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| <b>Course Number:</b> Dental Assisting Science I                                           |
| <b>Hours:</b> Lecture - 3, Lab - 0, Credits - 3                                            |
| <b>Prerequisite(s):</b> none                                                               |
| <b>Term:</b> Spring 2022, January 18, 2022 – May 6, 2022                                   |
| <b>Faculty:</b> Kelly O'Brien, CDA, RDH, MEd                                               |
| <b>Faculty Accessibility:</b> office hours as posted on Canvas, other times by appointment |
| <b>Email:</b> <a href="mailto:kobrien@ccsnh.edu">kobrien@ccsnh.edu</a>                     |
| <b>Phone:</b> (603) 271-6484 x.4123                                                        |

## Syllabus Table of Contents

|                                                                             |          |
|-----------------------------------------------------------------------------|----------|
| <b>Course Description</b> .....                                             | <b>3</b> |
| <b>Learning Outcomes</b> .....                                              | <b>3</b> |
| Course Goals .....                                                          | 3        |
| Student Learning Outcomes.....                                              | 3        |
| <b>Course Materials and Resources</b> .....                                 | <b>4</b> |
| Textbooks Required .....                                                    | 4        |
| Materials Required .....                                                    | 4        |
| Software, Required .....                                                    | 4        |
| <b>Canvas Orientation</b> .....                                             | <b>4</b> |
| Available Technical Support .....                                           | 5        |
| <b>Instructional Approach</b> .....                                         | <b>5</b> |
| Critical Thinking Skills and Activities .....                               | 5        |
| <b>Assessment of Learning</b> .....                                         | <b>5</b> |
| Assignment/Assessment Descriptions.....                                     | 5        |
| Grading Criteria and Grade Calculation .....                                | 6        |
| <b>Course Schedule</b> .....                                                | <b>6</b> |
| <b>Course Notices</b> .....                                                 | <b>9</b> |
| Faculty Email Response Time .....                                           | 9        |
| Posting of Grades .....                                                     | 9        |
| Attendance Policy.....                                                      | 9        |
| Late Assignment Policy.....                                                 | 9        |
| Accessibility Services and Accommodations.....                              | 10       |
| English for Speakers of Other Languages.....                                | 10       |
| Academic Honesty.....                                                       | 10       |
| Ethical and Professional Behavior .....                                     | 10       |
| Instructor Assistance.....                                                  | 11       |
| Use of Cell Phones, Smart Watches, Electronic Devices in the Classroom..... | 11       |
| Use of Canvas and E-mail.....                                               | 11       |
| Classroom Etiquette.....                                                    | 11       |
| The Virtual Classroom - Remote/Online Instruction & Testing.....            | 12       |
| COVID-19 Concerns.....                                                      | 12       |

|                                         |    |
|-----------------------------------------|----|
| Specific Instructional Objectives ..... | 12 |
| Academic Affairs Notices.....           | 16 |

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## Course Description

A study of the anatomy of the head, emphasizing the osteological landmarks and the structures of the oral cavity. Both the permanent and primary dentitions are studied, including embryonic development and eruption patterns. In addition, an introduction to the structure and function of the human body systems in health and disease will be presented.

[Return to Top](#)

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## Learning Outcomes

Educated Person Statement of Philosophy:

[https://www.nhti.edu/wp-content/uploads/2020/10/ONLINE\\_EducatedPersonStatementOfPhilosophy\\_0820.pdf](https://www.nhti.edu/wp-content/uploads/2020/10/ONLINE_EducatedPersonStatementOfPhilosophy_0820.pdf)

## Course Goals

1. Pronounce, spell, and define key terminology required to function within the profession. (PC 1, 2, 5, 7)
2. Identify any tooth in the oral cavity by name, number, location, function and shorthand terms. (PC 1, 2, 7)
3. Discuss the development of the head and neck from conception through adulthood with a focus on the oral cavity. (PC 1, 5)
4. Describe the major systems of the body, their functions, and relationship to oral health. (PC 4, 5)

## Student Learning Outcomes

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

1. List the classifications and function of each of the teeth. (CG 1)
  - a. Identify the arrangement of the dentitions by arch, quadrant, and sextant.
  - b. Label the surfaces of any tooth, and the divisions into thirds of the root and the crown.
  - c. Define contour, line angles, and point angles as the terms relate to tooth shape.
  - d. Identify anatomic features of the various types of teeth.
2. Provide the shorthand identification of each tooth using Palmer, FDI, and Universal. (CG 2)
3. Identify the different tissues of the teeth and oral cavity. (CG 1)
4. Label the parts of the gingival unit and attachment unit. (CG1)
  - a. Name the three types of oral mucosa and discuss the density of each in relationship to where it is found and its function.
  - b. Identify healthy and diseased oral tissue by color, shape, size, texture, and response to stimulus.
5. Provide a timeline for the development of the head and neck from embryonic structures to full development of the oral cavity. (CG 3)
  - a. Define the stages of tooth development. (CG 3)
6. Describe the dentitions using eruption and shedding dates. (CG 3)
7. Recognize overbite, overjet, cross-bite, open bite, and occlusion variations. (CG 1)
  - a. Relate a facial profile to a potential occlusion classification.
8. Label the noteworthy landmarks of the face and oral cavity. (CG 1)
9. Identify the anatomical landmarks of the head and neck. (CG 1)

- a. Locate the various canals, fossa, foramina, and bones in the skull.
  - b. Describe the structure of the temporomandibular joint and the symptoms of dysfunction.
  - c. Locate and identify the major muscles, nerves, and blood vessels of the head and neck.
  - d. Locate and explain the function of the salivary glands, major lymph nodes, and paranasal sinuses.
10. List the major systems in the human body, their functions, and major parts of each system. (CG 4)
- a. Discuss the impact each of the body systems has on dental health.

[Return to Top](#)

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## Course Materials and Resources

**\*\*\*DO NOT PURCHASE WITHOUT FURTHER INFORMATION FROM INSTRUCTOR**

### Textbooks Required

Bird, D.L. & Robinson, D.S. (2021). Modern Dental Assisting (13th Ed.). St. Louis, MO: Elsevier.

Allied Dental Education Department Dental Assisting Student Manual (2021-2022). NHTI, Concord's Community College.

### Materials Required

None

### Software Required

Bird, D.L., Robinson, D.S., Smith, J.R. (2021). Dental Assisting Online (DAO) for Modern Dental Assisting (13th Ed.). Elsevier.

**\*\*\*NOTE: Testing will be conducted on Canvas using LockDown Browser and Respondus Monitor. The software does not work on phones, Chromebooks, or tablets. A computer with a full operating system (Windows preferred) is needed. A webcam is also required.**

### Resources Suggested

Bird, D.L. & Robinson, D.S. (2021). Student Workbook for Modern Dental Assisting (13th Ed.). St. Louis, MO: Elsevier.

Textbooks, materials, and software are available online at [eFollet](#) unless specified by your instructor.


[Return to Top](#)

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## Canvas Orientation

If this is your first time using Canvas at CCSNH, please complete the [Canvas student orientation](#) to familiarize yourself with its navigation and use.

## Available Technical Support

If you need help navigating this course, explore the Canvas [Student Guide](#). The Student Guide, Chat, and Phone offer helpful information and are always found by clicking on the  help button on the bottom-right of every page in Canvas.

[Return to Top](#)

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## Instructional Approach

Instructional methods may include lecture, PowerPoint presentations, individual assignments, self-study, group discussion, role-play, case studies, collaborative learning groups, video presentations, internet resources, visual aids, and computer software instruction.

## Critical Thinking Skills and Activities

Higher education requires critical thinking skills. Critical thinking skills are defined as applying theories or concepts to practical problems or new situations; analyzing the basic elements of an idea, experience, or theory; making judgments about the value or soundness of information, arguments, or methods; and synthesizing and organizing ideas and information in new ways.

The lecture, assignments and testing formats in this course will require students to apply critical thinking and problem-solving skills. Students will be required to retain and apply the information learned in the course into the clinical experience with patients. The critical thinking case-based questions foster evidence-based decision-making and an appreciation for the assimilation and application between the classroom and the clinical setting.

Examples of critical thinking activities for this course include a body system project that relates a major body system to oral health and the design of a tooth eruption project that is concise and informative.

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## Assessment of Learning

### Assignment/Assessment Descriptions

- Discussion Posts w/grading rubric
- 3 Quizzes
- 4 Exams
- Individual Eruption Project w/grading rubric
- Group Body System Project w/grading rubric
- Final Exam

## Grading Criteria and Grade Calculation

| Category                   | % of Final Course Grade |
|----------------------------|-------------------------|
| Discussion Posts & Quizzes | 20%                     |
| Exams                      | 40%                     |
| Eruption Project           | 10%                     |
| Body System Project        | 15%                     |
| Final Exam                 | 15%                     |
| <b>Total</b>               | <b>100%</b>             |

| Grading Schema |              |
|----------------|--------------|
| A              | 93-100       |
| A-             | 90-92        |
| B+             | 87-89        |
| B              | 83-86        |
| B-             | 80-82        |
| C+             | 77-79        |
| C              | 73-76        |
| C-             | 70-72        |
| F              | 69 and below |

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## Course Schedule

This syllabus is to be used as a guide; it contains information about the course, how it will be taught, what will be required of students and assessment methods that will be used. All information is subject to change at any time.

| <b>Weeks &amp; Dates</b>   | <b>Topics</b>                                                                                                                      | <b>Activities</b>                                                                                                                                                                                                                                                                                                                                                                                              | <b>Assignment Due Dates</b>                                                                                                         |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Week 1</b><br>1/18-1/21 | Syllabus & Course Introduction<br><br>Overview of the Dentitions<br><br>Longhand Tooth Identification & Universal Shorthand System | <ul style="list-style-type: none"> <li>• Watch Course Overview Video</li> <li>• Read ALL "Important Course Information"</li> <li>• Read Chapter 11</li> <li>• View Lecture</li> <li>• Quadrants &amp; Sextants Worksheet</li> <li>• Cube Activity</li> <li>• Division Into Thirds</li> <li>• Tooth Labeling Worksheet</li> <li>• Dental Assisting Online: Module 3 Lesson 1 &amp; Module 3 Lesson 3</li> </ul> | 1/19 Introduction video<br>1/19 Discussion post<br>1/20 Discussion replies                                                          |
| <b>Week 2</b><br>1/24-1/28 | Anatomy of a Tooth                                                                                                                 | <ul style="list-style-type: none"> <li>• Read Pages 83-89</li> <li>• View Lecture</li> <li>• Components of a Tooth Game</li> <li>• Tooth Numbering Games</li> <li>• Dental Assisting Online: Module 1 Lesson 2</li> <li>• Practice Quiz</li> </ul>                                                                                                                                                             | 1/26 Discussion post<br>1/27 Discussion replies<br><b>1/28 QUIZ</b> on Longhand Tooth Identification and Universal Shorthand System |
| <b>Week 3</b><br>1/31-2/4  | Anatomic Features<br><br>Tooth Morphology                                                                                          | <ul style="list-style-type: none"> <li>• Read Pages 134-135, 141-151</li> <li>• View Lecture</li> <li>• Permanent Tooth Morphology Chart</li> <li>• BoneBox App</li> <li>• Dental Assisting Online: Module 4 Lesson 1 &amp; Module 4 Lesson 2</li> </ul>                                                                                                                                                       | 2/2 Discussion post<br>2/3 Discussion replies<br>2/4 Formative Course Survey                                                        |
| <b>Week 4</b><br>2/7-2/11  | Facial and Tooth Development<br><br>Eruption and Exfoliation<br><br>Primary vs Permanent Dentition                                 | <ul style="list-style-type: none"> <li>• Read Pages 74-83, 151-155</li> <li>• Review Tables 11.2 &amp; 11.3</li> <li>• Eruption Project Introduction &amp; Rubric</li> <li>• View Lecture</li> <li>• Development Timeline</li> <li>• Dental Assisting Online: Module 1 Lesson 1</li> </ul>                                                                                                                     | 2/9 Discussion post<br>2/10 Discussion replies<br><b>2/11 EXAM #1</b> (weeks 1-3)                                                   |
| <b>Week 5</b><br>2/14-2/18 | Oral Mucosa and Periodontium<br><br>Landmarks of the Face & Oral Cavity                                                            | <ul style="list-style-type: none"> <li>• Read Chapter 10, Pages 89-93</li> <li>• View Lectures</li> <li>• Gingiva, Attachment Unit, and Oral Structures Labeling</li> </ul>                                                                                                                                                                                                                                    | 2/16 Discussion post<br>2/17 Discussion replies                                                                                     |
| <b>Week 6</b><br>2/22-2/25 | Occlusion and Malocclusion<br><br>Palmer and ISO/FDI Shorthand Systems                                                             | <ul style="list-style-type: none"> <li>• Read Pages 136-139</li> <li>• View Lectures</li> <li>• Numbering Systems Study Guide</li> <li>• Occlusion Kahoot</li> <li>• Dental Assisting Online: Module 3 Lesson 2</li> <li>• dentalcare.com assignment</li> </ul>                                                                                                                                                | 2/23 Discussion post<br>2/24 Discussion replies<br><b>2/25 Eruption Project DUE</b>                                                 |

|                             |                                                                                                   |                                                                                                                                                                                                                                                                                                        |                                                                                                                                     |
|-----------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Week 7</b><br>2/28-3/4   | Bones and Landmarks of the Skull<br><br>Temporomandibular Joint                                   | <ul style="list-style-type: none"> <li>• Read Pages 94-106</li> <li>• View Lectures/Videos</li> <li>• TMJ Animation Video</li> <li>• 3D Skull Atlas App</li> <li>• Skull Bones Labeling</li> <li>• TMJ Poster</li> <li>• Dental Assisting Online: Module 2 Lesson 1 &amp; Module 2 Lesson 2</li> </ul> | 3/2 Discussion post<br>3/3 Discussion replies<br><b>3/4 EXAM #2</b> (weeks 4-6)                                                     |
| <b>Week 8</b><br>3/7-3/11   | Muscles of the Head and Neck<br><br>Salivary Glands                                               | <ul style="list-style-type: none"> <li>• Read Pages 106-109</li> <li>• View Lectures</li> <li>• Muscle Labeling</li> </ul>                                                                                                                                                                             | 3/9 Discussion post<br>3/10 Discussion replies<br><b>3/11 QUIZ</b> on All Tooth Numbering Systems                                   |
| <b>Week 9</b><br>3/14-3/18  | SPRING BREAK                                                                                      | Ms. O'Brien Unavailable                                                                                                                                                                                                                                                                                | Have Some Fun!                                                                                                                      |
| <b>Week 10</b><br>3/21-3/25 | Blood Supply to the Head and Neck<br><br>Nerves of the Head and Neck<br><br>Lymph Nodes & Sinuses | <ul style="list-style-type: none"> <li>• Read Pages 109-116, 517-518</li> <li>• View Lecture</li> <li>• Trigeminal Nerve Diagram</li> <li>• Head and Neck Anatomy Kahoot</li> <li>• Dental Assisting Online: Module 2 Lesson 3 &amp; Module 2 Lesson 4</li> </ul>                                      | 3/23 Discussion post<br>3/24 Discussion replies                                                                                     |
| <b>Week 11</b><br>3/28-4/1  | Project Introduction<br><br>Project Work                                                          | <ul style="list-style-type: none"> <li>• Body System Project Introduction &amp; Rubric</li> <li>• Assignment of Systems</li> <li>• Plan &amp; organize for project</li> <li>• Research body system</li> <li>• Develop a visual aid</li> <li>• Prepare for oral presentation</li> </ul>                 | 3/30 Discussion post<br>3/31 Discussion replies<br><b>4/1 EXAM #3</b> (weeks 7-10)                                                  |
| <b>Week 12</b><br>4/4-4/8   | General Anatomy<br><br>Structural Units of Organs and Tissues                                     | <ul style="list-style-type: none"> <li>• Read Chapter 6</li> <li>• View Lecture</li> <li>• Relative Position Practice</li> <li>• Cells &amp; Organization Game</li> <li>• Create oral presentation video</li> </ul>                                                                                    | 4/6 Discussion post<br>4/7 Discussion replies<br><b>4/8 Body System Project DUE</b>                                                 |
| <b>Week 13</b><br>4/11-4/15 | Body Systems                                                                                      | <ul style="list-style-type: none"> <li>• Read Pages 51-63</li> <li>• Watch body system presentations</li> <li>• Body Systems Summary Sheet</li> </ul>                                                                                                                                                  | 4/13 Discussion post<br>4/14 Discussion replies<br><b>4/15 QUIZ</b> on Longhand Tooth Identification and Universal Shorthand System |
| <b>Week 14</b><br>4/18-4/22 | More Body Systems                                                                                 | <ul style="list-style-type: none"> <li>• Read Pages 63-71</li> <li>• Watch body system presentations</li> <li>• Body Systems Summary Sheet</li> </ul>                                                                                                                                                  | 4/20 Discussion post<br>4/21 Discussion replies                                                                                     |



|                                    |                                      |                                                                                                                                                                                                                                                                                                                             |                                                                                                                        |
|------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Week 15</b><br><b>4/25-4/29</b> | Review Highlights of Body Systems    | <ul style="list-style-type: none"> <li>• Read Articles on Canvas</li> <li>• Body Systems Review</li> <li>• Body Systems Graphic Organizer</li> <li>• Free Anatomy Quizzes</li> </ul>                                                                                                                                        | 4/27 Discussion post<br>4/28 Discussion replies<br><b>4/29 Exam #4</b> (weeks 12-15)                                   |
| <b>Week 16</b><br><b>5/2-5/6</b>   | Review for Final Exam<br><br>Wrap Up | <ul style="list-style-type: none"> <li>• Compose twenty questions from notes and reading assignments that might be useful on the final exam (topic assigned by instructor)</li> <li>• Virtual class meeting &amp; review for final (optional)</li> <li>• Watch final thoughts video</li> <li>• Course evaluation</li> </ul> | 5/4 Discussion post<br>5/5 Discussion replies<br>5/6 Feedback for the Instructor<br><b>5/6 Final Exam</b> (cumulative) |

[Return to Top](#)

## Course Notices

### Faculty Email Response Time

Instructors will reply to e-mails within 48 hours of receipt Mondays 8:00 AM through Fridays 4:00 PM. Instructors will respond sometime during the next business day to e-mails received between 4:00 PM Friday and 8:00 AM Monday or on holidays and school breaks. Communication via e-mail with the professor is preferable to phone calls or voice mail, unless otherwise directed by the instructor. See also “Clinical Absence Reporting Policy and “Instructor Assistance”.

### Posting of Grades

Grades are posted only on Canvas and not given by e-mail. Students are expected to check their NHTI campus e-mail account daily.

### Attendance Policy

Students are expected to attend all scheduled classes, labs, and clinical sessions. Attendance and active participation are critical for the success of the student. Any student who arrives after the class has begun will be marked tardy. The Allied Dental Education Department Attendance Policy and Vacation Policy apply to this course and are specified in the Dental Assisting Program Manual.

If you are going to be late or absent from an online session due to some unforeseen situation, please email Ms. O'Brien at [kobrien@ccsnh.edu](mailto:kobrien@ccsnh.edu) PRIOR TO THE START OF CLASS. If absent, it is the responsibility of the student to seek out the instructor for missed handouts and a classmate for any additional notes.

### Late Assignment Policy

All assignments must be submitted on the due date. Failure to do so will result in a grade of 0 (zero) for the assignment. Make up of missed exams, quizzes, and project submission/presentation will only be allowed in extenuating circumstances and is at the discretion of the instructor.

## Accessibility Services and Accommodations

Refer to the NHTI *Dental Assisting Program Manual* and the Student Resources page on the NHTI website for Policies and Procedures for Receiving Academic Accommodations for Students with Disabilities <https://www.nhti.edu/temp-services/student-support/accessibility-services/>. Any information regarding accommodations and Letter of Accommodation (LOA) is confidential. The student is the only person who can inform faculty about his or her needs for accommodations. Course instructors are unable to discuss individual accommodations in the presence of others.

Students must meet individually with the course instructor to present their LOA before allowable accommodations can be instituted in this course. Students must meet with the course instructor at least one week prior to any course assessments/exams. Students must schedule an appointment or visit the instructor during office hours to discuss their accommodation needs and any topics related to disabilities. It is the student's responsibility to make these arrangements and schedule time in the Academic Center for Excellence (ACE) during the same time the exam is scheduled in class, or at a time approved by the course instructor.

## English for Speakers of Other Languages

Tutoring and Support Services are available to all NHTI students whose native language is not American English. Students who speak other languages are strongly encouraged to contact the Cross-Cultural Education & ESOL Office for these services. Refer to the Cross-Cultural & ESOL page on the NHTI website for more information <https://www.nhti.edu/support-success/esol/>. Students must schedule an appointment or visit the instructor individually during office hours to present their plan issued by the Cross-Cultural Education & ESOL Office before allowable accommodations can be instituted in this course. Arrangements for quiz/exam accommodations must be made by the student with the instructor a minimum of 1 (one) week prior to the scheduled quiz/exam otherwise the quiz/exam will be given without accommodations. It is the student's responsibility to make such arrangements as noted. It is the student's responsibility to make these arrangements and schedule time in the Cross-Cultural Education & ESOL Office during the same time the exam will be given in class, or at a time approved by the course instructor.

## Academic Honesty

Academic honesty is of extreme importance while establishing ethical behavior necessary for the successful dental education student. Any form of academic dishonesty is viewed by the college as a serious offense. Any student who demonstrates unethical academic/ professional behavior, such as, but not limited to, engaging in cheating, plagiarism, or falsification in the completion of quizzes, exams, radiographic interpretation, individual projects, group projects, or any clinical or lab evaluation procedures, or who facilitates such behavior may be subject to dismissal from the program in accordance with NHTI's Judicial Policies as published on the NHTI website at <https://www.nhti.edu/campus-life/student-life/student-code-of-conduct-judicial-process/>

All patient records and student portfolios are legal documents and tampering or altering those documents in any way can be considered criminal. Forgery of a patient's record is grounds for legal prosecution.

## Ethical and Professional Behavior

Professional conduct is of the utmost importance. Please refer to the section in the NHTI *Dental Assisting Program Manual* regarding Professional and Ethical Behavior. While enrolled in the Dental Assisting program, students will be expected to act in a professional manner in all contacts with peers, patients, faculty, staff, and outside agencies. Students will be accountable for individual behavior

irrespective of how any other person is conducting himself/herself. Please review and adhere to the Dental Hygiene code of Ethics found in the NHTI Dental Assisting Program Manual. Professional conduct will be considered very seriously and any breach may result in faculty review. Serious breaches as addressed in faculty review may result in a non-passing grade in this course, or dismissal from the program.

### **Instructor Assistance**

Students are encouraged to seek assistance early from the course professor when questions or concerns arise. If the student has questions regarding assignments, or if a problem arises that warrants help, please do not hesitate to make an appointment with the professor. Communication via e-mail with the professor is preferable to phone calls or voice mail. Reasonable response time may not be immediate. Therefore, the student will need to utilize long-range planning skills. See also “Faculty Email Response Time”.

### **Use of Cell Phones, Smart Watches, Electronic Devices in the Classroom**

All cell phones and smart watches must be off and stored away during class and lab. Students having an emergency requiring phone access must notify the professor prior to the start of class. The use of laptops and other electronic devices is limited to purposes related to course content. The use of these devices to study for other classes, check e-mail, or other extraneous activities is not permitted. The professor reserves the right to determine appropriate use of these devices. Dismissal from the class for this reason will be considered an absence.

Cell phone use and smart watches are prohibited in clinical areas at any facility. Cell phone use must be minimal and only utilized during lunch and break periods in a non-public area. Discretion and confidentiality must be maintained.

### **Use of Canvas and E-mail**

Students are expected to log in to the course Canvas site on the first day of class and daily throughout the course. This site is used extensively for posting announcements, grades, PowerPoints, reading assignments, homework, course and program information, etc. At times, emails and announcements sent through Canvas go to email junk/spam folders. It is advised to check the “junk/spam folder” often. The NHTI email is the only e-mail account used by the professor.

### **Classroom Etiquette**

Please minimize leaving the classroom as a courtesy to others. There will be a break mid-way through the class. Class will begin on time. Please be punctual. Student’s that are tardy, interrupt the learning environment for all students.

Class time is NOT a time to sleep. If a student falls asleep in class, the student will be asked to leave. This will count as an absence. If a student is sleeping the student is not hearing the material or participating in class, therefore; the student is mentally absent from the class. Sleeping in class causes a disruption to the learning environment.

When a student has a comment, please raise a hand and share the comment with the other students. Talking to each other or whispering during the lecture is considered rude and will NOT be tolerated. Any student that cannot follow this classroom etiquette will be asked to leave. Talking in class is annoying and disruptive to the learning environment.

All students are expected to abide by the *Student Code of Conduct*, published in the *NHTI Student Handbook* and are subject to sanctions as described therein for violations.

## The Virtual Classroom - Remote/Online Instruction & Testing

Part or all of this course will be taught remotely/online using Zoom. The Zoom link to the virtual classroom each week will be shared through the course Canvas site. If face-to-face instruction applies in this course, the course schedule will specify the days you will need to report to campus. Attendance is required at all classes (virtual and face-to-face if applicable), and all policies specified in the syllabus will apply in the virtual classroom as it would in the physical classroom. Please refer to “Zoom FAQs” posted on Canvas for information on how to connect to the Zoom classroom.

Testing in the virtual classroom will be conducted on Canvas using Respondus Lockdown Browser and Monitor. This tool provides a method of student verification and proctoring in the remote learning environment required as part of our program-specific accreditation by the Commission on Dental Accreditation. Students will be required to download the software in advance of exams and have access to a webcam in order to take tests in this class. Please refer to additional instructions posted on Canvas.

## COVID-19 Concerns

“Unresolved COVID-19 related concerns may be reported through the CCSNH toll free phone line (1-833-701-0665) or through the on-line safety reporting form that can be accessed at <https://www.ccsnh.edu/Covid-19/>. Communications made through the use of the phone line or the online form can be anonymous; however, should you choose to identify yourself, you may request that your report remain confidential.”

Students are expected to be familiar with and abide by the NHTI COVID-19 Student Social Compact which is part of the Student Code of Conduct.

**If you test positive for COVID-19, are sick with coronavirus symptoms, even mild ones, have exposure to suspected or confirmed cases, or recently returned from international travel, please do not come to campus but contact Campus Safety at 603-230-4042 or [nhticampussafety@ccsnh.edu](mailto:nhticampussafety@ccsnh.edu) for reporting and additional guidance.**

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## Specific Instructional Objectives

### Overview of the Dentitions

1. Discuss the overall importance of our teeth.
2. Name the three dentition periods and explain the differences between them.
3. Name the two dental arches and explain two ways that the arches can be divided.
4. State which teeth are anterior and which teeth are posterior.
5. Name and describe the 4 different types of teeth and give the function of each.
6. Identify and label the 5 surfaces of the teeth.
7. Explain the concepts of angles and division of teeth.
8. Define the following terms: Dental Anatomy, Anterior, Line Angle, Oral Embryology, Posterior, Point Angle, Oral Histology, Quadrant, Masticatory, Tooth Morphology, Sextant, Maxillary, Dentition, Midline, Mandibular, Deciduous, Long Axis, Proximal Surface, Succedaneous, Crown, Root, Cervix/CEJ, Apex

### **Tooth Identification & Numbering Systems**

1. State the correct order of terms for the longhand name of each tooth.
2. Name any tooth using the correct order of terms.
3. Label each tooth by number or letter using the Universal shorthand system.
4. Identify any tooth when given the code from the Universal system.
5. Identify each tooth using the Palmer Notation system.
6. Identify each tooth using the ISO/FDI system.
7. Name any tooth when given the code (number) from any of the three numbering systems.

### **Anatomy of a Tooth**

1. Identify the anatomic parts of a tooth.
2. Explain the difference between the anatomical crown & the clinical crown.
3. Differentiate between a bifurcated and trifurcated root.
4. Identify which teeth have greater curvature of the cemento-enamel junction and discuss
5. the reason for the greater curvature in those teeth.
6. Identify the 4 major tissues of a tooth.
7. Describe the composition, characteristics, and functions of the 4 major tissues of a tooth.
8. Identify which hard tissues of a tooth have the capability of growth after maturity.
9. List and describe the 3 types of dentin.
10. Describe the changes that occur with age within the pulp chamber, pulp canal, and apical
11. foramen and explain the reason for the changes.
12. Define the following terms: Apical, Periapical, Enamel rods, Dentinal tubules, Pulp chamber, Pulp horns, Pulp canal, Pulp cavity, Apical foramen, Ameloblasts, Cementoblasts, Odontoblasts

### **Anatomic Features & Tooth Morphology**

1. Discuss the importance of facial and lingual contours of teeth and what happens with over contoured and under contoured teeth.
2. Discuss the self-cleaning qualities of teeth.
3. Identify and describe: Contours, Contacts, Embrasures.
4. Define and identify the impact these following situations have on the teeth and gingiva: Open contact, Rough margin, Overhanging restorations.
5. Explain the geometric concept of crown outlines.
6. State the number of cusps/edges and roots of each permanent tooth.
7. Describe the identifying features of each permanent tooth.
8. Compare and contrast all of the characteristics of the permanent teeth.
9. Describe anomalies that occur in the permanent dentition.
10. Define edentulous and partially edentulous.
11. Define the following terms which describe the various anatomical landmarks of the teeth: Cingulum, Mamelon, Contact Area, Cusp, Ridge, Embrasure, Cusp of Carabelli, Marginal ridge, Interproximal Space, Lobe, Oblique ridge, Incisal edge, Fossa, Triangular ridge, Pit, Lingual fossa, Transverse ridge, Fissure, Groove

### **Development & Eruption**

1. Describe the 3 periods of prenatal development.
2. Describe the importance of the first branchial arch.
3. Describe the development of the face and oral cavity.
4. Describe the process of palate formation, including the primary and secondary palates and fusion of them.
5. Describe how a cleft lip and palate occur, and give the prenatal age in which they are likely to occur.
6. State the prenatal ages at which the primary and permanent dentitions begin.
7. Give examples of genetic and environmental factors which affect dental development.

8. Describe the 3 developmental periods of the tooth.
9. Explain the 3 stages of the growth period.
10. Describe the 3 phases of active tooth eruption.
11. Describe passive tooth eruption.
12. State the 3 general rules of eruption.
13. List the eruption sequence of the primary dentition.
14. Discuss the importance of primary teeth.
15. Define primate spaces and give their significance.
16. Define exfoliation and describe how it occurs.
17. Define osteoclasts, resorption, and ankylosis.
18. Define 3 ways in which a primary tooth may be retained.
19. List the eruption sequence of the permanent dentition.
20. State the relationship between the exfoliation dates of the primary dentition and the eruption dates of the permanent dentition.
21. Compare and contrast the primary and the permanent dentitions.

### **Oral Mucosa & Periodontium**

1. Define oral mucosa and describe the 3 types of mucosa by giving an example of each.
2. Define periodontium and name the 2 divisions of the periodontium.
3. Describe the gingival unit and the attachment unit and give the parts and functions of each.
4. List characteristics of healthy gingiva.
5. Describe gingival recession and periodontal pockets.
6. Define the following terms: Free gingiva, Gingival sulcus, Gingival margin, Free gingival groove, Attached gingiva, Mucogingival junction, Interdental papilla, Alveolar mucosa, Alveolar process, Alveolus, Lamina dura, Trabecular bone, Alveolar crest

### **Landmarks of the Face & Oral Cavity**

1. Discuss the significance of the knowledge of normal oral cavities.
2. Identify the 2 divisions of the oral cavity and state the borders of each.
3. Locate and describe the functions of the taste buds.
4. Name and identify the following structures of the face and oral cavity: Labial commissure, Philtrum, Vermillion zone, Labial frenum, Buccal frenum, Maxillary tuberosity, Retromolar pad, Hard palate, Soft palate, Palatine torus, Incisive papilla, Palatine raphe, Palatine rugae, Uvula, Palatine tonsils, Dorsum of tongue, Lingual frenum, Sublingual caruncles, Sublingual fold, Lingual tonsil, Mandibular tori, Outer and inner canthus of the eye, Ala of the nose, Tragus of the ear, Mental protuberance, Angle of the mandible, Zygomatic arch

### **Occlusion & Malocclusion**

1. Define the following terms: Occlusion, Retrusion, Normal Occlusion, Protrusion, Malocclusion, Alignment, Centric occlusion, Lateral excursion, Centric relation, Antagonists
2. Describe the following occlusal deviations: Openbite, Labioversion, Overbite, Buccoverision, Overjet, Linguoversion, Crossbite, Infraversion, Edge-to-edge bite, Supraversion, End-to-end bite, Torsoversion
3. List and describe the 3 types of facial profiles.
4. Describe Angle's 3 classifications of occlusion (be sure to give the facial profile for each).
5. List various causes of malocclusion.
6. Discuss the results of the lack of primate spaces and the premature loss of primary teeth.
7. Define premature contact and discuss what might occur as a result of premature contact of teeth.

### **Bones & Landmarks of the Skull**

1. Identify the regions of the head

2. Locate and identify the bones of the skull including the cranium, face, and hyoid bone
3. Discuss the postnatal development of the skull
4. Differentiate between the male and female skull
5. Define the following terms: anterior fontanelle, alveolar process, condyle, coronal suture, cranium, crista galli, external auditory meatus, foramen magnum, frontal, frontal process, glenoid fossa, hamulus, hyoid, incisive foramen, infraorbital foramen, lacrimal, lambdoid suture, mastoid process, greater palatine foramen, mental, mental protuberance, mental foramen, nasal, nasal conchae, occipital, parietal, pterygoid process, sagittal suture, sphenoid, styloid process, symphysis menti, temporal, temporal process, zygomatic, zygomatic arch, zygomatic process

### **Temporomandibular Joint**

1. Identify the components of the temporomandibular joint.
2. Describe the action and movement of the temporomandibular joint.
3. Describe the symptoms of temporomandibular joint disorders.
4. Explain the causes of temporomandibular joint disorders.
5. Describe the treatments for temporomandibular joint disorders.

### **Muscles of the Head & Neck**

1. Describe the importance of muscles
2. Explain how muscles work
3. Locate and identify the major muscles of the head and neck, including muscles of: the neck facial expression, mastication, the floor of the mouth, the tongue, the palate

### **Salivary Glands**

1. State the functions of saliva
2. Name and describe the 3 large paired salivary glands and their associated ducts
3. Describe common disorders of the salivary glands

### **Nerves of the Head & Neck**

1. Identify and locate the nerves of the head and neck, including the following:
  - a. Name the twelve cranial nerves.
  - b. Name the maxillary and mandibular divisions of the trigeminal nerve.
2. List the teeth for which the following nerves supply sensation and give the injection site for each nerve: Anterior superior alveolar nerve, Middle superior alveolar nerve, Posterior superior alveolar nerve, Inferior alveolar nerve, Mental nerve, Incisive nerve
3. Describe a mandibular block and a mental block.

### **Blood Supply, Lymph Nodes, & Sinuses**

1. Identify and trace the routes of the blood vessels of the head and neck.
2. Discuss the importance of lymph nodes, including the following:
  - a. Explain the structure and function of lymph nodes.
  - b. Identify the locations of the lymph nodes of the head and neck.
  - c. Identify the locations of major lymph node sites of the body.
  - d. Discuss the importance of lymph nodes and the lymph system in dentistry.
3. Identify the paranasal sinuses and explain their function.

### **General Anatomy & Structural Units**

1. Define anatomy and physiology
2. Explain why understanding anatomy and physiology is important to the dental assistant
3. Identify the planes and associated body directions used to divide the human body
4. Identify the major body cavities and their components

5. Name and locate the two reference regions of the body and identify the structures in each region
6. Identify and describe the four levels of organization in the human body, including the following:
  - a. Describe the components of a cell
  - b. Explain differentiation of cells
  - c. Describe the different types of stem cells
  - d. Identify and describe the four types of tissue in the human body
  - e. Explain the difference between an organ and a body system

### **Body Systems**

1. Locate the eleven body systems
2. Explain the purpose, components, and functions of each body system
3. Describe the signs and symptoms of common body system disorders
4. Explain the relationship between systems of the body and the oral cavity

[Return to Top](#)

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