

B.D.S SECOND YEAR
SUBJECT: DENTAL MATERIALS

Teaching Scheme(Hours)				Credits	Examination Scheme				
Lec(L)	Prac(P)	Clinical(C)	Total		External		Sessional		Total
					Theory	Pract	Theory	Pract	
103	364	-	467	1	1	3	3	8	

A. COURSE OVERVIEW

Aim of the course is to present basic chemical and physical properties of Dental materials as they are related to its manipulation to give a sound educational background so that the practice of the dentistry emerged from art to empirical status of science as more information through further research becomes available. It is also the aim of the course of Dental materials to provide with certain criteria of selection and which will enable to discriminate between facts and propaganda about claims of manufactures.

To understand the evolution and development of science of dental material.

To explain purpose of course in dental materials to personnel's concerned with the profession of the dentistry. Knowledge of physical and chemical properties. Knowledge of biomechanical requirements of particular restorative procedure. An intelligent compromise of the conflicting as well as co-ordinating factors into the desired Ernest. Laying down standards or specifications of various materials to guide to manufacturers as well as to help professionals.

B. COURSE CONTENT

NO	TOPIC	L+P (hrs)	CLs
1	STRUCTURE OF MATTER AND PRINCIPLES OF ADHESION	10+10	CL1
2	IMPORTANT PHYSICAL PROPERTIES APPLICABLE TO DENTAL MATERIALS	10+10	CL1,6
3	BIOLOGICAL CONSIDERATIONS IN USE OF DENTAL MATERIALS.	5+4	CL1,4,5
4	GYPNUM & GYPNUM PRODUCTS.	10+60	CL1,2,3,4,6
6	SYNTHETIC RESINS USED IN DENTISTRY.	10+85	CL1,2,3,4,6
7	METAL AND ALLOYS:	8+20	CL1,2,3,4,6
8	DENTAL WAXES INCLUDING INLAY CASTING WAX	5+55	CL1,4,5,6
9	DENTAL CASTING INVESTMENTS	8+20	CL1,6
11	DENTAL CEMENTS	10+30	CL1,3,4,5,6
12	DENTAL CERAMICS	6+10	CL1,5,6
13	ABRASION & POLISHING AGENTS	5+20	CL1,5,6
14	DIE AND COUNTER DIE MATERIALS INCLUDING ELECTROFORMING AND ELECTROPOLISHING	6+15	CL1,5,6
15	DENTAL IMPLANTS	5+5	CL1,4,5,6
16	MECHANICS OF CUTTING	5+20	CL1,4,5

C. TEXT BOOKS

1. Kenneth J Anusavice; Phillips's science of dental materials; 10th edition; Elsevier,2014

D. REFERENCE BOOKS

1. Robert G Craig; Restorative dental materials, 10th edition, Elsevier, 2021.
2. E.C.Combe; Notes on dental materials; 4th Revised edition,3 Harcourt Brace/Churchill Livingstone,1981.
3. Dr.M.S Koudi & Dr. Sanjay Gouda B. patil; Manual for undergraduates- Dental materials, Elsevier, 2007.
4. Dr. M.S. Koudi & Dr. SanjayGouda B. Patil; Prep. Manual for undergraduates-Dental Materials

E. COMPTENCY LEVEL

CL Number	Skill	Statement
CL1	Knowledge	<ul style="list-style-type: none">• The need for the dentist to possess adequate knowledge of materials to exercises his best through knowledge of properties of different types of materials.
CL2	Investigations	<ul style="list-style-type: none">• To recognize and physical, chemical and biological properties of the dental materials.
CL3	Patient Care: Diagnosis	<ul style="list-style-type: none">• Diagnose the patient's problem and get familiarized with materials to be used for the procedures.
CL4	Patient Care: Treatment planning	<ul style="list-style-type: none">• To demonstrate and apply basic facts, concepts and theories in the field of Dental Materials
CL5	Patient Care: Treatment	<ul style="list-style-type: none">• Be thorough with the preclinical exercises.
CL6	Research and Innovation	<ul style="list-style-type: none">• Search for newer and better materials which may answer our requirements with greater satisfaction
CL 7	Evidence Based Learning	<ul style="list-style-type: none">• Consolidate all the above mentioned major competencies acquired during the course and integrate newer evidence based knowledge in displaying expertise in the science of DENTAL MATERIALS

PROGRAM SPECIFIC OUTCOME (PSO)

PSO1	DIAGNOSIS	To understand the evolution and development of science of dental material. To explain purpose of course in dental materials to personnels concerned with the profession of the dentistry. Knowledge of physical and
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		chemical properties. Knowledge of biomechanical requirements of particular restorative procedure
PSO2	INVESTIGATIONS	To recognize and physical, chemical and biological properties of the dental materials.
PSO3	TREATMENT	To demonstrate and apply basic facts, concepts and theories in the field of Dental Materials .Be thorough with the preclinical exercises.

F. COURSE MATRIX

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PS O1	PS O2	PS O3
CL1	3	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3	2	2
CL2	3	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3	3	2
CL3	3	3	3	3	3	2	1	2	2	2	3	3	3	3	3	3	2	2
CL4	3	3	3	3	3	2	1	2	2	1	3	2	2	3	3	3	3	3
CL5	3	3	3	3	3	2	1	2	2	1	3	2	2	3	3	3	3	3
CL6	2	2	2	2	2	2	1	2	2	1	3	2	2	3	3	3	2	2
CL7	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Avg	2.9	2.9	2.9	2.9	2.9	2.4	1.6	2.1	2.1	1.7	3.0	2.6	2.6	3.0	3.0	3.0	2.6	2.4