# D H 326A: COMMUNITY DENTAL HEALTH I

## Foothill College Course Outline of Record

| Heading | Value |
| --- | --- |
| Effective Term: | Summer 2021 |
| Units: | 2 |
| Hours: | 2 lecture, 1 laboratory per week (36 total per quarter) |
| Advisory: | Not open to students with credit in D H 58A or 63C. |
| Degree & Credit Status: | Degree-Applicable Credit Course |
| Foothill GE: | Non-GE |
| Transferable: | CSU |
| Grade Type: | Letter Grade Only |
| Repeatability: | Not Repeatable |

## Student Learning Outcomes

- The student will analyze oral health disparities and barriers that exist in defined populations.
- The student will differentiate between epidemiologic study designs.

## Description

The first course in a year long series in the study of community dental health problems and disparities that exist in health care. The science of epidemiology, research and writing skills, and statistics will be discussed. An analysis of current dental health issues and initial development of a community dental health program. Evaluation of scientific literature will be developed. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

## Course Objectives

The student will be able to:
A. Define dental public health and ideal public health programs.
B. Understand and apply principles of epidemiology to the field of dental public health.
C. Identify the components of scientific research design.
D. Describe basic principles of statistics.
E. Cite disparities in health that exist in the community.
F. Understand and apply the principles of law and ethics to the practice of dental public health.

## Course Content

A. Dental public health (Lec)
1. Concepts of health and dental public health
a. Core principles of public health
1) Assessment
2) Policy development
3) Assurance
b. Essential services of public health
2. Principles of an ideal public health program
3. Compare and contrast dental health care delivery in the private practice setting from that which occurs in the community setting
B. Epidemiology (Lec)

1. Concepts of epidemiology
a. Epidemiologic triangle
1) Agent factors
2) Environmental factors
3) Host factors
b. Role of the epidemiologist
c. Distribution of disease
d. Measures of disease occurrence
1) Incidence
2) Prevalence
3) Morbidity
4) Mortality
2. The influence of epidemiologic factors on the health of a community
a. Barriers to health
1) Transportation
2) Socioeconomic
3) Educational
4) Cultural
b. Determinants of health
1) Environmental
2) Educational level
3) Health/genetics
4) Socioeconomic
5) Cultural
c. Conceptual models of the determinants of health
1) Mandala of health
2) Systematic approach to health improvement
3. Major dental indices utilized in dental public health and their application in the assessment of dental health problems
a. Characteristics of an ideal index
b. Inter-rater and intra-rater reliability
b. Types of indices used in dental public health
1) DMFT, dft
2) Basic screening survey
3) Community periodontal index
4) Root caries index
5) Dean's fluorosis index
4. Clinical measures used in oral health surveillance
a. Screening methods
1) Primary
2) Secondary
3) Tertiary
C. Scientific research design (Lec)
1. Define components of research methodology
a. Research design
1) Sampling populations
a) Convenience
b) Judgement
c) Systematic
d) Random
e) Stratified
2) Observational studies
a) Prospective (longitudinal) study design
b) Retrospective (case control) study design
c) Cross sectional study design
3) Experimental studies
a) Single blind design
b) Double blind design
c) Randomized control study
d) Parallel design
e) Crossover design
2. Describe components of well-designed research in a journal article

a. Scientific method
b. Hypothesis testing
1) Alternate hypothesis
2) Null hypothesis
3) Type I errors
4) Type II errors
c. Controlling bias
1) Sample size
2) Randomization of sample
3) Double vs. single blind studies
D. Statistics (Lec)
1. Concepts of statistics and common statistical terminology
a. Measures of central tendency
1) Mean
2) Mode
3) Median
b. Measures of dispersion
1) Standard deviation
2) Range
c. Correlation coefficients
d. Probability
e. t-test
f. Chi-square
2. The use of statistics in dental public health
a. Healthy people program
b. NHANES
E. Health disparities (Lec)
1. Oral health disparities and barriers to health care
a. Lack of providers
b. Financial
c. Transportation
d. Cultural influences
e. Educational status
2. Oral health problems affecting the public and the extent to which they affect the population
a. Dental caries
b. Periodontal disease
c. Oropharyngeal cancer
3. Trends in oral health and disease during the past 20 years
a. Oral health surveillance systems
1) ASTDD
2) NOHSS
4. Participate in dental screenings at elementary schools with underserved populations, using dental indices to measure oral health in a population and providing oral health education
5. Develop an oral health education program and provide oral health information to developmentally delayed teens
F. Law and ethics (Lec)
1. Maintain a high degree of professional ethics and conduct interactions with the community, patients, faculty, and fellow classmates
2. Provide informed consent for participants of oral health education programs
3. Apply ethical research practices when collecting and assessing oral health information and data from participants in health programs
4. Maintain the need to consistently perform all aspects of the dental hygiene process to acceptable standards of care
5. Exhibit sensitivity to individual's emotions, needs, rights and comforts with emphasis on the influence of cultural, psychosocial and other factors

## Lab Content

Students will fulfill field work (lab hour) requirements by engaging in various community outreach projects including educating underserved populations (including developmentally delayed teens, children enrolled in migrant education, and children in lower socioeconomic areas) on oral health and related topics and participating in school-based dental screenings.

## Special Facilities and/or Equipment

A. Classroom with multimedia equipment.
B. Visual aids, over-sized typodonts and toothbrushes, pamphlets and interactive games to use for oral health education.

## Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Community dental health project: literature review and formulation of a dental health program journal article critique and presentation/moderator of discussion
Midterm exam
Final exam
Development of curriculum and visual aid for oral health education in classroom with developmentally delayed teens and elementary school-aged children
Participation in community dental health programs: oral health education and school-based dental screenings

## Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lecture
Discussion
Field work
Oral presentations
Community service

## Representative Text(s) and Other Materials

Nathe, Christine. Dental Public Health & Research, 4th ed.. 2017.

Brennan, Christian. Community Dental Health Course Manual. 2020.

## Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

A. Reading assignments: 10 page scientific journal article on health disparities for discussion in class.
B. Writing assignments: 1-2 page introduction of literature review for community dental health project.
C. Community dental health project: conduct a literature review of a dental health topic (minimum of 10-15 scientific articles).
D. Community service assignment: group participation in community service programs (providing oral health education to underserved populations) and school-based dental screenings is required.

# Discipline(s)

Dental Technology