HIBBING COMMUNITY COLLEGE
COURSE OUTLINE

COURSE TITLE & NUMBER: Expanded Duties 2: DAS1529
CREDITS: 3 (1 Lec / 2 Lab)
PREREQUISITES: Successfully completed DAS1525: Expanded Duties 1

CATALOG DESCRIPTION: Expanded Duties 2 provides background knowledge and skill development in the orthodontics and periodontics specialty areas of dentistry. Local dentists are on duty to evaluate the students and give them direction with expanded duties.

OUTLINE OF MAJOR CONTENT AREAS:
1. Orthodontics
   A. Definition
   B. Classifications of malocclusion
      1. Class I (neutrocclusion)
      2. Class II (distocclusion)
         a. Division I
         b. Division II
      3. Class III (mesiocclusion)
      4. Bites
         a. Crossbite
         b. Openbite
         c. Overjet
         d. Overbite
         e. End to end
         f. Edge to edge
   C. Facial profiles
      1. Mesognathic
      2. Retrognathic
      3. Prognathic
   D. Etiology of malocclusion
      1. Habits
      2. Genetics
   E. Timing of orthodontic treatment
      1. Preventive
      2. Interceptive
      3. Corrective
   F. Orthodontic records
      1. Medical and dental history
      2. Clinical exam
      3. Radiographs
         a. Panorex or full mouth survey
b. Cephlometric

4. Diagnostic photographs
5. Study models

G. Diagnosis and treatment plan

H. Appliances
1. Fixed
2. Removable
3. Headgear
4. Retainers
5. Positioners
6. Bionators

I. Mechanism of tooth movement

J. Instruments and procedures
1. Placement and removal of separators
   a. Types
      (1) Elastomeric
      (2) Dumbbell
      (3) Brass wire
      (4) Steel spring
   b. Placement
      (1) Separating plier
      (2) Floss
   c. Removal
      (1) Orthodontic scaler
      (2) Explorer
   d. Evaluation
2. Sizing and fitting of orthodontic bands
   a. Parts of a band
      (1) Seating lug/Lingual cleat
      (2) Festooned edge
      (3) Bracket
      (4) Buccal tube/Headgear tube
   b. Position of band on tooth
   c. Preparation of selected band
   d. Evaluation
3. Cementation of orthodontic bands/pre-adjusted appliances
   a. Cements
      (1) Zinc phosphate
      (2) Glass Ionomer
      (3) Polycarboxylate
   b. Removal
      (1) Excavator (crown)
      (2) Explorer
      (3) Scaler
      (4) Knotted Floss
c. Procedure
   (1) Fulcrum
   (2) Horizontal action
d. Evaluation
4. Etch enamel surfaces
   a. Etchant types
      (1) Liquid
      (2) Gel
   b. Procedure
c. Evaluate
5. Direct bonding of orthodontic brackets
6. Placement of archwires
7. Placement and removal of ligature ties
   a. Wire ligatures
   b. Elastic ligatures
   c. Single ties
d. Chain ties
K. Maintenance
L. Oral hygiene considerations
M. Special diet
N. Patient cooperation
O. Palliative Treatment
   1. Cut arch wires
   2. Remove loose band/brackets
P. Remove fixed orthodontic bands and brackets
   1. Armamentarium
      a. Band removing plier
      b. Bracket removing plier
   2. Cement removal
   3. Excess bond removal
      a. Hand instruments
      b. Rotary instruments
   4. Evaluate
Q. Vacuum-formed orthodontic retainers
   1. Fabricate
   2. Deliver
   3. Evaluate

2. Periodontics
A. Periodontal disease
   1. Gingivitis
a. Acute
   (1) Acute necrotizing ulcerative gingivitis
   (2) Acute herpetic gingivostomatitis
b. Chronic
   (1) Simple localized gingivitis
   (2) Simple generalized gingivitis
   (3) Generalized diffuse gingivitis
   (4) Pregnancy gingivitis

2. Periodontitis
   a. Simple periodontitis
   b. Compound periodontitis
   c. Juvenile periodontitis

3. Periodontosis

B. Etiology
   1. Plaque
   2. Calculus
   3. Trauma from occlusion
   4. Faulty dentistry
   5. Nutritional influence
   6. Systemic conditions
   7. Recession and disuse

C. Periodontal exam
   1. Gingival evaluation
      a. Color
      b. Texture
      c. Resiliency
   2. Bone level
   3. Bleeding
   4. Tooth mobility
   5. Periodontal charting
   6. Plaque and bleeding indices

D. Treatment
   1. Scaling
   2. Root planing
   3. Curettage
   4. Gingivoplasty
   5. Gingivectomy
   6. Osteoplasty

E. Instruments
   1. Periodontal probe
   2. Sealers
   3. Gracey curettes
   4. Pocket marker
   5. Periodontal knives
6. Power driven devises  
   a. Ultrasonic scalers  
   b. Cavitrons

F. Periodontal surgery considerations  
1. Esthetics  
2. Tooth sensitivity  
3. Home care commitment  
4. Sutures  
   a. Absorbable  
   b. Non-absorbable  
      (1) Removal  
      (2) Evaluate  
      (3) Document

G. Periodontal dressings  
1. Types  
   a. Eugenol  
   b. Non-eugenol  
   c. Light-cured  
   d. Gelatin-based
2. Use  
3. Placement  
4. Removal

H. Splinting

3. Personal oral hygiene  
A. Motivation  
B. Patient education  
C. Dietary analysis  
   1. Frequency  
   2. Duration  
   3. Consistency
D. Plaque control  
   1. Disclosing agents  
      a. Liquid  
      b. Tablets  
   2. Toothbrush  
      a. Parts  
         (1) Head  
         (2) Toe  
         (3) Handle  
         (4) Bristles  
            (a) Natural  
            (b) Synthetic  
            (c) Rounded  
            (d) Soft  
            (e) Multi-tufted
b. Electric

3. Toothbrush methods
   a. Bass technique
   b. Modified Stillman technique
   c. Charters method
   d. Fones technique
   e. Press-roll technique
   f. Scrub brush technique

4. Flossing
   a. Types of floss
   b. Flossing technique

5. Dentifrices
   a. American Dental Association (ADA) accepted
   b. Tartar control
   c. Gel versus paste
   d. Tooth whitening
   e. Abrasiveness
   f. Sensitivity reducing

6. Oral hygiene adjuncts
   a. Floss holders
   b. Rubber or wood stimulator
   c. Interproximal brushes
   d. Stimudents
   e. Water irrigation devices
   f. Floss threaders
   g. Chewing gum
   h. Oral rinses
      (1) Fluoride
      (2) Plaque reduction
      (3) Antimicrobial

E. Hygiene for patients with special needs
   1. Physically challenged
   2. Cancer patients
   3. Older adult patients
   4. Pregnant patients
   5. Orthodontic patients
   6. Prosthetic patients
      a. Fixed
      b. Removable

4. Rubber dam evaluation
   A. Placement
   B. Application
      1. Lubricant applied (if needed)
      2. Clamp & dam applying
      3. Seated over anchor tooth
4. Seated over post tooth and anchored
5. Septa flossed through contacts
6. Dam inverted with blunt instrument
7. Success in inversion
8. Nasal passages free

C. Removal
1. Clamp removed first with safety
2. Septa cut completely with finger under dam to protect gingiva
3. Free septal material toward lingual
4. Dam and frame removed together
5. Dam checked for missing material: contacts flossed for pieces
6. Gingiva massaged

5. Coronal polish evaluation
   A. Grasp
      1. Holds handpiece with index finger and thumb pads, stabilizing with middle finger, not on knuckle
      2. Supports handpiece with hand
      3. Rotates handpiece to aid adaption
   B. Fulcrum
      1. Establishes on stable tooth whenever possible
      2. Establishes on same arch whenever possible
      3. Uses ring finger with little finger held close or acting as a second fulcrum
      4. Pivots hand to aid adaptation
   C. Stroke
      1. Maintains constant speed (1-13 lbs air pressure)
      2. Uses light to medium pressure
      3. Does not remain on tooth too long
      4. Flares edge of cup into sulcular/proximal area
      5. Adapts flexes edge of cup to tooth structure
      6. Angles brush into occlusal pits and grooves
      7. Wraps tape/floss from proximal
      8. Uses systematic sequence
   D. General polish procedure
      1. Removes all plaque, soft debris and extrinsic stain from all clinical crowns
      2. Produces no tissue trauma
      3. Uses mirror for maximum vision
      4. Uses illumination for maximum vision
      5. Positions patient for maximum confort/accessibility
      6. Maintains good posture, with face 14-16 inches from patient
      7. Works with elbows close to body when possible
      8. Completes polish in acceptable length of time

6. Assisting Coronal polish evaluation
   A. Tray setup
1. All instruments and/or supplies ready on tray
2. Instruments placed in order of use
3. Tray neatly arranged

B. Assistant position
1. Eye level 4-6 inches above operator’s
2. Front of stool in line with patient’s mouth
3. Back and body relatively erect
4. Feet firmly on ring
5. Equipment within easy reach
6. Able to see field of operation without bending
7. Elbows close to body

C. Instrument transfer all instruments
1. Delivered in transfer zone
2. Delivered with the correct hand
3. Held parallel in transfer zone
4. Held by correct end
5. Transferred without hand contact
6. Retrieved with little finger
7. Retrieved instruments disposed of properly

D. Assisting
1. Good use of tri-plex syringe, water, and air directed into areas
2. Ready to debride cup, rinse, and suction without being asked
3. Correct position of evacuator tip
4. Held correctly (either thumb-to-nose, or pen grasp)
5. Successful evacuation of mouth
6. Adjusted light successfully for operator
7. Assisted supervising dentist well
8. Good cleanup
9. One trip to sterile area

7. Sealant application/evaluation
A. Fissures, pits sealed
B. Sealant free of voids, gaps and/or bubbles
C. Sealant retentive
D. Occlusion unchanged
E. Topical fluoride/evaluation
1. Type
2. Dry area
3. Apply
4. Time

8. Bleaching Agents
A. Types
1. In-office
2. Home-fabricate vacuum tray
3. Over-the-counter
B. Safety
COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will display professional attitude and appearance.
2. Students will identify and define periodontic specialty, conditions, treatment, instruments, charting, and assistant duties.
3. Students will identify and define orthodontic specialty, classifications, diagnosis data, radiographs, instruments, appliances, and assistant duties.
4. Students will identify POH and products, define plaque control methods, and assist with patient education of patients with special needs.
5. Students will demonstrate and mechanically polish patient’s teeth, apply topical fluoride, and assist in oral hygiene instruction.
6. Students will assist and apply rubber dam placement and removal on patients.
7. Students will perform pit and fissure sealant application on patients.
8. Students will identify bleaching agents, safety, and fabricate custom trays.

MNTC GOALS AND COMPETENCIES MET:
N/A

HCC COMPETENCIES MET:
Working Productively and Cooperatively
Communicating Clearly and Effectively
Social / Civic Responsibility

STUDENT ASSESSMENT SHALL TAKE PLACE USING INSTRUMENTS SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.

Curriculum Committee Approval Date: May 1, 2018

AASC APPROVAL DATE: May 9, 2018
REVIEW DATE: May 2023