

FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: DES 1100

COURSE TITLE: Dental Materials

PREREQUISITE(S): Acceptance to the Dental Hygiene Program

COREQUISITE(S): DES 1101L

CREDIT HOURS: 1

CONTACT HOURS/WEEK: 1

CONTACT HOUR BREAKDOWN:

 Lecture/Discussion: 1

 Laboratory:

 Other _____:

FACULTY WORKLOAD POINTS: 1

STANDARDIZED CLASS SIZE ALLOCATION: 24

CATALOG COURSE DESCRIPTION:

This course is a study of the physical, mechanical and biological characteristics of materials used in the laboratory and clinical practice of dentistry.

SUGGESTED TEXT(S): Powers, & Wataha. Dental Materials, 9th Edition, 2008

IMPLEMENTATION DATE: Fall Term, 2004 (20051)

REVIEW OR MODIFICATION DATE: Fall Term, 2008 (20091) (was DES 1101)
Fall Term, 2008 (20091) - Outline Review 2007

COURSE TOPICS

CONTACT HOURS
PER TOPIC

I. Introduction to Dental Materials	2
A. History	
1. Christian Era	
2. Fauchard	
3. Early Century	
4. G.V. Black	
5. National Bureau Standards	
B. ADA Specifications	
C. Dental Materials and Oral Environment	
D. Classification of Restorative Materials	
E. Properties of Dental Materials	
F. Manipulation of Dental Materials	
G. Laboratory Equipment	
1. Vibrators	
2. Lathe	
3. Model trimmer	
4. Bunsen burner	
5. Bench Engine	
II. Gypsum	2
A. Uses	
B. ion	
C. Composition and Structure	
1. Setting reaction	
2. Characteristics	
3. Composition and Structure	
II. Varnishes, Cavity Liners and Bases	1
A. Cavity Liners and Varnishes	
1. Definition	
2. Classification	
3. Uses	
4. Composition	
5. Characteristics	
B. Bases	
1. Definition	
2. Classifications	
3. Uses	
4. Composition	
5. Characteristics	

COURSE TOPICS	<u>CONTACT HOURS PER TOPIC</u>
III. Dental Cements	3
A. Classification	
B. General Uses	
1. Temporary and intermediate restorations	
C. Phosphate Cements	
1. Uses	
2. Composition	
3. Characteristics	
D. Zinc Oxide and Eugenol Cement	
1. Uses	
2. Composition	
3. Characteristics	
E. Polycarboxylate Cement	
1. Uses	
2. Composition	
3. Characteristics	
4. Manipulation	
1. Armamentarium	
2. Mixing	
F. Resin Cements	
1. Composition	
2. Characteristics	
G. Glass Ionomer Cements	
1. Uses	
2. Composition	
3. Characteristics	
IV. Resins	2
A. Definitions	
B. Uses	
C. Classifications	
1. Unfilled Resins	
1. Uses	
2. Composition	
3. Characteristics	
2. Composites	
1. Uses	
2. Composition	
3. Characteristics	
D. Bonding Agents	

COURSE TOPICS	<u>CONTACT HOURS PER TOPIC</u>
V. Amalgam	2
A. History	
B. Definitions	
1. Alloy	
2. Amalgam	
3. Corrosion	
4. Tarnish	
5. Amalgamated	
6. Turturation	
C. Uses	
D. Composition	
E. Setting Reaction	
F. Classification	
VI. Dental Metals	1
A. Uses	
1. Restorative	
2. Orthodontic	
3. Prosthodontics	
B. Types	
1. Direct filling gold	
2. Dental Casting gold alloys	
3. Wrought wire gold	
C. Characteristics	
VII. Impression Materials	2
A. Classification	
1. Rigid	
2. Aqueous	
3. Rubber-based	
B. Trays	
1. Perforated	
2. Water cooled	
3. Rim Lock	
4. Custom	
5. Maintenance	
C. Definitions	
D. Colloids	
1. History	
2. Irreversible Hydrocolloids	
1. Uses	

COURSE TOPICS

CONTACT HOURS
PER TOPIC

- 2. Composition
- 3. Characteristics
- 4. Storage
- 3. Reversible hydrocolloid
 - 1. Uses
 - 2. Types Composition
 - 3. Characteristics
 - 4. Storage
- E. Impression Compound
 - 1. Uses
 - 2. Types
 - 3. Composition
 - 4. Characteristics
 - 5. Storage

Total Contact Hours 15

PROGRAM TITLE: Dental Hygiene

COURSE TITLE: Dental Materials

CIP NUMBER: 317.01020

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

02.0 DEMONSTRATE THE ABILITY TO COMMUNICATE AND USE INTERPERSONAL SKILLS EFFECTIVELY - The student will be able to:

- 02.01 Develop basic listening skills.
- 02.02 Develop basic observational skills and related documentation strategies in written and oral form.
- 02.03 Identify characteristics of successful and unsuccessful communication including barriers.
- 02.04 Respond to verbal and non-verbal cues.
- 02.05 Compose written communication using correct spelling, grammar and format.
- 02.06 Use appropriate medical terminology and abbreviations.
- 02.07 Recognize the importance of courtesy and respect for patients and other health care workers and maintain good interpersonal relationships.
- 02.08 Recognize the importance of patient/client education regarding health care.
- 02.09 Adapt communication skills to varied levels of understanding and cultural orientation.
- 02.11 Demonstrate ability to give and follow directions.
- 02.12 Distinguish between factual reports and personal opinion.

16.0 IDENTIFY, DESCRIBE, MAINTAIN AND UTILIZE DENTAL INSTRUMENTS AND EQUIPMENT -The student will be able to:

- 16.01 Identify various types, functions and operations of dental operator and laboratory equipment.
- 16.02 Identify types and functions of operative, restorative, surgical, prosthodontic, orthodontic and endodontic dental instruments.

20.0 IDENTIFY PROPERTIES AND USES, AND MANIPULATE DENTAL MATERIALS - The student will be able to:

- 20.01 Identify properties and uses and manipulate gypsum.
- 20.02 Identify properties and uses and manipulate restorative materials.
- 20.03 Identify properties and uses and manipulate dental cements.
- 20.04 Identify properties and uses and manipulate impression materials.
- 20.05 Identify properties and uses and manipulate acrylics and/or thermoplastics.
- 20.06 Identify properties and uses and manipulate waxes.
- 20.07 Perform dental laboratory procedures to include the fabrication of casts, custom trays and/or temporary crowns and bridges.
- 20.08 Clean and polish removable dental appliances.



NOTE: Use either the Tab key or mouse click to move from field to field. The box will expand to accommodate your entry.

Section 1	
COURSE PREFIX AND NUMBER: <u>DES 1100</u>	SEMESTER CREDIT HOURS: <u>1</u>
COURSE TITLE: <u>Dental Materials</u>	

Section 2
TYPE OF COURSE: (Click on the box to check all that apply)

<input type="checkbox"/> AA Elective	<input checked="" type="checkbox"/> AS Required Professional Course	<input type="checkbox"/> College Prep
<input type="checkbox"/> AS Professional Elective	<input checked="" type="checkbox"/> AAS Required Professional Course	<input type="checkbox"/> Technical Certificate
<input type="checkbox"/> Other _____		
<input type="checkbox"/> General Education: (For General Education courses, you must also complete Section 3 and Section 7)		

Section 3 (If applicable)
INDICATE BELOW THE DISCIPLINE AREA FOR GENERAL EDUCATION COURSES:

<input type="checkbox"/> Communication	<input type="checkbox"/> Social & Behavioral Sciences	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Humanities	

Section 4
INTELLECTUAL COMPETENCIES:

<input checked="" type="checkbox"/> Reading	<input checked="" type="checkbox"/> Speaking	<input checked="" type="checkbox"/> Critical Analysis	<input type="checkbox"/> Quantitative Skills	<input checked="" type="checkbox"/> Scientific Method of Inquiry
<input checked="" type="checkbox"/> Writing	<input checked="" type="checkbox"/> Listening	<input checked="" type="checkbox"/> Information Literacy	<input checked="" type="checkbox"/> Ethical Judgment	<input checked="" type="checkbox"/> Working Collaboratively

Section 5	LEARNING OUTCOMES	METHOD OF ASSESSMENT
•	Upon successful completion of this course, students will be able to identify properties and uses of gypsum	Written Examination
•	Upon successful completion of this course, students will be able to identify properties and uses of dental cements	Written Examination
•	Upon successful completion of this course, students will be able to identify properties and uses of impression materials	Written Examination
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Section 6
 Name of Person Completing This Form: Jeff Smith Date: 4/29/2008