

VERNON COLLEGE
SYLLABUS

DIVISION: Allied Health & Human Services

DATE: 2024-2025

COURSE NUMBER AND TITLE: DNTA 1205 Dental Radiology

CREDIT HRS: 2

HRS/WK LEC: 2

HRS/WK LAB: 1

LEC/LAB COMB: 3

I. PROGRAM OUTCOME STATEMENT

Dental assistants are responsible for providing the patient with high quality care by performing a variety of office, laboratory, and patient care duties. This usually entails helping the dentist or hygienist handle patients, instruments, and supplies during treatment of teeth, mouth, and gums. Dental assistants are eligible to take the Registered Dental Assistant Certification Exam.

PROGRAM LEARNER OUTCOMES (PLO)

PLO1 Demonstrate the rules, regulations, and procedures of the dental assisting profession.

PLO2 Demonstrate solid knowledge of infection control in the dental profession.

PLO3 Apply a working knowledge of jurisprudence and the ability to apply these policies and ethical procedures as it relates to the dental assisting profession.

PLO4 Identify and differentiate body systems with a working knowledge of how the body works during dental procedures.

PLO5 Demonstrate proficiency in applications of techniques, utilization of tools, and handling of instruments, patients, and all other procedures to assist the dentist.

PLO6 Demonstrate understanding of x-ray procedures and ability to utilize x-ray equipment proficiently.

PLO7 Application of skills in general practice dentistry, orthodontist dentistry, pediatric dentistry, and oral surgery in assisting the dentist.

*Program outcomes highlighted in bold are emphasized in this course.

II. CATALOG DESCRIPTION:

Introduction to radiation physics, radiation protection, and the operation of radiographic equipment. Instruction in exposure, processing and mounting of dental radiographs, and study of federal and state safety and standard practices. Lab Fee: \$24.00; Program Fee: \$40.00

III. REQUIRED BACKGROUND:

IV. STUDENT E-MAIL:

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All students should activate and regularly check their Vernon College issued student email account. Student emails are an official form of communication between Vernon College and students and will be used by various components of the college including the Office of Financial Aid, Admissions & records, the Business Office, Student Services, and Instructional Services.

Additionally, an active VC student email account is required for students to access online courses and supplemental instruction provided on the College's Learning Management System – *Canvas*.

V. TEXTS, OTHER REFERENCE MATERIALS:

Essentials of Dental Radiography, 10th edition (2018). Thomson, Evelyn M., BSDH, MS, and Johnson, Orlen, N., BS, DDS, MS Pearson Education, Inc.

VI. METHODS OF INSTRUCTION:

Lecture, discussion, and laboratory with appropriate A/V materials

Students desiring auxiliary aids and services for this course should make their requests to the instructor and the PASS Department Director/Office for Students with Disabilities Coordinator

VII. COURSE CONTENT:

1. Dental Radiography: Historical and Future
2. Characteristics and Measurement of Radiation
3. The Dental X-ray Machine: Components and Function
4. Factors Affecting Radiographic Quality
5. Effects of Radiation Exposure
6. Radiation Protection
7. Dental X-Ray Film and Processing Methods
8. Digital Radiography and Image Acquisition
9. Infection Control
10. Legal and Ethical Responsibilities
11. Patient Relations and Education
12. Introduction to Radiographic Examinations
13. Quality Control and Environmental Safety
14. Recognizing Normal Radiographic Anatomy – Intraoral and Panoramic Radiographs
15. Radiographic Appearance of Dental Materials, Foreign Objects, Dental Caries, and Periodontal Diseases

VIII. STUDENT LEARNER OUTCOMES (SLO):

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By the end of this course, each student should be able to:

- SLO1 Describe the theory of radiation physics
- SLO2 Comply with radiation health and safety principles
- SLO3 Apply radiographic techniques
- SLO4 Expose, process, and mount radiographs
- SLO5 Demonstrate quality assurance practices

IX. ASSESSMENT:

The student will demonstrate proficiency in the objectives listed above through active listening during class lectures, class participation during lectures and activities, and performance on assignments, quizzes/examinations.

The final class grade will be determined by the following formula:

| | |
|-------------|-----|
| Assignments | 30% |
| Exams | 40% |
| Final Exam | 30% |

Dental Assisting Program Grading Scale

| | | |
|---|---|---------|
| A | = | 90 -100 |
| B | = | 80 – 89 |
| C | = | 70 – 79 |
| F | = | < 70 |

A 70 average is the minimum acceptable grade for successful completion of this course. A student will be dismissed from the

Dental Assisting program if a 70% average becomes mathematically unobtainable at any time during the duration of the course.