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| Course title and number | DH 3340 Biomedical Sciences II |
| Term | Spring 2024 |
| Meeting times and location | Meeting and exam times online Tues, 1:00-2:00 pm; Wed, 10:00 am-11:00 am; Thu, 9:00 am-11:00 am. Lab locations TBA. |

Course Description and Prerequisites

This course is designed to provide the dental hygiene student with a basic introduction to the structure of the human body, including its anatomy, biochemistry, histology, and physiology. Emphasis is placed on the structures of the head and neck region that surround the oral cavity. Completion of DH 3250 Biomedical Sciences I is required to take this course.

Learning Outcomes or Course Objectives

For most topics, instructional objectives are presented in the handouts for each lecture and as study questions at the end of each chapter in the textbook.

Learning Outcomes/Competencies:

- 2.1 - Apply critical thinking skills and evidence-based decision making to the practice of dental hygiene.
- 2.2 - Commit to self-assessment and lifelong learning in order to provide contemporary clinical care.
- 3.1 - Prepare for career opportunities within health care, industry, education, research, and other roles as they evolve for the dental hygienist.
- 3.3 - Contribute to the knowledge base of dental hygiene.
- 6.1 - Determine medical conditions that require special precautions or consideration prior to or during dental hygiene treatment.
- 6.2 - Perform an extraoral and intraoral examination of the patient including assessment of vital signs and radiographic examination, and distinguish normal from abnormal findings.
- 6.3 - Manage the patient at risk for a medical emergency, and be prepared to handle the emergency should it occur during an appointment.
- 6.4 - Recognize predisposing, etiologic risk factors, and life style choices that may require intervention to prevent disease.
- 6.5 - Analyze and interpret the assessment data to formulate a dental hygiene diagnosis related to and congruent with the diagnosis of the dentist and other health professionals.
- 6.6 - Determine the need for referral to the appropriate health professional.
- 8.2 - Control pain and anxiety during treatment through the use of accepted clinical techniques and appropriate behavioral management strategies.

Course Director and Administrator Information

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| Name | Phillip Kramer, Ph.D. |
| Telephone number | (214) 348-4247 |
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| Office hours | By appointment |

Office location Room 493

Instructor Information

Name Shannon Kramer, Ph.D.
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Name Yongbo Lu
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Name Lisa Mallonee, B.S., D.H., M.P.H.
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Name Mikhail Umorin
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Textbook and/or Resource Material

Principles of Anatomy and Physiology, 15th Edition, Tortora and Derrickson, 2016
ISBN #: 978-1-119-32064-7
(14th Edition - ISBN 9781118345009 is also acceptable)

Lecture outlines, handouts, and course manual

PowerPoint presentations and recordings from class meetings posted to Canvas

Grading Policies

Evaluation Criteria/Methods: Seven major exams worth a total of 520 points and ten quizzes worth a total of 100 points are scheduled during this semester. The lowest quiz score will be dropped, making 610 total points available. On these exams, students must be able to demonstrate their knowledge of material presented in: (1) the assigned textbook sections (where pertinent), (2) the lectures, and (3) the demonstrations. These written exams may consist of a combination of multiple choice, true/false, matching, diagram labeling and/or completion and short discussion type questions. The class performance may be curved up to 79% on major exams. Final grades will be based on the percentage of total points accumulated and all points that are included in the final grade must be included in the syllabus prior to the start of class.

Grading Scale

Letter Grading Scale:

A = 90-100
 B = 80-89
 C = 75-79
 D = 70-74
 F = <70

DH 3340 Course Schedule

Spring 2024

Tues, 1:00-2:00 pm; Wed, 10:00 am-11:00 am; Thu, 9:00 am-11:00 am

Note the time change from the regular schedule in red

| Date | # | Session Title/Topic | Instructor |
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| 1/09/2024 | 1 | Endocrine overview | Phillip Kramer |
| 1/10/2024 | 2 | Hormone actions on cells | Phillip Kramer |
| 1/11/2024 | 3 | Endocrinology: pituitary & hypothalamus | Phillip Kramer |
| | 4 | Thyroid & adrenals | Phillip Kramer |
| 1/16/2024 | 5 | Endocrinology, pancreas, Quiz 1 | Phillip Kramer |
| 1/17/2024 | 6 | Endocrinology, pancreas | Phillip Kramer |
| 1/18/2024 | | Glucose tolerance demo 8:00 am-10 am , Room 310 | Phillip Kramer |
| | | Glucose tolerance demo | Phillip Kramer |
| 1/23/2024 | 7 | Endocrinology, calcium & bone, Quiz 2 | Phillip Kramer |
| 1/24/2024 | 8 | Endocrinology, calcium & bone | Phillip Kramer |
| 1/25/2024 | 9 | Endocrinology of reproduction & pregnancy | Phillip Kramer |
| | | | Phillip Kramer |
| 1/30/2024 | 10 | Blood I | Shannon Kramer |
| 1/31/2024 | | Exam 1: Endocrines, (Lectures 1-9) 90 pts., 10:00 am | Phillip Kramer |
| 2/01/2024 | 11 | Blood II | Shannon Kramer |
| | 12 | Hemostasis I | Shannon Kramer |
| 2/06/2024 | 13 | Hemostasis II | Shannon Kramer |
| 2/07/2024 | 14 | Cardiovascular anatomy I, Quiz 3 | Umorin |
| 2/08/2024 | 15 | Cardiovascular anatomy II | Umorin |
| | | Cardiovascular anatomy demonstration | Umorin |
| 2/13/2024 | 16 | Vascular Anatomy | Umorin |
| 2/14/2024 | 17 | Cardiac electrophysiology | Lu |
| 2/15/2024 | | ECG recording demonstration | Lu |
| | 18 | Cardiac cycle, Quiz 4 | Lu |
| 2/20/2024 | 19 | Cardiac output | Lu |
| 2/21/2024 | | Exam 2: Blood/Heart, (Lectures 10-16) 70 pts., 10:00 am | Benson/ Umorin |
| 2/22/2024 | 20 | Hemodynamics | Lu |
| | 21 | Cardiovascular control | Lu |
| 2/27/2024 | 22 | Capillaries & veins | Lu |

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| 2/28/2024 | | Review, Quiz 5 | Lu |
| 2/29/2024 | 23 | Structure & function of the lung | Shannon Kramer |
| | 24 | Ventilation | Shannon Kramer |
| 3/05/2024 | 25 | Diffusion, blood flow & metabolism | Shannon Kramer |
| 3/06/2024 | | Exam 3: Cardio, (Lectures 17-22) 60 pts., 10:00 am | Lu |
| 3/07/2024 | 26 | Ventilation-perfusion relationships | Shannon Kramer |
| | 27 | Gas transport by the blood | Shannon Kramer |
| 3/11-15/2024 | | SPRING RECESS | Shannon Kramer |
| 3/19/2024 | 28 | Mechanics of breathing, Quiz 6 | Shannon Kramer |
| 3/20/2024 | 29 | Control of ventilation | Shannon Kramer |
| 3/21/2024 | 30 | Abnormal respiration | Shannon Kramer |
| | 31 | Tests of respiratory function | Shannon Kramer |
| 3/26/2024 | 32 | GI anatomy & GI-related organs | Lu |
| 3/27/2024 | | Exam 4: Respiration, (Lectures 23-31) 90 pts., 10:00 am | Shannon Kramer |
| 3/28/2024 | 33 | Stomach, pancreas & liver function I | Lu |
| | 34 | Stomach, pancreas & liver function II | Lu |
| 4/02/2024 | 35 | Intestinal digestion, Quiz 7 | Lu |
| 4/03/2024 | 36 | Intestinal absorption | Lu |
| 4/04/2024 | 37 | GI abnormalities | Lu |
| | 38 | Vitamins | Mallonee |
| 4/09/2024 | | GI Review | Lu |
| 4/10/2024 | | Exam 5: GI System, (Lectures 32-37) 60 pts., 10:00 am | Lu |
| 4/11/2024 | 39 | Enzymes & coenzymes, Quiz 8 | Shannon Kramer |
| | 40 | Carbohydrate metabolism | Shannon Kramer |
| 4/16/2024 | 41 | Diet history | Mallonee |
| 4/17/2024 | 42 | Nutrition & health | Mallonee |
| 4/18/2024 | 43 | Lipid metabolism | Shannon Kramer |
| | 44 | Protein metabolism | Shannon Kramer |
| 4/23/2024 | 45 | Anatomy of kidney | Phillip Kramer |
| 4/24/2024 | 46 | Tubular reabsorption I | Phillip Kramer |
| 4/25/2024 | 47 | Integration of metabolic pathways | Shannon Kramer |
| | | Review, Quiz 9 | Shannon Kramer /Mallonee |
| 4/30/2024 | 48 | Tubular reabsorption II | Phillip Kramer |
| 5/01/2024 | | Exam 6: Metabolism, (Lectures 38-44, 47) 80 pts., 10:00 am | Shannon Kramer /Mallonee |
| 5/02/2024 | 49 | Tubular reabsorption & secretion | Phillip Kramer |
| | 50 | Urine concentration | Phillip Kramer |
| 5/07/2024 | 51 | Water balance, Quiz 10 | Phillip Kramer |
| 5/08/2024 | 52 | Acid-base balance | Phillip Kramer |
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| 5/14/2024 | | Exam 7: UT System, (Lectures 45, 46, 48, 49-52) 70 pts. 10 am | Phillip Kramer |
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Other Pertinent Course Information

Laboratory/Clinic Policies and Procedures: N/A

Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Associate Dean for Academic Affairs in charge of Disability Services, Room 514, or call 214-828-8208 for additional information.

Academic Integrity

Another characteristic of a professional is to uphold the highest standards of personal and intellectual ethical conduct. As a student in this course, the faculty expect you to adhere to such standards of academic integrity, which include not being a participant in cheating or misrepresentation of facts, nor withholding information if you know of such acts being committed. While the faculty will take steps to minimize cheating on exams, it is your responsibility as a professional to not only refrain from such activities but to report those who participate in them.

“An Aggie does not lie, cheat or steal, or tolerate those who do.”

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the honor Code, to accept responsibility, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System. Details are found at <http://aggiehonor.tamu.edu>.