

Maui Community College
Course Outline

August 2009
Received March 2004
Under Amnesty Program
SLOs Updated & Linked To Content
COWIQ Grid Prepared

1. Alpha DENT Number 164
Course Title Oral Biology I
Credits 3
Department Allied Health Author
Date of Outline 2/5/09 Effective Date Fall 2009 5-year Review Date Fall 2014

2. Course Description: Discusses general anatomy of the skull; arteries, veins, and lymphatics; musculature; and nervous structures of the head and neck, including the normal periodontal tissues, oral mucous membranes, and salivary glands. Includes the embryologic development of the structures and tissues of the head, neck, teeth and oral cavity; oral microbiology; and nutrition. Discusses the anatomy and identification of teeth, the eruption sequence, normal occlusion, and classification of occlusion.

Cross-list

Contact Hours/Type Lecture - two (2), Lecture/Lab - two (2)

3. Pre-requisites Admission to Dental Assisting Program

Pre-requisite may be waived by consent yes no

Co-requisites

Recommended Preparation none

4. Function/Designation AA Category Additional Category

AS Allied Health - Dental Hygiene Category List Additional Programs and Category:

AAS Program Category List Additional Programs and Category:

BAS Program Category Developmental/Remedial

Chancellor

9/2/09

Approval Date

Other/Additional: Explain:

See Curriculum Action Request (CAR) form for the college-wide general education and/or program SLOS this course supports.

This course outline is standardized and/or the result of a community college or system-wide agreement.
Responsible committee:

5. Student Learning Outcomes (SLOs): List one to four inclusive SLOs.

For assessment, link these to #7. Recommended Course Content, and #9. Recommended Course Requirements & Evaluation. Use roman numerals (I, II, III.) to designate SLOs

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

I. Discussion of oral anatomic position and relationships between the skull, arteries, veins, lymphatics, musculature, and nervous structures of the head and neck.

II. Identification of dental landmarks, oral microbiology, and dental nutrient needs.

III.

IV.

6. Competencies/Concepts/Issues/Skills

For assessment, link these to #7. Recommended Course Content, and #9. Recommended Course Requirements & Evaluation. Use lower case letters (a., b., c...n.) to designate competencies/skills/issues

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

- a. Describe the mechanism involved in the development of the face and oral cavity, its anatomical position, and explain the significance of it.
- b. Identify and use terminology specific to general anatomy and physiology.
- c. Describe the dentition using correct terminology and definitions.
- d. Explain oral histology and embryology including the stages of tooth development.
- e. Demonstrate knowledge of the morphology of each surface of the crown as well as the root of each of the teeth in the deciduous and permanent dentitions.
- f. Describe and identify each of the teeth of the deciduous and permanent dentitions.
- g. Compare the dentition of humans including any anatomical structures.
- h. Make comparisons among the general characteristics of the teeth in the deciduous and permanent dentitions.
- i. Indicate the normal eruption sequence for each of the teeth in the deciduous and permanent dentitions.
- j. Describe the development and classification of malocclusion.
- k. Identify anatomical parts of the head and neck including skull, arteries, veins, lymphatics, musculature, and nervous structures.
 - l. Describe the bones of the skull with emphasis on the maxilla and mandible.
 - m. Describe the origin, insertion, and action of the musculature of the head and neck.
 - n. Discuss the blood supply from the heart to all areas of the oral cavity including all teeth.
 - o. Explain the acidogenic theory of dental caries.
 - p. Discuss five oral and dental conditions.
 - q. Discuss oral microbiology and the causative agents of gingivitis and periodontitis.
 - r. Explain the interaction of nutrient needs to good physical and dental health and well-being.

7. Suggested Course Content and Approximate Time Spent on Each Topic
Linked to #5. Student Learning Outcomes and # 6 Competencies/Skills/Issues

- 2 weeks Processes and stages of early embryological and fetal development; formation and organization of the structures of the head, neck, and oral cavity (I, a, b, d, k, l, m, n)
- 3 weeks Anatomy of head and neck, lymphatic, vascular, musculature, and nervous system (I, a, b, k, l, m, n)
- 1 week Process and stages of tooth development and eruption sequence (I, II, c, d, e, f, g, h, i)
- 2 weeks Normal occlusion, classification of occlusion (I, II, b, c, g, j, l)
- 1 week Principles of nutrition in relation to oral health (II, o, p, r)
- 2 weeks Principles of oral microbiology (II, o, p, q, r)
- 2 weeks Acidogenic theory of dental caries (II, c, o, q, r)
- 2 weeks Oral and dental conditions (II, c, o, p, q, r)

8. Text and Materials, Reference Materials, and Auxiliary Materials

Appropriate text(s) and materials will be chosen at the time the course is offered from those currently available in the field. Examples include: Bird, D. and Robinson, D., *Torres and Ehrlich Modern Dental Assisting*, current edition, Elsevier.

Bird, D. and Robinson, D., *Student Workbook to Accompany Torres and Ehrlich Modern Dental Assisting*, current edition, Elsevier.

Appropriate reference materials will be chosen at the time the course is offered from those currently available in the field. Examples include: Brand, R. and Isselhard, D., *Anatomy of Orofacial Structures*, current edition, Elsevier.

Massler, M. and Schour, I., *Atlas of the Mouth*, current edition, American Dental Association.

Durley, C. et al., *The DANB Review*, current edition, Dental Assisting National Board.

Durley, C. et al., *DANB's Glossary of Dental Assisting Terms*, current edition, Dental Assisting National Board.

Miller, B. et al., *Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing and Allied Health*, current edition, Elsevier.

Mosby et al., *Mosby's Dental Dictionary*, current edition, Elsevier.

Mosby et al., *Review Questions and Answers for Dental Assisting*, current edition, Elsevier.

Appropriate auxiliary materials will be chosen at the time the course is offered from those currently available in the field. Examples include: State of Hawaii Department of Commerce and Consumer Affairs, *Hawaii Administrative Rules Title 16, Chapter 79, Dentists and Dental Hygienists*.

State of Hawaii Department of Commerce and Consumer Affairs, *Hawaii Revised Statutes Chapter 448, Dentistry*.

9. Suggested Course Requirements and Evaluation

Linked to #5. Student Learning Outcomes (SLOs) and #6 Competencies/Skills/Issues

Specific course requirements are at the discretion of the instructor at the time the course is being offered. Suggested requirements might include, but are not limited to:

- Prompt attendance is required at all class sessions. (I, II, a - r)
- Students will be responsible for completing all assigned reading material in text before each class session. (I, II, a - r)
- Complete various learning skills exercises. (I, II, a - r)
- Complete various laboratory exercises. (I, II, a - r)
- Complete all projects. (I, II, a - r)

EVALUATION AND GRADING

Weekly quizzes	25 - 35% (I, II, a - r)
Midterm	10 - 20% (I, II, a - r)
Lab assignments	15 - 25% (I, II, a - r)
Final exam	25 - 35% (I - II, a - r)
Attendance/ Attitude	10% (I - II, a - r)

10. Methods of Instruction

Instructional methods will vary considerably by instructor. Specific methods are at the discretion of the instructor teaching the course and might include, but are not limited to:

- Participation in class lecture/ discussion.
- Reading assigned portions in textbooks, journal articles, and/ or modules.
- Viewing various audiovisual materials.
- Participation in class exercises such as role-plays and simulations.
- Demonstration and simulation.
- Discovery learning.
- Group projects.

11. Assessment of Intended Student Learning Outcomes Standards Grid attached

Grid of Maui Community College Student Learning Outcomes- Dental Assisting

KEY: 3 Major Emphasis: The student is actively involved (uses, reinforces, applies, and evaluates) in the student learning outcomes. The learner outcome is the focus of the class.
 2 Minor Emphasis: The student uses, reinforces, applies and is evaluated by the learner outcome, but it is not the focus of the class.
 1 No Emphasis: The student does not address this learner outcome but does not get evaluated on this learner outcome.
 0 No Emphasis: The student does not address this learner outcome

Dental Assisting Educational Standards

I. Demonstrate an understanding of dental assistant roles including the legal, professional, and ethical responsibilities within the community	DENT 120	DENT 150	DENT 151	DENT 152	DENT 164	DENT 165	DENT 176	DENT 177
II. Demonstrate basic theoretical knowledge and skills in biological science, dental radiology, chairside dental assisting, and business office procedures	2	3	3	3	3	1	1	1
III. Support dental assisting practice and build the foundation for an associate degree dental hygiene program	3	3	3	3	3	3	3	3
IV. Demonstrate a commitment to life long learning and advancing competency over a lifetime of clinical practice	1	2	1	3	1	1	1	1

General Education Standards

Standard 1 - Written Communication	DENT 120	DENT 150	DENT 151	DENT 152	DENT 164	DENT 165	DENT 176	DENT 177
Outcome 1.1 Use writing to discover and articulate ideas	3	3	2	3	0	0	1	1
Outcome 1.2 Identify and analyze the audience and purpose for any intended communication	3	3	2	3	0	0	1	1
Outcome 1.3 Choose language, style, and organization appropriate to particular purposes and audiences	3	3	3	3	0	0	1	1
Outcome 1.4 Gather information and document sources appropriately	3	3	3	3	0	0	1	2
Outcome 1.5 Express a main idea as a thesis, hypothesis, or other appropriate statement	1	3	0	0	0	0	1	1
Outcome 1.6 Develop a main idea clearly and cohesively with appropriate content	1	3	0	0	0	0	1	1
Outcome 1.7 Demonstrate a mastery of the conventions of writing, including grammar, spelling, and mechanics	3	3	0	0	0	0	1	1
Outcome 1.8 Demonstrate proficiency in revision and editing	3	3	0	1	0	0	1	1
Outcome 1.9 Develop a personal voice in written communication	3	3	0	3	0	0	1	0

Standard 2 - Quantities Reasoning

Outcome 2.1 Apply numeric, graphic, and symbolic skills and other forms of quantitative reasoning accurately and appropriately	3	1	3	3	0	0	3	3
Outcome 2.2 Demonstrate mastery of mathematical concepts, skills, and applications, using technology when appropriate	3	0	3	3	0	0	3	3
Outcome 2.3 Communicate clearly and consistently the methods and results of quantitative problem solving	3	2	3	3	0	0	3	3
Outcome 2.4 Formulate and test hypotheses using numerical experimentation	0	2	0	0	0	0	0	3
Outcome 2.5 Define quantitative issues and problems, gather relevant information, analyze that information, and present results	0	1	0	0	0	0	3	0
Outcome 2.6 Assess the validity of statistical conclusions	0	1	0	0	0	0	0	0

Standard 3 - Information Retrieval and Technology

Outcome 3.1 Use print and electronic information technology ethically and responsibly	3	3	3	3	0	0	1	2
Outcome 3.2 Demonstrate knowledge of basic vocabulary, concepts, and operations of information retrieval and technology	3	3	0	2	0	0	1	2
Outcome 3.3 Recognize, identify, and define an information need	3	3	0	3	0	0	1	2
Outcome 3.4 Access and retrieve information through print and electronic media, evaluating the accuracy and authenticity of that information	3	3	0	1	0	0	1	2
Outcome 3.5 Create, manage, organize and communicate information through electronic media	3	3	0	0	0	0	1	2
Outcome 3.6 Recognize changing technologies and make informed choices about their appropriateness and use	2	3	2	2	0	0	1	2

Standard 4 - Oral Communication

Outcome 4.1 Identify and analyze the audience and purpose of any intended communication	3	3	3	3	2	2	3	3
Outcome 4.2 Gather, evaluate, select, and organize information for the communication	3	3	3	3	2	2	3	3
Outcome 4.3 Use language techniques and strategies appropriate to the audience and occasion	3	3	3	3	2	2	3	3
Outcome 4.4 Speak clearly and confidently, using the voice volume, tone, and articulation appropriate to the audience and occasion	3	3	3	3	2	2	3	3
Outcome 4.5 Summarize, analyze, and evaluate oral communications and ask coherent questions as needed	3	3	3	3	2	2	3	3
Outcome 4.6 Use competent oral expression to initiate and sustain discussions	3	3	3	3	2	2	3	3

Standard 5 - Critical Thinking

Outcome 5.1 Identify and state problems, issues, arguments, and questions containing in a body of information	3	3	3	3	2	2	3	3
Outcome 5.2 Identify and analyze assumptions and underlying points of view relating to an issue or problem	3	3	3	3	0	0	3	3
Outcome 5.3 Formulate research questions that require descriptive and explanatory analyses	0	2	0	0	0	0	0	0
Outcome 5.4 Recognize and understand multiple modes of inquiry, including investigative methods based on observation and analysis	1	3	3	3	0	0	3	1
Outcome 5.5 Evaluate a problem, distinguishing between relevant and irrelevant facts, common assumptions, issues, values, and biases through the use of appropriate evidence	0	3	3	3	2	2	3	3
Outcome 5.6 Apply problem-solving techniques and skills, including the rules of logic and logical sequence	3	3	3	3	2	2	3	3
Outcome 5.7 Synthesize information from various sources, drawing appropriate conclusions	3	3	3	3	2	2	3	3
Outcome 5.8 Communicate clearly and cohesively the methods and results of logical reasoning	3	3	3	3	2	2	3	3
Outcome 5.9 Refined upon and evaluate their thought processes, value system, and world views in comparison to those of theirs	3	3	3	3	2	2	3	3

Standard 6 - Creativity

Outcome 6.1 Generate responses to problems and challenges through intuition and non-linear thinking	2	2	1	1	1	1	1	1
Outcome 6.2 Explore diverse approaches to solving a problem or addressing a challenge	3	3	3	2	1	1	2	1
Outcome 6.3 Engage in activities without a preconceived purpose	0	0	0	0	0	0	0	0
Outcome 6.4 Apply creative principles to discover and express new ideas	2	0	0	0	2	2	3	3
Outcome 6.5 Demonstrate the ability to trust and follow one's instincts in the absence of external direction	2	0	0	0	0	0	1	1
Outcome 6.6 Build upon or adapt the ideas of others to create unique expressions or solutions	2	1	0	2	0	0	2	2