

De Anza College **Biology 40 C Human Anatomy and Physiology** Spring 2018

Instructor: Nora Balabanian, MA, MD

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Lab: Monday or Wednesday 9:30 am - 12:20 pm Room SC 2106

Lecture: Monday and Wednesday 12:30 pm – 2: 20 pm Room MLC103

Office Hours: Monday and Wednesday 8:15am- 9:15am Science Center SC1232 second floor

Introduction

This 5-unit course is the third of a three part series of anatomy and physiology classes, with emphasis on basic principles in the study of the endocrine system, lymphatic and immune systems, the digestive system, the urinary system, the body fluids and electrolytes, the reproductive system, human embryological development and basic knowledge of inheritance, genetics and genetic engineering. Since this course is designed for students who will pursue a career in allied health sciences, I will incorporate case studies and present medical diseases from real world scenarios.

The Laboratory procedures will be correlated with the lecture topics when possible.

Student Learning Outcomes (SLOs): BIOL. 40C

- **Student Learning Outcome:** Predict the homeostatic responses of the endocrine system to internal and external changes or stimuli.
- **Student Learning Outcome:** Appraise the role of the lymphatic and immune system in the body's defense to disease.
- **Student Learning Outcome:** Generalize the way in which nutrients are processed to perform various energetic and structural functions in the body.
- **Student Learning Outcome:** Integrate the structure and function of the kidneys in the regulation of fluid, electrolyte, and pH balance.

Prerequisite

BIOL 40A and 40B, with a grade of C or better

Required Texts and Materials

1. Textbook: Principles of Anatomy and Physiology, Tortora & Derrickson, Wiley, 15th Edition. An E version of this textbook is available through Course Smart.
2. Laboratory Manual: Human Anatomy & Physiology Laboratory Manual, Marieb & Mitchell, Fetal Pig 12th Edition. Earlier editions for both textbooks are acceptable. I encourage you to have both textbooks, if you have any difficulty in obtaining them, please come and see me.
3. Scantrons Long #s 2052, 882-ES for the exams, Scantrons Short #32020-C for the quizzes. #2 pencil and a good eraser. Make sure the Scantrons are not wrinkled.
4. Colored Pencils.
5. A Positive Attitude "I can succeed in 40C as I did in 40 A and B, I will do my best, and I will use the Information I acquire for my personal and professional growth.

Other resources and Readings

1. Arnold's Glossary of Anatomy
2. Anatomy Drill and Practice Excellent site from Wiley to aid in lab content.
3. Virtual Anatomy lab
4. Histology Quizzes
5. Get body smart interactive 3D tutorial for anatomy

Attendance

Lectures: You are expected to fully attend every lecture and lab meeting regularly and on time. While the student's attendance record is not part of his/her grade, the workload is designed to make full use of the hours allocated for this class. Most of my exam questions are drawn from the lectures and I emphasize the key concepts during my lectures. Come prepared and participate. From my experience, I have noticed that most of the students who get A or A+ are those who always come prepared and on time. You are responsible for all material and quizzes missed in any absence. Lecture quizzes cannot be made up.

Labs You are expected to attend every lab session. Labs cannot be made up.

Missing lab without prior notice or justified legitimate emergency reason that can be verified and documented, such as a doctor's note, will cost you the points of the worksheet done during class. You also will miss lab quiz points if you miss the lab quiz.

Any student who does not attend lab after or before a lab quiz will be considered to have missed that lab. I take attendance during the lab.

I have the right to drop

1. Any student who does not attend the first day of the class (without prior notice), to accommodate wait listed students.
2. Any student who does not attend all class sessions between the first days of the class and the Census day on April 23.
3. Any student who has missed four lecture periods or two lab periods without any documented and legitimate reason.
4. No drops will be processed after Friday, June 1, 2018 (last day to drop with a W).
5. If a student quits or if I drop a student for multiple absences after this date the student's final grade will reflect the grade the student has earned until the day of the drop.

I can't emphasize enough the importance of attendance, and this is for your own benefit. I want you all to get the most out of Biol.40 C with decent grades. I am available to help you succeed. Please contact me and come to my office hours.

Student Responsibilities Classroom protocols, policies and expected behavior

Professional behavior, conduct, language and communication (verbal and nonverbal) is expected at all times.

1. I expect each student to be present and punctual at every scheduled class.
2. Please turn off your cellular phones during the class. Anyone disturbing the class by a cell phone will be asked to leave the lecture/ exam immediately.
3. Please refrain from talking during the lectures, however questions are encouraged.
4. Turn in the completed assignment on time to count for your grade.
5. Keep track of your progress and grades on [CANVAS](#)
6. Check [CANVAS](#) @ <https://deanza.instructure.com> regularly for updates and messages.
7. If you miss a lecture or a lab you are still responsible for any material discussed or assignments given.
8. In lab close-toed shoes are an absolute must. You will not be allowed in lab with flip-flops, sandals or open toed shoes.
9. It is the student's responsibility to Add or Drop the class per school academic calendar for the current quarter.
<http://www.deanza.edu/calendar/springdates.html>
Eating and drinking are not allowed in lab. If caught with food or drinks you will be asked to leave that lab. Food is not allowed in the lecture hall, but drinks are.
10. It is the Student's responsibility to clean up the lab bench he/she used after every lab.
11. Disruptive behavior will not be tolerated. Any incidence where the faculty member feels they are or any class member is threatened; the faculty member will immediately call security and the Dean. Administrative follow up will occur.
<http://bhs.deanza.edu/StudentHandbook.pdf>
13. I will deduct points from the 15-point professional conduct and participation grade, from any student who does not abide by the above-mentioned rules.

Examinations, Assignments, Grading Information and Exam Policies

Lecture Exams: There will be 2 Midterm examinations and a non-comprehensive Final exam. All examinations are multiple-choice and graded by Scranton. Questions for the lecture exams are drawn from the material presented during the lectures in the form of multiple choice, true and false and matching questions.

You should write your CWID on the exam booklet and it must be returned to me after completion of the exam along with the Scranton. If you do not return the exam booklet at the end of the exam period with your name or CWID marked on it, you will receive a grade of 0% for that exam. I will retain the exams, but they will be available for your review during office hours or by appointment.

The material covered in each exam will be announced in class and on [CANVAS @ https://deanza.instructure.com](https://deanza.instructure.com)

Also, it is tentatively posted in the lecture schedule.

Final Examination is non-cumulative, Wednesday, June 27 @ MLC103, 11:30 am-1:30pm

Lab exams: there will be two lab exams 100 points each. (one Midterm and one Final). Questions for the lab exams are obtained from materials covered during the lab, classroom experiments, lab models, power-points, lab notes, discussions, paperwork passed and homework assignments.

One hour is allocated for each of the four groups. A sign-up sheet will be generated in due time.

Final Lab Exam is non-cumulative, Wednesday June 20 in the lab, 10:00am-2:00pm

Quizzes: There will be 5-6 quizzes during the quarter, announced or unannounced, during both lab and lecture. The quizzes may cover material presented in lab or lecture, the questions in the quiz will prepare you for the upcoming exam. Lab quizzes are usually announced, and the questions are obtained from the homework/assignments. There may be unannounced quizzes during the lectures.

Assignments: Assignments/homework must be turned in completed and on time to count towards for grade. The assignments will be posted in the assignment section on [CANVAS @ https://deanza.instructure.com](https://deanza.instructure.com). Please bring a printed copy to the lab. The assignment is due the next lab meeting unless otherwise indicated. However, part of the homework that includes lab reports and drawing histology slides from the microscope, should be completed during the same lab period, I need to check your work and sign it before you leave the lab. Assignments with no signatures will not be accepted, and if you have missed the lab without a legitimate reason you lose your grades for the "in lab" part of the lab assignment. Late assignments may be penalized at 10 % per day late.

Note that I might post a pre-lecture or a prelab reading as an assignment/homework and quiz you from the material assigned.

Exam Policies

1. Scantrons long #s 2052, 882-ES, Scantrons short #32020-C and a #2 pencil.
2. Be on time. No late comers allowed once the first student leaves the classroom.
3. Turn cell phones/pagers off during the exam
4. Place all your belongings (backpacks, books, cell phones) where the instructor tells you.
5. Use the restroom before the exam, you are not allowed to leave the classroom once the exam has started. If you leave the classroom I will assume that you have finished your exam and collect your Scantron.
6. Zero tolerance for Cheating. Cheating will result in a zero on the exam and disciplinary action by the department and college. Please see the paragraph below on cheating and plagiarism.
7. Make up examinations are given only if the student has a reasonable excuse and with prior notice, such as an interview or with a legitimate unexpected emergency that can be documented. A student can make up only one exam per quarter. Make up exams must be taken no later than one week from the original exam date. No early make up exams are given. Make up exams may have different questions and are of all-essay type questions.
8. Please do not schedule appointments, interviews on an exam or lab time if possible.
9. If space permits, students will alternate seats for exams.
10. You should write your CWID on the exam booklet and it must be returned to me after completion of the exam along with the Scantron. Missing test booklets, Scantrons or booklets without a name will result in automatic Zero!

Grading Information

You will receive a grade for each of the exams, the final exam, homework and quizzes. Grades are calculated by weighting the scores as defined below. I do not curve grades.

2 lecture exams@ 100 points	= 200 points
1 lecture final	= 100 points
2 lab exams @ 100 points	= 200 points
6 Lab activities	= 60 points
5 Quizzes	= 75 points
Professional conduct	= 15 points
Total	= 650 points

Letter grades are determined based on the following scale.

>96%	A+
92-95%	A
89-91%	A-
85-88%	B+
82-84%	B
79-81%	B-
73-78%	C+
65-72%	C
55-64%	D
<55	F

- Letter grades (with +/-) will be determined using the standard rounding rules, where .1-.49 is rounded down, .5-.99 is rounded up.
- Quiz and exam grades are not curved.
- Late assignments may be penalized at 10 % per day late.
- Extra credit options are not available.
- The scale above is tentative and is subject to change.
- De Anza College does not give C- grade.

Study Tips and Learning Resources

The course syllabus (green sheet), power point lectures, notes which accompany lectures, announcements and other resources will be posted on [Canvas @ deanza.instructure.com](https://deanza.instructure.com). This is a 5-unit course. As a general rule, it is expected that each unit of a college level course will require three hours of your study time per week. This means that you will need to spend at least 15 hours per week studying for this course. Some students will require more time and others will require less.

- ✓ I strongly encourage you to attend the lectures regularly and on time, take notes and start studying soon after the lecture (best thing that you can do for your own accomplishment and success).
- ✓ I want you to understand the concepts in Biol.40 C very clearly. If you have any doubts or confused in a concept, PLEASE do not hesitate to ask questions, or come to my office during office hours. I welcome questions and welcome inquisitive students. **It is my goal and desire to help you learn and succeed.**
- ✓ Try to study the exams in advance and form study groups and visit my office hours for any questions and concerns
- ✓ Always relate the anatomy of an organ or system, or the kind of cell to its function to which it is designed in the body. This will help you understand and learn the complex behavior of cell, organs and system in the context of their physiology. Also, it will help you to learn rationally and not depend fully on memorization.
- ✓ Remember always that I like to be a Reach and Teach teacher. I want you to reach out to me for all the issues that affect your academic performance here at De Anza College.

Academic Integrity

Cheating and plagiarism are strictly prohibited in the class and campus wide. All Homework and exams should be your individual work. You can work on your assignment together with other students; however, I expect answers to be written individually, unless in a group session). There is a zero tolerance policy for any cheating, plagiarism, or behavior that would lead a reasonable person to assume that these actions have taken place. Please read on academic integrity in [Academic Integrity @ http://www.deanza.edu/studenthandbook/academic-integrity.html](http://www.deanza.edu/studenthandbook/academic-integrity.html).

These policies and standards apply within this Division and will be enforced. Please read all College policies [de Anza policies @ https://www.deanza.edu/policies/dueprocess.html](https://www.deanza.edu/policies/dueprocess.html).

In the handbook you will find descriptions of cheating and plagiarism: "Cheating is the act of obtaining or attempting to obtain credit for academic work through the use of dishonest, deceptive or fraudulent means... Plagiarism is representing the work of someone else as your own" (and the Student Handbook gives many detailed examples).

"It is the students' responsibility to know what constitutes academic dishonesty...When students are caught cheating or plagiarizing, a process is begun which may result in severe academic and administrative consequences." The consequences can include "receiving a failing grade on the test, paper or exam, and possible probation or suspension"

Disruptive Behavior:

Basic definition is: a disruptive person is one, who through his/her behavior, speech or actions, interferes with academic activity.

The college will enforce all policies and procedures set forth in the *Standards of Student Conduct* in **De Anza College Catalog @ <http://www.deanza.edu/publications/catalog/>**

Any student disrupting the class may be asked to leave that class. Administrative follow-up may result.

If disruptive behavior occurs in a class, "the instructor may remove the student from his or her class for that day and the next class meeting if the student interfered with the instructional process," and the behavior will be reported to the Office of Student Development for possible disciplinary action/reprimand/suspension.

In addition the students are required to access and read the De Anza College Catalog <http://www.deanza.edu/publications/catalog/> and the student handbook. An on-line copy is available at <http://bhs.deanza.edu/StudentHandbook.pdf> . This handbook provides useful information on how you can improve your chances of success in classes within this department and division. It also outlines expected behavior. The material and expectations contained in this handbook are part of my contract with you and will be applied during this course.

The Science Resource Center

This resource center has a variety of materials and media available as well as staff assistance. Some of these materials include: Interactive CDs, microscope slides (if provided by the instructor) posters, anatomical models, and computers. The center is open Monday through Friday.

Please check the web site www.deanza.edu/bhes/src.html for hours or call 408-864-8921.

Need Tutoring?

Free Tutoring is available both in person and online. Phone number 408-864-8682

Visit the Student Success Center: <http://deanza.edu/studentsuccess> and "smart thinking" Online Tutoring with Smarthinking is now available for free for De Anza students inside My Portal. <http://www.deanza.edu/studentsuccess/online tutoring/>

Accommodation

This course is accessible to students who fall under the "Americans with Disabilities Act"

"When a student with a verified and eligible disability meets with their DSPS Counselor, they will agree upon the appropriate academic adjustments, auxiliary aids, and services (accommodations) that the student will need in their specific classes. The faculty and staff of the Division of Biological, Health and Environmental Sciences fully support the District policy of reasonable accommodations for students with disabilities.

A student requesting academic accommodation under the Americans with Disability Act should apply according to Board Policy 4647-A. Assistance is available through the:

1-Disabled Student Programs and Services (DSPS). 408-864-8753. Disability services <http://deanza.edu/dsps>.

2-EDC, educational Diagnostic Center phone number (408)864-8838. Assists students in discovering their learning styles, academic strengths and weaknesses and whether or not they have a learning disability.

If you need a Test accommodation verification form (also known as TAV form) you can obtain it from DSPS or EDC.

Students are expected to give a five- day notice of the need for accommodation.

Please come see me after the lecture or during my office hours for all your concerns regarding your academic performance. It is my duty and my pleasure to "reach and teach" you all, and partner with you for your academic success.

Other services

Please read the services offered to all the students at

<http://deanza.edu/student-services>

<http://deanza.edu/student-success>

Also, always remember that I am your instructor, and will try my best to help you succeed. Contact me for all your academic needs in Biol.40C

Drop Policy and important dates and deadlines

Students are responsible for dropping a class and must fill out the appropriate paperwork by the deadline below to officially drop the course.

It is your responsibility as a student to add or Drop the class per school academic calendar for the current quarter.

<http://www.deanza.edu/calendar/springdates.html>. Failure to drop by April 22 will result in a W. No drops will be processed after June 1 (last day to drop with a W).

Exam Dates

- | | | | |
|------------------------|-----------|----------|---|
| 1. Lecture Midterm I | Monday, | April 30 | |
| 2. Lab Practical | Wednesday | May 2 | |
| 3. Lecture Midterm II | Wednesday | May 30 | |
| 4. Final lab Practical | Wednesday | June 20 | 10:00am-2:00pm @SC2106 |
| 5. Final lecture Exam | Wednesday | June 27 | 11:30am-1:30pm @MLC103 <u>Final Exam Schedule</u> |

Make up examinations will not be given for the finals.

Early exams and quizzes are not given

Other Important Dates

1. 4/21/2018 last date to add class
2. 4/22/2018 last date to drop class for a full refund and without a W
3. 6/1/2018 last date to drop class with a W
4. 5/28/2018 Monday, Memorial Day Holiday, campus closed

Course Objectives

- A. Examine and describe the location, anatomy, and function of the endocrine glands.
- B. Describe hormone action, hormone classification, and regulation of hormone secretion.
- C. Describe the hypothalamic-pituitary axis and investigate the endocrine organs it regulates.
- D. Examine and describe the gross and microscopic anatomy of the lymphatic system and relate morphology to function.
- E. Investigate and describe the non-specific and specific immune responses.
- F. Examine, compare, and contrast the histologic and gross anatomy of the digestive tract and its accessory organs.
- G. Distinguish the contributions of each of the organs of the digestive system to the processes of digestion and absorption.
- H. Summarize the major metabolic pathways and their interrelations.
- I. Examine and describe the gross and microscopic anatomy of the urinary system.
- J. Investigate and analyze the process of urine formation and its role in the maintenance of homeostasis.
- K. Describe the physiological importance of the main electrolytes and of proper acid/base balance.
- L. Examine and describe the gross and microscopic anatomy of the reproductive system.
- M. Distinguish the role played by each of the organs of the reproductive system in the process of reproduction.
- N. Investigate the hormonal control of reproduction.
- O. Describe the events of human development in-utero and shortly after birth.
- P. Study and predict patterns of inheritance.
- Q. Investigate the molecular basis of genetic disorders.

Biol. 40 C Human anatomy and Physiology Spring Quarter 2018 Tentative course Schedule

This Schedule is tentative and is subject to change with advance notice. Changes will be announced in class and on [CANVAS](#). Reviews for the exams are not guaranteed during the lecture. I will do my best to review as time allows. Reviews and study guides will always be posted on [CANVAS @ https://deanza.instructure.com](#)

Week	Date	Lectures-Chapters from Tortora/ Wiley	Lab Exercises from Pearson
1	4/9	Ch.18 The Endocrine System	Lab 1: Endocrine system
	4/11	Ch.18 The Endocrine System	Lab 1: Endocrine system
2	4/16	Ch.22 The Lymphatic System and Immunity	Lab 2: The lymphatic system/ Quiz 1
	4/18	Ch.22 The Lymphatic System and Immunity	Lab 2: The lymphatic system/ Quiz 1
3	4/23	Ch.24 The Digestive System	Lab 3: The Digestive system/ Quiz 2
	4/25	Ch. 24 The digestive System	Lab 3: The Digestive system/Quiz 2
4	4/30	Lecture exam 1 (Ch. 18,22,24)	Take home lab
	5/2	Lab exam 1 (labs 1,2,3) No lecture	Take home lab
5	5/7	Ch. 25 Nutrition and Metabolism	Lab 4: Nutrition Lab
	5/9	Ch. 25 Nutrition and Metabolism	Lab 4: Nutrition Lab
6	5/14	Ch. 26 The Urinary System	Lab 5: Urinary system 4/Quiz 3
	5/16	Ch. 26 The Urinary System	Lab 5: Urinary system 4/Quiz 3
7	5/21	Ch. 28 The Reproductive System	Lab 6: Reproductive system
	5/23	Review for lecture exam (Ch. 25, 26), Lab Quiz 4	Lab 6: Reproductive system
8	5/28	Memorial Day/ No class	Memorial day/ No class Take home lab
	5/30	Lecture exam 2	Take home lab
9	6/4	Ch. 28 The Reproductive System	Lab 7: Reproductive system
	6/6	Ch. 28 The Reproductive System, Lab Quiz 5	Lab 7: Reproductive system
10	6/11	Ch. 29 Development and Inheritance	Lab 8: Development and inheritance/ Review for final /
	6/13	Ch. 29 Development and Inheritance	Lab 8: Development and inheritance/ Review for final
11	6/18	Ch. 27 Fluid electrolyte and acid base homeostasis Review for Final lecture exam	Open Lab/Review
12	6/20	Lab Final Exam (labs 4,5,6,7,8) in the lab, No lecture	
	6/27	Lecture Final Exam (Ch.27,28,29) 11:30-1:30 @ MLC103	

