BAKER COLLEGE
STUDENT LEARNING OUTCOMES

DHY1510 Radiography

3 Semester Hours

Student Learning Outcomes and Enabling Objectives

Each student will, with at least 77% accuracy:

1. Analyze the discovery of x-radiation.
2. Interpret the concept of ionization.
3. Identify and describe the function of all parts of the x-ray machine.
4. Compare and contrast Bremsstrahlung and Characteristic radiation.
5. Distinguish the factors controlling the x-ray beam.
6. Evaluate the use of film badges.
7. Differentiate between the more frequently used units for measuring quantities of radiation.
8. Explain the effects of radiation at the cellular, tissue and organ level.
9. Differentiate between organs of high radiosensitivity and high radioresistance. Compare and contrast sources of radiation exposure.
10. Evaluate minimal dosage requirements based on federal and state regulations.
11. Indicate the need for radiographic examinations.
12. Compare and contrast sources of radiation exposure.
13. Identify clinical applications of the various sizes of dental x-ray film.
14. Assess accepted safety recommendations on radiation protection.
15. Identify the components of x-ray film.
16. Evaluate the major imaging characteristics of x-ray film and list the influencing factors.
17. Assess the manner in which the principles of projection geometry influence image clarity, image magnification and image distortion.
18. Compare and contrast the paralleling and bisecting angle techniques.
19. Assess the Buccal Object Rule (Clark's Rule) technique for object localization.
20. Assess the elementary principles of film processing utilizing either automatic or manual technique procedures.
21. Analyze the step-by-step procedure for manual film processing.
22. Identify the function and composition of processing solutions.
23. Evaluate the requirements and necessary equipment for a darkroom.
24. Compare and contrast manual and automatic film processing.
25. Interpret causes of undiagnostic radiographs and implement corrections for proper diagnosis.
26. Demonstrate the preferred method of film mounting.
27. Identify normal radiographic landmarks.
28. Differentiate between restorative materials in radiographs.
29. Utilize the ADA’s guidelines for the frequency of exposing patients to radiation.

30. Identify variances in procedures for radiographs on children.
31. Adapt special considerations for patients with unique physical and/or emotional characteristics.
32. Evaluate specialized radiographic techniques (digital radiography) utilizing library or Internet resources.
33. Incorporate the paralleling, bisecting, bitewing, occlusal and distal oblique techniques when appropriate.
34. Interpret various carious lesions on a radiograph.
35. Interpret the limitations of diagnosing periodontal conditions on a radiograph.
36. Assess variances in radiographic procedures for the periodontal patient.
37. Identify various conditions associated with periodontal disease.
38. Identify various anomalies and pathological conditions observed on radiographs.
39. Apply all safety precautions.
40. Demonstrate full mouth surveys using the paralleling technique and stabes.
41. Demonstrate a full mouth survey using the paralleling technique and the Rinn XCP.
42. Demonstrate the bisecting angle technique with a snap-a-ray device.
43. Demonstrate the distal oblique technique.
44. Demonstrate the technique of exposing maxillary and mandibular occlusal films.
45. Describe the technique of exposing a size # 3 bitewing film.
46. Demonstrate the technique of horizontal and vertical bitewings.
47. Describe processing of radiographs using the automatic processor.
48. Analyze the steps involved in taking a panoramic radiograph.
49. Demonstrate the technique of exposing receptors with digital imaging devices.
50. Demonstrate mounting of radiographs.
51. Describe the process for duplication of radiographs.
52. Practice teamwork activities related to the laboratory assignments.
53. Model professional behavior and etiquette and necessary infection control standards throughout treatment.
54. Describe cone beam computed tomography.
55. Identify radiographic images of dental implants.

Required Elements

RE 1. The process evaluations for program assessment
RE 2. Exposure of radiographs for patient requirements

These SLOs are not approved for experiential credit.
Effective: Spring 2018