## **DNH 214**

# **Practical Materials for Dental Hygiene**

Faculty Name: Heather Harris, BSDH

Program Head: Martha Sullivan, MSHA

Dean's Review:

Dean's Signature: \_\_\_\_\_ Date Reviewed:\_\_\_/\_\_/\_\_\_

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#### **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 Hours: 1

#### 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.

Textbook:

Dental Materials. Clinical Applications for Dental Assistants and Dental Hygienists by Hatrick, Eakle, and Bird. 3rd edition ISBN: 9781455773855

Clinical Practice of the Dental Hygienist by Esther M. Wilkins 12<sup>th</sup> edition ISBN: 9781451193114

Virginia Western Community College Dental Hygiene Student Guidelines & Procedure Manual 2019-2020

The following supplementary materials are provided to each student:

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

#### Course Objectives:

#### WEEK 1

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 dualcured 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.

Chapter 7 – Preventive and Desensitizing Materials

- 1. Fluoride and Caries Control:
  - a. Describe the applications of fluoride in prevention.
  - b. Explain how fluoride protects teeth from caries.
  - c. Discuss the various methods of fluoride delivery.
  - d. Explain the benefit of using an antibacterial rinse in conjunction with fluoride.
  - e. Describe the antibacterial effects of chlorhexidine.
  - f. Apply topical fluoride gel, foam, or varnish correctly (as permitted by state law).
- 2. Sealants:
  - a. Describe how sealants protect pits and fissures from dental caries.
  - b. List the components of sealant material.

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

#### WEEK 5

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-thecounter (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.

#### WEEK 6

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.

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.

#### WEEKS 9 & 10

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.

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.

#### **WEEK 14**

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 Objectives:

#### 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  $\leq$  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

#### 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

**Topical Description:** 

#### **UNIT 1: WEEKS 1-4**

- 1. Introduction to Dental Materials
- 2. Oral Environment and Patient Considerations
- 3. Physical Properties of Dental Materials
- 4. General Handling and Safety
- 5. Principles of Bonding
- 6. Composites, Glass Ionomers and Compomers
- 7. Preventive and Desensitizing Materials
- 8. Abrasion, Finishing and Polishing

#### **UNIT 2: WEEKS 5-7**

- 9. Whitening Materials and Procedures
- 10. Preventive and Corrective Oral Appliances
- 11. Dental Implants
- 12. Polymers for Prosthetic Dentistry

#### **UNIT 3: WEEKS 8-11**

- 13. Impression Materials
- 14. Gypsum and Wax Products

#### UNIT 4: WEEKS 12-13

- 15. Provisional Restorations
- 16. Casting Metals, Solders and Wrought Metal Alloys
- 17. Dental Ceramics
- 18. Dental Cement

#### UNIT 5: WEEKS 14-15

19. Dental Amalgam