UNIVERSITY OF ARKANSAS
PULASKI TECH

Assessment Report:
2019-2020:
DEN 1504 Dental Materials I

1. Name of individual compiling report: *Shannon Burchfield*

2. Date of submission: *October 1, 2020*

3. Is the assessment plan

☐ an initial plan for the program ☒ a revision of an old plan ☐ unaltered from previous year

Course-Level Learning Outcomes-

1. What are the Course-Level Outcomes (CLOs)?

The following Course-Level Outcomes are for DEN 1504 Dental Materials I

1. Supply correct definitions for terms related to dental materials.
2. Describe the various programs and their functions as related to dental materials.
3. Define and differentiate between: force, stress, strain, elastic limit, ultimate strength, ductility, malleability and hardness.
4. Students will learn the names, functions, and proper handling techniques of dental lab equipment including instruments and machinery.
5. Define the terms alloy and amalgam alloy.
6. List and describe the components of silver amalgam. Understand the difference in properties of the chemical composition of high copper admix and single composition alloy.
7. Prepare an amalgam mix and load the amalgam carrier.
8. List the suspected biological effects of galvanic current.
9. Describe the composition of direct esthetic restorative materials and their application in the restoration of teeth.
10. Describe the preventive dental materials used in the dental office, their composition and manipulation techniques.
11. Assemble the necessary equipment and prepare a mix of Zinc Phosphate, ZOE, Polycarboxylate, Resin and Glass Ionomer cements.
12. Dispense and prepare a homogenous mix of Calcium Hydroxide.
13. Assemble the necessary equipment and prepare a mix of gypsum type II and III to be used in pouring models.
14. Assemble the necessary equipment and prepare a mix of each of the following elastic impression materials: Reversible and Irreversible Hydrocolloid, Polysulfide, Polyether, Rubber Base, Silicone and Vinyl Polysiloxane.
15. Describe inelastic impression materials and their uses.

Return to Top of Document

16. Describe the correct waxes used to bead and box impressions, prepare reliefs and liners, take bite registrations and hold objects together.
17. Use light cure and auto polymerization materials to fabricate custom trays and temporary coverage.
18. Learn how to manipulate polymer fabricated dentures/partials utilizing position Indication or recording dental materials.
19. Learn the various teeth whitening chemicals used in dentistry and modes of application.
20. Fabricate custom teeth whitening trays using acrylic dental material while utilizing a vacuum sealer machine.
21. Describe the use of sports/mouth guards in dentistry and learn to fabricate a custom guard.
22. Learn how the medical condition of snoring and sleep apnea are being addressed in the dental community through dental appliances.
23. Select one of the dental materials covered during the semester and prepare a written report citing at least two professional journal articles or books acquired through on line libraries or professional Internet websites as the student's sources.
24. Prepare an office supply order inventory. The student will utilize dental catalogues to complete the assignment learning how to navigate through the information as well as receive a better understanding of the cost of dentistry.

2. Which CLOs were addressed for this academic year? (2019-2020)

1. Assemble the necessary equipment and prepare a mix of Zinc Phosphate, ZOE, Polycarboxylate, Resin and Glass Ionomer cements.
2. Assemble the necessary equipment and prepare a mix of gypsum type II and III to be used in pouring models.
3. List and describe the components of silver amalgam. Understand the difference in properties of the chemical composition of high copper admix and single composition alloy.

3. Which CLOs are being addressed in your assessment plan next academic year? (2020-2021)

1. Describe inelastic impression materials and their uses.
2. Define and differentiate between: force, stress, strain, elastic limit, ultimate strength, ductility, malleability and hardness.

3. Describe the preventive dental materials used in the dental office, their composition and manipulation techniques.

4. Explain the assessment cycle.

Once program goals and outcomes are set, the materials is presented to the students. Competency evaluations are given and each student is assessed using what they have learned through lecture, labs, and instructor review. After being assessed, a review of each student's exam or competency will show if the material was comprehended by each student. This will let me know how I may need to address the material in the future and if any changes will need to be made to meet the needs of the students.
Since this is our first year documenting our course learning outcomes, we will look to add new data in the upcoming years.

5. What are the assessment methods? Are they direct or indirect?

The assessment methods used for Dental Materials I are direct. Each competency requires a passing rate of 70% before a student can move forward without having to retake any classes.

6. What are the assessment goal(s)?

- Graduates will perform dental assisting responsibilities and related office and laboratory procedures under the direct supervision of the dentist.
- Graduates will function as a valued team member, exhibiting professionalism and ethics.
- Graduates will demonstrate proficiency in dental assisting skills and competencies to meet registration requirement with the Arkansas State Board of Dental Examiners and qualify for the Dental Assisting National Board Exam.

7. What were the findings for this academic year? (2019-2020)

1. Assemble the necessary equipment and prepare a mix of Zinc Phosphate, ZOE, Polycarboxylate, Resin and Glass Ionomer cements. The pass rate was 100% with an average score of 99.56%
2. Assemble the necessary equipment and prepare a mix of gypsum type II and III to be used in pouring models. The pass rate was 83% with an average score of 81.11%

Return to Top of Document

3. List and describe the components of silver amalgam. Understand the difference in properties of the chemical composition of high copper admix and single composition alloy. The pass rate was 83% (1 student was absent for exam) with an average score of 80%

8. What is your analysis of the findings?

The above findings are a representation of students overall performance. Based on the numbers given, our program is graduating students that are able to perform their very best as dental assistants. They are also well equipped with knowledge needed to use the various dental materials in their offices.

9. What is the action plan for the next academic year? (2020-2021) Explain.

The following items affect the action plan for the coming year:

- Taking suggestions from former students and applying that knowledge in next year's curriculum
- Continuing Education
- Update material in the program as CODA updates throughout the year

The following CLO's are planned for the coming year:

1. Describe inelastic impression materials and their uses.
2. Define and differentiate between: force, stress, strain, elastic limit, ultimate strength, ductility, malleability and hardness.
3. Describe the preventive dental materials used in the dental office, their composition and manipulation techniques.