

# Dental Assisting Course Syllabus



2016 – 2017

Revised: 6/16

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**COURSE:** DA 165 – Dental Radiography I

**GENERAL DESCRIPTION:** This course will provide information needed to understand radiation physics, equipment, characteristics, and safety. Students will be instructed in exposing, processing/scanning, and mounting diagnostically acceptable radiographs on mannequins and patients. Procedures to verify quality in radiography will also be included.

**INSTRUCTOR:** Nicole Pahl, CDA, RDA Room 112 [Nicole.pahl@lakeareatech.edu](mailto:Nicole.pahl@lakeareatech.edu) 605-882-5284 ext. 362

This course (via MyPortal) is available 24 hours a day, seven days a week. I am on campus 8:00am to 4:00 pm M-F and other times by appointment. Please schedule via email or phone call. However, you can expect a reply to any e-mail within 24 hours M-F and 48 hours Saturday/Sunday.

**LAB INSTRUCTORS:** Nicole Pahl, CDA, RDA Amy Meadors, CDA

**DURATION:** Clock Hours – 72 (44 didactic, 28 lab) Semester Credits – 2.5

**CLASS SESSION:** **Campus Students:**.....Lecture: Tuesday and Thursday 9:00-10:50  
Lab Section A Thursday 1:00 – 3:00 p.m.  
Lab Section B Tuesday 1:00 – 3:00 p.m.  
Lab Section C Wednesday 1:00 – 3:00 p.m.

**Online Students:** .....Lecture: Online as directed  
Lab: Friday 3:00 - 5:00 p.m.  
*Dates to be present:*

**REQUIRED TEXT:** *Modern Dental Assisting and Student Workbook*, Robinson and Bird, 11<sup>th</sup> edition

**MAJOR REFERENCES:** *Dental Radiography Principles and Techniques*, 4<sup>th</sup> Ed., Haring, and Jansen Howerton; *Radiology for Dental Professionals*, 9<sup>th</sup> edition, Frommer, Stabulas-Savage; *Radiographic Imaging for the Dental Team*, 4<sup>th</sup> Ed., Miles, Van Dis, Williamson, Jensen; *Quality Control Tests for Dental Radiography*, Eastman Kodak.

**METHODS OF INSTRUCTION:** Learning Activity Packets, lecture/PowerPoints, demonstrations, videos, laboratory and clinical practice sessions, x-rays showing correct and incorrect processing, and exposure techniques.

**REQUIRED TECHNOLOGY:** Computer/laptop, Internet access, Internet Browser: Firefox or Chrome, Microsoft Office (Word, PowerPoint) and webcam for online chat.

**REQUIRED SUPPLIES:** Pencils, eraser, highlighter, and daily planner.

**STUDENT LEARNING OUTCOMES:** At the completion of this course the student will:

1. Explain the history of x-radiation, the concepts of atomic and molecular structure and the interactions of x-radiation with matter.
2. Describe components of the x-ray machine and describe in detail how x-rays are produced.
3. Detail the concepts of x-ray beam quantity and quality, and discuss how exposure factors influence these characteristics.
4. Describe the mechanisms and theories of radiation injury, radiation measurements, effects of radiation exposure, and methods of patient and operator protection.

5. Describe dental film composition, types of film, and demonstrate proper darkroom procedures in processing diagnostically acceptable x-rays.
6. Describe legal responsibilities of a dental radiographer and identify quality control tests and quality administration procedures in the use of dental radiography equipment.
7. Describe a complete mouth series and identify the intraoral techniques necessary to achieve a diagnostically acceptable series.
8. Demonstrate the paralleling, bisecting and bitewing techniques.
9. Expose, process/scan, and mount complete mouth series on mannequins and patients.
10. Describe occlusal, panoramic, lateral jaw and cephalometric radiographs.
11. Explain the difference between digital radiography and the film-based system.
12. Prepare for the Radiography component of the Dental Assisting National Board exam.

UNITS OF INSTRUCTION/TOPICS INCLUDED		Didactic Hours	Lab Hours	Clinic Hours
165 1	Describe radiography history, physics, equipment, and characteristics.	12		
165 2	Identify technique basics.	12		
165 3	Expose digital radiographs.	2	24	
165 4	Describe radiation biology and protection	12		
165 5	Perform processing and quality assurance procedures	6	4	
Total		44	28	

**ATTENDANCE:** Consistent with department policy, a student may miss six hours of any one class during the semester. Upon missing the seventh hour, a drop slip will be filled out and submitted to the registrar. Within three days of being dropped, the student may appeal by filling out an appeal form with the registrar. The registrar will then set up a meeting with the student and the instructor. The appeal will be considered and a decision reached on an individual basis. Absences can seriously affect grades. **Students are responsible for all information missed while absent from class.** This includes any changes to the schedule that might occur. When a student is 10 minutes late for class, it is an automatic absence.

**EVALUATION CRITERIA:** Class attendance is required. Daily quizzes may be given which will be graded and may not be made up. Unit exams and a comprehensive final will be given. All radiographs will be graded based on the criteria stated in each LAP. Any series not achieving an 80% must be repeated on another qualified patient. The final grade will be calculated by adding total points achieved and dividing by the number of points possible. The student must achieve a minimum 80% cumulative average at the completion of the course.

Grading: Quizzes and Assignments..... 100 points  
 Practical Evaluations ..... 250 points  
 Exams ..... 200 points  
 Final Exam ..... 100 points  
 650 Total Points

**GRADING SCALE:** 94% - 100% = A    87% - 93% = B    86% - 80% = C    79% or below = Failing

**GRADING POLICIES:** Tests not taken on the scheduled test day will be assessed a 10% late penalty unless other arrangements have been made **prior** to test day. If you are absent the day of a test, the late penalty will be assessed and that test must be taken within **2 days** or a score of zero will be awarded. *Note: This test may NOT be the same test given in class.*

To obtain full credit for a missed test, the following conditions must be met:

1. You contact the course instructor prior to the beginning of class.  
**AND**
2. You have a legitimate excuse that you can document. Examples: serious illness (requires a doctor's note), funeral (accompanied by the memorial pamphlet from the funeral), automobile accident (documentation necessary), severe weather, and program-related activity (requires documentation).

Points are awarded for assignments completed. Assignments/tests are due on the date specified unless an extenuating circumstance has been approved by the instructor. Late assignments will not be accepted unless due to extenuating circumstances and will be penalized by 10%.

**ADDITIONAL COURSE INFORMATION:**

*for online and on-campus students*

1. It is expected that students will spend 2 hours per credit hour outside of class time for each course. For example, for a 3 credit course you can expect to spend 3 hours working with the concepts presented (for on-campus students this would be the time you attend class) plus 6 additional hours per week (2 hours x 3 credits) completing assigned homework and projects as well as studying for tests.
2. Laptops are LATI property during class and will be used for academic purposes only. Social networking is distracting to those around you. Please be courteous during classroom instructional time (lecture and other class activities).
3. Cellphones and other mobile devices (iPods) are to be turned off and put away unless being used for classroom activities (as specified by your instructor). Any texting during class will not be allowed. Please inform the instructor if there is an emergency call expected. No cell phones should be on or visible during exams.
4. The instructor has the right to alter the syllabus and assignments during the course. Any changes will be announced.
5. Personal responsibility is expected of all students. You are responsible for knowing the material as well as meeting all due dates. It is suggested that each student develop a method for keeping track of due dates.
6. Professional behavior is expected in class and on-campus at all times. Professionalism in the classroom and in the workplace are vital to your success. Unprofessional behavior including, but not limited to, swearing, cheating, making rude comments or gestures, showing disrespect, and talking during instructional time will not be tolerated.
7. Excellent communication is a vital tool to success in the classroom and workplace. This communication includes in-person and email as well as any other methods utilized by your instructor. The course (via My Portal) is available 24 hours a day, seven days a week. Your instructor is available 8:00 am to 4:00 pm M-F and by appointment. However, you can expect a reply to any e-mail within 24 hours M-F and 48 hours Saturday/Sunday. *It is expected that you will check your LATI email at least 5 days a week* to ensure you are receiving up to date information. As your instructor, I am here to assist you. If I do not know you have questions or are struggling, I am not able to help. Please feel free to call, stop by my office, or send an email if you have any questions or need assistance.

*Communication guidelines for email:*

- When emailing, always use LATI's email system for communicating with your instructor.
- Include a subject line to let me know what the message is about.
- Please include a salutation (Hi) and a closing (thank you, sincerely,)
- Clearly describe your question or information you would like to share.
- Use complete sentences including capital letters and punctuation. Email (in an academic and workplace setting) should follow a professional format; it is not the same as texting or sending a quick reply to a close friend.

*Professional Online Etiquette:*

- **Be aware of how you communicate via e-mail or in the forum so your message is not misinterpreted.** Communication between humans is approximately 90 percent body language, 8 percent tone of voice, and 2 percent spoken words. With e-mail, 98 percent of the communication's context is no longer in play.
  - **Avoid language that may come across as strong or offensive.** Language can be easily misinterpreted in written communication. Humor and sarcasm may easily be misinterpreted in online platforms, so try to be as matter-of-fact and professional as possible. No inappropriate, offensive, or profane language.
  - **Review, review, then send.** There's no taking back a comment that has already been sent, so it is important to double-check all writing to make sure that it clearly conveys the exact intended message.
  - **An online classroom is still a classroom.** Though the courses may be online, appropriate classroom behavior is still mandatory. Respect for fellow classmates and the instructors is as important as ever.
  - **Proofread posts and messages.** Make sure you are communicating your points as clearly as possible in the forums and other communications. The accurate grammar and spelling of a message is vital. If your audience cannot decode misspelled words or poorly constructed sentences, you are not communicating. It is a good practice to compose, review, and check your comments in Word before posting them.
8. Without my permission, you do not have the authority to record any of my class, its class members, or any content expressed here.

**ACADEMIC HONESTY STUDENTS' RESPONSIBILITIES:** Students are responsible for their own behaviors and are expected to maintain stated standards of academic honesty. Students share the responsibility with the faculty for maintaining an environment that supports academic honesty and discourages plagiarism or cheating.

**FACULTY AND ADMINISTRATOR RESPONSIBILITIES:** Faculty are responsible for creating a classroom and testing environment that discourages cheating, confronts suspected violators and insures fair treatment of all students. Administrators also share the responsibility for developing an environment that discourages academic dishonesty.

**ACADEMIC DISHONESTY: The following activities are considered to be academically dishonest:**

- Failing to report observed instances of academic dishonesty.
- Plagiarism, defined as representing as one's own, the ideas, writings, or other intellectual properties of others, including other students; any material taken verbatim from the work of others must be placed in quotation marks and a reference cited. Paraphrased content must have appropriate attribution.
- Collaboration on assignments unless it is clearly permitted per the syllabus/instructor.
- Falsifying academic records.
- Bribing faculty to improve academic scores or grades.
- Acquiring an exam during the preparation, duplication, storage, or prior to testing date.
- Removing or acquiring secured exams after administration.
- Copying answers from another student's examination.
- Taking a crib sheet or other form of prepared answers/notes into an examination when not permitted by the instructor.
- Leaving the examination and returning without permission.
- Taking an examination for someone else, preparing and submitting an assignment for someone else, or sign-in for class for someone else.
- Receiving, retaining, and/or using materials obtained in a manner that is defined as academically dishonest.

- Using signals or otherwise communicating (e.g. text messaging) during an examination to share answers with or from another student.
- Continuing to answer test items beyond the prescribed exam time limit.
- Falsifying reasons for excused absences from examinations.
- Taking examinations at times other than the one to which you have been assigned in order to obtain more preparation time.

**If a student is participating in academic dishonesty and is caught, he/she may be dismissed from the course.**

**RECORDING STATEMENT:** Without permission, students do not have the authority to record **any** of the dental assisting classes, its class members, or any expressed content.

**INSTRUCTOR RIGHTS STATEMENT:** The instructor has the right to change any and all material on this syllabus at any time.

**ADA STATEMENT:** Watertown School District 14-4 provides equal opportunity in its employment regulations, educational, and activity programs. It is the policy of the District not to discriminate on the basis of sex, race, color, national origin, creed, religion, marital or veteran status, status in regard to public assistance, age, or disability.

Students are entitled to 'reasonable accommodations' under provisions of the Americans with Disabilities Act. Those in need of such accommodations should notify the instructor and make appropriate arrangements with the Office of Disability Services, Educational Services/Library.

Inquiries regarding implementation and compliance of the Americans with Disabilities Act may contact Sandie Jungers, Special Needs Coordinator, Watertown School District 14-4, P.O. Box 730, Watertown, SD 57201-0730, 605-882-6312. Persons with inquiries regarding implementation and compliance regarding Title IX or Section 504 may contact the Watertown School District Superintendent's Office, P.O. Box 730, Watertown, SD 57201-0730, 605-882-6312.

Additional inquiries may be directed to the Regional Director, U.S. Department of Education, Office for Civil Rights, 10220 North Executive Hills Boulevard, 8<sup>th</sup> Floor, Kansas City, MO 64153-1367, 816-880-4200.

#### **STUDENT SERVICES:**

- ***Career Counseling***

Guidance is available for students when investigating career choices or in reaffirming the choice already made.

- ***Personal Counseling***

Knowing that student life can be stressful, Lake Area Tech provides personal on-campus counseling for either school-related or non-school-related issues. At times, referral to another counseling service may be warranted. Check with the on-campus counseling staff if you have concerns you need to discuss. Specific referrals for drug and alcohol-related issues will be made by on-campus counselors.

- ***Student Tutoring***

The Educational Services Center staff and peer tutors provide tutoring for all courses. If you are a student in need of help in any of your classes, please contact the Educational Services Coordinator located in the LATI library.

- ***Online Learner Information***

Additional information and support for online learners at LATI is available at:  
<http://www.lakeareatech.edu/onlinelearner/index.html>

**DA 165 – Dental Radiography I  
Calendar of Instruction (Weekly Schedule)**

DATE	TOPIC	ASSIGNMENT
<b>Week 1</b>	<b>Lecture:</b> Introduction Syllabus LAP 1 – Describe Radiography History, Physics, Equipment, and Characteristics	Atomic Structure Worksheet Electromagnetic Radiation Worksheet X-ray Tube Components Worksheet
<b>Week 2</b>	<b>Lecture:</b> LAP 1 – Describe Radiography History, Physics, Equipment, and Characteristics <b>Lab:</b> LAP 2 – Identify Technique Basics	Circuits Worksheet Paralleling Tech Worksheet Video Paralleling Tech
<b>Week 3</b>	<b>Lecture:</b> LAP 1 – Describe Radiography History, Physics, Equipment, and Characteristics <b>Lab:</b> LAP 2 – Identify Technique Basics	Bisecting Worksheet Bitewing Worksheet <b>Exam over LAP 1</b>
<b>Week 4</b>	<b>Lecture:</b> LAP 2 – Identify Technique Basics <b>Lab:</b> Demo XCP and Snaparay	Workbook 41 (eLearning)
<b>Week 5</b>	<b>Lecture:</b> LAP 3 – Expose Digital Radiographs LAP 4 – Describe Radiation Biology and Protection <b>Lab:</b> FMX PSP DXTR	Radiation Protection Worksheet Radiation Protection Quiz Radiation Measurement Worksheet View video “Scanner” <b>Exam over LAP 2</b>
<b>Week 6</b>	<b>Lecture:</b> LAP 4 – Describe Radiation Biology and Protection <b>Lab:</b> FMX PSP/DIGITAL DXTR	Biological Effects Worksheet <b>Exam over LAP 3</b>
<b>Week 7</b>	<b>Lecture:</b> LAP 4 – Describe Radiation Biology and Protection <b>Lab:</b> FMX SENSORS DXTR BW’s FILM on 2 DXTR’s	View video “NOMAD”
<b>Week 8</b>	<b>Clinical</b>	<b>Clinical</b>
<b>Week 9</b>	<b>Clinical</b>	<b>Clinical</b>
<b>Week 10</b>	<b>Spring Break</b>	<b>Spring Break</b>
<b>Week 11</b>	<b>Lecture:</b> LAP 4 – Describe Radiation Biology and Protection LAP 5 – Perform Processing and Quality Assurance Procedures <b>Lab:</b> BW’s FILM on 2 DXTR’s	Processing Radiographs Worksheet WB 39 and 40 (eLearning) <b>Exam over LAP 4</b>
<b>Week 12</b>	<b>Lecture:</b> LAP 5 – Perform Processing and Quality Assurance Procedures	<b>Exam over LAP 5</b>
<b>Week 13</b>	<b>Final Review</b>	<b>Final Exam</b>

This schedule is subject to change at the discretion of the instructor or director of the Dental Assisting program.



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