

# BMS 310 – ANATOMY FOR THE HEALTH PROFESSIONS

## COURSE INFORMATION & LECTURE/LAB SCHEDULE

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### **Required Prerequisite for BMS 310**

- One course in college-level biology.

If you have questions regarding your academic background/preparedness before you register for BMS 310, please contact instructor Mark Frasier.

### **Course Textbooks/Instructional Materials**

- Most required materials **must** be purchased through the [CSU Bookstore](#).
- The required text *Essential Clinical Anatomy* (Moore, 5<sup>th</sup> edition) and the optional, but **highly** recommended, atlas may be purchased from the retailer of your choice.

### **Required Textbooks/Software**

1. *ESSENTIAL CLINICAL ANATOMY* (MOORE, 5TH edition)
2. *HUMAN (GROSS) ANATOMY LECTURE NOTES* (FRASIER)
3. *VIRTUAL EDGE: TEXT W/SOFTWARE\* – HUMAN PROSECTON GUIDE* (FRASIER)

\*An information card with a product key is included in the *VIRTUAL EDGE: TEXT W/SOFTWARE*. The information card will direct you to a specific website, to enter the product key, and to download the software to your computer.

### **Optional Textbook**

The purchase of an atlas is optional but is **highly** recommended. Choose *one* of the following:

1. *ATLAS OF HUMAN ANATOMY* – (NETTER)
2. *COLOR ATLAS OF ANATOMY* (ROHEN/YOKOCHI)

### **Important Dates/Course Registration Confirmation**

Important dates associated with the course (begin and end dates, drop and withdrawal deadlines) can be found in the course registration confirmation that you should have received 24-48 hours after you registered for BMS 310. Please check your CSU email and your spam and junk folders for this information. If you are still unable to locate your course registration confirmation, you may request a copy by sending your name, CSU ID number, and the name of the course to the following address:

[csu\\_online\\_registration@Mail.Colostate.edu](mailto:csu_online_registration@Mail.Colostate.edu)

# COURSE INFORMATION

**ALL COURSEWORK FOR BMS 310 IS COMPLETED IN CANVAS (COLORADO STATE UNIVERSITY'S LEARNING MANAGEMENT SYSTEM)**

## Accommodations

Students who believe that they may need accommodations in this class are encouraged to contact [Resources for Disabled Students](#) (RDS) as soon as possible to ensure that accommodations are implemented in a timely manner. For consideration of exceptions outside the scope of RDS, please contact the [University Testing Center](#).

## How to Access BMS 310

1. Create your [CSU Electronic Identification](#) (eID)
2. Create your CSU password for the course
3. Log in to [Canvas](#)

## Course Description and Goals

BMS 310 presents the gross anatomy of the human body from a regional perspective which utilizes clinical applications as a basis for anatomical understanding. Other disciplines such as physiology, embryology, histology, and anthropology will also be included when they assist in anatomical understanding.

The course has been designed to fit the needs of students preparing for careers in health-related fields including: Fitness and Athletics; Pre-Medicine; Pre-Physical and Occupational Therapy; Pre-Physician Assistance; Nursing; Bio-Education (teachers!), and students who are simply interested in their own physical construction.

The **LECTURE** section of the course includes 42 class lectures that are delivered via streaming video in Canvas. Each lecture is 40-50 minutes in length. The lectures were recorded in a live class of anatomy students at Colorado State University.

Lectures within the four regions of study include the following topics:

- The skeletal, muscular, vascular, and nervous system components of the upper and lower extremities.
- The vascular, nervous, and organ system components of the thorax, abdomen, and pelvis.
- The musculature and vasculature of the head, neck, and back.
- An overview of cranial nerves and of the central nervous system.

The **LAB** section of the course includes the following subject matter:

- Computer-facilitated study using *The Visible Human Dissector (VHD)* software and *The Virtual Edge Human Prosection Guide* software. An emphasis is placed on identifying relationships and locations of anatomical structures and practicing anatomical vocabulary.

**Importantly, the lectures and labs are intimately correlated and inseparable.**

# EXAM & GRADING POLICIES

## Lecture Exams

**There are four lecture unit exams.** Each exam is worth 50 points for a total of 200 points. Each unit exam will emphasize the material in that unit. Questions will be taken from the video lectures. These are closed-book exams, are taken using Canvas, and are proctored by ProctorU.

## Lab Exams

**There are four laboratory unit exams.** Each exam is worth 50 points for a total of 200 points. Questions will include the identification of tagged structures on *The Visible Human Dissector* from that unit. These are closed-book/closed-software exams, are taken using Canvas, and are proctored by ProctorU.

## Lab Assessments

**There are 12 laboratory assessments.** Each assessment is worth either 4 or 5 points for a total of 50 points. Questions will be taken from the syllabus, *The Visible Human Dissector*, *The Virtual Edge*, and/or the laboratory exercise. These assessments should be taken after each corresponding laboratory exercise. These assessments are open-book, open-note, open-software, are taken using Canvas, and are not proctored.

## Optional Comprehensive Final

**An optional, final comprehensive lecture exam is available for students whose overall grade may be improved by taking the exam.** The optional, final comprehensive exam score (if higher) can replace any one of the four lecture unit exams. The exam is taken using Canvas, is proctored by ProctorU, and is closed book. If the optional, final comprehensive exam score is lower than the lowest lecture exam score, it will not be used to replace one of the four lecture unit exams.

## Final Grade Computation

Your final grade will be computed by using the grades from the four unit lecture exams (200 points), the four unit laboratory exams (200 points), and from the 12 open-book assignments (50 points) for a total of 450 points.

You can determine your overall grade at any time during the semester by dividing your actual points by the total points possible to that date. A grading curve is not used in BMS 310.

Letter grades will be calculated as follows:

<b>A = 90% - 100%</b>	<b>(405 points and above)</b>
<b>B = 80% - 89%</b>	<b>(360 – 404 points)</b>
<b>C = 70% - 79%</b>	<b>(315 – 359 points)</b>
<b>D = 60% - 69%</b>	<b>(270 – 314 points)</b>
<b>F = Below 60%</b>	<b>(269 points and below)</b>

**NOTE: No points are given for practice exams or for completing the academic integrity agreement found in Canvas.**

# EXAM PROCTORING

All exams in BMS 310 will be proctored in real time by a live proctor through ProctorU.

Colorado State University utilizes proctored exams to ensure academic integrity.

CSU has contracted with ProctorU to provide students with convenient, online exam proctoring. Proctor U is provided to you at no cost, is simple to use, and allows you to take all of your exams at home or at any other location that offers a high-speed internet connection and a quiet, interruption-free environment. Please be aware of the following points:

- 1. Exams in BMS 310 must be taken via ProctorU.**
- 2. If you do not possess the necessary system requirements or if you are not able to utilize ProctorU, you cannot register for BMS 310.**

Please review the following system requirements to ensure that your computer will work with ProctorU:

## ProctorU System Requirements

	<u>Minimum</u>	<u>Recommended</u>
Web camera	640 x 480 resolution	1280 x 720 resolution
PC users	Windows Vista	Windows 10 (10 S is not supported)
Mac users	Mac OS X 10.5 or higher	Mac OS X 10.10 Yosemite
Internet download speed	.768 Mbps	1.5 Mbps
Internet upload speed	.384 Mbps	1 Mbps
RAM	1024 MB	2 GB
Ports	1935, 843, 80, 443, 61613, UDP/TCP	1935, 843, 80, 443, 61613, UDP/TCP

## **ProctorU System Requirements (continued)**

1. A functioning microphone (some web cameras have built-in microphones).
2. One of the following compatible web browsers (click to download):
  - [Google Chrome \(preferred\)](#)
  - [Mozilla Firefox](#)
  - [Safari](#)
3. The following plug-ins for your web camera (click to download):
  - [Adobe Flash Player \(version 12\)](#)
  - [Adobe Shockwave Player](#)

## **Platforms Not Currently Supported by ProctorU**

At this time, ProctorU does not support the following platforms; however, ProctorU is working on solutions to accommodate every platform.

- Google Chromebooks
- Android Tablets (e.g. Nexus 7, etc.)
- iOS Tablets (iPad, iPad Mini, etc.)
- Linux operating systems
- Microsoft Surface RT

## **Questions?**

- ProctorU is available 7 days a week, 24 hours a day (with the exception of some holidays).
- You can connect to and chat with a live person at [ProctorU](#) via the internet, or you can call [\(855\) 772-8678](tel:8557728678).
- Contact [ProctorU](#) to perform an equipment test (if you need assistance) and to view FAQs (Frequently Asked Questions).

# USING ProctorU

## At Least Three Days Prior to Each Exam

- There are no pre-determined exam dates. Because the course is self-paced, you determine the dates you want to take each exam.
  - There are a total of four (4) Unit Exams. Each Unit Exam consists of a one-hour Unit **Lab Exam** and a one-hour Unit **Lecture Exam**.
  - You do not need to schedule all of your exams at the same time; however, you must schedule the four Unit Exams at least three days prior to the date you want to take each exam.
  - You should schedule a total of two consecutive hours for each of the four Unit Exams-- one hour for the Unit **Lecture Exam** and one hour for the Unit **Laboratory Exam**.
1. Go to [ProctorU](#).
  2. In the upper right-hand corner of the page, click the blue “LOGIN” button.
  3. To log in, create a new account or use an existing account (if you have one).
  4. To schedule an exam, click “schedule new sessions.”
  5. Use the drop-down menu to select the appropriate term and exam.
  6. If you have difficulty scheduling your exam, go to [ProctorU](#) and ask for assistance via the live chat option located in the bottom right-hand corner of the page. You may also contact ProctorU at **(855) 772-8678**.

## The Day of the Exam

1. On the appropriate date and time of your exam, log into [ProctorU](#) and click on “exams.”
2. Following the procedures on the ProctorU website, log in to Canvas and open the appropriate exam.
3. When you access your exam on the scheduled day, there should be a timer on the “my sessions” tab of your account. When the timer reaches “0,” click “start session.” You will be connected with a proctor.
4. You will need to provide photo identification to your proctor prior to taking any exam.
5. **Both exams need to be completed in the same two-hour time block, one exam immediately after the other. Exceeding 60 minutes on either the lecture or lab exam will result in a loss of exam points.**

If you have difficulty establishing connectivity or taking your exam, go to [ProctorU](#) and ask for assistance via the live chat option located in the bottom right-hand corner of the page. You may also contact ProctorU at **(855) 772-8678**.

**DO NOT SCHEDULE AN EXAM AT THE LAST MINUTE!**  
Doing so could result in your exam not being reviewed by the instructor

### **Optional Comprehensive Final Exam**

At the end of the course, you may elect to take a comprehensive final to improve your total score in the course (as described under “Exam and Grading Policies”). If you choose to take this exam, you must schedule a one-hour time block with ProctorU to do so.

### **IMPORTANT!! IMPORTANT!! IMPORTANT!! IMPORTANT!! IMPORTANT!!**

- Failure to take a scheduled exam or scheduling and repeatedly cancelling exams (especially at the last minute) could result in losing your ability to take exams through ProctorU.
- Without ProctorU you will be unable to take exams and, as a result, you will be unable to complete BMS 310.
- Reservations to take an exam within three days of the exam are subject to a \$5.00 late reservation fee.
- Reservations to take an exam within one hour of the exam are subject to an \$8.75 “Take it Now” fee.

**Please scroll down, syllabus continues on next page**

# **COURSE LENGTH; DROP, WITHDRAWAL, AND UNIVERSITY WITHDRAWAL DEADLINES; APPEALS**

Please review the following information carefully as you are accountable for understanding the content. Please refer to the course registration confirmation found at the bottom of the first page of this syllabus for specific dates/deadlines associated with BMS 310.

## **Course Length**

- BMS 310 is an [open-entry course](#). BMS 310 is a self-paced course and is not a traditional, semester-long course.
- BMS 310 is designed to be completed in four (4) calendar months from the date that your registration for the course was processed (usually 24-48 hours after the date that you register for the course). Because BMS 310 is self-paced, it is possible to complete the course in less than four months.
- If you do not complete the course within four calendar months, contact the instructor (Mark Frasier) to arrange for an extension of two additional months (a total of six calendar months from the date that your registration for the course was processed) to complete the course. If you have not completed the course in four months and an extension is granted, you will be assigned a grade of “Incomplete” (“I”).

If you do not complete BMS 310 within the *extension period* (six months total from the date that your registration for the course was processed), your grade of “Incomplete” (“I”) will be automatically changed to a grade of “Fail” (“F”).

## **Drop, Withdrawal, and University Withdrawal Deadlines**

If you no longer want to remain enrolled in BMS 310, you may consider one of the following three options:

1. You may **DROP** BMS 310 within 20 calendar days of the date that your registration for BMS 310 was processed.

When you **drop** BMS 310 within 20 calendar days, the title of the course and a grade will not appear on your CSU transcript. You will receive a 100% refund of course tuition and fees.

2. You may **WITHDRAW** from BMS 310 after the 20-day drop period (see #1 above) and through 43 calendar days from the date that your registration for BMS 310 was processed.

When you **withdraw** from BMS 310, the title of the course and a grade of “W” (Withdrawal) will appear on your CSU transcript. You will not receive any refund of course tuition and fees when you withdraw from the course (day 21 and up until and through 43 calendar days from your registration date).

3. You may perform a **UNIVERSITY WITHDRAWAL** after the last day that you can withdraw from the course (see #2 above) and through four (4) calendar months from the date that your registration for BMS 310 was processed. You must also meet the following conditions:

- a. You are taking BMS 310 during the fall or spring semester (University Withdrawals are not available during the summer);
- b. To request a University Withdrawal, you must withdraw from your entire schedule of classes (regardless of whether you are taking one course or multiple courses).



## **PROCEDURES FOR DROPPING OR FOR WITHDRAWING FROM A COURSE\***

You may request to *drop* or *withdraw* from a course by logging in to your [RAMweb](#) account and by clicking "Registration" to begin the process.

\*You may not drop or withdraw from a course by phone or by contacting your instructor.

## **PROCEDURES FOR PERFORMING A UNIVERSITY WITHDRAWAL\***

You may request a University Withdrawal by logging in to your [RAMweb](#) account and by clicking "Registration" to begin the process.

\*You may not perform a University Withdrawal by phone or by contacting your instructor.

## **APPEALS**

Due to extenuating circumstances (e.g. death in the immediate family, serious medical condition, military deployment, natural disaster, calamity, etc.) there may be times when students are unable to meet the deadlines associated with performing a drop, a withdrawal, or a University Withdrawal.

For more information about the appeals process and about how to file a course registration/refund appeal (e.g. late or retroactive drop; late or retroactive withdrawal; refund of tuition and/or technology, course, and late fees), click [Appeals](#).

# BMS 310 COURSE SCHEDULE

- All readings listed below can be found in *Essential Clinical Anatomy* (Moore, 5<sup>th</sup> edition)
- All lectures are located on the BMS 310 Canvas course home page in the four units of study
- Labs are performed by using *The Visible Human Dissector* and the *Virtual Edge* software

The following schedule lists the lectures and labs for each of the four units of study that can be found in Canvas:

## UNIT 1: LOWER LIMB

### Section 1

Lecture 1	Introduction to BMS 310 (same lecture in Introduction module)
Lecture 2	Introduction to the Lower Limb
Lecture 3	The Gluteal Region
Labs	Open-book assessment #1 (4 points) Exercise 1* and Exercise 13, <i>Virtual Edge</i> *Exercise One only: “Anatomy common to all vertebrae” and “Anatomy common to sacral vertebrae”
Readings	Pages 1-27, 195-201, 309-322, 337-340, 369-374

### Section 2

Lecture 4	Introduction to the Nervous System
Lecture 5	Nerve and Blood Supply of the Lower Limb
Lecture 6	The Knee
Labs	Open-book assessment #2 (4 points) Exercise Fourteen, <i>Virtual Edge</i>
Readings	Pages 27-33, 184, 208-209, 324-329, 331-337, 337-348, 359, 365, 374-384

### Section 3

Lecture 7	The Thigh
Lecture 8	The Ankle and Leg
Lecture 9	The Foot
Labs	Open-book assessment #3 (4 points) Exercise Fifteen and Exercise Sixteen, <i>Virtual Edge</i>
Readings	Pages 329-337, 342, 346-367, 385-395

**EXAMS**      **Unit 1: Lower Limb Lab Exam**  
                  **Unit 1: Lower Limb Lecture Exam**

## **UNIT 2: TAP (THORAX, ABDOMEN, AND PELVIS)**

### **Section 1**

Lecture 10	The Vertebral Column
Lecture 11	Muscles of the Back
Lecture 12	The Spinal Cord
Labs	Open-book assessment #4 (4 points) Exercise 1, <i>Virtual Edge</i>
Readings	Pages 265-284, 295-308, 288-294

### **Section 2**

Lecture 13	The Thorax and Lungs
Lecture 14	The Heart
Lecture 15	Coronary Circulation and Fetal Circulation
Labs	Open-book assessment #5 (4 points) Exercise Two, <i>Virtual Edge</i>
Readings	Pages 43-51, 56-64, 64-76, 76-110

### **Section 3**

Lecture 16	The Abdominal Wall and Peritoneum
Lecture 17	The Abdominal Viscera
Lecture 18	The Abdominal Viscera Blood Supply and Return
Labs	Open-book assessment #6 (5 points) Exercise Three, <i>Virtual Edge</i>
Readings	Pages 111-123, 130-194

### **Section 4**

Lecture 19	Male Reproductive Anatomy
Lecture 20	Female Reproductive Anatomy
Lecture 21	The Autonomic Nervous System
Labs	Exercise Four, <i>Virtual Edge</i> There is no open-book assessment for this section
Readings	Pages 211-264, 33-42

<b>EXAMS</b>	<b>Unit 2: Thorax, Abdomen, Pelvis Lab Exam</b> <b>Unit 2: Thorax, Abdomen, Pelvis Lecture Exam</b>
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## UNIT 3: HEAD & NECK

### **Section 1**

Lecture 22	The Skull
Lecture 23	The Brain
Lecture 24	Arterial Supply to the Head
Labs	Open-book assessment #7 (4 points) Exercise Five, <i>Virtual Edge</i>
Readings	Pages 485-493, 543-544, 561-566, 501, 510-514, 505-507

### **Section 2**

Lecture 25	Cranial Meninges & Venous Return from the Head/Brain
Lecture 26	Cerebrospinal Fluid & the Ventricular System
Lecture 27	The Cranial Nerves & Facial Nerve (CN VII)
Labs	Open-book assessment #8 (4 points) Exercise Seven, <i>Virtual Edge</i>
Readings	Pages 492-500, 501-504, 507-510, 514-518, 644-646

### **Section 3**

Lecture 28	Trigeminal Nerve (CN V) and Muscles of Mastication
Lecture 29	The Neck and Cervical Viscera
Labs	Open-book assessment #9 (4 points) Exercise Six, <i>Virtual Edge</i>
Readings	Pages 642-644, 537-561, 581-608

### **Section 4**

Lecture 30	The Pharynx
Lecture 31	The Larynx
Lecture 32	The Eye (Part I)
Lecture 33	The Eye (Part II)
Labs	Exercise Eight, <i>Virtual Edge</i> No open-book assessment for this section
Readings	Pages 616-626, 608-615, 518-536

<b>EXAMS</b>	<b>Unit 3: Head &amp; Neck Lab Exam</b>
	<b>Unit 3: Head &amp; Neck Lecture Exam</b>

## UNIT 4: UPPER LIMB

### **Section 1**

Lecture 34	The Shoulder Region
Lecture 35	Pectoral and Shoulder Muscles
Labs	Open-book assessment #10 (4 points) Exercise Nine, <i>Virtual Edge</i>
Readings	Pages 465-471, 397-411, 414-419

### **Section 2**

Lecture 36	The Axilla and the Breast
Lecture 37	The Brachial Plexus
Lecture 38	Upper Limb Blood Supply & Return
Labs	Open-book assessment #11 (4 points) Exercise Ten, <i>Virtual Edge</i>
Readings	Pages 419-425, 52-56, 425-431, 409-410, 432-434, 452-453, 458-464

### **Section 3**

Lecture 39	The Elbow and Arm
Lecture 40	Articulations of the Distal Limb
Lecture 41	Muscles of the Forearm
Labs	Open-book assessment #12 (4 points) Exercise Eleven, <i>Virtual Edge</i>
Readings	Pages 472-477, 432-438, 475-484, 438-451

### **Section 4**

Lecture 42	The Hand
Labs	Exercise Twelve, <i>Virtual Edge</i> There is no open-book assessment for this section
Readings	Pages 451-464

**EXAMS**      **Unit 4: Upper Limb Lab Exam**  
                 **Unit 4: Upper Limb Lecture Exam**

### **Optional Comprehensive Final**

(See p. 3 for information about taking an optional comprehensive final)

## TRANSCRIPTS

Official CSU transcripts may be ordered at [www.registrar.colostate.edu](http://www.registrar.colostate.edu). Under “STUDENTS,” click on “TRANSCRIPTS.”

Be sure that your BMS 310 grade has been posted to your unofficial transcript on [RAMweb](#) **before** you order an official CSU transcript.