UNIVERSITY OF ARKANSAS
PULASKI TECH

Course-Level Assessment Report
Course: DEN 1103 Dental Science
Academic Year: 2020-2021

Due to Chair/Program Director and Faculty Assessment Chair by September 4

1. Name of course:	DEN 1103 Dental Science
2. Name of individual(s) compiling report:	Weeda Jones
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Course-Level Learning Outcomes

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

Dental Anatomy CLOs

1. Match terminology words associated with dental anatomy with their terms.
2. Identify major landmarks of the oral cavity.
3. Identify the muscles, major arteries and veins of the face and mouth.
4. Describe the glide and hinge action of the TMJ.
5. Identify the major sources of innervations of the teeth and oral cavity including ophthalmic, maxillary and mandibular sections of the trigeminal nerve.
6. Identify the root, body, apex and four papillae and taste sensations on the tongue.
7. Identify the four types of teeth, functions of each type and classify as anterior or posterior.
8. Identify the two dental arches by location, function, teeth arrangement, antagonist, quadrants and locate anterior and posterior teeth of each arch and quadrant.
9. Label a tooth/teeth diagram showing the clinical crown, anatomic crown, tissues of the tooth and supporting structures, and division of the crown and root surfaces into thirds.
10. Discriminate between bifurcation and trifurcation of roots on teeth.
11. Identify the two major units of the periodontium and structures of each.
12. List no less than three characteristics of healthy gingiva.
13. Discriminate between free gingiva, attached gingiva, gingival sulcus, gingival margin, free gingival groove, gingival papillae, alveolar mucosa, incisive papillae, palatine raphe and palatine rugae.
14. Number each tooth of the primary and permanent dentition using the Universal, Federation Dentaire, and Palmer's Notation numbering systems.
15. Define terms related to tooth morphology including: names of surfaces, contours and contacts, overbite and overjet, embrasures and occlusal form and physiology of occlusion.

16. Distinguish between each of the primary and permanent teeth using the correct terminology to describe number of cusps, roots and anatomical landmarks, size, shape, function and number of each type in each arch.
17. Identify normal eruption and exfoliation dates of teeth of the primary and permanent dentition.
18. Given extracted teeth or a typodont tooth, identify the type of tooth, state if anterior or posterior and identify the surfaces of each.
19. Identify the two types of cell divisions and specialization of tissue differentiation.
20. Distinguish between stages of human development from fertilization of ovum to birth.
21. Distinguish between the three embryonic cell layers and identify tissues each form, following differentiation.
22. Identify the age and embryonic development of the face and its associated structures.
23. Identify the embryonic development of the palate including the formation of the primary and secondary palate and anomalies that occur during development.
24. Discriminate between the effects of genetic and prenatal environmental factors on dental development.
25. Describe the prenatal and postnatal growth of the maxilla and mandible in terms of deposition and resorption of bone.
26. List the three developmental periods in the lifecycle of a tooth. Identify the anomalies that may occur during the development period.
27. Identify the four tissues of the teeth, their function and the specialized cells that form each tissue.
28. Identify the tissues that surround and support the teeth.
29. Describe the structures that form the attachment apparatus and the gingival unit of the periodontium and their functions.
30. Identify characteristics of normal gingival tissue.
31. Discriminate between bone descriptions of the alveolar process.

Disease Transmission/Infection Control CLOs

1. Identify the three category classifications, as stated in the basic text, according to job risks established by OSHA.
2. Identify means of infection control and controlling cross contamination in all areas of the dental practice.
3. Explain the disposal of sharps, infectious and hazardous waste materials.
4. Identify types of personal barriers and equipment barriers to prevent disease transmission.

5. Differentiate between sterilization and disinfection, disinfectants and antiseptics, and sepsis and asepsis.
6. Demonstrate the use of various types of sterilization equipment.
7. Discuss the properties and use of various ADA approved disinfectants.
8. Identify the two sections of the sterilization area and the flow of instruments as they are cleaned, packaged and replaced on preset trays.
9. Demonstrate proper hand washing prior to and after removing gloves.
10. Demonstrate the preparation of instruments for sterilization by autoclave, dry heat and chemical disinfection.
11. Explain the infection control procedures to include the use of personal barriers, equipment and instrument barriers and/or disinfection and sterilization techniques in the operatory and laboratory.
12. Prepare various chemical solutions for disinfection, ultrasonic cleaning and sterilization.
13. List hazardous chemicals common to the dental office and their health hazards.
14. Explain the preparation and implementation of infection and hazard control protocol for the dental office.

1. Which CLOs were addressed for the academic year?

1. Identify the two sections of the sterilization area and the flow of instruments as they are cleaned, packaged and replaced on preset trays.
2. Demonstrate proper hand washing prior to and after removing gloves. dry heat and chemical disinfection.
3. Demonstrate the preparation of instruments for Sterilization by autoclave, dry heat and chemical disinfection.

2. Which CLOs are being addressed in your assessment plan in the upcoming academic year?

1. Identify major landmarks of the oral cavity.
2. Describe the glide and hinge action of the temporomandibular joint.

3. Explain the assessment cycle.

Didactic exams are performed via technology or in class with paper and pencil. Clinical competency is evaluated by lab practice, peer reviews and one on one competency skills evaluations with the instructor. Assessment is ongoing throughout the year but specific CLO's are evaluated annually.

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

All assessment methods are direct and require satisfactory performance in order to move forward without remediating. They include written exams as well as competency evaluations.

5. What is the assessment goal(s), including benchmarks?

CLO #1 Written exam pass rate of 70%
CLO #2 The assessment goal is for students to achieve an 80%.
CLO #3 The assessment goal is for students to achieve a 90%.
This achievement assures students reach the level of competence in the area of disease transmission and infection control with knowledge and skills to protect patients, themselves and other dental team members.

6. What were the findings for the academic year?

CLO	Written Exams (average of all students)	Competency Evaluations (average of all students)
Identify the two sections of the sterilization area and the flow of instruments as they are cleaned packaged and replaced on preset trays.	78%	
Demonstrate proper handwashing prior to and after gloving.		100%
Demonstrate the preparation of instruments for sterilization by autoclave, dry heat and chemical disinfection.		97%

7. What is your analysis of the findings?

For this particular group, students performed very well (above the goal) during one on one competency evaluations with their instructor. However, when it comes to written recall and application of similar concepts, some students struggled to reach the 70% goal. While 69% of students met all three goals, 31% came up short by one goal to being able to perform to the level necessary.

9. What is the action plan for the upcoming academic year? Explain.

Students may benefit from some case scenarios assigned that require they take the concepts performed in lab and put them in writing. If they are performing the competencies well, they are either guessing and getting it right or they have the knowledge to perform it correctly. If they are given case scenarios of the situation and are asked to write out a solution or steps to a solution, it may help them transition the knowledge they have from lab experience to written documentation.

Additional class assignments asking students to describe the sterilization area and how the flow of instruments proceed through the area would help them put into words the process that takes place. These assignments will be completed before the written exam.