

DENT 54 - Applied Dental Science II

Scope and objectives as required by American Dental Association and CA Code of Regulations

- A. Course and professional requirements
- B. Microbiology
 1. Micro-organism relating to dental procedures -- pathogens, bacteria, epidemiology, aerobes, anaerobes
 2. Asepsis, sepsis and the relations to sterilization and transmission of disease
 3. Common diseases caused by various microorganisms
 4. Methods by which bacteria may be studied
- C. Oral pathology
 1. Oral pathology
 2. Terms included in the vocabulary for oral pathology
 3. Body defenses and three major factors which affect the body's resistance to disease
 4. Most common lesions found in the oral cavity
 5. Biopsy procedure
 6. Process of repair and the terms "granulation tissue and regeneration"
 7. Dental caries and diseases of the dental pulp
 8. Difference between certain pathological conditions of oral soft and hard tissues
 9. Oral manifestations of nutritional disorders
- D. Pharmacology
 1. Parts of a prescription for drugs
 2. Routes of drug administration
 3. Drugs and preparations used and associated with dental treatment
 4. Care and storage of medicines according to accepted standards
 5. Laws pertaining to the regulation of dangerous drugs
 6. Prescribed or administered medications with expected systemic reactions
- E. Emergency and first aid in dentistry
 1. Basic supplies and medications necessary on an emergency cart and first aid kit
 2. Dental/medical health history and its relationship to preventing/treating an emergency
 3. Obtaining and updating a health history using open-ended questions and reviewing different formats
 4. Legal problems related to emergency care
 5. Procedures to help prevent medical emergencies
 6. Treatments for a variety of medical and dental emergencies
 7. Vital diagnostic signs/symptoms used by the dentist when examining a patient
 8. Use of the base line vital signs
 9. Most common emergencies of dental origin
 10. Acute infection or acute gingivitis and the treatment for the condition
 11. Types of shock occurring in the practice of dentistry
 12. Diagnostic signs and treatment of cardiac arrest, angina pectoris and cerebrovascular accident
 13. EKG recording and the cardiac cycle
 14. Cardiopulmonary resuscitation
 15. Diseases diabetes mellitus and hypoglycemia and treatment of their emergency
 16. Epilepsy and emergency treatment
 17. Symptoms and emergency treatment for hypoglycemia
 18. Three indications of drug addiction and the risks involved in treating this type of patient
 19. Symptoms and treatment for syncope, hyperventilation and allergic reactions

20. Treatment for hemorrhage, convulsion, eye injuries, and fractures
 21. Occupational hazards and prevention to office personnel
- F. Preventive dentistry
1. Plaque control program for a patient
 2. Aspects of a complete preventive dentistry program to provide education to individual needs
 3. Competence in personal oral hygiene, using a disclosing agent, the appropriate toothbrushing technique, dental floss, and other dental health aids as needed
 4. Plaque, acquired pellicle, disclosing agents, and methods of personal oral hygiene
 5. Tooth whitening trays and chairside procedure of in-office whitening
 6. Formation of plaque and the patterns of accumulation
 7. Oral irrigating devices, power toothbrushes, and mouthwashes in personal oral hygiene
 8. Step by step procedure for plaque control instruction
 9. Nursing bottle syndrome and how it can be prevented
 10. Role of fluorides in preventive dentistry (topical and systemic) through drinking water, dietary supplements, topical applications, and toothpaste
 11. Value of a preventive recall program/continuing care
 12. Importance of a developmental guidance program for an adult
 13. Role of preventive dentistry plays in the prevention of sports injuries
 14. Role of the plaque control assistant including the planning of a plaque control program and facilitating learning
 15. Relationship between frequency and quantity of cariogenic foods in causing tooth decay
- G. Nutrition
1. Nutrition and nutrients
 2. Knowledge and understanding of nutrition being important as a dental assistant
 3. Carbohydrates in nutrition
 4. Key nutrients and their primary functions
 5. Sources of antioxidants
 6. Role of fats in the diet differentiating between saturated fats, polyunsaturated, and monounsaturated
 7. HDL and LDL as it relates to diet
 8. Dietary Reference Intakes and how they reduce the risk of chronic disease
 9. Role of protein in the diet and compare the terms: complete protein, incomplete protein, and essential amino acids
 10. Essential vitamins and minerals by stating their primary function and listing one good source of each
 11. Six major food groups and identification of food found in each group
 12. Primary nutrition contributions of each of the six food groups found in my Pyramid.
 13. Empty calories in terms of the food containing them and how they affect our nutrition, well-being, and weight control
 14. Basic concepts of nutrition and how food needs differ for family members, and how these needs can be effectively met
 15. Competence in keeping and evaluation a diet diary
 16. Diets for pre/post oral surgery new denture patients, orthodontic patients and injury patients
 17. Primary objective of any preventive dentistry program
 18. Need for preventive dentistry and the role of general dentistry and dental specialties in prevention
 19. Role of diet in a plaque control program
 20. Interpretation of food labels
 21. Health and oral implication of eating disorders

22. Criteria for food to be considered "organic"