AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Coordination Chemistry								
Course Code	KİM532		Couse Level		Second Cycle (Master's Degree)				
ECTS Credit	6	Workload	156 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	This course follows “Coordination Compounds” which deal with the thermodynamic and spectroscopic properties of inorganic complexes and will deal with the ways in which such complexes react.								
Course Content	Transition metals,Coordination compounds,Structure and İsomerism,Ligands,Nomenclature of coordination compounds and ligands ,Chemicals bonding in coordination compounds,Valence bond theory (VBT),Crystal field theory (CFT),Ligand field theory (LFT),Molecular orbital theory MOT),Electronical transitions in coordination compounds, Magnetic properties of coordination compounds								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Individual Study, Problem Solving								
Name of Lecturer(s)	Prof. Nursabah SARIKAVAKLI								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Tunalı N.K., Özkar, S., (1999) Anorganik Kimya, Gazi Üniversitesi Yayınevi
2	Gündüz, T. (1994) Koordinasyon Kimyası, Ankara Üniversitesi, Fen Fakültesi
3	Shriver D.F., Atkins P. W., Langford C. H., (1991) Inorganic Chemistry, Oxford Chemistry
4	Miessler G.L., Tarr D.A., (1999) Inorganic Chemistry, PrenticeHall,
5	Housecroft C.E., Sharpe A.G., (2001) Inorganic Chemistry, 1st Ed, PrenticeHall
6	Huheey J.E., Keiter E.A., Keiter R.L., (1993) Inorganic Chemistry, 4th Ed., Harper Collins
7	Arthur E. Martell, , (1978) Coordination Chemistry, Volume 1-2, Texas A?M University College Station, Texas

Week	Weekly Detailed Course Contents	
1	Theoretical	Transition metals
2	Theoretical	Coordination compounds
3	Theoretical	Structure and Isomerism
4	Theoretical	Ligands
5	Theoretical	Nomenclature of coordination compounds and ligands
6	Theoretical	Chemicals bonding in coordination compounds
7	Theoretical	Valence bond theory (VBT)
8	Intermediate Exam	Midterm Exam
9	Theoretical	Crystal field theory (CFT)
10	Theoretical	Jahn-Teller Theory
11	Theoretical	Ligand field theory (LFT)
12	Theoretical	Molecular orbital theory (MOT)
13	Theoretical	Molecular orbital theory (Sigma and Pi Interaction)
14	Theoretical	Electronical transitions in coordination compounds
15	Theoretical	Magnetic properties of coordination compounds
16	Final Exam	Final Exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	3	42
Assignment	4	0	9	36
Reading	14	0	1	14
Midterm Examination	1	30	2	32

Final Examination	1	30	2	32
			Total Workload (Hours)	156
			[Total Workload (Hours) / 25*] = **ECTS**	6
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	to be able to recognize and name the coordination compounds.
2	to be able to define the geometry and isomers of coordination compounds
3	to be able to recognize coordination compounds binding models and apply on complexes.
4	to be able to analyse electronic transitions in complexes and the electronic spectra inferential.
5	to be able to recognize the idea of the applications of coordination compounds

Programme Outcomes *(Chemistry Master)*	
1	To be able to gain proficiency in depths and analysis by statistical methods in the same or a related area depending on the undergraduate competence,.
2	To be able to use the knowledge of his/her field and the skills to solve problems and/or applications in interdisciplinary research.
3	To be able to adopt to evaluate the information and skill his/her field by critical approach.
4	To be able to evaluate the effect of important persons, case and fact on his/her field applications.
5	To be able to gain the ability to discuss write and orally present to a group of literate listener.
6	To be able to communicate orally and written in a foreign language at least at European language B2 level.
7	To be able to use computer programs related to his/her field and have skills for informatics communication.
8	To be able to be careful in protecting social, scientific and cultural ethics in collection data, application and presentation.
9	To be able to develop strategic, political and application plans in his/her field and may evaluate the outcomes in quality periods.

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	4	4	4	4	4
P2	4	4	4	4	4
P3	4	4	4	4	4
P5	4	4	4	4	4