

Virginia Western Community College

DNH 214

Practical Materials for Dental Hygiene

Prerequisites

DNH 111; DNH 115; DNH 120; DNH 130; DNH 190; DNH 141; DNH 142; DNH 143

Course Description

Studies the current technologic advances, expanded functions, and clinical/laboratory materials used in dental hygiene practice. Provides laboratory experience for developing skills in the utilization and applications of these technologies and functions.

Semester Credits: 2 Lecture Hours: 1 Lab: 1

Required Materials

Textbooks:

Dental Materials. Clinical Applications for Dental Assistants and Dental Hygienists by Hatrick, Eakle, and Bird. 4th edition ISBN:9780323596602

Clinical Practice of the Dental Hygienist by Boyd. 13th edition ISBN: 9781496396273 Jones & Bartlett Learning

Virginia Western Community College, Dental Hygiene Student Guidelines and Procedures Manual (2021-2022)

The following supplementary materials are provided at NO COST to each student:

- Practical Materials for Dental Hygiene Laboratory Book – Lab Activities & Skill Assessments

Course Outcomes

At the completion of this course, the student should be able to:

Gain knowledge to apply the current technologic advances, expanded functions, and clinical application for the materials used in dentistry and dental hygiene practice.

Student Learning Outcomes

DOMAIN: ETHICAL VALUES & PROFESSIONALISM

The dental hygiene graduate must be able to:

1. Apply the ADHA Code of Ethics as a guide for ethical consciousness, decision-making, and practice.
2. Adhere to state & federal laws, regulations, & recommendations in the provision of dental hygiene care.
3. Serve all patients without discrimination, appreciating population diversity.
4. Communicate effectively with patients, families, communities and other health professionals in a responsive and responsible manner using verbal, non-verbal, written & electronic communication skills.

DOMAIN: PROFESSIONAL COMMITMENT AND DEVELOPMENT

The dental hygiene graduate must be able to:

1. Evaluate professional issues and scientific literature to make evidence-based decisions.

DOMAIN: DENTAL HYGIENE PROCESS OF CARE

The dental hygiene graduate must be able to carry out the components of the process as delineated below:

1. Provide accurate, consistent & complete documentation for assessment, diagnosis, planning, implementation, evaluation & documentation of dental hygiene services.
2. Use principles of risk management to assess & manage risk, and prevent liability.
3. Utilize critical thinking and problem-solving skills.
4. Evaluate and integrate evidence-based research outcomes with clinical expertise and patient values.
5. Support optimal oral wellness for all patients.

Course Information

DNH 214 is a synchronous hybrid online distance-learning course with on-line and face-to-face components that incorporates laboratory activities/skill assessments. The course will utilize the CANVAS learning management system and follow a timeline. Lecture material is delivered once a week via two-way audio and two-way video. This synchronous video communication utilizes the ZOOM video conferencing platform & Panopto lecture capture platform. Panopto & Zoom will be utilized for recordings and connection. Lecture material is reinforced and practiced/applied during the hands-on/face-to-face laboratory component of the course. The laboratory/clinical component of the course is an opportunity for the student to demonstrate a working knowledge of lecture material. The course will follow a timeline.

Course material will be taught in a linear sequence as follows:

1. Introduction to Dental Materials
2. Oral Environment and Patient Considerations/ Physical Properties of Dental Materials
3. General Handling and Safety
4. Principles of Bonding
5. Composites, Glass Ionomers and Compomers
6. Preventive and Desensitizing Materials
7. Abrasion, Finishing and Polishing
8. Whitening Materials and Procedures
9. Preventive and Corrective Oral Appliances
10. Dental Implants
11. Polymers for Prosthetic Dentistry
12. Impression Materials/Gypsum and Wax Products
13. Provisional Restorations
14. Casting Metals, Solders and Wrought Metal Alloys
15. Dental Ceramics/Dental Cement
16. Dental Amalgam

The student will learn through reading, lecture, group activities, peer discussion/review, videos, assignments, exams, laboratory activities and skill assessments.

Laboratory material will be taught in a linear sequence as follows:

1. Lab Orientation and Safety
2. Classmate File Review and BWX for Sealants
3. Air Polish & Seal Plastic Tooth
4. Classmate Sealant Skill Assessment (Graded BWX via Staff Dentist. Dentist / faculty approved tooth – One Sealant Placed)
5. Laser Orientation & Safety
6. Vacu-form Use/Safety and Tray or Guard Creation (on a faculty provided cast model)
7. Utilization of Surgical Scissors and Torches for trays or guards
8. Alginate manipulation and impressions on a Mannequin
9. Manipulating and Pouring stone with Mannequin impression.
10. Manipulating and Pouring plaster for Ideal Model Creation
11. Review of cast separation and trimming
12. Classmate alginate impressions (1 maxillary & 1 mandibular)
13. Pouring, separate, trimming and fine-tune of class-mates stone casts.

The student will learn through lecture, reading, peer discussion/review, videos/links, laboratory activities and laboratory skill assessments.

Learning Experiences:

Student online didactic learning experiences include reading, lecture, PowerPoints, a “flipped classroom”, online assignments, YouTube videos, and additional video links. Respondus Lockdown Browser with Monitor will be utilized for assignments, quizzes and exams.

Laboratory learning experiences include the review and acquisition/use of Emergency Protocols, Emergency Equipment, Emergency record &/or exposure record forms, Laboratory machines/equipment/ventilation, Sealant Placement/Safety, Laser Equipment/Safety, Dental Impressions, Pouring & Trimming Casts, Use of Vacu-form Machines/Safety, and Creation of Guards/Trays.

Students receive weekly laboratory instruction, material guides and armamentarium via a **Practical Materials for Dental Hygiene Laboratory Book**. Students do not purchase this lab manual. Mrs. Harris creates this manual and distributes to faculty/students at no cost. Students begin laboratory activities that may involve plastic teeth, and inanimate objects (ie. mannequins). All activities must be satisfactorily met before progressing to classmate activities/assessment in the laboratory session. Once met, PROCEDURAL skills with a classmate are assessed during the DNH 214 Laboratory sessions. AFTER a student successfully meets laboratory classmate assessments within DNH 214, they may progress to PATIENT assessment in DNH 244 & 245 Clinical. **See Clinical Requirements.**

Topical Description

Unit 1 : Weeks 1-4

Chapter 1 – Introduction to Dental Materials

1. Discuss the importance of the study of dental materials for the allied oral health practitioner.
2. Discuss why it is necessary that the allied oral health practitioner have an understanding of dental materials for the delivery of dental care.
3. Discuss evidence-based decision-making (EBDM) as it relates to dental materials; what questions might you ask yourself or your practice to make sure you are increasing the potential for successful patient care outcomes?
4. Review the historical development of dental materials.
5. List and compare the agencies responsible for setting standards and specifications of dental materials.
6. Discuss the requirements necessary for a consumer product to qualify for the ADA Seal of Acceptance.

Chapter 2 – Oral Environment and Patient Considerations

1. Discuss the qualities of the oral environment that make it challenging for long-term clinical performance of dental materials.
2. Describe the long-term clinical requirements of therapeutic and restorative materials.
3. List and give examples of the four types of biting forces and the tooth structures most ideally suited to them.

4. Define stress, strain, and ultimate strength and compare the ultimate strength of restorative materials during each type of stress to tooth structures.
5. Describe the effects of moisture and acidity on dental materials.
6. Describe the clinical significance of galvanism and how it can be prevented.
7. Define thermal conductivity and thermal expansion and contraction and compare the values of thermal expansion and conductivity of restorative materials with those of tooth structures.
8. Describe the process used to achieve mechanical, chemical, and bonding retention.
9. Describe the factors that determine successful adhesion, including wettability, viscosity, film thickness, and surface characteristics.
10. Describe micro leakage and how the results of this process can lead to recurrent decay and postoperative sensitivity.
11. Define biocompatibility and discuss why requirements for biocompatibility may fluctuate.
12. Compare the three visible light wavelengths that are sensed when recognizing color.
13. Describe tooth color in terms of hue, value, and chroma.
14. Explain the importance of detection of restorations and methods for detection.

Chapter 3 - Physical Properties of Dental Materials

1. Define primary and secondary bonds and give an example of how each determines the properties of the material.
2. Describe the three forms of matter and give a defining characteristic of each.
3. Define density and explain the relationship of density, volume, and crystalline structure.
4. Define hardness and describe how hardness contributes to abrasion resistance.
5. Define elasticity and give an example of when elasticity is desirable in dental procedures.
6. Relate stiffness and proportional limit, and describe how these properties apply to restorative dental materials.
7. Define ductility and malleability and explain how these characteristics contribute to the edge strength of a gold crown.
8. Differentiate between toughness and resilience.
9. Define brittleness and discuss how this property applies to restorative dental materials.
10. Define viscosity and thixotropic materials and describe the clinical significance of each.
11. Differentiate between therapeutic, preventive, and restorative materials.
12. Discuss the component classifications that may make up a dental material.
13. Describe the reaction stages a material undergoes to acquire its final state.
14. Describe the variables in the manipulation of a material.

Chapter 4 – General Handling and Safety

1. Identify five job-related health and safety hazards for employees in dental offices, and explain the methods of prevention for each one.

2. Explain the components of the Occupational Safety and Health Administration Hazard Communication Standard.
3. Describe the ways that chemicals can enter the body.
4. Describe the employee and employer responsibility for safety training.
5. Describe the basic infection control methods for the handling of dental materials in the treatment area.
6. Identify the concepts and benefits of going green in the dental practice.
7. Discuss how the ADA Top Ten Initiatives of sustainability can be incorporated into a general dental practice.

Chapter 5 - Principles of Bonding

1. Discuss the effects of acid etching on enamel and dentin.
2. Describe the basic steps of bonding.
3. Explain the differences between bonding to enamel and bonding to dentin.
4. Discuss the significance of the smear layer.
5. Describe "wet" dentin bonding.
6. Compare total-etch and self-etch bonding techniques.
7. Explain how the hybrid layer is formed and its importance in bonding to dentin.
8. Discuss the factors that interfere with good bonding.
9. Discuss the adverse effects of microleakage at restoration margins.
10. Describe how to bond ceramic veneers.
11. Describe the bonding of orthodontic brackets.
12. Describe the bonding of endodontic posts.
13. Explain the differences in bonding to enamel, dentin, metal, and ceramic.
14. List the factors that contribute to tooth sensitivity after bonding.
15. Etch enamel and dentin with phosphoric acid as permitted by state law.
16. Apply a bonding system to etched enamel and dentin as permitted by state law.

Chapter 6 – Composites, Glass Ionomers, and Compomers

1. Describe the various types of composite resin restorative materials.
2. Discuss the advantages, and disadvantages, of each type of composite resin.
3. Discuss the similarities and differences among chemical-cured, light-cured, and dual-cured composite resins.
4. Describe how fillers affect the properties of composites.
5. Explain why incremental placement of composite resin is recommended.
6. Describe the factors that determine how long an increment of composite resin should be light-cured.
7. Place a sectional matrix for a class II composite.
8. Select an appropriate type of composite for a class II cavity preparation.
9. As permitted by state law, place a composite in a class II cavity preparation.
10. Light-cure a composite resin restoration following recommended exposure times.

11. As permitted by state law, finish and polish a class III composite restoration.
12. Discuss the procedural differences between direct and indirect composite restorations.
13. Describe the composition of glass ionomer restoratives and their uses, advantages, and disadvantages.
14. Explain the effects of fluoride-releasing, resin-modified glass ionomer restorations in the prevention of recurrent caries.
15. List the components of compomers.
16. Describe the uses of compomers.
17. Compare the clinical applications of composite resin restorative materials with glass ionomer cement restorative materials.

Unit 2 Weeks 5-7

Chapter 7 – Preventive and Desensitizing Materials

1. Fluoride and Caries Control:
 - Describe the applications of fluoride in prevention.
 - Explain how fluoride protects teeth from caries.
 - Discuss the various methods of fluoride delivery.
 - Explain the benefit of using an antibacterial rinse in conjunction with fluoride.
 - Describe the antibacterial effects of chlorhexidine.
 - Apply topical fluoride gel, foam, or varnish correctly (as permitted by state law).
2. Sealants:

Describe how sealants protect pits and fissures from dental caries.

 - List the components of sealant material.
 - Recite the steps for applying sealants.
 - Apply sealants to teeth (as permitted by state law).
3. Desensitizing agents:
 - Recite causes of tooth sensitivity.
 - Explain how desensitizing agents work.
 - List the types of materials used to treat sensitive teeth.
 - Apply desensitizing agents to sensitive teeth (as permitted by state law).
4. Remineralization products:
 - Explain the process of remineralization of enamel.
 - Describe how products for remineralization work.
 - Explain how resin infiltration of the early white spot lesion works.
 - Apply remineralizing products (as permitted by state law).

Chapter 13 – Abrasion, Finishing, and Polishing

1. Define abrasion, finishing, polishing, and cleaning.
2. Discuss the purpose of finishing, polishing, and cleaning of dental restorations and tooth surfaces.

3. Identify and discuss the factors that affect the rate and efficiency of abrasion.
4. Compare the relative ranking of abrasives on restorations and tooth structures.
5. Describe methods by which dental abrasives are applied.
6. Discuss the contraindications to the use of abrasives on tooth structure and restorations.
7. Describe the clinical decisions made to determine which abrasive to use when finishing, polishing, or cleaning dental restorations or tooth structures.
8. Describe the abrasives and the procedures used for finishing and polishing metals, composite, and porcelain.
9. Describe the abrasives and the procedures used for polishing and cleaning metals, composite, ceramic, and gold alloys as part of oral prophylaxis.
10. Describe the safety and infection control precautions taken by the operator when using abrasives.
11. Relate the instructions given to patients to prevent and remove stain from tooth surfaces and restorations.

Chapter 8 - Teeth Whitening Materials and Procedures

1. Describe how whitening materials penetrate the tooth.
2. Explain the differences between professionally supervised home whitening and over-the-counter (OTC) systems.
3. Describe the precautions to take to protect the oral tissues when applying in-office power whitening products.
4. Compare the whitening materials used for in-office, take home, and OTC home use.
5. List the potential side effects of home whitening.
6. Describe the methods to whiten nonvital teeth.
7. Discuss the relative effectiveness of whitening products and whitening toothpastes in removing stains from teeth.
8. List the steps in the procedures for in-office power whitening.
9. Fabricate home whitening trays.
10. Demonstrate to a patient how home whitening products are used.
11. Describe clinical situations in which enamel microabrasion might be used.
12. Explain how enamel microabrasion works.

Chapter 19 – Preventive and Corrective Oral Appliances

1. Describe the uses of mouth guards.
2. List the materials for the fabrication of mouth guards.
3. Explain to a patient how to care for a mouth guard.
4. Fabricate a sports mouth guard.
5. Describe what obstructive sleep apnea is.
6. Describe the use of oral appliances to prevent snoring or obstructive sleep apnea.
7. Explain how space maintainers prevent the drifting of teeth and loss of space.

8. Describe how thermoplastic orthodontic aligners work.

Chapter 12 – Dental Implants

1. Describe the components of an implant used for a crown.
2. Describe the most common materials used for dental implants.
3. Explain osseointegration of an implant.
4. Discuss the indications and contraindications for dental implants.
5. Explain the advantages of image-guided implant surgery.
6. Identify risks to the patient for implant surgery.
7. Describe the sequence of the one-stage surgical procedure.
8. Present postsurgical instructions to a patient.
9. Compare the one-stage, two-stage, and immediate surgical procedures.
10. Discuss the pros and cons of immediate loading of an implant.
11. Explain the process of taking an implant impression.
12. Compare the open-tray and closed-tray impression procedures.
13. Make an impression for an implant, using the open- or closed-tray procedure (as permitted by state law).
14. Identify the uses for mini-implants.
15. Define the types of bone grafting.
16. Describe the purpose of the sinus lift procedure.
17. Describe the assessments that should be done for dental implants at visits.
18. Demonstrate to a patient the use of home care aids for dental implants.
19. Explain the rationale for the use of plastic instruments for cleaning titanium implants.

Chapter 17 – Polymers for Prosthetic Dentistry

1. Describe the formation of long-chain polymers from monomers.
2. Explain the effect that cross-linking has on the physical and mechanical properties of polymers.
3. Describe the stages of addition polymerization.
4. Explain the function of a free radical.
5. List the important properties of acrylic resins.
6. Describe the procedure for heat processing a denture.
7. Explain the importance of control of heat and pressure when processing a denture.
8. Compare the properties of hard and soft lining materials.
9. List the indications for long- and short-term soft liners.
10. Compare the advantages and disadvantages of chairside and laboratory-processed hard liners.
11. List the indications for the use of acrylic denture teeth versus porcelain teeth.
12. Repair a broken acrylic denture.
13. Use an ultrasonic cleaner for cleaning complete and partial dentures in the office.

14. Educate patients regarding the home care regimen they should follow for complete and partial dentures.
15. Inform patients of the precautions they should take when cleaning their dentures.

Unit 3 Weeks 8-11

Chapter 15 – Impression Materials

1. Describe the purpose of an impression.
2. Describe the three basic types of impressions.
3. Explain the importance of the key properties of impression materials.
4. Define sol and gel and describe these states as they occur with hydrocolloids.
5. Explain why alginate is an irreversible hydrocolloid.
6. List the supplies needed to make an alginate impression and explain how they are used.
7. Select trays for alginate impressions for a patient.
8. Mix alginate, load and seat the tray, and remove the set impression.
9. Evaluate upper and lower alginate impressions, in accordance with the criteria for acceptability.
10. Disinfect alginate impressions and prepare them for transport to the office laboratory.
11. Troubleshoot problems experienced with alginate impressions.
12. Describe the various types of elastomers and explain why they are called elastomers.
13. Compare similarities and differences among the physical properties of polyvinyl siloxane (PVS) and polyether impression materials.
14. Discuss the advantages and disadvantages of using polyether impression material for a crown impression.
15. Explain why polyvinyl siloxane impression material is so popular.
16. Explain the difference between a hydrophobic and a hydrophilic impression material.
17. Evaluate cord placement and gingival retraction for acceptability.
18. Use ferric sulfate astringent to control gingival bleeding before making an impression.
19. Make a registration of a patient's bite in centric occlusion.
20. Assemble the cartridge of impression material with mixing tip and load into the dispenser.
21. Explain what a digital impression is.
22. Describe the advantages and disadvantages of digital impressions.

Chapter 16 – Gypsum and Wax Products

1. Differentiate between negative and positive reproduction.
2. Differentiate among diagnostic cast, working cast, and dies.
3. Describe the chemical and physical nature of gypsum products.
4. Explain the manufacturing process for gypsum products and how this affects their physical characteristics.
5. Compare the following properties and behaviors of gypsum products: strength, dimensional accuracy, solubility, and reproduction of detail.

6. List the American Dental Association–recognized gypsum products and their most appropriate uses.
7. Explain initial and final set of gypsum and the factors that affect the setting time, setting expansion, and strength.
8. Explain the procedure for mixing and handling gypsum products to create diagnostic casts.
9. Identify the common components of dental waxes.
10. Compare the properties of waxes.
11. Describe the clinical/laboratory significance of each of the properties of waxes.
12. Discuss the three classifications of waxes.
13. Differentiate between direct and indirect waxings and identify which property of dental waxes is most important in their difference.
14. Describe the usual color, form, and use of inlay, casting, baseplate, boxing, utility, and sticky waxes.
15. Prepare model plaster or stone for pouring.
16. Pour the anatomic portion of maxillary and mandibular diagnostic casts.
17. Pour the base portion of maxillary and mandibular diagnostic casts.
18. Trim maxillary and mandibular diagnostic casts.
19. Obtain a bite registration, using bite registration or utility wax.

Unit 4 Weeks 12-13

Chapter 18 – Provisional Restorations

1. Explain the purpose of provisional coverage.
2. Describe examples of circumstances that may require provisional coverage.
3. Identify the criteria necessary for a high-quality provisional restoration.
4. Describe the properties of provisional materials.
5. Distinguish among properties that are important for posterior coverage, anterior coverage, and both anterior and posterior coverage.
6. Distinguish between intracoronal and extracoronal restorations.
7. Summarize advantages and disadvantages of preformed and custom crowns.
8. Differentiate among direct, indirect, and vacuum former fabrication techniques.
9. Summarize the advantages and disadvantages of acrylic and bis-acrylic composite provisional materials.
10. Describe the technique for fabrication of metal, polycarbonate, custom, and cement provisional restorations.
11. Summarize patient education and home care instructions.

Chapter 11 – Casting Metals, Solders, and Wrought Metal Alloys

1. Describe the differences among the types of gold alloy used for dental restorations.
2. Define karat and fineness.
3. Differentiate among high-noble, noble, and base-metal alloys.

4. Describe the characteristics needed for porcelain bonding alloys.
5. Describe the characteristics of metals used for casting partial denture frameworks.
6. Explain the biocompatibility problems associated with some alloys.
7. Explain how solders are used.
8. List metals used for solders.
9. Describe how wrought metal alloys differ from casting alloys.
10. Describe the uses of wrought wire.
11. Explain the use of the different types of metal wire for orthodontic arch wire.
12. Prepare the surfaces of teeth for bonding of an orthodontic bracket.
13. Select and use a resin cement to bond an orthodontic bracket (as permitted by state law).
14. Explain the purpose of an endodontic post.
15. Describe the types of materials used for preformed endodontic posts.

Chapter 9 – Ceramics

1. Discuss the attributes and shortcomings of dental porcelains.
2. Compare the clinical applications of restorations made from porcelain with those made from lithium disilicate.
3. Explain why crowns made from zirconia can be used to restore molars.
4. Describe the methods used to process ceramic restorations.
5. Present a rationale for the selection of ceramic materials for restorations used in the anterior and posterior parts of the mouth.
6. Describe how porcelain bonds to metal for porcelain-fused-to-metal (PFM) crowns.
7. Select a cement for use with glass-based ceramic materials.
8. Describe common causes for failure of ceramic restorations.
9. Finish and polish ceramic restorations without generating too much heat or stress in the material.
10. Compare the relative strengths of feldspathic porcelain, lithium disilicate, and zirconium.
11. Explain how CAD/CAM technology is used to fabricate a ceramic crown.
12. List the clinical applications for all-ceramic restorations.
13. Prepare the ceramic restoration for bonding with a resin cement.
14. Define chroma, value, and hue.
15. Identify ideal conditions in the operatory for shade taking.

Chapter 14 – Dental Cement

1. Compare the various types of cements and the uses of cements in dentistry for: Pulpal protection, Luting, Restorations, and Surgical dressing
2. Describe the properties of cement, and explain how these properties affect selection of cement for a dental procedure.
3. Identify the components of each dental cement.

4. Describe how these components affect the properties of the cement.
5. Compare the advantages and disadvantages of each cement.
6. Describe the manipulation considerations for mixing cements.
7. Describe the procedure for filling a crown with luting cement.
8. Describe the procedure for removing excess cement after cementation.

Unit 5 Weeks 14-15

Chapter 10 – Dental Amalgam

1. Discuss the safety of amalgam as a restorative material.
2. List the main components in dental amalgam.
3. Describe the advantages of high-copper amalgams over low-copper amalgams.
4. Explain the role of the gamma-2 phase in corrosion of amalgam.
5. Describe the particle shapes in lathe-cut, admix, and spherical alloys, and discuss their effects on the condensation resistance of freshly mixed amalgam.
6. Define creep, corrosion, and tarnish associated with amalgam.
7. Compare the strength of amalgam with composite resin or glass ionomer cement.
8. Discuss the effect of mixing time on the strength and manipulation of amalgam.
9. Discuss the advantages and disadvantages of amalgam as a restorative material.
10. Describe safe mercury hygiene practices in the dental office.
11. Describe how to properly collect and process amalgam scrap for recycling.
12. List the different classes of amalgam restorations

Laboratory Description

WEEK 1

Lab Orientation & Safety

1. Receive a lab booklet and print full name on the cover
2. Review and verbalize proper infection control & asepsis for the lab and clinic
3. Review and verbalize lab responsibilities and lab assistant reception duties
4. Review & recite emergency safety plans detailed on your campus (fire pulls, exits)
5. Review and recite oxygen tank & fire extinguisher location/use.
6. Review and recite location of emergency drug kit, AED, and emergency phone numbers
7. Locate and recite proper use of eyewash station
8. Locate emergency record form, MSD book, Safety Data Sheets, Information For Use Forms (IFU)
9. Identify hazardous classifications, National Fire Protection Association labeling system and hazardous pictograms.

WEEK 2**Update/Review Classmate Clinic Files And Take/Review 4 BWX**

1. Review and update classmates clinic file to ensure a smooth check-in for future lab skill assessment.
2. Determine if classmate has BWX that are ≤ 6 months old and present with open contacts.
3. If 4 BWX ≥ 6 months or missing open contacts, successfully take 4 BWX for sealant placement.
4. Review new &/or prior radiographs with faculty.
5. Present the need for retakes and/or concerns with caries prior to sealant placement.
6. Utilize and complete exposure record when applicable.
7. Acquire a soft tissue check, have note history signed and walkout reviewed.
8. Utilize and complete radiograph interpretation forms and turn-in to staff dentist.

WEEK 3**Air Polish & Seal a Plastic or Extracted Tooth**

1. Identify materials needed and recall how materials are used to place a sealant
2. With identified armamentarium, get hands-on experience with air polisher, etchant & sealant placement, use of slow-speed bur for adjustments
3. Identify proper codes and legal documentation for patient treatment

WEEKS 4 & 5**Classmate Sealant Skill Assessments**

1. Successfully Identify a tooth for a sealant with diagnostic BWX ≤ 6 months that a Staff Dentist has reviewed &/or graded
2. Successfully identify armamentarium needed and prepare/set-up prior to seating classmate
3. Successfully utilize Air Polisher on Approved tooth
4. Successfully Etch Approved Tooth
5. Successfully place & Cure Sealant on Approved tooth
6. Successfully check occlusion seated in an upright position

WEEK 6**Laser Orientation & Safety**

1. Identify safety measures, equipment and armamentarium needed for laser use.
2. View provided videos and participate in the activity responsibly.
3. Participate in an introductory hands-on experience with a laser.

4. Clean, disinfect, breakdown and store equipment/work stations.

WEEK 7

PART 1 – Utilize Vacu-form To Create Thermoplastic Tray/Guard

1. Follow safety & PPE guidelines at all time
2. Utilize thermoplastic material and Vacu-form Machine to create a tray/guard
3. Follow methods for cutting away excess thermoplastic material with LAB scissors

WEEK 8

Alginate Impressions on Dexter

1. Gain knowledge on where to obtain armamentarium for alginate impressions
2. Identify maxillary and mandibular impression trays
3. Identify different types of impression trays.
4. Get hands-on experience/practice taking alginate impressions on Dexter
5. Get hands-on experience disinfecting and storing impressions

WEEK 9

Manipulating and Pouring-Up Stone for Dexter Impressions

1. Identify & acknowledge importance of PPE when obtain and manipulating stone & plaster
2. Get hands-on experience/practice pouring-up dexter impressions with stone
3. Get hands-on experience/practice separating dexter casts
4. Get hands-on experience/practice cleaning impression trays with correct PPE
5. Identify where to obtain sterilization pouches and how to use them correctly

WEEK 10

PART 1 - Manipulating and Pouring-Up Plaster for Ideal Model

1. Identify & acknowledge importance of PPE when obtain and manipulating plaster
2. Get hands-on experience/practice pouring-up ideal rubber model with plaster
3. Get hands-on experience/practice separating ideal rubber model
4. Get hands-on experience cleaning ideal rubber model with correct PPE

PART 2 – Utilize Surgical Scissors & Torches to Fine-tune WEEK 7 tray/guard

5. Identify & acknowledge importance of PPE when creating and fine tuning a guard/tray
6. Identify & acknowledge armamentarium needed to create and fine tune a guard/tray

7. Observe location of needed armamentarium and fire extinguishers/fire pulls
8. Identify & acknowledge importance of reviewing IFU manuals before working hanau torches.
9. Identify & acknowledge importance of reagent alcohol ONLY in torches
10. While waiting for plaster to set, observe faculty utilizing hanau torch to smooth/fine tune a tray or guard

WEEK 11

Trimming Stone Casts

1. Identify & acknowledge importance of PPE when trimming casts with trimmer & dremel
2. Identify & acknowledge armamentarium needed to trim & finish casts
3. Recall location of armamentarium needed to trim & finish casts
4. With faculty guidance and assistance-practice trimming stone cast model

Continue to Utilize Surgical Scissors & Torches to Fine-tune WEEK 7 tray/guard

1. Identify & acknowledge importance of PPE when creating and fine tuning a guard/tray
2. Identify & acknowledge armamentarium needed to create and fine tune a guard/tray
3. Observe location of needed armamentarium and fire extinguishers/fire pulls
4. Identify & acknowledge importance of reviewing IFU manuals before working hanau torches.
5. Identify & acknowledge importance of reagent alcohol ONLY in torches
6. While waiting for plaster to set, observe faculty utilizing hanau torch to smooth/fine tune a tray or guard
7. 7. Turn-in Dexter Stone Casts & Turn-in Completed Tray/Guard by the end of Lab

WEEKS 12 & 13

Classmate Impressions Skill Assessments

1. While following PPE, successfully take maxillary & mandibular impressions on a classmate
2. While following PPE & IFU's pour-up with plaster, separate and trim.

WEEK 14

Trimming/Fine-Tuning Classmates Casts

1. Trim Maxillary And Mandibular Plaster Casts by Following the Template For Study Models
2. Fine-tune casts while using gypsum slurry from trimmer, sandpaper, etc.

WEEK 15

Trimming/Fine-Tuning Classmates Casts & Lab Beautification

1. THE END OF 2-HOUR LAB, Turn-In Classmates Mx & Md Plaster Casts
2. PERFORM LAB BEAUTIFICATION: clean, restock, replenish and inventory lab materials