

DHF 103- MATERIAL SCIENCE 1

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1. Term

1. week	Manipulation practice (plaster)
2. week	Manipulation practice (plaster)
3. week	Manipulation practice (wax)
4. week	Manipulation practice (soap)
5. week	Manipulation practice (soap)
6. week	Permanent maxillary central manipulation
7. week	Permanent maxillary lateral manipulation
8. week	Permanent mandibular central manipulation
9. week	Permanent mandibular lateral manipulation
10. week	Permanent maxillary canine manipulation
11. week	Permanent mandibular canine manipulation
12. week	Permanent maxillary 1 st premolar manipulation
13. week	Permanent maxillary 1 st premolar manipulation
14. week	Permanent maxillary 1 st premolar manipulation
15. week	Permanent mandibular 1st and 2nd premolar manipulation
16. week	Mid-term exam
1. week	Introduction to material science, materials used in dentistry
2. week	History of restorative materials in dentistry
3. week	Standards of materials used in dentistry
4. week	Properties of dental materials, General properties of materials, Primer interatomic connections, Secondary interatomic connections, Thermal energy, Crystal structures
5. week	Properties of dental materials, Abrasion, Viscosity, Creep and flow, Color, Tarnish and corrosion
6. week	Wax in dentistry, Types of waxes, Contents of wax, Flow of wax, Thermal properties, Manipulation of wax
7. week	Gypsum in dentistry, Usage of gypsum in dentistry, History of gypsum, Content of gypsum, Gypsum hardening reaction of gypsum, Types of gypsum, ISO classification, Factors affecting hardening reaction of gypsum
8. week	Wettability and thermal behavior, Surface energy, Surface contact angle, Thermal expansion.
9. week	Metals, Structure and properties of metals, What is the alloys?, Classification of metals used in dentistry
10. week	Investment, Properties of Investment, Types of investment, Preparation of investment
11. week	Casting, soldering, leveling and polishing, Casting process, Materials used in casting process, The aim of casting process, Problems that can be encountered in casting process
12. week	Soldering process, Possible conditions of soldering, Type of solder, Steps of soldering process
13. week	Leveling and Polishing, Materials used for lapping and polishing, Stages of lapping and polishing, Errors in lapping and polishing
14. week	Acrylic resins and polymerization,
15. week	Polymerization methods, Resin types, Properties of acrylic resins
16. week	Mid-term Exam