COURSE ID: ODO.34
PRINCIPLES OF WIRE BENDING

INCLUDES LAB EXERCISES ON:
ARCH FORMING AND WIRE BENDING

FACULTY: Fares Abou Obeid, DDS.

Goals: This course should enable the resident to:
1. Be introduced to the materials, pliers and instruments used in the orthodontic practice.
2. Know the different theories concerning the arch form.
3. Understand the purpose and indications of placing the first, second and third order bends.

Objectives: At the end of this course, the resident should know how to:
1. Perform different arch forms with a straight wire.
2. Place different types of bends in a working wire, so it can be used in the mouth.
3. Compensate with bends to deficiencies in bracket positioning.
wire bending and to understand the indications of different types of bends used in daily orthodontic practice.

POLICY ON EXAMINATIONS: One examination is given for this course, usually during the progress examination in December. During the course, a number of practical assignments on wire bending may be given. Their cumulative weight in proportion to the final grade may not exceed 50%.

PRINCIPLES OF WIRE BENDING

SUMMARY OUTLINE

COMMONLY USED PLIERS, INSTRUMENTS, AND MATERIAL

ARCH FORM

1ST ORDER BENDS

2ND ORDER BENDS

3RD ORDER BENDS

HEAT TREATING:

ANNEALING

CLINICAL

INDICATIONS OF LOOPS

COURSE OUTLINE

1. COMMONLY USED PLIERS, INSTRUMENTS, AND MATERIAL

2. ARCH FORM

3. 1ST ORDER BENDS
   A. Functions
   B. Maxillary arch
      a. Lateral in-set
      b. Cuspid off-set
      c. 1st molar off-set + toe-in
      d. 2nd molar off-set
   C. Mandibular arch
      a. Cuspid off-set
      b. 1st molar off-set + toe-in
      c. 2nd molar off-set

4. 2ND ORDER BENDS
   A. Gable bends
   B. Esthetic bends
   C. Cuspid tip bends
   D. Tip-back bends
   E. Step-up and step-down bends
   F. By-pass bends
   G. Compensating bends
H. V-bends
I. Bypass arches
J. Arch loops

5. 3rd ORDER BENDS
   A. Continuous torque
   B. Progressive torque
   C. Segmental torque
   D. Individual torque
   E. Progressive torque (spiral torque)
   F. Passive torque
   G. Differential torque
   H. Tip and torque relationships

6. HEAT TREATING / ANNEALING

7. CLINICAL INDICATIONS OF LOOPS
   A. Alignment
   B. Leveling
   C. Rotations
   D. Tipping and uprighting
   E. Torquing
   F. Closing and opening spaces
   G. Intrusion
   H. Extrusion
   I. Space maintenance
   F. As stops

REFERENCES