Oregon
John A. Kitzhaber, MD, Governor

Health Licensing Agency
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As of July 1, 2013 the Board of Denture Technology in collaboration with Oregon Students Assistance Commission and Department of Education has determined that 103 quarter hours or the equivalent semester or trimester hours is equivalent to an Associate's Degree. A minimum number of credits must be obtained in the following course of study or educational areas:

- Orofacial Anatomy a minimum of 2 credits;
- Dental Histology and Embryology a minimum of 2 credits;
- Pharmacology a minimum of 3 credits;
- Emergency Care or Medical Emergencies a minimum of 1 credit;
- Oral Pathology a minimum of 3 credits;
- Pathology emphasizing in Periodontology a minimum of 2 credits;
- Dental Materials a minimum of 5 credits;
- Professional Ethics and Jurisprudence a minimum of 1 credit;
- Geriatrics a minimum of 2 credits;
- Microbiology and Infection Control a minimum of 4 credits;
- Clinical Denture Technology a minimum of 16 credits which may be counted towards 1,000 hours supervised clinical practice in denture technology defined under OAR 331-405-0020(9);
- Laboratory Denture Technology a minimum of 37 credits which may be counted towards 1,000 hours supervised clinical practice in denture technology defined under OAR 331-405-0020(9);
- Nutrition a minimum of 4 credits;
- General Anatomy and Physiology minimum of 8 credits; and
- General education and electives a minimum of 13 credits.

Curriculum objectives which correspond with the required course of study are listed below. Complete information can be located on the agency Web site at http://www.oregon.gov/OHLA/DT/Pages/How_to_Get_Licensed.aspx

DENTURE TECHNOLOGY

CURRICULUM OBJECTIVES

STATE BOARD OF DENTURE TECHNOLOGY

Adapted from the Baseline Competencies Profile developed by the International Federation of Denturists
March 17, 1995

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Date: July 1, 2013

To: Denture Technology Stakeholders

From: Samie Patnode, Policy Analyst

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For more information contact Samantha Patnode at (503)373-1917 or at samie.patnode@state.or.us

OVERVIEW OF OBJECTIVES

1.00 GENERAL ANATOMY AND PHYSIOLOGY

Introduction To The Human Body

1.1 Define anatomy and physiology.

1.2 List the principle body cavities and the organs contained within them.

1.3 Identify the different levels of complexity found in the human body: (e.g., molecule, cell, tissues, organ system).

1.4 Define metabolism, catabolism and anabolism, homeostasis.

1.5 Describe the three major planes of section:

- 1.5.1 coronal
- 1.5.2 transverse
- 1.5.3 sagittal

Cells, Tissues and Glands
Replaced by text of 3.1

1.6 Identify each major cellular component at the microscopic level and describe the function of each component.

- 1.6.1 Cytoplasmic organelles
- 1.6.2 Nucleus and its contents
  - Nucleoli
  - Nuclear membrane
  - Nuclear pore
  - Chromatin and chromosomes
- 1.6.3 Describe the path of a protein molecule from its site of synthesis to intercellular space.

1.7 Define the terms mitosis and meiosis and identify the purpose of each.

1.8 Identify the fluid compartments of the body, comparing and contrasting their composition and volume.

1.9 Define the transport mechanisms by which substances move between the body's compartments, stating an example of each:

- 1.9.1 diffusion
- 1.9.2 osmosis
- 1.9.3 filtration

1.9.4 active transport
1.9.5 phagocytosis
1.9.6 facilitated diffusion

1.10 State normal blood pH.

1.11 Define the following terms.

1.11.1 acid
1.11.2 base
1.11.3 pH
1.11.4 buffer

1.12 Define the term tissue.

1.13 Briefly describe the following:

1.13.1 epithelial tissue
1.13.2 connective tissue
1.13.3 muscle
1.13.4 nervous tissue

1.14 Define the term gland and distinguish between exocrine and endocrine glands giving examples of each.

The Skeletal System

1.15 Describe the functions of the skeletal system.

1.16 Describe the histological features of compact and spongy bone.

1.17 Describe the process of bone development and remodeling.

1.18 List the five principle shapes of bones in the skeleton, giving an example of each.

1.19 Define the term "bony landmark" and give examples.

1.20 Describe the structure and movements of fibrous, cartilaginous and synovial joints.

Muscular System

1.21 Identify the functions of muscle tissue.

1.22 Describe the relationship of blood vessels and nerves to skeletal muscles.

1.23 Describe the relationship involving bones and joint articulations in producing body movements.

The Nervous System

1.24 Identify the functions of the nervous system.

1.25 Describe the organization of the nervous system.

1.26 Describe the generation and propagation of a nerve impulse.

1.27 Define synapse.

1.28 Explain the role of neurotransmitters.

1.29 Define reflexes and list general characteristics of all reflexes.

1.30 Briefly describe the meninges, including their function.

1.31 Describe the manufacture, circulation and function of cerebrospinal fluid.

1.32 Describe the structure and function of the spinal cord.

1.33 Briefly describe the structure of the brain, including the location and functions(s) of

- 1.33.1 cerebral cortex
- 1.33.2 white matter
- 1.33.3 basal ganglia
- 1.33.4 thalamus
- 1.33.5 hypothalamus
- 1.33.6 cerebellum
- 1.33.7 pons
- 1.33.8 medulla oblongata
- 1.33.9 reticulate formation

1.34 Identify the two divisions of the autonomic nervous system.

1.35 Describe the function of each division of the autonomic nervous system, including their effects on the other body systems.

1.36 List the 12 pairs of cranial nerves and describe their distribution.

The Cardiovascular System

1.37 List the functions of the cardiovascular system.

1.38 Describe the structure and functions of erythrocytes, leukocytes, and thrombocytes.

1.39 Describe the mechanism of hemostasis, including both factors which would promote blood clotting and those that would inhibit it.

1.40 Describe the structures of the heart, including the :

1.40.1 pericardium
1.40.2 myocardium
1.40.3 endocardium
1.40.4 chambers
1.40.5 valves

1.41 Define coronary circulation and identify the 2 major arteries.

1.42 Define automaticity.

1.43 Identify the components of the heart's conduction system, including the function of each.

1.44 Describe the events of the cardiac cycle.

1.45 Define cardiac output and identify factors which affect it.

1.46 Describe and differentiate between the structure and function of arteries, arterioles, capillaries, venules, and veins.

1.47 List and identify the major arteries and veins of systemic circulation.

1.48 Describe capillary dynamics.

1.49 Define blood pressure.

1.50 Identify the normal values for blood pressure.

1.51 Identify factors which would affect blood pressure.

The Lymphatic System

1.52 Describe the components and functions of the lymphatic system.

1.53 Identify the functions of the tonsils, spleen, and thymus gland.

The Respiratory System

1.54 Identify the functions of the respiratory system.

1.55 Briefly describe the structure and functions of each of the following:

1.55.1 pharynx
1.55.2 larynx
1.55.3 trachea

1.56 Briefly describe the structure of the bronchial tree.

1.57 Briefly describe the mechanics of respiration.

1.58 Identify factors which control and influence respiration.

1.59 Describe alveolar gas exchange.

1.60 Identify how gases are transported in the blood.

1.61 Briefly describe the respiratory system's role in maintaining acid-base balance.

The Urinary System

1.62 List the functions of the urinary system.

1.63 Briefly describe the structure of the kidneys.

1.64 Briefly describe the mechanism of formation of urine, identifying factors which would affect it.

1.65 Describe the normal composition and volume of urine.

1.66 Briefly describe the role of the urinary system in regulation of:

1.66.1 blood pressure
1.66.2 fluid and electrolyte balance
1.66.3 acid-base balance

1.67 Briefly identify the structure and function of:

1.67.1 the ureters
1.67.2 urinary bladder
1.67.3 urethra

1.68 Define micturition.

The Digestive System

1.69 Describe the components and functions of the digestive system.

The Reproductive System

1.70 Describe the components and functions of the reproductive system.

The Endocrine System

1.71 Locate and describe the function of the endocrine glands.

1.72 Identify the function of the endocrine system.

1.73 Identify the location of each of the following glands, and the function(s) of the specified hormones:

1.73.1 pituitary:
- (a) growth hormone
- (b) antidiuretic hormone

1.73.2 thyroid
- (a) thyroxin
- (b) thyrocalcitonin

1.73.3 parathyroids:
- parahormone

1.73.4 adrenals
- (a) epinephrine & norepinephrine
- (b) aldosterone
- (c) glucocorticoids

1.73.5 pancreas
- (a) glucagon
- (b) insulin

2.00 OROFACIAL ANATOMY

Head & Neck Anatomy

Bones

2.1 Identify the composition and purpose of bone.

2.2 Describe the structure and development of bone.

2.3 Explain divisions and classifications of bone.

2.4 Identify and describe bones of the cranium and state their function.

2.5 Identify sutures of the skull and describe their formation.

2.6 Identify and describe the bones of the face and state their function.

2.7 Identify and describe the structure and function of the mandible. (See 2.8)

2.8 Describe the structure and function of the maxilla.

2.9 Describe the functions of the nasal cavity and para-nasal sinuses.

Muscles

2.10 Identify major muscles of mastication, their origin and insertion and describe their actions. (See also 14.3)

2.11 Identify the suprahyoids as a group, their origin and insertion and describe their actions.

2.12 Identify the infrahyoids as a group, their attachments and describe their functions.

2.13 Identify the platysma muscle, its origin, insertion and describe its action.

2.14 Identify the posterior musculature of the neck, their origin, insertion and describe the actions.

2.15 Identify the muscles of facial expression, their origin, insertion and describe their actions. (See also 14.3)

2.16 Identify the intrinsic and extrinsic muscles of the tongue, their location and describe their actions.

Circulatory System

Arteries

2.17 Identify and describe the circulatory system of the head and neck.

2.18 Identify and describe arteries of the head and neck including their branches and functions.

2.19 Identify and describe the pathway of the Circle of Willis.

Veins

2.20 Identify and describe the groups of veins of the head and neck and their functions.

2.21 Identify and describe the pathway of the venous sinuses.

Nervous System

2.22 Describe the relation between the peripheral nervous system and the cranial nerves.

2.23 Explain the relation between the autonomic nervous system and three divisions of the trigeminal nerve.

2.24 Define proprioception and relate this term to movement of the mandible and the TMJ.

Nerves

2.25 Explain the coordination of receptors and effectors in regulating nerve impulses.

2.26 Identify and state origins and exits (or entrances) of each of the twelve pairs of cranial nerves.

2.27 Describe the basic functions of each pair of cranial nerves.

2.28 Describe the functional components of cranial nerves: V, VII, IX,XII.

2.29 List the cranial nerves that are most pertinent to denturist practitioners.

2.30 Describe the origin, pathway, site of exit, structures innervated and functional components of the trigeminal nerve.

2.31 Identify any muscle (other than masticatory) which is innervated by the trigeminal nerve.

2.32 Describe the origin, pathway, site of exit, structures innervated and function components of the facial nerve.

2.33 Identify the origin and trace the pathway of the glossopharyngeal nerve and its branches.

2.34 Identify the origin and trace the pathway of the vagus nerve and its branches.

Lymphatic System

2.35 Define the lymphatic system and its components.

2.36 Explain the importance of the lymphatic system as it relates to the health and proper function of the body.

2.37 Identify superficial and deep nodes of the head and neck and describe their respective functions and routes of drainage.

2.38 List locations of the superficial parotid, deep parotid, posterior auricular, occipital nodes, submandibular and submental nodes and identify drainage areas.

2.39 Identify and explain how palatine, pharyngeal and lingual tonsils assist in maintaining health.

Salivary Glands (See also 3.8)

2.40 Identify major and minor salivary glands, locate and describe their function.

2.41 List major components of saliva.

2.42 Describe the functions of saliva.

2.43 Describe the innervation to the major salivary glands and the autonomic system control.

Dental Anatomy

Oral Cavity

2.44. Identify the anatomical landmarks of the oral cavity and the pharynx.

Teeth

2.45 Describe the supporting and associated structures of the teeth.

2.46 Describe the development of the teeth and their supporting structures.

2.47 List and describe individual primary and permanent dentition utilizing the Universal, Palmer and FDI system.

2.48 Define primary, mixed and permanent dentition.

2.49 State the general sequence of eruption of primary (deciduous) and permanent dentitions.

2.50 Identify the anatomical structures and landmarks of anterior and posterior teeth in the permanent and primary dentition.

2.51 Describe the mandibular positions and movements in relation to articulation of teeth.

2.52 Identify and describe Angle's classification of malocclusion.

Temporomandibular Joint

2.53 Identify the components of the temporomandibular joint (TMJ).

2.54 Describe the structure and functions of the TMJ.

2.55 Identify the ligaments associated with the TMJ, their locations and describe their functions.

Anomalies

2.56 Define and recognize common dental anomalies and developmental disturbances.

2.57 (See 4.1.3)

3.00 GENERAL HISTOLOGY (See also 1.12 and 1.13)

(3.1 moved to 1.6)

3.2 Identify the microscopic structure of epithelial tissue and discuss the function of each component.

3.2.1 Locate, describe and give the prime function of the various epithelial cells.

3.2.2 Illustrate the relationship of the ultrastructure of a Goblet cell to its function.

3.2.3 Describe the structure of the basement membrane.

3.2.4 Discuss the similarities and differences between keratinized and nonkeratinized epithelium of the oral mucosa and list the chief distribution in the oral cavity.

3.2.5 Describe surface specializations such as keratin, microvilli and cilia.

3.2.6 Discuss the histology of the following clinical conditions:

- linea alba
- nicotine stomatitis
- (Duplicates 7.116)

3.2.7 Describe the histology of stippling.

3.2.8 Describe the age change that takes place in the epithelia of the oral cavity.

3.2.9 Discuss the change in the oral epithelium following:

- the insertion of a new denture
- the prolonged wearing of a denture

3.3 Describe the microscopic structure of connective tissue and discuss the function of each component.

3.3.1 Discuss the importance of collagen in the structure and function of the tooth.

3.3.2 Describe and identify the fibrous components of connective tissue and the functional significance of collagen, elastin and reticulin.

3.3.3 Describe, identify and state the function of the following the cellular components of connective tissue:

- fibroblasts
- fibrocytes
- fat cells
- histiocytes/macrophages
- mast cells
- plasma cells
- undifferentiated mesenchymal cells

3.3.4 Discuss the origin of macrophages

3.3.5 Describe and discuss dense fibrous regularly and irregularly arranged

connective tissue.

3.3.6 Describe the histology of a tendon and tendon regeneration.

3.4 Discuss and describe the specialized connective tissue of blood and the inflammatory process.

3.4.1 Recognize, describe and give the prime function of granular leukocytes (neutrophils, eosinophils, basophils) and agranular leukocytes (lymphocytes and monocytes).

3.4.2 Discuss the accumulation of neutrophils at the site of infection and the components of a purulent exudate.

3.4.3 Discuss eosinophilic and basophilic involvement in allergic and inflammatory reactions.

3.4.4 Describe the fate of lymphocytes when they are stimulated with an appropriate antigen.

3.4.5 Discuss the structure and function of erythrocytes and platelets.

3.4.6 Outline the vascular and cellular response for acute denture stomatitis.

3.4.7 (moved to 6.46.5)

3.4.8 Describe the components of crevicular fluid found in gingival inflammation.

3.5 Describe the histology of each of the following conditions:

3.5.1 tissue atrophy

3.5.2 tissue hypertrophy

3.5.3 tissue aplasia

3.5.4 bone atrophy

3.6 Explain the function and differentiate between a "blast" cell and a "clast" cell.

3.7 Describe oral mucosa and differentiate between the function of masticatory and lining mucosa.

3.8 Identify and describe the function of major and minor salivary glands.

3.8.1 (Duplicates 1.14)

3.8.2 Construct and label diagrams of serous acini, mucous acini and serous demilunes.

3.8.3 Distinguish between interlobar, interlobular and intralobular ducts by means of a fully labelled diagram.

3.8.4 Discuss the histology of the major and minor salivary glands.

3.8.5 (Duplicates 7.126.5)

3.8.6 Discuss the relation of saliva to dentures.

3.9 Identify the microscopic structure of bone and describe the function of each component.

3.9.1 Discuss the intercellular substance of bone.
3.9.2 Discuss the ability of bone to provide solid support and at the same time provide adequate nutrition to its osteocytes.
3.9.3 Distinguish between immature and mature bone.
3.9.4 Distinguish whether bone deposition or bone resorption is occurring in a particular location.
3.9.5 Describe and label an osteogenic cell, an osteoblast, an osteocyte and an osteoclast.
3.9.6 Distinguish between intramembranous and endochondral ossification.
3.9.7 Describe the structure of long bones.

3.10 Identify and describe the function of all types of cartilage.

3.10.1 List and describe the characteristics of cartilage.
3.10.2 Describe the manner in which chrondocytes are nourished and their fate when intercellular substance around them calcifies.
3.10.3 Describe the two methods of cartilage growth.
3.10.4 Describe and label diagrams that represent hyaline, elastic and fibrocartilage.
3.10.5 Describe and label a chondrogenic cell, a young chrondoblast and a mature chondrocyte.

3.11 Identify the microscopic structure of muscle tissue and describe the function of each component.

3.11.1 Describe and label diagrams of smooth, striated and cardiac muscle.
3.11.2 Discuss the component parts of a muscle fiber involved in contraction.
3.11.3 Draw a sarcomere in a relaxed and a contracted state.
3.11.4 Discuss the differences between cardiac and skeletal muscle.
3.11.5 Define and explain the functions of:

3.11.5.1 sarcomere
3.11.5.2 sarcoplasm
3.11.5.3 sarcoplastic reticulum
3.11.5.4 sarcolemma

4.00 DENTAL HISTOLOGY AND EMBRYOLOGY

4.1 Describe the development of the face and oral cavity.

4.1.1 List the three embryonic layers that give rise to the entire human.
4.1.2 Describe the stomodeum
4.1.3 Describe the following facial malformations:

- macrostomia
- microstomia
- cleft lip
- cleft palate
- macroglossia
- microglossia
- aglossia

4.2 Describe the development, structure and function of teeth.

4.2.1 Define the following terms and list the stages of tooth development by means of a time line.

- initiation
- proliferation
- histodifferentiation
- morphodifferentiation
- apposition
- calcification and maturation
- eruption

4.2.2 List the basic structures that collectively comprise the enamel organ.
4.2.3 State the origin of enamel, dentin, pulp, periodontal ligament, cementum and the alveolus.
4.2.4 Describe and discuss the following:

- the fate of the dental lamina
- the fate of the secondary lamina
- the vestibular lamina
- the outer and inner enamel epithelium, the stellate reticulum, stratum intermedium, Hertwig's epithelial root sheath and root formation.

4.2.5 Describe amelogenesis and list three defects.
4.2.6 Discuss the architecture of enamel, including enamel rods, rod sheaths, and inerplasmic substance.
4.2.7 Describe the specific histological features of enamel and include

Hunter-schreger bands, incremental lines of Retzius, neontal line, perikymata, primary enamel cuticle.

4.2.8 Distinguish among enamel lamellae, enamel spindles and enamel tufts.

4.2.9 Illustrate dentinogenesis, discuss the differences between mantle dentin and circumpulpal dentin formation.

4.2.10 Describe the histology of:

4.2.10.1 lines of von Ebner
4.2.10.2 contour lines of Owen
4.2.10.3 neonatal lines
4.2.10.4 interglobular dentin
4.2.10.5 Tomes' granular layer

4.2.11 Describe peritubular and intertubular matrices, dentinal tubules and odontoblast processes.

4.2.12 Describe regular physiological secondary dentin versus reparative dentin.

4.2.13 State the clinical significance of dead tracts and sclerotic dentin.

4.2.14 Describe dentinogenesis imperfecta.

4.2.15 Describe dental pulp cells and discuss the functions of dental pulp.

4.2.16 Describe the sensory nerve ending found in dental pulp tissue.

4.2.17 (Definition for term not found)

4.3 Describe the processes of exfoliation of natural teeth.

4.4 Describe the histology and functions of the periodontium.

4.4.1 Describe the functions of the periodontal ligament and each of the principal fiber groups.

4.4.2 Describe the cell rests of Malassez and state their clinical significance.

4.4.3 Describe the role of the accessory canals in the spread of dental disease.

4.4.4 Describe cementogenesis.

4.4.5 Distinguish between the histology of acellular and cellular cementum and the functions of cementum.

4.4.6 Describe the varieties of junctions that are found between enamel and cementum.

4.5 Describe the histology of the alveolar process and list causes of resorption of the alveolar process.

4.5.1 Describe the alveolar process and state two names for the alveolar bone proper.

4.5.2 List the structural elements of bone tissue.

4.5.3 List the types of bone classified according to function.

4.5.4 State the structure, function and location of Sharpey's fibers.

4.5.5 Discuss bone changes during orthodontic movement.

4.6 Describe and list the steps in hard tissue genesis.

- 4.6.1 Describe the organic and inorganic contents of the four hard tissues of the body; bone, cementum, dentin and enamel.
- 4.6.2 Compare and contrast the hard tissues of the tooth.
- 4.6.3 (Not related to denturist practice)

4.7 Describe the histology of the four types of papillae found on the tongue and discuss the location of taste buds.

4.8 Describe the changes in oral hard and soft tissues due to tooth extraction and/or denture wearing.

4.9 Describe the attachment of the epithelia to the basal bone.

4.10 Describe the age changes that occur in the periodontium, tissues of the teeth and tongue.

5.00 PERIODONTOLOGY

5.1 Identify and define correct periodontal terminology.

5.2 Classify periodontal disease.

5.3 Describe the basic etiology of periodontal disease.

5.4 Recognize and describe clinically healthy gingiva.

5.5 Differentiate between healthy gingiva and the early pathological manifestations of gingival disease.

5.6 Describe inflammatory and non-inflammatory conditions affecting the gingiva.

5.7 Describe HIV periodontal lesions such as atypical gingivitis and ANUG gingiva.

5.8 Describe candidiasis in the denture-wearing patient.

5.9 List common drugs that cause gingival enlargement.

5.10 Define and classify pockets.

5.11 Describe rapidly progressing periodontitis.

5.12 Recognize radiographic signs indicative of periodontal disease.

5.13 Relate occlusion to periodontal disease.

5.14 Distinguish between primary and secondary occlusal trauma.

5.15 Describe periodontosis or juvenile periodontitis.

5.16 Explain the process of recession.

5.17 Describe pericoronitis**,** periodontal abscess***es*** and cysts.

5.18 List and describe four forms of periodontal therapy and discuss their use.

5.19 List and describe surgical periodontal procedures.

5.20 Describe synthetic bone grafts, citric acid technique and guided tissue regeneration (Gortex).

5.21 Discuss the goals of osseointegration and describe the most common implant system currently used.

5.22 (Duplicates 7.103)

5.23 List and describe the various periodontal diseases that directly affect the geriatric patient such as: desquamative gingivitis, burning mouth syndrome, denture sore mouth, xerostomia.

5.24 Explain the various oral physiotherapy aids that are currently available to patients.

5.25 Explain the use of chlorhexidine, Keyes technique, antitartar toothpastes, anti-plaque oral rinses and antibiotics in the control and elimination of periodontal disease.

5.26 List an appropriate oral regimen for patients receiving chemotherapy and radiation therapy.

5.27 Describe the drug-induced changes in the oral tissues by common drugs.

5.28 List representative drugs causing xerostomia and modes of treatment currently available to patients.

5.29 Recognize and record periodontal findings by performing an extra-oral, intra-oral examination.

6.00 MICROBIOLOGY & INFECTION CONTROL

Definitions

6.1 Describe the following microbes:

- 6.1.1 bacteria
- 6.1.2 viruses
- 6.1.3 fungi
- 6.1.4 rickettsia
- 6.1.5 chlamydia
- 6.1.6 protozoa

6.2 Define the terms "infection" and "spread of infection".

6.3 Define the term "chronic carrier" and describe the chronic carrier state.

6.4 Define the terms "cross infection & cross contamination".

6.5 (Duplicates 6.1)

Growth Requirements and Transmission

6.6 List the growth characteristics of bacteria

6.7 List and describe growth needs of other micro-organisms.

6.8 List and describe the factors that affect the death rate of microorganisms

6.9 State the potential routes of infection between the dental patient/client and the dental care provider.

Disease Characteristics and Symptoms

6.10 List and describe human air borne infectious disease characteristics.

6.11 List and describe food and water borne infectious disease characteristics.

6.12 List and describe soil-borne and arthropod-borne infectious disease characteristics.

6.13 List the major microorganism located on the:

- 6.13.1 tongue
- 6.13.2 gingival crevice

6.13.3 saliva
6.13.4 buccal mucosa
6.13.5 gingival mucosa

6.14 List and describe sexually transmitted and contact disease characteristics.

6.15 (Incorporated in 6.10-6.14 as amended)

6.16 (Incorporated in 6.10-6.14 as amended)

6.17 (Incorporated in 6.10-6.14 as amended)

6.18 (Incorporated in 6.10-6.14 as amended)

Resistance Factors of Microorganisms

6.19 List and describe non-specific resistance factors.

Defense Mechanisms

6.20 List and describe physical and chemical barriers to disease.

6.21 Define the term "phagocytosis" and describe the phagocytic process.

6.22 Define the term "inflammation" and describe the inflammatory response.

6.23 Define the term "fever" and describe its benefits and detriments.

6.24 Define the following terms:

6.24.1 immunity
6.24.2 active immunity
6.24.3 antigen
6.24.4 passive immunity
6.24.5 antibody
6.24.6 adaptive immunity
6.24.7 immune system
6.24.8 cellular immunity
6.24.9 humoral immunity
6.24.10 innate immunity
6.24.11 natural immunity
6.24.12 artificial immunity

6.25 Describe the formation of B-lymphocytes.

6.26 Describe the formation of T-lymphocytes.

6.27 Define the term "immune tolerance".

6.28 List the four types of hypersensitivity reactions and describe the process in each case.

6.29 List the causes of immune deficiency diseases and their consequences.

6.30 Define the term immune suppression and describe the process.

6.31 Describe the action of "T4 cells" and "T8 cells".

6.32 List individuals receiving prosthodontic treatment whose resistance to disease may be reduced.

Defense Mechanisms (Mechanical)

6.33 Define the following terms:

6.33.1 disinfection
6.33.2 sterilization
6.33.3 antiseptics
6.33.4 asepsis
6.33.5 cidal agents
6.33.6 static agents
6.33.7 sanitization
6.33.8 decontamination
6.33.9 germicide
6.33.10 cross-infection
6.33.11 disinfectant
6.33.12 define superinfection and briefly explain its etiology and implications.

6.34 Discuss the susceptibility of the denturist to sources of infection.

6.35 Describe and demonstrate an effective hand washing routine.
(See also 14.16)

6.36 Identify the protective measures to prevent disease transmission (cross-infection).

6.37 List several components of a well-designed infection control procedure.

6.38 Describe the personal hygiene guide-lines that should be observed by all dental personnel.

6.39 (Duplicates 6.33)

6.40 Prepare instruments for sterilization and disinfection.

6.40.1 Demonstrate operatory sanitization and disinfection, i.e., chair light.

6.41 Compare and contrast the five accepted methods of instrument sterilization.

6.42 Demonstrate the proper operation of the autoclave and dry-heat oven.

6.43 Describe the process of cold disinfection.

6.44 Discuss the choice and use of chemical disinfectant.

6.45 Identify advantages and disadvantages of various disinfecting agents in a denturist clinic.

Specific Diseases

6.46 For the hepatitis viral diseases:

6.46.1 Name the causative organism.
6.46.2 Describe the route(s) of transmission.
6.46.3 Describe the clinical symptoms and disease course.
6.46.4 Describe treatment and prevention modalities.
6.46.5 Discuss the immunology of hepatitis B and HIV infections and the health care workers. (Moved from 3.4.7).

6.47 Describe the oral manifestations of:

6.47.1 syphilis
6.47.2 gonorrhea
6.47.3 herpes simplex
6.47.4 tuberculosis (See also 6.62)
6.47.5 mumps
6.47.6 measles
6.47.7 rubella
6.47.8 chicken pox (varicella)
6.47.9 shingles (herpes zoster)
6.47.10 verrucae (warts)
6.47.11 candidiasis
6.47.12 rheumatic fever
6.47.13 scarlet fever
6.47.14 mononucleosis

6.48 For AIDS, list the:

6.48.1 causative organism
6.48.2 routes of transmission
6.48.3 clinical signs and symptoms (especially oral)
6.48.4 treatment and prevention modalities
6.48.5 describe high risk behaviors

6.49 For the herpes simplex viruses:

6.49.1 Name the causative organism.
6.49.2 Describe the routes of transmission.
6.49.3 Describe the clinical symptoms and disease course
6.49.4 Describe treatment and prevention modalities

Dental Prosthesis

6.50 Describe an appropriate aseptic procedure to follow when transporting dental prostheses.

6.51 Discuss the legal implications of following the recommended OSHA Infection Control Guide-lines to the denturist.

6.52 Describe the Health and Safety Standards regarding bloodborne pathogens.

6.53 Identify the key components of Material Safety Data Sheets (MSDS).
(See also 16.8)

6.54 Describe the recommended procedure regarding contaminated material disposal.

6.55 Discuss the components of a quality assurance program as it relates to monitoring devices.

6.56 Collect and incubate microbial samples from different parts of the clinic to evaluate the success of contamination control practices in the denturist clinic.

6.57 Observe and report on aseptic procedure in another dental clinic.

6.58 Make a specific list of items in the student's instrument kit and determine how each item would best be sterilized and/or disinfected.

6.60 (Text deleted)

6.61 (Text deleted)

6.62 Briefly describe tuberculosis under the following headings:

6.62.1 etiology

6.62.2 pre-disposing factors
6.62.3 pathophysiology
6.62.4 manifestations and complications including drug resistance
6.62.5 therapeutic interventions
6.62.6 prevention

7.00 PATHOPHYSIOLOGY (MEDICINE)

(Items marded by * are outside the scope of practice in Oregon, but are recommended as training related to dental health and community standards.)

Part I: General Pathology

Definitions

7.1 Define the following terms:

- 7.1.1 disease
- 7.1.2 pathology
- 7.1.3 pathogenesis
- 7.1.4 etiology
- 7.1.5 lesion
- 7.1.6 sign
- 7.1.7 symptom
- 7.1.8 ulcer (ulceration)
- 7.1.9 vesicle
- 7.1.10 laceration
- 7.1.11 bullae (bullous)
- 7.1.12 syndrome
- 7.1.13 diagnosis
- 7.1.14 prognosis
- 7.1.15 petechiae
- 7.1.16 erythematous

Etiology of Disease

7.2 Identify the general causes of disease, including several examples of each:

- 7.2.1 genetic or hereditary diseases.
- 7.2.2 congenital anomalies
- 7.2.3 trauma (mechanical, physical)
- 7.2.4 chemicals
- 7.2.5 infectious diseases
- 7.2.6 alterations in immunity and inflammation
  - 7.2.6.1 hypersensitivity
  - 7.2.6.2 immunodeficiency
- 7.2.7 hypoxia
- 7.2.8 nutritional diseases (See 22.7.1.3)
- 7.2.9 neoplasia
- 7.2.10 psychogenic disease (psychosomatic)
- 7.2.11 iatrogenic disease

7.2.12 idiopathic disease

Cellular Adaptation to Injury

7.3 Define, list the causes of and give an example of each of the following cellular adaptations to injury:

7.3.1 atrophy
7.3.2 hypertrophy
7.3.3 hyperplasia
7.3.4 metaplasia
7.3.5 dysplasia
7.3.6 neoplasia
7.3.7 necrosis

Fluids Imbalances

7.4 Describe dehydration under the following headings:

7.4.1 causes
7.4.2 manifestations, including oral
7.4.3 therapeutic interventions
7.4.4 clinical implications

7.5 Describe edema under the following headings:

7.5.1 types
7.5.2 causes
7.5.3 manifestations including oral
7.5.4 therapeutic interventions, including diuretics
7.5.5 clinical implications

7.6 Briefly discuss the correlation between fluid imbalances and electrolyte imbalances.

Inflammation

7.7 Define inflammation.

7.8 Identify the causes of an inflammatory response.

7.9 List several purposes of inflammation.

7.10 List the cardinal signs of inflammation.

7.11. Briefly explain what is meant by the term chemical mediators.

7.12 Identify and briefly describe the events involved in each of the following:

- 7.12.1 vascular response
- 7.12.2 cellular response

7.13 Define the following terms:

- 7.13.1 hyperemia
- 7.13.2 exudation
- 7.13.3 purulent
- 7.13.4 abscess
- 7.13.5 pyrexia
- 7.13.6 leukocytosis
- 7.13.7 cyst
- 7.13.8 fistula

7.14 List several systemic manifestations of inflammation.

7.15 Compare and contrast acute and chronic inflammations under the following headings:

- 7.15.1 causative agents
- 7.15.2 onset of response
- 7.15.3 cells involved
- 7.15.4 intensity of response
- 7.15.5 duration
- 7.15.6 outcome

7.16 Identify general therapeutic interventions used in the treatment of inflammation.

7.17 (Moved to 12.5.9)

7.18 (Moved to 12.5.10)

7.19 Differentiate between regeneration and repair.

7.20 Identify several factors which influence wound healing either positively and negatively.

7.21 Briefly describe repair of a simple wound.

7.22 Describe some therapeutic interventions which might be used to promote healing.

7.23 List groups of drugs which impair healing.

Immunity and Related Disorders (See also 6.20-6.32)

7.24 (Duplicates 7.20)

7.25 (Duplicates 7.21)

7.26 (Duplicates 7.22)

7.27 (Duplicates 7.23)

7.28 Define the following terms:

- 7.28.1 immunity
- 7.28.2 antigen
- 7.28.3 antibody
- 7.28.4 hypersensitivity

7.29 Identify 3 characteristics of an immune response.

7.30 Briefly describe how immune cells can differentiate between host cells and antigen.

7.31 Identify the 3 types of cells involved in immunity and the roles of each.

7.32 Briefly describe the events of:

- 7.32.1 cellular immunity
- 7.32.2 humoral immunity

7.33 Briefly describe events of:

- 7.33.1 active immunity
- 7.33.2 passive immunity

7.34 Explain how active and passive immunity are acquired.

7.35 Identify the advantages and disadvantages of both active and passive immunity.

7.36 Define autoimmune disease.

7.37 Identify a drug group which suppresses immunity.

7.38 (Moved to 6.48)

Genetic Diseases

7.39 Identify the categories of genetic disease, including the general characteristics and examples of the following:

- 7.39.1 mutations
- 7.39.2 autosomal dominant disorders.
- 7.39.3 autosomal recessive disorders
- 7.39.4 sex-linked disorders
- 7.39.5 alterations in chromosomal number

Neoplasia

7.40 Briefly identify the general rules used in naming tumors.

7.41 Differentiate between benign and malignant growths.

7.42 Define the following terms:

- 7.42.1 anaplasia
- 7.42.2 infiltration
- 7.42.3 metastasis
- 7.42.4 carcinogenesis
- 7.42.5 carcinogen
- 7.42.6 oncology
- 7.42.7 oncogenic
- 7.42.8 primary cancer
- 7.42.9 secondary (metastic cancer)

7.43 Identify several carcinogens associated with a denturist practice and include an example of each.

7.44 Identify several factors which pre-dispose to the development of cancer.

7.45 (Text deleted)

7.46 List the 7 warning signs of cancer.

7.47 Identify how surgery is used in the treatment of cancer.

7.48 Briefly describe radiation therapy under the following headings:
(See also 7.118-7.120)

- 7.48.1 action

7.48.2 adverse effects
7.48.3 oral effects

7.49 Briefly describe chemotherapy under the following headings:

7.49.1 mechanism of action
7.49.2 effects
7.49.3 adverse effects
7.49.4 oral manifestations

7.50 (Moved to 12.4.3)

7.51 (Text deleted)

7.52 Briefly describe leukemia under the following headings:

7.52.1 characteristics
7.52.2 manifestations
7.52.3 therapeutic interventions

7.53 Briefly describe Hodgkin's disease under the following headings:

7.53.1 characteristics
7.53.2 manifestations
7.53.3 therapeutic interventions

7.54 (Duplicates 6.46)

7.55 (Moved to 6.47)

Diseases Affecting the Cardiovascular System

7.56 Define anemia

7.57 List the general manifestations of anemia.

7.58 Identify several types of anemia including cause, specific manifestations and therapeutic interventions for each.

7.59 Briefly describe thrombocytopenia under the following headings:

7.59.1 etiology
7.59.2 manifestations
7.59.3 therapeutic interventions

7.60 Define the following terms;

- 7.60.1 hypercoagulability
- 7.60.2 thrombosis

7.61 Identify several factors which contribute to inappropriate clotting.

7.62 List several conditions associated with hypercoagulability.

7.63 Identify the drug groups used in the treatment of hypercoagulability and describe each under the following headings:

- 7.63.1 action and effects
- 7.63.2 examples
- 7.63.3 adverse effects

7.64 Define a thrombus.

7.65 Briefly describe thrombophlebitis under the following headings:

- 7.65.1 etiology
- 7.65.2 pathophysiology
- 7.65.3 therapeutic interventions

7.66 Define the following terms:

- 7.66.1 arteriosclerosis
- 7.66.2 atherosclerosis
- 7.66.3 hyperlipidemia
- 7.66.4 atherosclerotic plaque
- 7.66.5 infarction
- 7.66.6 aneurysm
- 7.66.7 antilipemic
- 7.66.8 embolism

7.67 List the factors which predispose an individual to atherosclerosis indicating which are the most significant.

7.68 Briefly describe the atherosclerotic plaque and its significance.

7.69 List several therapeutic interventions used in the treatment of atherosclerosis.

7.70 Define the following terms:

7.70.1 hypertension
7.70.2 essential hypertension
7.70.3 cardiomegaly
7.70.4 proteinuria
7.70.5 hematuria
7.70.6 uremia
7.70.7 vertigo
7.70.8 tinnitus
7.70.9 epistaxis
7.70.10 syncope

7.71 Identify the numerical definition of hypertension.

7.72 List factors which predispose an individual to hypertension.

7.73 Briefly identify possible causes of hypertension

7.74 Identify the main organs or structures which are affected the most significantly by hypertension and what these effects are.

7.75 List common manifestations of hypertension.

7.76 Identify several modalities used in the treatment of hypertension.

7.77 (Moved to 12.5.1)

7.78 Define angina pectoris.

7.79 Identify the conditions which are responsible for angina pectoris.

7.80 Identify the basic pathophysiology involved in angina.

7.81 Describe anginal pain, including what might precipitate its onset.

7.82 Identify non-pharmalogic interventions, including surgical modalities, used in the treatment of angina.

7.83 Identify the types of drugs used in the treatment of angina.

7.84 Briefly describe nitroglycerin under the following headings:

7.84.1 action and effects
7.84.2 uses
7.84.3 adverse effects

7.85 Define myocardial infarction.

7.86 Briefly describe myocardial infarction under the following headings:

- 7.86.1 pathophysiology
- 7.86.2 manifestations
- 7.86.3 complications
- 7.86.4 therapeutic goals and interventions
- 7.86.5 prognosis

7.87 Define congestive heart failure.

7.88 Identify the general causes of heart failure.

7.89 Briefly describe both left-sided and right-sided heart failure under the following headings:

- 7.89.1 pathophysiology
- 7.89.2 manifestations

7.90 (Moved to 12.5.4)

7.91 (Moved to 12.5.3)

7.92 Define cerebrovascular accident (CVA).

7.93 Briefly describe cerebrovascular accident under the following headings:

- 7.93.1 etiology
- 7.93.2 pathophysiology
- 7.93.3 manifestations
- 7.93.4 therapeutic interventions
- 7.93.5 prognosis

7.94 Briefly describe the heart complications associated with rheumatic fever including the:

- 7.94.1 typical lesion
- 7.94.2 pre-disposition to endocarditis
- 7.94.3 course of endocarditis
- 7.94.4 implications for dental professionals

7.95 (Moved to 6.33.12)

Respiratory Diseases

7.96 Define the following terms:

7.96.1 chronic obstructive pulmonary disease
7.96.2 asthma
7.96.3 emphysema
7.96.4 chronic bronchitis

7.97 Briefly describe asthma under the following headings:

7.97.1 causative factors
7.97.2 factors which may precipitate an attack
7.97.3 pathophysiology
7.97.4 manifestations
7.97.5 therapeutic interventions

7.98 (Moved to 12.5)

7.99 Briefly describe emphysema under the following headings:

7.99.1 etiology
7.99.2 pathophysiology
7.99.3 manifestations and complications
7.99.4 therapeutic interventions

7.100 Briefly describe chronic bronchitis under the following headings:

7.100.1 etiology
7.100.2 pathophysiology
7.100.3 manifestations and complications
7.100.4 therapeutic interventions

7.101 (Moved to 6.62)

Endocrine Diseases

7.102 Define the following terms:

7.102.1 diabetes mellitus
7.102.2 hyperglycemia
7.102.3 glycosuria
7.102.4 ketonuria
7.102.5 ketoacidosis
7.102.6 polyuria
7.102.7 polydipsia

7.102.8 polyphagia
7.102.9 pruritus
7.102.10 neuropathy
7.102.11 nephropathy
7.102.12 proteinuria
7.102.13 retinopathy

7.103 Briefly describe diabetes mellitus under the following headings:

7.103.1 incidence
7.103.2 pre-disposing factors
7.103.3 types
7.103.4 etiology
7.103.5 pathophysiology
7.103.6 manifestations
7.103.7 acute complications
7.103.8 chronic complications
7.103.9 therapeutic interventions

7.104 Briefly describe the following endocrine problems, including the etiology, manifestations, therapeutic interventions and dental implications of each:

7.104.1 Cushing's disease
7.104.2 Addison's disease
7.104.3 hypothyroidism
7.104.4 hyperthyroidism
7.104.5 acromegaly

Musculoskeletal Disorders

7.105 Briefly describe osteoporosis under the following headings:

7.105.1 definition
7.105.2 pre-disposing factors
7.105.3 pathophysiology
7.105.4 manifestations and complications
7.105.5 therapeutic intervention
7.105.6 dental complications

7.106 Define each of the following terms:

7.106.1 arthritis
7.106.2 osteoarthritis
7.106.3 rheumatoid arthritis

7.106.4 (Unknown term)
7.106.5 subluxation
7.106.6 crepitus
7.106.7 ankylosis

7.107 Describe osteoarthritis under the following headings:

7.107.1 etiology
7.107.2 pre-disposing factors
7.107.3 pathophysiology
7.107.4 joints involved
7.107.5 manifestations, including oral
7.107.6 therapeutic interventions

7.108 Describe rheumatoid arthritis under the following headings:

7.108.1 etiology
7.108.2 pathophysiology
7.108.3 joints involved
7.108.4 manifestations - intra-articular, including oral - extra-articular
7.108.5 therapeutic interventions

Neurological Disorders

7.109 Define epilepsy
7.110 Identify medications used to treat epilepsy
7.111 Briefly describe the oral manifestations of the drug phenytoin (Dilantin)
7.112 Identify the appropriate emergency care for an epileptic seizures.

Part II: Oral Pathology

7.113 Describe the histological features, clinical significance and therapeutic interventions for each of the following.

7.113.1 angular cheilitis
7.113.2 leukoplakia
7.113.3 thrush (moniliasis)
7.113.4 actinomycosis
7.113.5 (Duplicates 6.49)
7.113.6 lichen planus
7.113.7 apthous ulcers (RAU)

Odontogenic Cysts and Tumors

7.114 Discuss the odontogenic cysts and tumors which may develop in the head and neck region and describe their consequence to prosthodontic therapeutic interventions.

7.114.1 Describe the etiology, clinical features, radiographic appearance, treatment and complications of primordial, dentigerous, apical periodontal and lateral periodontal cysts.

7.114.2 Describe the etiology and clinical features of the following cysts:

- 7.114.2.1 dental lamina cyst of the newborn
- 7.114.2.2 gingival cyst of the adult
- 7.114.2.3 odontogenic keratocyst
- 7.114.2.4 calcifying odontogenic cyst

7.114.3 Describe the etiology and clinical features of the following tumors:

- 7.114.3.1 ectodermal tumors - enameloma and ameloblastoma
- 7.114.3.2 mesodermal tumors - cementoma
- 7.114.3.3 mixed tissue tumors - odontoma and teratoma

7.115 Describe the general characteristics, clinical features, treatment and prognosis of the following benign tumors of epithelial origin:

7.115.1 papilloma
7.115.2 pigmented cell nevus

7.116 Discuss the etiology, clinical features, histology, malignant potential, treatment and differential diagnosis of leukoplakia.

7.117 Describe the clinical features, histology and clinical significance of leukodema.

7.118 Describe the general characteristics, etiology, clinical features, histology, treatment, prognosis and complications of malignant tumors of epithelial origin.

7.118.1 basal cell carcinoma
7.118.2 squamous cell carcinoma of the lip, tongue, buccal mucosa, gingiva and floor of the mouth.
7.118.3 malignant melanoma
7.118.4 adenocarcinoma

7.119 Describe the general characteristics, etiology, clinical features, histology, treatment, prognosis and complications of malignant tumors of mesenchymal origin.

7.119.1 fibrosarcoma

7.119.2 Kaposi's sarcoma
7.119.3 osteosarcoma
7.119.4 Hodgkin's disease
7.119.5 multiple myeloma

7.120 Describe the general characteristics, etiology, clinical features, treatment and prognosis of the following benign tumors of mesenchymal origin:
(See also 7.40-7.53)

7.120.1 fibroma
7.120.2 peripheral giant cell granuloma
7.120.3 lipoma
7.120.4 hemangioma
7.120.5 lymphangioma
7.120.6 myxoma
7.120.7 chondroma
7.120.8 osteoma
7.120.9 traumatic neuroma (amputation neuroma)
7.120.10 neurofibroma

Oral Manifestations of Chemical and Physical Injuries

7.121 Describe the etiology and clinical features of the following physical injuries

7.121.1 bruxism
7.121.2 fracture of the teeth
7.121.3 traumatic cyst and ulcer
7.121.4 focal osteoporosis
7.121.5 effects of orthodontic movement
7.121.6 traumatic ulcer (denture ulcer)
7.121.7 factitial injuries (self-inflicted injuries)

7.121.7a attrition
7.121.7b abrasion
7.171.7c erosion

7.121.8 denture injuries

7.121.8a papillomatosis (papillary hyperplasia)
7.121.8b epulis fissuratum (fibroid epulis)
7.121.8c epulis granulomatosis

7.121.9 perleche
7.121.10 mucous retention cyst

7.121.11 ranula
7.121.12 sialothiasis
7.121.13 radiation burn
7.121.14 hematoma

7.122 Describe the clinical features and treatment for the following chemical injuries to the oral cavity.

7.122.1 aspirin burn
7.122.2 sodium perborate burn
7.122.3 dilantin hyperplasia
7.122.4 tetracycline staining
7.122.5 antineoplastic agent reaction

7.123 Describe the clinical features and treatment for the following allergic reactions.

7.123.1 angioneurotic edema
7.123.2 drug allergy
7.123.3 contact stomatitis

7.123.3a denture sore mouth
7.123.3b denture stomatitis

Temporomandibular Joint

7.124 Discuss the etiology, clinical features, characteristics and treatment of the following temporomandibular joint pathologies:

7.124.1 Subluxation
7.124.2 TMJ pain - dysfunction syndrome
7.124.3 Infectious arthritis
7.124.4 (Duplicates 7.107)
7.124.5 Rheumatoid Arthritis

7.125 Discuss developmental anomalies and neoplasms of the temporomandibular joint.

Developmental Conditions

7.126 Describe the etiology, pathology and clinical consequences of the following pathologies related to developmental disturbances of the jaws and face:

7.126.1 Tori
7.126.2 (Duplicates 4.1.3)
7.126.3 Macroglossia

7.126.4 Macrognathia
7.126.5 Fordyce's granules
7.126.6 Facial hemihypertrophy
7.126.7 Facial hemiatrophy
7.126.8 Fibromatosis gingivae
7.126.9 Exostosis

7.127 Describe the etiology, clinical manifestation and treatment for each pathology related to developmental disturbances of the teeth.

7.127.1 Size
7.127.2 Shape
7.127.3 Number
7.127.4 Structure
7.127.5 Eruption
7.127.6 Regressive alteration

7.128 Identify the position, clinical manifestations and clinical significance of each of the following developmental cysts in the oral cavity.

7.128.1 Median anterior maxillary cyst
7.128.2 Median palatal cyst
7.128.3 Globomaxillary cyst
7.128.4 Median mandibular cyst
7.128.5 Nasoalveolar cyst
7.128.6 Palatal cyst of the newborn
7.128.7 Thyroglossal tract cyst
7.128.8 Dermoid cyst

Conditions of the Tongue

7.129 Describe the etiology, clinical characteristics and therapy for pathology related to developmental disturbances of the tongue and salivary glands:

7.129.1 Median rhomboid glossitis
7.129.2 Ankyloglossia
7.129.3 Coated tongue
7.129.4 Fissured tongue
7.129.5 Lingual tonsil
7.129.6 Geographic tongue (migratory glossitis)
7.129.7 Black hairy tongue (lingua nigra)
7.129.8 White hairy tongue (lingua villosa alba)
7.129.9 Aplasia
7.129.10 Xerostomia

7.129.11 Atresia
7.129.12 Aberrancy

Dental Caries and Pulpal Diseases

7.130 Identify the various deposits found on the dentition and relate the pathologic processes that are initiated by these deposits.

7.131 Describe the etiology, incidence, clinical features, treatment and prognosis of dental caries.

7.132 Describe the etiology, incidence, clinical features, treatment and prognosis of gingivitis, acute necrotizing ulcerative gingivitis, and periodontitis.

7.133 Describe the etiology, incidence, clinical features, treatment and prognosis of gingival hyperplasia.

7.134 Define pulpitis and describe the conditions which account for the wide variability in pulpal response to injury among different patients.

*7.135 Characterize each of the following disturbances (diseases) of pulp:

*7.135.1 hyperemia of pulpitis
*7.135.2 supporative pulpitis
*7.135.3 ulcerative pulpitis
*7.135.4 internal resorption (idiopathic resorption)
*7.135.5 simple pulpitis
*7.135.6 gangrenous pulpitis
*7.135.7 chronic productive pulpitis (hyperplastic pulpitis)

*7.136 Associate each of the following symptoms with one of the diseases listed in 7.135 above and describe the symptom:

*7.136.1 pulp polyp (granulation tissue)
*7.136.2 pink tooth of Mummary
*7.136.3 ischemia

*7.137 Characterize each of the following sequelae to pulpitis:

*7.137.1 periapical abscess (central abscess)
*7.137.2 periodontal abscess (lateral abscess)
*7.137.3 cellulitis

8.00 RADIOGRAPHIC PATTERN RECOGNITION

(Items marked by * are outside the scope of practice in Oregon, but are recommended as training related to dental health and care and community standards.)

Radiography in Dental Practice

*****8.1 Specify the uses of radiographs in dental treatment.

8.2 List the legal/ethical accountabilities and responsibilities of each member of the dental team as these relate to dental radiography.

8.3 Define the following terms:

- *****8.3.1 radiography, radiographer
- *****8.3.2 radiology, radiologist
- *****8.3.3 x-ray radiation
- 8.3.4 Radiographic film (x-rays, radiograph, radiogram, intra-oral films and extra-oral films)

8.4 Describe the history and development of radiology.

Characteristics of Radiation

8.5 List and explain the physical characteristics of x-ray radiation.

8.6 Define the following terms:

- 8.6.1 primary radiation
- 8.6.2 secondary radiation
- 8.6.3 scatter radiation
- 8.6.4 primary beam
- 8.6.5 whole body radiation

8.7 Identify the terms used to measure radiation.

Technical Aspects of Radiation Production

*****8.8 Define the following terms:

- *****8.8.1 latent image
- *****8.8.2 visible image
- 8.8.3 radiopacity
- 8.8.4 radiolucency

Dental X-ray Films

8.9 Describe the common types of intra-oral and extra-oral radiographic films and list their functions.

8.10 Identify common artifacts that affect dental radiographic film and describe their abnormal appearance.

Mounting Radiographs for Identification

*****8.11 Demonstrate the procedure and system of mounting dental radiographs.

8.12 Explain the purpose of the embossed dot on radiographic films.

Radiographic Interpretation - Teeth and Periodontium

8.13 List and identify in dental radiographs the following:

- 8.13.1 Visible characteristics of individual teeth of the primary or permanent dentition (e.g. shape of crowns, number of roots, etc).
- 8.13.2 The anatomical structures of the tooth:
  - 8.13.2.1 enamel
  - 8.13.2.2 dentin
  - 8.13.2.3 cementum
  - 8.13.2.4 pulp chamber and pulp canal(s)
- 8.13.3 The anatomical structures of the periodontium:
  - 8.13.3.1 alveolar bone
    - 8.13.3.1.1 cortical bone (lamina dura)
    - 8.13.3.1.2 cancellous bone (spongy bone)
    - 8.13.3.1.3 alveolar crest
  - 8.13.3.2 periodontal membrane space
  - 8.13.3.3 gingiva

***Radiographic Interpretation - Anatomical Structures of the Head**

*****8.14 List and identify in dental radiographs the following:

- *****8.14.1 incisive canal foramen (anterior palatine foramen)
- *****8.14.2 median palatine suture
- *****8.14.3 nasal fossae
- *****8.14.4 nasal septum

*****8.14.5 maxillary sinus
*****8.14.6 inverted "typical Y"
*****8.14.7 zygomatic bone (malar bone)
*****8.14.8 zygomatic arch
*****8.14.9 maxillary tuberosity
*****8.14.10 hamular process
*****8.14.11 coronoid process
*****8.14.12 genial tubercles
*****8.14.13 lingual foramen
*****8.14.14 mental foramen
*****8.14.15 mylohyoid ridge (internal oblique ridge)
*****8.14.16 inferior border of the mandible
*****8.14.17 external oblique ridge
*****8.14.18 mandibular canal and other nutrient canals
*****8.14.19 ascending border of the ramus
*****8.14.20 mental process or ridge
*****8.14.21 temporomandibular joint

***Radiographic Interpretation - General**

*****8.15 Identify the following structures in dental radiographs:

*****8.15.1 metallic restorations
*****8.15.2 calculus
*****8.15.3 caries (incipient, advanced, recurrent occlusal)
*****8.15.4 overhang
*****8.15.5 abscessed teeth
*****8.15.6 impacted teeth
*****8.15.8 retained roots
*****8.15.8 bone loss
*****8.15.9 resorption (crestal bone loss)
*****8.15.10 root resorption
*****8.15.11 bifurcation
*****8.15.12 internal resorption
*****8.15.13 condensing osteitis
*****8.15.14 pulp stone
*****8.15.15 hypercementosis
*****8.15.16 dilacerated roots
*****8.15.17 supernumerary teeth
*****8.15.18 mesiodens
*****8.15.19 gutta percha
*****8.15.20 silver points
*****8.15.21 restorations - acrylic composite silicate

*****8.15.22 space maintainer

***Radiographic Interpretation - Cysts**

*****8.16 Describe the dental radiographic appearance of:

*****8.16.1 odontogenic cysts

*****8.16.1.1 radicular cysts
*****8.16.1.2 dentigerous cysts
*****8.16.1.3 residual cysts
*****8.16.1.4 kerato cysts
*****8.16.1.5 primordial cysts

*****8.16.2 nondontogenic cysts

*****8.16.2.1 nasopalatine cysts
*****8.16.2.2 median palatine cysts
*****8.16.2.3 nasoalveolar cysts
*****8.16.2.4 dermoid cysts

***Radiographic Interpretation - Hyperplasia**

*****8.17 Describe the dental radiographic appearance of the following hyperplasias:

*****8.17.1 torus palatinus
*****8.17.2 torus mandibularis
*****8.17.3 exostosis
*****8.17.4 enostosis

***Radiographic Interpretation - Tumors**

*****8.18 Describe the dental radiographic appearance of odontogenic tumors:

*****8.18.1 ectodermal tumors

*****8.18.1.1 ameloblastoma

*****8.18.2 mixed tumors (ectodermal-mesodermal)

*****8.18.2.1 odontoma
*****8.18.2.2 ameloblastic fibroma

*****8.18.3 mesodermal tumors

*****8.18.3.1 dentinoma

*****8.19 Describe the dental radiographic appearance of nonodontogenic tumors:

*****8.19.1 ectodermal

*****8.19.1.1 neuroma

*****8.19.2 mixed tumors (ectodermal-mesodermal)

*****8.19.2.1 neurofibroma
*****8.19.2.2 mesodermal tumors

*****8.19.2.2.1 osteoma
*****8.19.2.2.2 central hemangioma
*****8.19.2.2.3 osteoblastoma

***Radiographic Interpretation - Malignant Lesions**

*****8.20 Describe the radiographic characteristics and appearance of malignant lesions:

*****8.20.1 Carcinomas

*****8.20.1.1 squamous cell carcinoma
*****8.20.1.2 metastatic carcinoma

*****8.20.2 Sarcomas

*****8.20.2.1 osteosarcoma
*****8.20.2.2 chondrosarcoma
*****8.20.2.3 fibrosarcoma

9.00 BIOMECHANICS (DENTAL KINESIOLOGY)

9.1 Explain the relationship between kinesiology and prosthodontic care.

9.2 List and describe the normal functions of the oral/facial muscles of mastication.

9.3 Identify all forces affecting denture prostheses during muscle functions.

9.4 List and describe the normal functions of the temporomandibular joint.

9.5 Identify the forces generated on the denture prostheses during temporomandibular joint excursions.

9.6 Describe the functional force relationships between teeth and the prosthetic appliance.

9.7 Describe and explain the dynamic relationship between functional occlusion and prosthetic design.

9.8 List and describe oral hard and soft tissue adaptive processes following prosthodontic appliance insertion.

10.00 DENTAL PSYCHOLOGY

Theories

10.1 Discuss appropriate psychology theories relating to oral health care.

10.2 Describe common theories of hunger as they relate to eating disorders, satiety, hunger and thirst.

Basic Functions

10.3 Describe the three basic functions of the oral cavity and their importance to the individual from a psychological perspective.

10.4 Describe the anatomical and physiological structures involved in taste and smell.

Pain and TMJ Dysfunction

10.5 Describe the elements involved in the transmission of pain.

10.6 Discuss the emotional and cultural factors mediating pain.

10.7 Describe the psychological implications related to TMJ dysfunction.

Patient Expectations

10.8 Describe patient expectations and reactions related to prosthetics.

10.9 Determine the expectations of the denture patient/client related to oral rehabilitation.

Communication

10.10 Define and demonstrate verbal and non-verbal communication.

10.11 Identify patient types in relation to communication theory and describe the potential problems.

Patient Management and Behavior Modification

10.12 Define hypnosis and relaxation techniques in patient management.

10.13 Discuss patient and practitioner stress and phobias related to dental care.

10.14 List several factors accounting for stress and phobias in the patient.

10.15 Describe techniques of behavior modification.

10.16 Discuss the psychological effects of sexually abused patients. (moved/edited from 20.15)

11.00 DENTAL PSYCHOLOGY AND THE AGING PROCESS

11.1 Differentiate among the following terms:

- 11.1.1 Gerontology
- 11.1.2 Aging
- 11.1.3 Geriatrics
- 11.1.4 Gerodontics

11.2 Describe the current demographic trends of the aging population.

- 11.2.1 Demographic trends in aging

11.3 Discuss the importance of attitudes toward aging.

- 11.3.1 Myths and realities of aging

11.4 Describe the psychological significance of tooth loss.

11.5 Discuss theories of aging.

11.6 Discuss the effects of aging on intelligence and memory.

11.7 Discuss the physical characteristics of aging.

- 11.7.1 Physical health changes/health problems

11.8 Discuss the characteristics of the retired person.

- 11.8.1 Life Adjustments and Transistions in the Older Years:
  - 11.8.1.1 Retirement
  - 11.8.1.2 Changes in relationships
  - 11.8.1.3 Social isolation/loneliness
  - 11.8.1.4 Dealing with death, widowhood and loss
  - 11.8.1.5 Changes in role
  - 11.8.1.6 Changes in financial state

11.9 Describe common psychological disorders of the elderly and their underlying causes.

- 11.9.1 Mental and emotional problems in senior years
  - 11.9.1.1 Depression, anxiety, sleep disturbances, etc.
  - 11.9.1.2 Drug and alcohol problems among seniors.

11.10 Differentiate between normal aging and disease conditions.

11.11 Describe the special health needs of the institutionalized and disabled elderly person.

11.12 Demonstrate an understanding of how to utilize the senior services system.

11.13 Demonstrate an understanding of major policy issues affecting seniors

- 11.13.1 Health care
- 11.13.2 Insurance
- 11.13.3 Housing
- 11.13.4 Transportation
- 11.13.5 Taxation

12.00 PHARMACOLOGY

12.1 (Moved to 23.2)

12.2 (Moved to 23.3)

12.3 Be familiar with the laws governing prescription drugs and use.

12.4 Describe the actions, reactions, indications, side effects and implications (particularly oral) of the following drug groups as they relate to the practice of denture technology:

- 12.4.1 antimicrobials
- 12.4.2 autonomic nervous system drugs
- 12.4.3 central nervous drugs, including anesthetics, analgesics, sedatives, antidepressants, hormone regulation and anticonvulsants.

12.5 Identify the actions, indications and how each of the following drug types may complicate a denturist's treatment.

- 12.5.1 antihypertensives
- 12.5.2 anticoagulants & platelet inhibitors
- 12.5.3 cardiotonics
- 12.5.4 antiarrhythmics
- 12.5.5 bronchodilators
    - 12.5.5.1 mechanism of action and effect
    - 12.5.5.2 route(s) of administration
    - 12.5.5.3 examples
    - 12.5.5.4 adverse effects
- 12.5.6 corticosteriods
    - 12.5.6.1 mechanism of action and effect
    - 12.5.6.2 route(s) of administration
    - 12.5.6.3 examples
    - 12.5.6.4 adverse effects
- 12.5.7 immunosuppressants
- 12.5.8 antineoplastics
- 12.5.9 describe the oral implications of non-steroidal anti-inflammatory drugs for the denturist
- 12.5.10 describe the oral implications of steroidal anti-inflammatory drugs for the denturist

12.6 (Moved to 23.4)

12.7 (Moved to 23.1)

13.00 PRE-CLINICAL PROSTHETICS

Equipment and Materials

13.1 Identify the safe use of laboratory and clinical equipment, instruments and materials used in denture construction.

13.2 Demonstrate methods of maintaining the equipment and materials utilized in the construction of removable dentures.

13.3 Describe the characteristics of impression materials in terms of use, equipment needed and manipulation requirements.

Laboratory Procedures

13.4 Correctly box/bead, final impressions and pour and trim casts.

13.5 Fabricate custom impression trays utilizing various methods.

13.6 Construct baseplates and occlusal rims, to given measurements.

13.7 Construct record bases esthetic occlusal trim to be used for the registration of interocclusal records utilizing a pintracing device. Articulate master casts utilizing a facebow transfer, conventional registration records and/or intraoral tracing devices.

13.8 Arrange artificial teeth according to arch configuration.

13.9 Set-up various types of artificial teeth to achieve proper articulation and balanced occlusion with anatomical teeth.

13.10 Describe the components, use and assemble a pin tracing device.

13.11 Wax-up to correct aesthetic standard, flask, process, and deflask complete dentures utilizing various techniques.

13.12 Remount and equilibrate maxillary and mandibular dentures.

13.13 Demonstrate proper contouring and finishing techniques when trimming and polishing dentures.

13.14 Reline, rebase and repair dentures.

Impression Trays, Jaw Relations, and Artificial Teeth

13.15 Select suitable stock trays for preliminary impression making.

13.16 Describe and demonstrate the use of the facebow transfer to an articulator.

13.17 Select teeth to satisfy aesthetic and functional requirements of different cases and arch configurations.

13.18 Describe the advantages and disadvantages of various types of artificial teeth and their applications.

13.19 Register eccentric jaw relations and adjust a semi-adjustable articulator to correspond to a given record.

14.00 PROSTHODONTICS CLINICAL PROSTHETICS/THEORY, AND APPLICATION

The Edentulous State and Biomechanics

14.1 Define the edentulous state and list the procedures involved in complete denture construction.

14.2 Describe patient adaptive responses of hard and soft tissues to complete dentures.

14.3 List and describe the normal functions of the muscle of facial expression and the muscles of mastication. (See also 2.10 and 2.15)

14.4 Describe the biomechanical effects of the muscles of facial expression and mastication (origin, insertion, action) on denture prostheses.

14.5 Describe and explain the dynamic relationships between functional occlusion and prosthetic design.

14.6 Describe the functional relationships between natural teeth and prosthetic appliances.

14.7 Describe the influences of saliva on denture prosthesis rehabilitation.

Anatomical Evaluation

14.8 Describe the anatomy of the TMJ and relate its function to denture prostheses.

14.9 Describe the anatomical relations of the following structures and list the influences of each on prosthesis construction including but not limited to:

- 14.9.1 midline raphe
- 14.9.2 mylohyoid ridge
- 14.9.3 oblique ridge
- 14.9.4 genial tubercles
- 14.9.5 tuberosity
- 14.9.6 retromolar pad
- 14.9.8 frenum
- 14.9.8 rugae
- 14.9.9 vestibule
- 14.9.10 hard palate
- 14.9.11 soft palate
- 14.9.12 floor of mouth
- 14.9.13 foramina
- 14.9.14 incisive papilla
- 14.9.15 hamular notch

14.10 Define the following terms and, for each, state the influences on prosthetic construction and stability, including but not limited to:

- 14.10.1 bony spicules
- 14.10.2 residual roots
- 14.10.3 undercut areas
- 14.10.4 hypertrophied tissues
- 14.10.5 atrophied tissues
- 14.10.6 exostosis
- 14.10.8 maxillary/mandibular tori

14.11 Describe the influences of tongue size, shape and range of movement on denture stability and function

14.12 Recognize intra-oral and extra-oral pathologic conditions which may effect denture aesthetics, phonetics or functions.

Patient Management

14.13 Demonstrate professional patient/client management.

14.14 Complete a medical/dental questionnaire.

14.15 Describe the importance of interprofessional relationships and explain those principles.

14.16 Utilize aseptic techniques during all procedures.
(See also 6.35)

- 14.16.1 Describe and demonstrate an effective handwashing routine.

14.17 Employ appropriate precautionary measures with high risk patients.

Examination

14.18 Conduct extra-oral inspection using visual and digital methods and other appropriate methods.

14.19 Conduct intra-oral inspection with:

- 14.19.1 dentures in place
- 14.19.2 dentures removed

14.20 Examine, assess and evaluate the aesthetics, function and phonetics of the existing prostheses.

Patient Records and Treatment Planning

14.21 Analyze all documented patient history information.

14.22 Establish a prosthetic treatment plan utilizing dental, medical, psychological, biomechanical and radiographic data.

14.23 Develop, present and discuss a treatment plan and prognosis.

14.24 Present treatment plan to the patient/client and discuss expectations and imitations.

14.25 Obtain patient consent.

Clinical Procedures (Preliminary Impressions)

14.26 Demonstrate operatory and patient preparation.

14.27 Select and adapt stock trays, prepare and manipulate the appropriate impression materials.

14.28 Manipulate the pertinent facial and/or oral tissues to give the desired results in the preliminary impressions.

14.29 Apply removal techniques and assess the resultant impressions.

14.30 Use correct handling and transporting procedures in the storing and casting of preliminary impressions.

Clinical Procedures (Final Impressions)

14.31 Design a custom tray for fabrication on the preliminary cast in preparation for peripheral border molding.

14.32 Apply border molding material in a sequential manner to the periphery of the tray and obtain correct extensions, within the limitations of the oral cavity, for the maximum support and retention.

14.33 Identify and manipulate the tissues involved in border molding.

14.34 Select, prepare and manipulate appropriate final impression materials.

14.35 Apply correct removal techniques of final impressions.

14.36 Evaluate the final impression for acceptability.

14.37 Conduct a post-impression examination for possible tissue trauma.

Clinical Procedures (Jaw Relations)

14.38 Place and seat record bases and assess adaptation to and stability on the alveolar ridge.

14.39 Contour occlusal rims to complement the patient's facial form.

14.40 Establish the occlusal plane using anatomical guide-lines.

14.41 Describe the procedures required to register the horizontal jaw relationship.

14.42 Establish the required horizontal and vertical jaw relationship.

14.43 Demonstrate the correct procedures to establish a face bow transfer.

14.44 Demonstrate and discuss the procedures required to establish centric relations utilizing an intraoral tracing device.

Jaw relations utilizing a pin tracing device

14.45 Describe and demonstrate the correct procedures required to establish, record and transfer horizontal and vertical jaw relationship.

Clinical Procedures (Trial Techniques)

14.46 Select artificial teeth for the prosthetic patient/client.

14.47 Evaluate wax trial denture for aesthetics, phonetics and function.

Clinical Procedures (Denture Insertion)

14.48 Insert completed dentures and evaluate for aesthetics, phonetics and function.

14.49 Perform the clinical remount.

14.50 Complete post insertion evaluation and adjustments.
14.51 Provide patient/client oriented, continuing oral care.

Transitional Immediate Dentures and Overdentures

14.52 Describe the procedures required for the construction designed of transitional dentures.

14.52.1 Outline procedures for appropriate referrals to health care providers and other services in the community.

14.53 Describe the procedures required for the construction of immediate or temporary dentures.

14.54 Describe the procedures required for the construction of overdentures used for the correction of occlusal and aesthetic irregularities.

Relines and Repairs

14.55 Discuss the rationale and methods for establishing the need for temporary liners, long lasting soft liners and tissue conditioning.

14.56 Apply tissue conditioners/temporary relines.

14.57 Clinically assess repairs.

14.58 Describe the procedures required for the application of a long lasting soft lasting liner on new and or existing dentures.

15.00 REMOVABLE PARTIAL DENTURES (R.P.D.)

(Items marked by * are outside scope of practice in Oregon, but are recommended as training related to dental health and care and community standards.)

Patient Management and Examination

15.1 Discuss the treatment objectives of partial dentures

15.2 Complete a consent form to treatment

15.3 List the armamentarium for an oral examination

15.4 Discuss the principles of an oral examination

15.5 Discuss the goals of an oral examination

15.6 Define:

- 15.6.1 Examination
- 15.6.2 Signs of disease
- 15.6.3 Symptoms of disease
- 15.6.4 Diagnosis
- 15.6.5 Prognosis
- 15.6.6 Treatment Planning

15.7 List the sequence of examination according to:

- 15.7.1 collection of data
- 15.7.2 method of examination

15.8 Describe the treatment providers role:

- 15.7.8. Denturist
- 15.7.8 Dentist

15.9 Describe and perform an examination and assessment according to areas of consideration.

- 15.8.1 Physiologic
- 15.8.2 Psychologic
- 15.8.3 Systemic

15.10 Discuss the use and complete:

- 15.10.1 Medical questionnaire

15.10.2 Dental questionnaire

15.11 Discuss the significance of the questions in the health questionnaires

15.12 Discuss medical emergencies and describe the recognition, control and prevention.

15.12.1 endocrine
15.12.2 espiratory
15.12.3 cardiovascular
15.12.4 cerebrovascular

15.13 Discuss drug and allergic responses, syncope, epileptic seizure

15.14 Discuss the method and perform and extra-oral examination:

15.14.1 general
15.14.2 dentures in place

15.15 Describe a TMJ examination

15.16 Discuss and complete extra-oral assessment forms

15.17 Discuss and perform an intra-oral examination according to:

15.17.1 dentures in place
15.17.2 dentures removed
15.17.3 hard tissue assessment
15.17.4 remaining teeth assessment
*****15.17.5 periodontal ligament attachment
15.17.6 soft tissue examination
*****15.17.7 radiographic examination

15.18 Complete intra-oral soft tissues assessment forms

Charting

15.19 Discuss the general rules of charting

15.20 Discuss the purpose of complete dental charting

15.21 Describe the procedures to follow for complete dental charting. Complete a dental chart following charting principles.

15.22 Describe the classification of cavities

15.23 Describe charting symbols

15.24 Describe the types of occlusion and the classification of malocclusion

Diagnostic and Treatment Planning

15.25 Discuss diagnosis and treatment plan

15.26 Prepare a treatment plan for a partially edentulous patient.

15.27 Discuss the recording of the final treatment plan and the treatment sequence for a partial denture patient according to (reference 14.15):

- 15.27.1 soft tissue
- 15.27.2 hard tissue
- 15.27.3 surgical
- 15.27.4 peridontal
- 15.27.5 restorative
- 15.27.6 prosthetic

15.28 Discuss the treatment plan presentation:

- 15.28.1 verbal
- 15.28.2 written

15.29 Explain the importance of oral hygiene to a removable partial denture patient.

15.30 Explain the biological and mechanical function of removable partial dentures.

15.31 Describe the biomechanical effects of tooth loss in partially edentulous patient.

15.32 Explain the kinetic effects of loading on abutment teeth and the underlying mucosa.

15.33 Identify treatment alternatives for partially edentulous patients.

15.34 Explain the causes of ridges resorption and other pathologies in the partially edentulous patient.

15.35 Identify the load bearing mucosa.

15.36 Describe the histological changes which may accent to the mucosa in loading bearing areas.

15.37 Describe the effects of removable partial dentures on mastication, deglutition and digestion.

Impressions

15.38 Discuss impressions methods for a partial edentulous patient. Record preliminary impressions:

- 15.38.1 goal
- 15.38.2 impression material
- 15.38.3 patient preparation
- 15.38.4 tray selection

15.39 Discuss gypsum products.

Diagnostic Casts and Surveying

15.40 Discuss pouring diagnostic casts.

15.41 Discuss custom trays construction. Construct custom trays.

15.42 Discuss, impression techniques for:

- 15.42.1 finals
- 15.42.2 tooth borne partials
- 15.42.3 free end partials
- 15.42.4 altered cast techniques

15.43 Record impressions for the above.

15.44 Discuss pouring master casts and pour master cast.

15.45 Discuss diagnostic casts and diagnostic cast analysis.

15.46 Discuss the Kennedy Classification of partially edentulous arches.

15.47 Discuss the surveying of partially edentulous casts.

15.48 Discuss the surveying instrument and its use.

Removable Partial Denture Framework

15.49 List the components of R.P.D.

15.50 Discuss the types of major connectors in regard to:

- 15.50.1 characteristics
- 15.50.2 general considerations
- 15.50.3 location

15.50.4 relief
15.50.5 waxing

15.51 Discuss minor connectors and their uses.

15.52 Discuss indirect retainers.

15.53 Discuss direct retainers.

15.54 Discuss the types of clasps and their uses.

15.55 Discuss the edentulous areas of an R.P.D.

15.56 Explain the concept of friction and retention.

15.57 Discuss guiding plaques.

15.58 Explain the biodynamics of an RPD planing.

15.59 Explain the concept of the axis of rotation

15.60 Explain the rotation on transversal, diagonal, sagittal and vertical axis.

15.61 Describe the selection of abutments.

15.62 Explain the principles of clasps design.

15.63 Discuss rapport with chrome lab.

15.64 Describe chrome cobalt alloys.

15.65 Discuss and perform the method of assessment of a framework.

Try-In Insertion

15.66 Describe and perform bite registration, procedures, establish vertical dimension, and selection of artificial teeth.

15.67 Describe evaluation of R.P.D. framework try in.

15.68 Describe and perform RPD insertion and delivery procedures.

15.69 Discuss iatrogenesis.

15.70 Discuss oral hygiene, instruction, cleaning and maintenance of an RPD.

15.71 Discuss patient education

15.71.1 verbal
15.71.2 written

15.72 Discuss retentive examination and after care of an RPD.

15.73 Discuss post insertion complaints.

15.74 Describe the method of evaluation of an RPD for reline or repair.

Acrylic Partials

15.75 Discuss acrylic partials pertaining to:

15.75.1 indications
15.75.2 procedures for construction
15.75.3 design
15.75.4 principles of design

Sterilization

15.76 Discuss sterilization procedures for removable partial dentures.

16.00 DENTAL MATERIALS

16.1 Outline the history of dental materials.

16.2 Describe the methods of testing material properties(chemical, physical, mechanical and biological).

16.3 Select appropriate dental materials according to their structural and mechanical properties.

16.4 Explain the structural and mechanical properties used when selecting dental materials.

16.5 Identify agencies that establish standards for dental materials.

16.6 State the necessity for specification of dental materials.

16.7 Describe and demonstrate safety procedures when using dental materials and equipment.

16.8 Use Material Safety Data Sheets (MSDS) effectively.
(See also 6.53)

16.9 Describe the composition, properties and application of dental materials including:

- 16.9.1 gypsum products
- 16.9.2 impression materials
- 16.9.3 waxes and baseplates
- 16.9.4 acrylic resins
- 16.9.5 abrasive and polishing agents
- 16.9.6 tissue conditioners, resiliant liners and functional impression materials
- 16.9.7 denture cleaner and adhesives
- 16.9.8 acrylic and porcelain teeth
- 16.9.9 solvents and cleaning agents
- 16.9.10 light-cured resins
- 16.9.11 dental metals and alloys
- 16.9.12 separating media

17.00 COMMUNITY ORAL HEALTH FOR THE DENTURIST

17.1 Define health, community health, and community oral health.

17.2 Discuss current global, national and local initiatives in community oral healthcare.

17.3 Describe the oral healthcare system found in private practice.

17.4 Discuss the oral healthcare system found in the community (public) health system, including various government initiatives.

17.5 Define epidemiology, describe epidemiological methods, and the uses of epidemiology.

17.6 Define a dental index and describe the properties which characterize a good dental index.

17.7 Describe the dental indices utilized in measuring dental disease.

17.8 Describe the distribution of common oral diseases.

17.9 Describe the components of a good research paper and evaluate the scientific information.

17.10 Discuss oral healthcare with respect to need, demand, and utilization of services.

17.11 Discuss the principles of health education and health promotion.

17.12 Discuss the special oral healthcare needs of the following target populations: the elderly; racial minorities; those with sensory, motor or emotional challenges.

17.13 Describe the global challenges addressed by community oral health programs.

17.14 Design user-friendly practice settings which respond to the needs of all sectors of the community.

17.15 Discuss the role of the denturist in community oral health and research procedures.

18.00 REMOVABLE IMPLANT RETAINED SUPPORTED OVERDENTURES

Introduction To Osseointegration

18.1 Define osseointegration.

18.2 Discuss the history of osseointegration and osseointegrated implant systems.

18.3 Discuss the criteria for implant success.

18.4 Discuss the characteristics of osseointegrated implants, key factors of osseointegration and the soft tissue surrounding abutments.

18.5 Describe and discuss the biological considerations for implants regarding:

- 18.5.1 Bone-implant interface
- 18.5.2 Bone remodelling
- 18.5.3 Foreign body reactions
- 18.5.4 Mechanics of osseointegration
- 18.5.5 Destruction of osseointegration
- 18.5.6 Peri-implant membrane
- 18.5.7 Disease activity of periodontium and peri-implant tissue
- 18.5.8 The neuromuscular system as it relates to osseointegrated implants

18.6 Explain indications, contra-indications of the osseointegrated implant treatment.

18.7 Discuss complications and set-backs related to implant supported prosthesis or implant retained prosthesis.

Implant Team/Examination Treatment Planning & Patient Management

18.8 Discuss the composition role and responsibilities of the implant team members.

18.9 Recognize the need to refer for consultation.

- 18.9.1 Demonstrate ability to make appropriate referrals

18.10 Recognize that the oral surgeon, periodontist, or dentist trained in implant procedures are an integral part of the patient selection and treatment planning.

18.11 Perform an intra-oral examination and gather pertinent information through medical and dental history.

18.12 Perform a preliminary patient selection according to:

18.12.1 Vital signs
18.12.2 General health
18.12.3 Oral health
18.12.4 TMJ dysfunction
18.12.5 Mental attitude
18.12.6 Financial ability

18.13 Develop a conditional treatment plan and the limitations presented by his/hers general health.

18.14 Discuss indications for implant treatment and assessment requirements.

18.15 Discuss oral considerations that compromise the success of implant treatment.

18.16 Discuss and explain consent forms to the patient.

18.17 Discuss the advantages and disadvantages of implant supported or retained prosthesis.

18.18 Explain the fee structure (of treatment plan) and develop a mutually agreed upon payment plan.

18.19 List and explain the sequence of treatment for implant supported or retained prosthesis.

Implant Components and Implant Components Selection

18.20 Describe the main components of the implant structure.

18.21 Discuss and select implant components.

Treatment Sequence

Pre-surgical: Phase I and Phase II

18.22 Discuss the construction and analysis of presurgical diagnostic casts.

18.23 Construct a diagnostic wax up.

18.24 Construct a diagnostic splint and or a surgical splint (stent).

18.25 Discuss temporazation period.

18.26 Examine and maintain the oral health of the patient post surgically (implant placement stage) by performing:

18.26.1 Denture modifications
18.26.2 Denture relines

18.27 Examine and maintain the oral health of the patient post surgically (abutment placing stage) by performing:

18.27.1 Denture modifications
18.27.2 Denture relines

18.28 Recognize the need to refer the patient to the other dental health professional team members on the first sign of abnormalities or complications post surgically.

18.28.1 Implant placement stage
18.28.2 Abutment placement stage

18.29 Discuss criteria for implant success.

18.30 Discuss abutment placement.

18.31 Discuss fixture assessment and abutment positioning.

18.32 Discuss tissue compression period.

Impression and Transfer Methods

18.33 Take preliminary impressions.

18.34 Construct custom trays using the direct impression technique.

18.35 Construct custom tray using the indirect impression technique.

18.37 Describe and employ the custom tray construction and indirect impression technique.

18.38 Describe and employ the custom tray construction and direct impression technique.

18.39 Describe and employ the construction of record bases and occlusal rims method for a ball or bar implant retained overdenture (2-4 fixtures).

18.40 Describe and employ the construction of record bases and occlusal rims for an implant supported overdenture (5-6 fixtures).

18.41 Describe and employ jaw relations recording technique for a ball retained and a bar implant retained and or supported overdenture (2-4 fixtures).

18.42 Describe and employ jaw relations recording technique for an implant supported practitioner removable overdenture (5-6 fixtures).

18.43 Select artificial teeth according to patient's: age, sex, skin color, arch size and interarch space.

18.44 Describe the technique required for a facebow transfer.

Prosthetic Treatment Options

18.45 Describe the procedures required for a two implant fixtures ball retained tissue supported prosthesis.

18.46 Describe the procedures required for a (2-4) implant fixtures bar retained tissue (5-6) tissue and or implant supported overdenture.

18.47 Describe the procedures required for a (5-6) implant fixtures implant supported practitioner removable overdenture.

18.48 Discuss patient lifestyle education, hygiene instructions and maintenance.

18.49 Explain the importance of periodic examinations and appropriate future treatments.

18.50 Discuss and explain the advantages and feasibility to upgrade to a practitioner removable prosthesis.

18.51 Establish and maintain a patient record and model storage system appropriate for the implant patient.

18.52 Discuss trouble shooting tips.

18.53 Develop and maintain appropriate correspondence with oral surgeon, implant specialized dentist and patient.

18.54 Describe the reline procedure for a ball or ring retained overdenture.

18.55 Describe the reline procedure for a bar retained or supported overdenture.

18.56 Describe the appropriate repair procedures for implant retained or supported overdentures.

19.00 SMALL BUSINESS MANAGEMENT

19.1 Evaluate the following as they apply to a denture clinic including:

- 19.1.1 Ownership
- 19.1.2 Liabilities
- 19.1.3 Taxation
- 19.1.4 Payroll

19.2 Describe the services available from financial institutions.

19.3 Recognize the liabilities and responsibilities that accrue from contracts, negotiable instruments and guarantees.

19.4 Describe the services available from the following:

- 19.4.1 Insurance broker
- 19.4.2 Real estate agent
- 19.4.3 Lawyer
- 19.4.4 Financial adviser
- 19.4.5 Accountant
- 19.4.6 Dental suppliers
- 19.4.7 Financial Institutions
- 19.4.8 Federal or Provincial/State governments

19.5 Prepare invoices for various services.

19.6 Open and establish an accounting ledger.

19.7 Read and interpret financial statements.

19.8 Discuss small business taxation.

19.9 Establish a business plan for a denture clinic.

19.10 Discuss recruitment and management of employees.

19.11 Discuss the obligations and responsibilities of the employer and employee

19.12 Discuss benefits/incentives to promote a happy and productive relationship.

19.13 Discuss ethical method of staff dismissal and employer obligations

20.00 ETHICS, JURISPRUDENCE AND PROFESSIONAL RELATIONSHIPS

20.1 Establishing and maintaining ethical standards.

20.2 Denturist - patient relationships

- 20.2.1 Implied and informed consent
- 20.2.2 Duties, responsibilities, standards of care
- 20.2.3 Malpractice/liability

20.3 (Deleted)

20.4 List a hierarchy of values which denturists can use in making ethical decisions about ethical issues.

20.5 Describe the various pressures that can adversely affect ethical behavior of denturists and analyze different methods of controlling these pressures.

20.6 Recognize ethical issues found in journal articles and critically assess the ethical reasoning employed by the author(s).

20.7 Write and defend a dental dilemma under the following headings:

- 20.7.1 identify an ethical dilemma in a clinical practice setting
- 20.7.2 demonstrate the ethical reflective process in critically examining the ethical dilemma
- 20.7.3 demonstrate an ethical decision-making process in making a judgment about this ethical dilemma
- 20.7.4 apply and analyze the profession's "Code of Ethics" with respect to its congruency with the profession's and community ethical principles

20.8 Analyze ethical interactions among the dentist, dental technicians and other allied health professionals.

20.9 Articulate the guidelines for preparing a dental legal report.

20.10 Articulate good record-keeping skills in order to reduce or minimize the exposure to a lawsuit.

20.11 List the current policy on infection control to be used by denturists.

20.12 Outline the legislative changes and issues facing today's denturists.

20.13 Discuss the various methods available to break the cycle of stress becoming distress.

20.14 Comment on the current issues of the 1990's; e.g., amalgam toxicity and AIDS.

20.15 (Moved to 10.16)

20.16 Basic categories of the law.

20.17 Historical perspective on Denture Technology in Oregon.

20.18 Review of the Oregon Dental Practice Act.

20.19 Review of the Oregon Denturist Statutes/Licensure.

20.20 The role of the Oregon Legislature.

20.21 The role of state regulatory bodies:

- 20.21.1 Oregon Health Division
- 20.21.2 State Board of Denture Technology
- 20.21.3 State Board of Dentistry

21.00 PRACTICE MANAGEMENT

21.1 Recognize the legal requirements for and practical benefits of maintaining comprehensive patient records.

21.2 Discuss the importance of professional standards and ethics.

21.3 Describe the importance of effective communications with patient and other dental professionals.

21.4 Discuss the development of ethical marketing strategies.

- 21.4.1 interoffice
- 21.4.2 external
- 21.4.3 discuss patient reports

21.5 Discuss patient evaluation forms.

21.6 Discuss the role of the staff in a denturist practice.

21.7 Discuss proper fee collecting strategies.

21.8 Discuss fee schedules, dental plans and third party coverage.

21.9 Communicate professionally with other members of the health care system.

21.10 Recognize the necessity of continuous professional development.

21.11 Discuss the advantages and disadvantages of:

- 21.11.1 solo practice
- 21.11.2 partnership
- 21.11.3 associateship

22.00 NUTRITION

Functional Concepts

22.1 Describe the basic concepts of nutrition, stress management and physical fitness.

22.2 Describe the functions and significant food resources of vitamins and minerals.

22.3 Describe the processes involved in the food cycle.

22.4 Describe oral problems associated with dietary intake.

Nutrition

22.5 Describe the metabolism and major food sources of the energy yielding nutrients.

22.6 Identify the nutritional contribution made by each of the four food groups.

22.7 Describe the special nutritional considerations of the geriatric patient.

- 22.7.1 Senior nutrition (See also 7.2.8)
  - 22.7.1.1 Introduction to nutrition
  - 22.7.1.2 Nutrition status, food choices and diet planning for the elderly
  - 22.7.1.3 Nutrition problems among the elderlyAvitaminosis
    - 22.7.1.3a
    - 22.7.1.3b
    - 22.7.1.3c
    - 22.7.1.3d
    - 22.7.1.3e
    - 22.7.1.3k
  - 22.7.1.4 Nutrition and plaque disease
  - 22.7.1.5 Digestion and absorption
  - 22.7.1.6 Natural foods
  - 22.7.1.7 Vitamins, minerals, other supplements
  - 22.7.1.8 Carbohydrates
  - 22.7.1.9 Fats and oils
  - 22.7.1.10 Proteins

22.8 Describe the special nutritional considerations of the edentulous patient.

Diets

22.9 Assess the quality of his/her own diet.

22.10 Describe a suitable diet following surgery.

22.11 Outline the function of fiber in the diet.

22.12 Discuss the impact of alcohol on the diet.

22.13 Evaluate vegetarian meals.

22.14 Analyze a diet.

22.15 Describe the major factors influencing the dietary habits of the elderly.

Nutritional Factors.

22.16 Identify the dental considerations of sugar containing foods.

22.17 Describe the factors which contribute to obesity and the role physical activity can play.

22.18 Identify the role of diet, exercise and stress management in the prevention and management of coronary heart disease, diabetes and cancer.

22.19 List the common food allergies.

22.20 Describe the oral significance, if any, of excesses or definciencies of any of the following minerals:

22.20.1 calcium
22.20.2 magnesium
22.20.3 phosporous (phosphate)
22.20.4 potassium
22.20.5 sodium
22.20.6 chloride
22.20.7 iodine
22.20.8 iron
22.20.9 zinc

23.00 EMERGENCY CARE

23.1 Describe the immediate treatment for common medical/dental emergencies (including medications).

23.1.1 shock; anaphylactic syncope 23.1.2 insulin shock
23.1.3 diabetic coma
23.1.4 anginal attack
23.1.5 myocardial infarction
23.1.6 cerebrovascular accident
23.1.7 asthmatic attack
23.1.8 nose bleed
23.1.9 eye injury
23.1.10 dealing with emergency mental health crises

23.2 Obtain and maintain a valid CPR certification (Cardio Pulmonary Resuscitation)

23.3 Obtain a standard Red Cross First Aid card.

23.4 Accurately measure pulse, respiration and blood pressure, recognizing variations from the normal.

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