UNIVERSITY OF ARKANSAS
PULASKI TECH

Assessment Report:
2019-2020:
DEN 1103 Dental Science

1. Name of individual compiling report: *Weeda Jones*

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

3. Is the assessment plan (*Check or highlight one*)

☐ an initial plan for the program

X a revision of an old plan

☐ unaltered from previous year

Course-Level Learning Outcomes-

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

DEN 1103 Dental Science contains two classes, Dental Anatomy and Disease Transmission/Infection Control. Below are the CLOs for each class.

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 cusp, 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.

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

1. Identify types of personal barriers and equipment barriers to prevent disease transmission.
2. Differentiate between sterilization, disinfection, antiseptics sepsis and asepsis.
3. Demonstrate the use of various types of sterilization equipment.

Because of the importance of disease transmission and infection control practices, students must be competent in these areas.

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

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.

3. Demonstrate the preparation of instruments for sterilization by autoclave, dry heat and chemical disinfection.

4. Explain the assessment cycle.

Didactic exams are performed with paper and pencils or via technology. Competency evaluations are performed after lab practice, peer reviews and critique from the instructor(s). Since our program has just started documenting course learning outcomes, we look toward to adding additional data each year.

5. 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.

6. What are the assessment goal(s)?

The assessment goals are for students to achieve a 70% for each of the course learning outcomes. 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.

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

CLO	Written Exams (average of all students)	Competency Evaluations (average of all students)
Identify types of personal barriers and equipment barriers to prevent disease transmission.	70%	
Differentiate between sterilization, disinfection, antiseptics, disinfection, sepsis and asepsis.	70%	
Demonstrate the use of different types of sterilization equipment		90%

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8. What is your analysis of the findings?

Students required remediation in the area of identifying personal and equipment barriers and understanding terms associated with disease transmission/infection control. While the students collectively earned a 70% rate on the written exams covering these subjects, when we looked at individual grades of students, nine of the seventeen students scored below the 70% assessment goal we had set. Students were remediated and performed at or above the 70% post remediation. This was necessary for them to continue on and did not figure into their original grade.

Students performed much better during competency evaluations with the instructor demonstrating the use of different types of sterilization equipment. The average for this CLO was 90%, well above the 70% assessment goal. As we looked at individual grades for students, no students made below and 80% on the competency evaluation.

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

The plan for next year is to add data such as looking at each test question to determine the score on each question to pin point more accurately the area of difficulty or need for change in didactic or clinical instruction. Having pulled data from last year's students has allowed a better understanding of what is needed to assess the outcomes of student performance. Keeping accurate records to help access the data needed more easily to evaluate the CLO's.

The dental assisting program has an accrediting body, The American Dental Association Commission on Dental Accreditation (CODA). Standards are put forth and followed. Also the dental community, dental assisting students, graduates and advisory committee input is considered when deciding on assessment needs.

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