Course Specifications

General Information

Course name	Dental Material I
Course number	DENT2211
Faculty	
Department	
Course type	College Needs
Course level	2
Credit hours (theoretical)	2
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - Learn the basic since of dental material

Intended Learning Outcomes

Knowledge and Understanding	* Upon completing this course , students will be able to : Know the basic of dental material

Course Contents

1 - Structure of matter
2 - Physical properties
3 - Biological properties
4 - Mechanical properties1
5 - Mechanical properties2
6 - Polymer
7 - Surface properties and adhesion
8 - Metallurgy
9 - Metallurgy Tarnish and corrosion
10 - Tarnish and corrosion Alloys1
11 - Alloys 1
12 - Alloys2
13 - Non metallic denture base1
14 - Non metallic denture base2

Teaching and Learning Methods

1 - Power point (presentation)
2 - lectures
3 - assignments

Students Assessment

Assessment Method	TIME	MARKS
Midterm written exam	7th week	50
Final written exam	14th week	40
Final oral exam	14th week	10

Books and References

Course note	Basic dental materials 2013 John J manappallil Jaypee Brothers
	Philipss since of dental materials 2012 Kenneth J.Anusavice W.B. Saunders

Knowledge and Skills Matrix

Main Course Contents	Study Week	Knowledge and Understanding	Intellectual Skills	Professional Skills	General Skill
Structure of matter	1st week	Understanding meaning of matter	Identify different structure	Differentiate between different structure	Identify matter
Physical properties	2nd week	Physical properties and it is effect	Determined factor affecting physical properties	Differentiate physical properties of each material	Identify different type of physical properties
Biological properties	3rd weeek	Identify Biological properties and it is effect	Determined factor affecting biological properties	Verifying biological properties	Identify biological properties
Mechanical properties1	4th week	Identify Mechanical properties1 and it is effect	Determined factor affecting Mechanical properties1	Determined effect of Mechanical properties1	Identify Mechanical properties1
Mechanical properties	5th week	Identify Mechanical properties and it is effect	Verifying different effect of mechanical proparities	Understanding Mechanical properties	Identify Mechanical properties
Polymerisation,Physical changes occurring during polymerisation, Structure and properties,Methods of fabricating polymers,	6th week	Polymer	Verifying different techniques of polymerisation	Determined effect of polymers	Identify polymerization
Definitions, Types of adhesion ,Factors affecting the strength of adhesive junction, Factors affecting wetting ,Failure of adhesive junction Importance of adhesion in dentistry, Dental considerations	7th week	Surface properties and adhesion	DeterminedFactors affecting the strength of adhesive junction, Factors affecting wetting ,Failure of adhesive junction	Identify Types of adhesion	Identify surface proparites
Metallurgy	8th week	Identify Metallurgy	Determined factor affecting Metallurgy	Determined effect of Metallurgy	Identify Metallurgy
Introduction , The oral environment, Tarnish , Corrosion, Classification of corrosion, Types of electrolytic corrosion Passivity , Resistance to corrosion in dental restorations	9th week	Tarnish and corrosion	Determined effect of tarnish and corrosion	Inspect present oftarnish and corrosion and repair it	Classification of corrosion
Introduction , The oral environment, Tarnish , Corrosion Classification of corrosion, Types of electrolytic corrosion Passivity , Resistance to corrosion in dental restorations	10th week	Tarnish and corrosion Alloys	Determined effect of tarnish and corrosion	Inspect present of tarnish and corrosion	Classification of alloys

Structure and properties of alloys, Cooling curves, Phase diagrams,Compostion	11th week	Types of alloy	Verifying different type of alloys	Identify alloyand choice the best one for each case	Identify alloys
Classification ,Properties of eutectic alloys ,Method of altering the mechanical properties of alloys	12th weeks	Types of alloys	Verifying different type of alloys	Determined the best choice of alloy	Identify alloys
Requirements of denture base polymers, Acrylic denture base materials, Modified acrylic materials, Alternative polymers	13th week	Non metallic denture base	Verifying different materials used in non metallic denture base	Determined best materials used for denture base	IdentifyN on metallic denture base
Types of Non metallic denture base	14th week	Non metallic denture base	Verifying Non metallic denture base	Determined the proper Non metallic denture base	Identify Non metallic denture base