

BSc in Materials Science and Engineering Program Outcomes		NATIONAL QUALIFICATIONS OF RELATED FIELDS*																																															
		ENGINEERING & ENGINEERING TRADES															MANUFACTURING & PROCESSING																																
		A1	B1	B2	B3	B4	B5	C1	C2	D1	D2	D3	D4	D5	D6	D7	E1	E2	E3	E4	E5	F1	F2	F3	A1	B1	B2	B3	B4	B5	C1	C2	D1	D2	D3	D4	D5	D6	D7	E1	E2	E3	E4	E5	F1	F2	F3		
1	Understand the world, their country, their society, as well as themselves and have awareness of ethical problems, values and responsibility to the self and to others																			X	X	X	X																						X	X	X	X	
2	Understand different disciplines from natural and statistical sciences to social sciences and art, and develop multidisciplinary approaches in thinking and practice		X									X													X																								
3	Think critically, follow innovations and developments in science and technology, demonstrate personal and organizational entrepreneurship and engage in life-long learning in various subjects.					X		X	X	X				X					X	X			X					X			X	X	X				X					X	X					X	
4	Communicate effectively by oral, written, and graphical means in both English and Turkish.																X																							X									
5	Take individual and team responsibility, function effectively and respectfully as an individual and a member or a leader of a team.						X								X							X								X								X								X			
6	Possess and apply knowledge of mathematics, science, and engineering.	X	X								X													X	X																								
7	Design and conduct research, do experiments, as well as analyze and interpret data.					X																							X																				
8	Identify, formulate, and solve engineering problems.			X	X							X														X	X																						
9	Use the techniques, skills, and modern engineering tools necessary for engineering practice.				X	X							X	X	X												X	X									X	X	X										
10	Analyze, Design and model engineering systems, components and processes.			X	X							X	X					X								X	X										X	X					X						
11	Applying fundamental and advanced knowledge of natural sciences as well as engineering principles to develop and design new materials and establish the relation between internal structure and physical properties using experimental, computational and theoretical tools.	X	X	X	X							X		X										X	X	X	X	X								X		X											
12	Merging the existing knowledge on physical properties, design limits and fabrication methods in materials selection for a particular application or to resolve material performance related problems.	X																						X		X	X																						
13	Predicting and understanding the behavior of a material under use in a specific environment knowing the internal structure or vice versa.		X				X					X		X											X			X						X		X													

* Please check <http://tyyc.yok.gov.tr/> for the list of national qualifications. The numbers represent the qualifications in the below system:

A: KNOWLEDGE, Theoretical & Factual

B: SKILL, Cognitive & Applied

C: COMPETENCY, Working Independently & Taking Responsibility

D: COMPETENCY, Ability to Learn

E: COMPETENCY, Communication & Social Competencies

F: COMPETENCY, Field Specific