or 选修课.																						
Year - 1 Sophomore Semester 1							Year - 1 Sophomore Semester 2															
Course Grade	Course Name	Course Type	Prerequisite Courses	Std Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ACTS (Total)	Course Grade	Course Name	Course Type	Prerequisite Courses	Std Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ACTS (Total)							
MAP1023	Principles of Materials Science	lecture		4	4	0	4	MAP1024	Principles of Materials Science	lecture		4	4	0	4							
MAP1025	Introduction to Materials Science	lecture		4	4	2	4	MAP1026	Introduction to Materials Science (lab/elec)	core		0	4	2	0							
MAP1027	Materials	lecture		4	4	0	4	MAP1028	Materials	lecture		4	4	0	4							
MAP1029	Introduction to Computing	core/elective		4	4	0	4	MAP1030	Principles of Nanoscience	lecture		4	4	0	4							
MAP1031	Java To Objects & Data Classes Objects	elective		4	4	0	4	MAP1032	Deformation Liquids (soft) (change)	core		4	4	0	4							
MAP1033	Elective	elective		4	4	0	4	MAP1034	Graphics of Materials	core/elective	MAP1023 + MAP1025	4	4	1	4							
TERM TOTAL							32	TERM TOTAL							32							
The student has to take "Principles of Materials Science" and "Principles of Materials Science (lab/elec)" and "Introduction to Materials Science" and "Materials" and "Introduction to Computing" and "Java To Objects & Data Classes Objects" and "Deformation Liquids (soft) (change)" and "Graphics of Materials" as必修课 or 选修课.																						
Year - 2 Junior Semester 1							Year - 2 Junior Semester 2															
Course Grade	Course Name	Course Type	Prerequisite Courses	Std Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ACTS (Total)	Course Grade	Course Name	Course Type	Prerequisite Courses	Std Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ACTS (Total)							
MAP1035	Materials Characterization	lecture	MAP1023 + MAP1025 + MAP1026	4	4	0	4	MAP1036	Principles of Nanoscience (lab/elec)	lecture		4	4	0	4							
MAP1037	Material Prop. of Materials	lecture		4	4	1	4	MAP1038	Material Properties	core		4	4	1	4							
MAP1039	Elective	elective		4	4	0	4	MAP1040	Elective	core/elective		4	4	0	4							
MAP1040	Transport Phenomena in Materials	core/elective		4	4	0	4	MAP1041	Polymer Synthesis	core/elective		4	4	0	4							
MAP1041	Elective	elective		4	4	0	4	MAP1042	Elective	elective		4	4	0	4							
TERM TOTAL							32	TERM TOTAL							32							
The student has to take "Principles of Materials Science" and "Principles of Materials Science (lab/elec)" and "Introduction to Materials Science" and "Materials" and "Introduction to Computing" and "Java To Objects & Data Classes Objects" and "Deformation Liquids (soft) (change)" and "Graphics of Materials" and "Principles of Nanoscience (lab/elec)" as必修课 or 选修课.																						
Year - 3 Senior Semester 1							Year - 3 Senior Semester 2															
Course Grade	Course Name	Course Type	Prerequisite Courses	Std Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ACTS (Total)	Course Grade	Course Name	Course Type	Prerequisite Courses	Std Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ACTS (Total)							
MAP1043	Graduation Project	core	MAP1034 or MAP1032	4	4	0	4	MAP1044	Graduation Project	core	MAP1034 or MAP1032	4	4	0	4							
MAP1045	Elective	elective		4	4	0	4	MAP1046	Introduction to Nanoscience/Fundamentals of Nanoscience	lecture		4	4	0	4							
MAP1047	Elective	elective		4	4	0	4	MAP1048	Elective	core		4	4	0	4							
MAP1049	Elective	elective		4	4	0	4	MAP1050	Elective	core		4	4	0	4							
MAP1051	Elective	elective		4	4	0	4	MAP1052	Elective	core		4	4	0	4							
TERM TOTAL							32	TERM TOTAL							32							
The student has to take "Principles of Materials Science" and "Principles of Materials Science (lab/elec)" and "Introduction to Materials Science" and "Materials" and "Introduction to Computing" and "Java To Objects & Data Classes Objects" and "Deformation Liquids (soft) (change)" and "Graphics of Materials" and "Principles of Nanoscience (lab/elec)" and "Graduation Project" as必修课 or 选修课.																						
RECOMMENDED TOTAL: 120 ECTS TOTAL: 320																						
TRACK ELECTIVE COURSES																						
DESCRIPTION: These are not official tracks but are suggestions for those interested in concentrating in a particular area in Materials Science and Nano engineering. NOTE: Only MAP coded core elective or elective courses are listed - Core courses are required for all tracks. Special topic courses are also NOT included.																						
1. Suggested Courses For Materials Science and Nano engineering and "Organic materials, recycling and processing" Track							2. Suggested Courses For Materials Science and Nano engineering and "Polymer" Track															
Course Grade	Course Name	Course Type	Prerequisite Courses	Std Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ACTS (Total)	Course Grade	Course Name	Course Type	Prerequisite Courses	Std Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ACTS (Total)							
MAP1053	Organic Chemistry	lecture		4	4	0	4	MAP1054	Organic Chemistry	lecture		4	4	0	4							
MAP1055	Organic Chemistry	lecture		4	4	0	4	MAP1056	Organic Chemistry	lecture		4	4	0	4							
MAP1057	Organic Chemistry	lecture		4	4	0	4	MAP1058	Organic Chemistry	lecture		4	4	0	4							
MAP1059	Organic Chemistry	lecture		4	4	0	4	MAP1060	Organic Chemistry	lecture		4	4	0	4							
MAP1061	Organic Chemistry	lecture		4	4	0	4	MAP1062	Organic Chemistry	lecture		4	4	0	4							
MAP1063	Organic Chemistry	lecture		4	4	0	4	MAP1064	Organic Chemistry	lecture		4	4	0	4							
MAP1065	Organic Chemistry	lecture		4	4	0	4	MAP1066	Organic Chemistry	lecture		4	4	0	4							
MAP1067	Organic Chemistry	lecture		4	4	0	4	MAP1068	Organic Chemistry	lecture		4	4	0	4							
MAP1069	Organic Chemistry	lecture		4	4	0	4	MAP1070	Organic Chemistry	lecture		4	4	0	4							
MAP1071	Organic Chemistry	lecture		4	4	0	4	MAP1072	Organic Chemistry	lecture		4	4	0	4							
MAP1073	Organic Chemistry	lecture		4	4	0	4	MAP1074	Organic Chemistry	lecture		4	4	0	4							
MAP1075	Organic Chemistry	lecture		4	4	0	4	MAP1076	Organic Chemistry	lecture		4	4	0	4							
MAP1077	Organic Chemistry	lecture		4	4	0	4	MAP1078	Organic Chemistry	lecture		4	4	0	4							
MAP1079	Organic Chemistry	lecture		4	4	0	4	MAP1080	Organic Chemistry	lecture		4	4	0	4							
MAP1081	Organic Chemistry	lecture		4	4	0	4	MAP1082	Organic Chemistry	lecture		4	4	0	4							
MAP1083	Organic Chemistry	lecture		4	4	0	4	MAP1084	Organic Chemistry	lecture		4	4	0	4							
MAP1085	Organic Chemistry	lecture		4	4	0	4	MAP1086	Organic Chemistry	lecture		4	4	0	4							
MAP1087	Organic Chemistry	lecture		4	4	0	4	MAP1088	Organic Chemistry	lecture		4	4	0	4							
MAP1089	Organic Chemistry	lecture		4	4	0	4	MAP1090	Organic Chemistry	lecture		4	4	0	4							
MAP1091	Organic Chemistry	lecture		4	4	0	4	MAP1092	Organic Chemistry	lecture		4	4	0	4							
MAP1093	Organic Chemistry	lecture		4	4	0	4	MAP1094	Organic Chemistry	lecture		4	4	0	4							
MAP1095	Organic Chemistry	lecture		4	4	0	4	MAP1096	Organic Chemistry	lecture		4	4	0	4							
MAP1097	Organic Chemistry	lecture		4	4	0	4	MAP1098	Organic Chemistry	lecture		4	4	0	4							
MAP1099	Organic Chemistry	lecture		4	4	0	4	MAP1100	Organic Chemistry	lecture		4	4	0	4							
MAP1101	Organic Chemistry	lecture		4	4	0	4	MAP1102	Organic Chemistry	lecture		4	4	0	4							
MAP1103	Organic Chemistry	lecture		4	4	0	4	MAP1104	Organic Chemistry	lecture		4	4	0	4							
MAP1105	Organic Chemistry	lecture		4	4	0	4	MAP1106	Organic Chemistry	lecture		4	4	0	4							
MAP1107	Organic Chemistry	lecture		4	4	0	4	MAP1108	Organic Chemistry	lecture		4	4	0	4							
MAP1109	Organic Chemistry	lecture		4	4	0	4	MAP1110	Organic Chemistry	lecture		4	4	0	4							
MAP1111	Organic Chemistry	lecture		4	4	0	4	MAP1112	Organic Chemistry	lecture		4	4	0	4							
MAP1113	Organic Chemistry	lecture		4	4	0	4	MAP1114	Organic Chemistry	lecture		4	4	0	4							
MAP1115	Organic Chemistry	lecture		4	4	0	4	MAP1116	Organic Chemistry	lecture		4	4	0	4							
MAP1117	Organic Chemistry	lecture		4	4	0	4	MAP1118	Organic Chemistry	lecture		4	4	0	4							
MAP1119	Organic Chemistry	lecture		4	4	0	4	MAP1120	Organic Chemistry	lecture		4	4	0	4							
MAP1121	Organic Chemistry	lecture		4	4	0	4	MAP1122	Organic Chemistry	lecture		4	4	0	4							
MAP1123	Organic Chemistry	lecture		4	4	0	4	MAP1124	Organic Chemistry	lecture		4	4	0	4							
MAP1125	Organic Chemistry	lecture		4	4	0	4	MAP1126	Organic Chemistry	lecture		4	4	0	4							
MAP1127	Organic Chemistry	lecture		4	4	0	4	MAP1128	Organic Chemistry	lecture		4	4	0	4							
MAP1129	Organic Chemistry	lecture		4	4	0	4	MAP1130	Organic Chemistry	lecture		4	4	0	4							
MAP1131	Organic Chemistry	lecture																				