OXIDATIONANDREDUCTIONREACTIONSIN INORGANIC CHEMISTRY

1	Course Title:	OXIDATIONANDREDUCTIONREACTIONSIN INORGANIC CHEMISTRY	
2	Course Code:	KIM5024	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. SUAT AKSOY	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Doç. Dr. M. Suat AKSOY Uludağ Üniversitesi Fen-Edebiyat Fakültesi Kimya Bölümü Tel: 0 224 29 41740 e-posta: msaksoy@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	Oxidation and reduction reactions are important during complex formation and recovery of elements. In the metal industry, metal ions are reduced during the production. During complex formation, oxidation stages of metal ions varies. To investigate the change in oxidation step, the structures of complex compounds helps.	
19	Contribution of the Course to Professional Development:	The course contributes to professional development.	
20	Learning Outcomes:		
		1	The basic issues of redox reactions in inorganic chemistry will be understood.
		2	Acquired the ability to use information will be won.
		3	Redox reaction will be understood.
		4	The effect of the potential for complex formation will be understood.
		5	The issues of catalysis will be understood.
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21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Extraction of elements: Elements extracted by reduction	

2	Extraction of elements: Elements extracted by oxidation	
3	Reduction potentials: Redox half-reactions	
4	Reduction potentials: Kinetic factors	
5	Redox stability in water: Reactions with water	
6	Redox stability in water: Disproportionation	
7	Redox stability in water: Oxidation by atmospheric oxygen	
8	The diagrammatic presentation of potential data: Latimer diagrams	
9	Repetition of previous lessons and midterm	
10	The diagrammatic presentation of potential data: Frost diagrams	
11	The diagrammatic presentation of potential data: pH dependence	
12	The effect of the potential for complex formation	
13	Catalysis	
14	Homogeneous and Heterogeneous catalysis	

22	Textbooks, References and/or Other Materials:	Shriver D.F., Atkins P.W. and Langford C.H. Inorganic Chemistry, second edition, 1994. Fred B. And Ralph G.P.; Mechanisms of Inorganic Reactions, Second Edition, Wiley, 1967. Cotton F.A., Wilkinson G., Gaus P.L., Basic Inorganic

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Midterm Exam	1	30.00	
Self study and preperation	14	3.00	42.00
Quiz	0	0.00	
Homeworks	0	0.00	0.00
Home work-project	0	0.00	
Projects	0	0.00	0.00
Final Exam	1	50.00	
Field Studies	0	0.00	0.00
Total	2	100.00	
Midterm exams	1	30.00	30.00
Contribution of Term (Year) Learning Activities to		50.00	
Others	0	0.00	0.00
Final Exams	1	60.00	60.00
Contribution of Final Exam to Success Grade		50.00	
Total Work Load			204.00
Total		100.00	
Total work load/ 30 hr			5.80
Measurement and Evaluation Techniques Used in the		The number of evaluation activities is given	
ECTS Credit of the Course			6.00

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	50.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	50.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to		50.00
Final Exams	1	50.00
Contribution of Final Exam to Success Grade		50.00
Total		100.00
Measurement and Evaluation Techniques Used in the		The number of evaluation activities is given

24	**ECTS / WORK LOAD TABLE**

25	**CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	4	3	2	3	3	3	4	3	3	4	0	0	0	0	0	0
ÖK2	4	4	3	3	3	3	4	3	3	4	0	0	0	0	0	0
ÖK3	3	2	3	3	3	3	3	4	4	4	0	0	0	0	0	0
ÖK4	3	2	3	3	3	3	3	4	4	4	0	0	0	0	0	0

ÖK5	3	2	3	3	3	3	3	4	4	4	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications					
Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**