COURSE DESCRIPTION:
This course is designed to provide students with a survey of dental materials and procedures, their reasons for use, proper technique and dental application. The scope of study includes gypsum products, impression materials, dental cements, amalgam, synthetic resins, nightguard vital bleaching, athletic mouthguards, prosthetics, finishing and polishing of restorations, pit and fissure sealants, digital photography and advanced instrumentation. Laboratory sessions provide students with hands-on experience with selected dental material procedures and instrumentation. This course is subject to a course fee. Refer to http://mc3.edu/adm-fin-aid/paying/tuition/course-fees for current rates.

REQUISITES:
Previous Course Requirements
- DHG 158 Theory and Practice of Central Hygiene II
- DHG 159 Histology and Pathology Oral Tissues
- DHG 161 Periodontics I
- BIO 132 Human Anatomy and Physiology

Concurrent Course Requirements
None

<table>
<thead>
<tr>
<th>LEARNING OUTCOMES</th>
<th>LEARNING ACTIVITIES</th>
<th>EVALUATION METHODS</th>
</tr>
</thead>
</table>
| 1. Explore the basic properties, principles, advantages, disadvantages and use of common dental materials. | Online Presentations
Selected Readings
Blackboard Group Activities
Practice Observation Paper
Laboratory Experiences | Discussion Questions
Tests
Exams
Laboratory Evaluations |
| 2. Apply knowledge to patient education and in dental hygiene assessment and treatment procedures. | Laboratory Experiences
Selected Readings
Blackboard Group Activities | Discussion Questions
Tests
Exams
Laboratory Evaluations |
### LEARNING OUTCOMES | LEARNING ACTIVITIES | EVALUATION METHODS
--- | --- | ---
3. Demonstrate proper manipulation and application of selected dental materials. | Online Presentations<br>Selected Readings<br>Video Presentations<br>Classroom Activities<br>Laboratory Experiences | Discussion Questions<br>Tests<br>Exams<br>Laboratory Evaluations

4. Expose a series of intraoral photographs for documentation of patients' oral health status. | Laboratory Experiences | Laboratory Evaluations

5. Utilize basic principles of instrumentation and ergonomics to perform advanced instrumentation techniques. | Seminar<br>Selected Readings<br>Laboratory Experiences | Laboratory Evaluations

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that 70% of students will meet or exceed outcome criteria.

### SEQUENCE OF TOPICS:
1. Course Introduction
2. Materials Science and Dentistry
3. Physical and Mechanical Properties of Dental Materials
4. Cavity Design/Nomenclature
5. Advanced Instrumentation
6. Digital Photography
7. Impression Materials and Custom Trays
8. Gypsum Materials/Study Models Dental Cements
9. Esthetic Restorative Materials/Adhesives
10. Pit and Fissure Sealants
11. Amalgam and Mercury Hygiene
12. Fixed Indirect Restorative Materials and Prostheses
13. Removable Prostheses/Acrylic Resin
14. Finishing and Polishing of Restorations
15. Clinical Detection and Management of Dental Restorative Materials During Scaling/Polishing
16. Radiographic Appearance of Dental Materials
17. Athletic Mouthguards
18. Vital & Non-Vital Tooth Whitening
19. Debonding Orthodontic Resins
LEARNING MATERIALS:
Required Course Textbooks
Philadelphia: Saunders.
Gladwin, Marcia and Bagby, Michael. (2013). Clinical Aspects of Dental Materials
Root Instrumentation (7th ed.). Baltimore: Lippincott, Williams & Wilkins.

Additional Resource Material
St. Louis: Mosby.

Supplementary and Reference Textbooks in the Montgomery County Community
College Library

Other:
American Dental Association, Chairside Instructor
Clinic Handbook, Montgomery County Community College, 2017-2018
Course enhancement through the use of Blackboard: an online course management
platform.

Other learning materials may be required and made available directly to the student
and/or via the College’s Libraries and/or course management system.

COURSE APPROVAL:
Revised by: Susan Doebling, RDH, M.S. Date: 9/11/2004
Revised by: Jenny Sheaffer, RDH, M.S. Date: 1/2009
VPAA/Provost Compliance Verification: Dr. John C. Flynn, Jr. Date: 9/11/2009

Revised by: Jenny Sheaffer, RDH, M.S. Date: 9/2009
VPAA/Provost Compliance Verification: Dr. John C. Flynn, Jr. Date: 4/27/2010

Revised by: Jenny Sheaffer
VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 11/1/2012

Revised by: Linda Teal Mercer Date: 12/18/2017
VPAA/Provost or designee Compliance Verification: Date: 1/8/2018
This course is consistent with Montgomery County Community College’s mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.