



COURSE IMPLEMENTATION DATE: September 2006
 COURSE REVISED IMPLEMENTATION DATE: September 2012
 COURSE TO BE REVIEWED: June 2018
(six years after UEC approval) *(month, year)*

OFFICIAL UNDERGRADUATE COURSE OUTLINE INFORMATION

Students are advised to keep course outlines in personal files for future use.
 Shaded headings are subject to change at the discretion of the department – see course syllabus available from instructor

DHYG 201	Dental Hygiene	2.5
COURSE NAME/NUMBER	FACULTY/DEPARTMENT	UFV CREDITS
Microbiology for Dental Hygiene		
COURSE DESCRIPTIVE TITLE		

CALENDAR DESCRIPTION:

This course introduces dental hygiene students to microbiology, with a focus on oral implications. Topics include an introduction to microscopy; prokaryotic cell structure and function; bacterial nutrition; microbial metabolism; control of microbial metabolism and growth; infection control; biofilms; orofacial viral infections; and acquisition, adherence, distribution, and metabolism of microflora involved in diseases of the oral cavity.

PREREQUISITES: Admission to the Dental Hygiene program.
 COREQUISITES: DHYG 270
 PRE or COREQUISITES:

SYNONYMOUS COURSE(S):

- (a) Replaces: DHYG 101
- (b) Cross-listed with: _____
- (c) Cannot take: _____ for further credit.

SERVICE COURSE TO: *(department/program)*

TOTAL HOURS PER TERM: 45

STRUCTURE OF HOURS:

Lectures:	<u>30</u>	Hrs
Seminar:	_____	Hrs
Laboratory:	<u>15</u>	Hrs
Field experience:	_____	Hrs
Student directed learning:	_____	Hrs
Other (specify):	_____	Hrs

TRAINING DAY-BASED INSTRUCTION:

Length of course: 15 weeks
 Hours per day: _____

OTHER:

Maximum enrolment: 16
 Expected frequency of course offerings: Fall term
(every semester, annually, every other year, etc.)

WILL TRANSFER CREDIT BE REQUESTED? (lower-level courses only) Yes No
 WILL TRANSFER CREDIT BE REQUESTED? (upper-level requested by department) Yes No
 TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE: Yes No

Course designer(s): <u>Leta Zaleski</u>	Date approved: <u>May 2012</u>
Department Head: _____	Date of meeting: <u>May 18, 2012</u>
Supporting area consultation (Pre-UEC)	Date approved: <u>May 2012</u>
Curriculum Committee chair: <u>Stephanie Kelly</u>	Date approved: <u>May 2012</u>
Dean/Associate VP: <u>Diane Reed</u>	Date of meeting: <u>June 22, 2012</u>
Undergraduate Education Committee (UEC) approval	

LEARNING OUTCOMES:

Upon successful completion of this course, students will be able to:

1. Discuss the role of microorganisms in health and disease.
2. Describe routine practices for infection control.
3. Discuss the dental hygienist's role in preventing the spread of infectious disease in the dental office.
4. Discuss dental plaque and biofilms.
5. Describe microorganisms responsible for common oral diseases.
6. Discuss orofacial viral, protozoan and yeast infections.
7. Use aseptic techniques in the microbiology lab.
8. Correctly use the compound microscope.
9. Use appropriate isolation techniques.
11. Prepare and fix bacterial smears for staining.
12. Perform various bacterial metabolic tests.
13. Perform various techniques for controlling microbial growth.

METHODS: *(Guest lecturers, presentations, online instruction, field trips, etc.)*

Lecture, demonstration, laboratory exercises.

METHODS OF OBTAINING PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

Examination(s) Portfolio assessment Interview(s)

Other (specify):

PLAR cannot be awarded for this course for the following reason(s):

TEXTBOOKS, REFERENCES, MATERIALS:

[Textbook selection varies by instructor. An example of texts for this course might be:]

VanMeter, VanMeter, Hubert (2010) Microbiology for the Healthcare Professional (1st ed.) Missouri: Elsevier Inc.

UFV DHYG 201: Laboratory Manual

SUPPLIES / MATERIALS:

Lab coat, safety glasses.

STUDENT EVALUATION:

[An example of student evaluation for this course might be:]

Assessment will be directly linked to the learning outcomes listed in the course content of the course outline.

The final grade for this course will be awarded, based on the following:

Didactic Evaluation:

Assignments	5%
Midterm Exam	20%
Final Exam	30%

Laboratory Evaluation:

Pre-Lab Quizzes	5%
Quiz # 1	15%
Quiz #2	25%

UFV letter grading system will be used. A passing grade is 70% (B-).

COURSE CONTENT:

[Course content varies by instructor. An example of course content might be:]

1. Microbiology: compound microscope, phase contrast microscopy, bright field microscopy
2. Isolation techniques; transferring bacterial cultures, preparing pour plates; describing bacterial colonies using standard terminology
3. Bacterial strains: preparing and fixing bacterial smears for staining; steps in preparing a Gram stain; differential stain to demonstrate bacterial spores; negative stain to demonstrate bacterial capsules; cell morphology and arrangement
4. Controlling microbial growth by chemical means.
5. Controlling microbial growth by physical means.
6. Controlling microbial growth by heat.
7. Bacterial metabolism and physiology.
8. Fermentation and respiration.
9. Simulated epidemic; principles of infection control; stages in the development of infectious disease.
10. Caries susceptibility tests.
11. Oral protozoa and yeast.
12. Prokaryotic cell structure and function.
13. Host-parasitic interactions and relationships; virulence factors; nonspecific host defense mechanisms; acquired immune response.
14. Oral flora and the process of plaque biofilm formation.
15. Viruses; structure, replication; Hepatitis B, Hepatitis C, HIV.
16. Infection control in dentistry: universal precautions, standard precautions, routine practices, cross contamination.