Course Specifications

General Information

Course name	Inorganic Chemistry(3)
Course number	CHEM3317
Faculty	
Department	
Course type	Major Needs
Course level	3
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - This course aims to:-

2 - To provide an understanding of the chemistry of the 3d and 4d elements and their increasingly

3 - To provide an understanding of the chemistry of the 4f and 5f elements and their increasingly

4 - To develop an appreciation of how occupancy of the 4f- and 5f-orbitals influences oxidation

5 - To develop an appreciation of how occupancy of the 3d- and 4d-orbitals influences oxidation

6 - An appreciation of the unique chemical, magnetic and spectroscopic properties of the

7 - To illustrate and emphasise the unique chemistry emerging from recent research of

Intended Learning Outcomes

Knowledge and Understanding	* To provide an understanding of the chemistry of the transition elements and inner transition elements and their increasingly technologically important compounds.

Course Contents

1 - Introduction to inorganic chemistry, The group 3_B: scandium,Yttrium, lanthanum, and actinium. The group 4_B: Titanium, zirconium, and hafnium The group 5_B: Vanadium, Niobium, and Tantalum The group 6_B: Chromium, Molybdenum and Tungsten The group 7_B: Manganese, Technetium and Rhenium, The group 8 B: Iron, Ruthenium and Osmium, The group 9 B: Cobalt, Rhodium and Iridium, The group 10 B: Nickel, Palladium and Platinum, The group 1 B: Copper, Silver and gold, The group 2 B: Zinc, cadmium and mercury, Introduction to lanthanides and actinides basic studies

2 - This course deals with transition elements (d-block elements), electronic structure, general characteristic of d-block elements, physical and chemical properties with particular emphasis on the first series of transition elements. This course also deals with the chemistry of lanthanides and actinides.

Teaching and Learning Methods

1 - Teaching using powerpoint
2 - Teaching on board
3 - students activities
4 - Asking and answering dusring the discussion

Students Assessment

Assessment Method	TIME	MARKS
mid term exam (1)	1h	20
mid term exam (2)	1h	20
quizes exam, homeworks and activities	Frequently	10
final exam	2h	50

Books and References

Recommended books	Concise of Inorganic chemistry, by: G.D. Lee
	Advance Inorganic Chemistry, By: Cotton and Welkenson