T.C. ESKİŞEHİR OSMANGAZİ UNIVERSITY
ARCHITECTURE AND ENGINEERING FACULTY
MECHANICAL ENGINEERİNG DEPARTMENT

COURSE INFORMATION FORM

SEMESTER	Fall

COURSE CODE	151811205 - 151831205	COURSE NAME	Chemistry Laboratory

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
1	0	0	2	1	2	COMPULSORY (x) ELECTIVE ( )	English

COURSE CATAGORY			
Basic Science	Basic Engineering	Engineering Subjects [if it contains considerable design, mark with (√)]	Social Science
100		( )	

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term		
	Quiz		
	Homework		
	Project		
	Report	6	70
	Others (……)		
FINAL EXAM		1	30

PREREQUIEITE(S)	
COURSE DESCRIPTION	Verification of the Law of Definite Proportions, calculation of the ideal gas constant and the molar volume of a gas, calculation of the equivalent weight and atomic mass of a metal, qualitative analysis, titrimetric analysis, Charles' Law
COURSE OBJECTIVES	To give the abilities to obtain, evaluate, discuss, report and submit the experimental data by performing the experiments which are the applications of the knowledge of chemistry gained in the chemistry course and to achieve this in accordance with laboratory saffetly rules.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Providing the experimental chemistry knowledge and the abilities to obtain, evaluate, discuss, report and submit the experimental data, understanding the profesional and ethical responsibility, being able to achive the study in groups, to conduct efficiend oral and written communication, understanding the impotance of life-long learning.
COURSE OUTCOMES	By the end of this course the students will be able to obtain, analyze, discuss and submit the result of the following experiments. 1. Verification of the the Law of Definite Proportions, 2. Calculation of the ideal gas constant and the molar volume of a gas, 3. Calculation of the equivalent weight and atomic mass of a metal, 4. Qualitative analysis, 5. Titrimetric analysis, Charles' Law
TEXTBOOK	**İnel, O. ,** Genel Kimya Laboratuvar Kılavuzu**, Eskişehir**
OTHER REFERENCES	All chemistry and general chemistry lab. Textbooks
TOOLS AND EQUIPMENTS REQUIRED	Laboratory equipments and experimental setups

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Introduction
2	Establishing the experimental study groups
3	Explanations on the laboratory and safety rules and related subjects
4	Obtaining, evaluation, discussion and reporting the experimental data
5	Verification of the Law of Definite Proportions
6	Calculation of the ideal gas constant and the molar volume of a gas
7	Calculation of the equivalent weight and atomic mass of a metal
8	Mid-Term Examination
9	Mid-Term Examination
10	Qualitative analysis
11	Titrimetric analysis
12	Charles' Law
13	Make up of missed experiments
14	Make up of missed experiments
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	Sufficient knowledge of mechanical engineering subjects related with mathematics, science and own branch; an ability to apply theoretical and practical knowledge on solving and modeling of mechanical engineering problems.	[ ]	[X]	[ ]
2	Ability to determine, define, formulate and solve complex mechanical engineering problems; for that purpose an ability to select and use convenient analytical and experimental methods.	[ ]	[X]	[ ]
3	Ability to design a complex system, a component and/or an engineering process under real life constrains or conditions, defined by environmental, economical and political problems; for that purpose an ability to apply modern design methods.	[X]	[ ]	[ ]
4	Ability to develop, select and use modern methods and tools required for mechanical engineering applications; ability to effective use of information technologies.	[ ]	[X]	[ ]
5	In order to investigate engineering problems; ability to set up and conduct experiments and ability to analyze and interpretation of experimental results.	[X]	[ ]	[ ]
6	Ability to work effectively in inner or multi-disciplinary teams; proficiency of interdependence.	[X]	[ ]	[ ]
7	Ability to communicate in written and oral forms in Turkish/English; proficiency at least one foreign language.	[X]	[ ]	[ ]
8	Awareness of life-long learning; ability to reach information; follow developments in science and technology and continuous self-improvement.	[ ]	[X]	[ ]
9	Understanding of professional and ethical issues and taking responsibility	[ ]	[X]	[ ]
10	Awareness of project, risk and change management; awareness of entrepreneurship, innovativeness and sustainable development.	[ ]	[X]	[ ]
11	Knowledge of actual problems and effects of engineering applications on health, environment and security in global and social scale; an awareness of juridical results of engineering solutions.	[ ]	[X]	[ ]
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Prepared by: **Date:**

Signature(s):