COURSE OUTLINE OF RECORD
Number: DART G290  TITLE: Digital Design for Human Anatomy

ORIGINATOR: Steven Lustig  EFF TERM: Fall 2016
FORMERLY KNOWN AS: DATE OF
OUTLINE/REVIEW: 02-02-2016
CROSS LISTED COURSE: TOP NO: 0614.00

SEMESTER UNITS: 3.0
HRS LEC: 54.0  HRS LAB: 0.0  HRS OTHER: 0.0
CONTACT HRS TOTAL: 54.0
STUDY NON-CONTACT HRS RECOMMENDED: 108.0

CATALOG DESCRIPTION:
An introductory course in basic human anatomy that is paired with a Digital Design Lab (DART G290L),
covering the major organ systems using state of the art 3D software as a learning tool. Material covered in
this course will then be applied to anatomical digital designs students will be creating in DART G290L.
This course is designed for students who have an interest in digital or biomechanical design,
communications and biological technology careers. Will not satisfy transfer or credit requirements for
biological science majors or paramedical biology majors (nursing, x-ray technicians, physicians assistant,
physical therapist, occupational therapists, chiropractic, dental hygiene, pharmacy) and physical
education majors.

JUSTIFICATION FOR COURSE:

PREREQUISITES:
• DART G195: Introduction to Biotechnology Media Design with a minimum grade of C or better

COREQUISITES:
• DART G290L

ADVISORIES:
• BIOL G100: Introduction To Biology

ASSIGNED DISCIPLINES:
Biological sciences

MATERIAL FEE: Yes [ ] No [X] Amount: $0.00

CREDIT STATUS: Noncredit [ ] Credit - Degree Applicable [X] Credit - Not Degree Applicable [ ]

GRADING POLICY: Pass/No Pass [ ] Standard Letter [X] Not Graded [ ] Satisfactory Progress [ ]

OPEN ENTRY/OPEN EXIT: Yes [ ] No [X]

TRANSFER STATUS: CSU Transferable[X] UC/CSU Transferable[ ] Not Transferable[ ]

BASIC SKILLS STATUS: Yes [ ] No [X]  LEVELS BELOW TRANSFER: Not Applicable

CALIFORNIA CLASSIFICATION CODES: Y - Not Applicable

NON CREDIT COURSE CATEGORY: Y - Not applicable, Credit Course

OCCUPATIONAL (SAM) CODE: C

REPEATABLE ACCORDING TO STATE GUIDELINES: No [X] Yes [ ] NUMBER REPEATS:

REQUIRED FOR DEGREE OR CERTIFICATE: No [X] Yes [ ]

GE AND TRANSFER REQUIREMENTS MET:
COURSE LEVEL STUDENT LEARNING OUTCOME(S) Supported by this course:

1. Articulate anatomical concepts learned during lecture via presentations which contain designs that are created in DART G 290L.
2. Explain the interactions between various levels of organization in the human body.
3. Name, identify, and describe microscopic and macroscopic structures of the human body along coronal, midsagittal, sagittal, transverse, and oblique planes in order to render three-dimensional images in DART G 290L.
4. Place a structure of anatomical significance in proper orientation (location) for normal body function.
5. Name and describe the levels of organization in the human body.

COURSE OBJECTIVES:
1. Identify and detail the structures of the major organs and organ systems of the human body.
2. Evaluate the relationships between the various levels of organization within each system.
3. Evaluate the relationship between the structure and function of human organs.
4. Identify and detail the anatomy of the cellular structures, tissue structures, and organ structures of major organ systems.
5. Evaluate the contribution of each organ system to the function of the organism.
6. List the structures and basic mechanisms (processes) by which each organ system operates.

COURSE CONTENT:

LECTURE CONTENT:

Anatomy for Digital Arts COR

This course outline is meant to compliment the digital design projects students will be assigned in DART G290L.

I. Introduction to Human Anatomy and Digital Design

II. Molecular structure Anatomy

1. Water
2. DNA
3. Designs of these structures will be created in DART G290L

III. Cell Anatomy

1. Plasma Membrane
2. Membrane bound organelles
3. Non-Membrane bound Organelles
4. Designs of these structures will be created in DART G290L
IV. Tissue Anatomy

1. Epithelial Tissue
2. Connect Tissue
3. Muscle Tissue
4. Nervous Tissue
5. Designs of these structures will be created in DART G290L

V. Integumentary System

1. Epidermis Anatomy
2. Dermis Anatomy
3. Hypodermis Anatomy
4. Designs of these structures will be created in DART G290L

VI. Skeletal System and Selected Articulations

1. Axial Skeleton Anatomy
2. Appendicular Skeleton Anatomy
3. Joint Anatomy
4. Designs of these structures will be created in DART G290L

VII. Muscular System

1. Axial Muscle Anatomy
2. Appendicular Muscles Anatomy
3. Sarcomere Anatomy
4. Designs of these structures will be created in DART G290L

VIII. Nervous System

1. Brain Anatomy
2. Spinal Cord Anatomy
3. Peripheral Nervous System Anatomy
4. Designs of these structures will be created in DART G290L

IX. Cardiovascular System Anatomy

1. Blood Cell Anatomy
2. Heart Anatomy
3. Designs of these structures will be created in DART G290L
X. Respiratory System

1. Upper Respiratory System Anatomy
2. Lower Respiratory System Anatomy
3. Designs of these structures will be created in DART G290L

XI. Digestive System

1. Gastrointestinal Tract Anatomy
2. Stomach
3. Designs of these structures will be created in DART G290L

XII. Urinary System

1. Kidney Anatomy
2. Urinary Tract Anatomy
3. Designs of these structures will be created in DART G290L

XIII. Reproductive System

1. Male Reproductive System Anatomy
2. Female Reproductive System Anatomy
3. Designs of these structures will be created in DART G290L

METHODS OF INSTRUCTION:

A. Lecture:

INSTRUCTIONAL TECHNIQUES:

Instructor will be using power point, whiteboard, and 3D imaging to present material to students. Self-assessment activities such as Q & A, exit cards, and group discussions/activities will also take place.

COURSE ASSIGNMENTS:

Out-of-class Assignments

Students will be completing worksheet packets which consist of defining important terminology and labeling anatomical structures.

Group discussions and activities will take place throughout the semester which require preparation at home. Such activities will require students to become “experts” in certain areas of material and then present their fellow classmates this material. Students will also work together to create visually stimulating representations of the text during lab which they will use for presentations in lecture.

Writing Assignments

Students will be assigned critical thinking essays every unit that will test their ability to connect concepts learned throughout multiple chapters regarding human anatomy and biotechnology.

Reading Assignments
Students will be required to read textbook material that is associated with each day’s lecture prior to lecture.

METHODS OF STUDENT EVALUATION:
Midterm Exam
Final Exam
Short Quizzes
Written Assignments
Essay Examinations
Projects (ind/group)
Oral Presentations

Demonstration of Critical Thinking:

Students will be assigned critical thinking essays throughout the semester that will test their ability to connect concepts learned throughout multiple chapters and apply this knowledge to the biotechnology community. These essays will be peer evaluated and turned in for a pre-assessment to the instructor prior to submission for a grade as an assignment or for testing material.

Other forms of assessment such as exams (multiple choice, fill-in-the-blank, labeling, drawing), group projects, and presentations will also be used as opportunities for students to demonstrate their critical thinking skills.

Required Writing, Problem Solving, Skills Demonstration:

As mentioned, students will be assigned critical thinking essays as well as worksheet packets (peer evaluated and then graded by instructor), group projects (graded by instructor based on criteria made available to students), individual presentations (graded by instructor based on criteria made available to students), and examinations (graded by instructor) that will allow them to demonstrate their writing, problem solving, and skills obtained.

TEXTS, READINGS, AND RESOURCES:

TextBooks:

LIBRARY:

Adequate library resources include:

Comments:

Attachments:

Attached Files