HSDM Introduction to Dentistry Course - Syllabus

This course aims to provide aspiring pre-dental college students in the Boston area with a multifaceted, unique introduction to the field of dentistry. The seven sessions are taught by current Harvard School of Dental Medicine students and last roughly two hours each. The course is limited to 30 students, with preference given to students in the 3rd and 4th year of their undergraduate curriculum. Participants are required to attend at least five of the seven sessions to receive a course completion certificate.

Course Information

- Course meets on Wednesday evenings from 6:00 to 8:00 PM at the Harvard School of Dental Medicine (188 Longwood Avenue, Boston, MA; Room TBA)
- Each lecture will last for approximately 1 hour, including time for discussion
- Cost of attendance - $50 (includes printed course materials, laboratory supplies, etc.)

Curriculum Outline

Date	**Lecture Topic 1**	**Lecture Topic 2**
Wed., February 5	Tour of HSDM	Introduction to dentistry
Wed., February 19	Dental anatomy	Dental caries and hygiene
Wed., March 5	Pediatric and preventive dentistry	Small group tutorial - baby bottle caries
Wed., March 26	Periodontics and endodontics	Dental public health
Wed., April 2	Head and neck anatomy, OMFS, and trauma	Small group tutorial - mandibular fracture
Wed., April 16	Prosthodontics and esthetic dentistry	Orthodontics, facial analysis, and esthetics
Wed., April 30	Laboratory event TBD	Getting into dental school

Wednesday, February 5

- Course introduction and tour

- Introduction to dentistry
    - Scope of dentistry
    - Cases introducing dental specialties

Wednesday, February 19

- Dental anatomy
    - Types of teeth
    - Tooth function
    - Tooth anatomical planes- mesial, distal, buccal, lingual, occlusal
    - Tooth anatomy terminology- crown, root, lobe, cusp, fossa, pit, ridge
    - Tooth components- enamel, dentin, cementum, pulp

- Dental caries and hygiene
    - Review of healthy tooth structure
    - Introduction to three part formula for caries: bacteria, substrate, and susceptible host
    - Microbiology of biofilm formation
    - Types of bacteria and vertical/horizontal bacterial transmission
    - Diet and home care to prevent caries
    - The role of the dentist and dental hygienist in caries prevention

Wednesday, March 5

- Pediatric and preventive dentistry
    - Define the scope of pediatric dentistry
    - Early childhood caries
    - Review of caries etiology and modification
        - Oral flora - transmission of *S. mutans*, role of oral hygiene
        - Diet - frequency of carbohydrate intake
        - Host factors - systemic issues affecting the quality of enamel and saliva, role of fluoride

- Tutorial: Baby bottle caries

Wednesday, March 26

- Periodontics and endodontics
    - *Perio minilecture*
        - Define periodontics
        - Anatomy and function of the periodontium
        - Diseases of the periodontium (gingivitis versus periodontitis)
        - Connection between oral and systemic health: importance of oral hygiene
        - How do we detect gum disease: non-surgical versus surgical
    - *Endo minilecture*
        - Define endodontics
        - Review anatomy: Enamel, dentin, pulp, cementum
        - Pulp function/physiology
        - Pulpal disease: signs & symptoms
        - Causes: bacteria, trauma, etc.
        - Diagnosis: pulpal & periapical
        - Treatment: RCT (access, clean, shape, obturate)
        - Restorative treatment: temporary versus permanent

- Dental public health
    - Defining public health dentistry
    - The need for public health dentistry (US and beyond)
    - Today's key issues in public health dentistry (e.g., water fluoridation, mid-level providers, etc.)
    - How to become a public health dentist

Wednesday, April 2

- Head and neck anatomy, OMFS, and trauma
    - Training required for OMFS
    - Basic scope of procedures covered by Oral and Maxillofacial Surgeons
    - Bones of the head and neck
    - Nerves and muscles of the head and neck
    - Trauma

- Tutorial: Mandibular fracture

Wednesday, April 16

- Prosthodontics and esthetic dentistry
    - Defining removable and fixed prosthetics

- Fixed prosthetic options/indications: Full coverage versus onlay versus inlay versus veneer
- Edentulous treatment options/indications: FPD versus implant versus removable (RPD/CD)
- Example of diagnosis/treatment of crown

- Orthodontics, facial analysis and esthetics
  - Esthetics
    - Macroesthetics: Facial analysis, rule of 3rds, rule of 5ths,
    - Miniesthetics: Incisal display, lip sagging with aging, smile arc
    - Microesthetics: Facial and dental midline, tooth shape and size
  - Smile analysis
    - Use of study casts, photographs, and radiographs
  - Common problems in orthodontics
    - Alignment, rotation, occlusal relationship

Wednesday, April 30

- Hands-on laboratory activity

- Getting into dental school
  - DAT preparation techniques
  - Application process
  - Interview process

Please Note:

***** Participation in this course will not increase your chances of admission at HSDM *****