

# **Participating Institutions**

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# Drexel University College of Medicine

**Subject:** Gross Anatomy

Course Title: Summer Gross Anatomy - 2025

**Start Date:** 6/9/2025 **End Date:** 7/15/2025

Application Deadline & Fees: Application Deadline: June 6, 2025; Fee: \$2,200. If taken with our

Embryology online course, the fee for both courses is \$2700.00

Course Description: Course Description: Drexel University College of Medicine (DUCOM) offers a make-up course in Medical Gross Anatomy that is taken on the Web. The course material will be available from June 9, 2025 until July 15, 2025. The course includes approximately 30 hours of streaming video lectures with handouts, 20 web-based interactive Clinical Case Reviews, consisting of about 2 cases each. (See Technical Requirements listed below) and anatomy review videos and a large database of practice questions. A Medical School faculty member is available for questions and answers via bulletin board or email. Online classroom sessions will be held as needed. The Course is divided into 6 sections, which follow a weekly progression that students may access at their own pace. After each section the student takes a Section Exam consisting of MCQ's on the section content. Each Section Exam is taken through Blackboard Learn and requires a computer and use of the Respondus Lockdown Browser and Video Monitoring

**Pre-requisites:** The course is open only to medical students who have completed a medical school course that included full cadaver dissection but who require a remediation of the conceptual principles of the discipline. Students must be registered in an accredited U.S.A. Medical School, or equivalent, and provide written approval from their Dean of Students.

**Other Information:** Technical Requirements: 1. High Speed Internet Connection. All of the lectures in the Medical Gross Anatomy Review course are presented as streaming video, which has been optimized for high bandwidth internet connections (e.g., DSL, cable modem, T1). If you do not have a high-speed internet connection at home, you must be able to access such a connection from your medical school or elsewhere.

## **Course Contact:**

Dennis DePace Professor Emeritus Neurobiology and Anatomy 2900 Queen Lane Philadelphia, PA 19129 Phone: 2159918475

Fax:

dd38@drexel.edu

**Subject:** Embryology

Course Title: Summer Embryology 2025

**Start Date:** 6/9/2025 **End Date:** 6/23/2025

Application Deadline & Fees: Application Deadline: June 6, 2025; Fee: \$2,200. If taken with our

Embryology online course, the fee for both courses is \$2700.00

**Course Description:** Course Description: Drexel University College of Medicine (DUCOM) offers a make-up course in Medical Embryology that is taken on the Web. The course material will be available from June 9, 2025 until June 23, 2025 The course is organized into four sections, each consisting of three or four modules. In order of presentation they are: • Unit 1: Early Development • Unit 2: Musculoskeletal System, Body Cavities and Respiratory System, Cardiovascular System • Unit 3: Peritoneal Cavity, GI Tract and Related Organs, Genitourinary System • Unit 4: Branchial Arches, Face, Eye and Ear

**Pre-requisites:** Course is open to first year medical students who require remediation in the subject and are in good standing.

**Other Information:** Technical Requirements: 1. High Speed Internet Connection. All of the lectures in the Medical Gross Anatomy Review course are presented as streaming video, which has been optimized for high bandwidth internet connections (e.g., DSL, cable modem, T1). If you do not have a high-speed internet connection at home, you must be able to access such a connection from your medical school or elsewhere.

### **Course Contact:**

Dennis DePace Professor Emeritus Neurobbioloby and Anatomy 2900 Queen Lane Philadelphia, PA 19129 Phone: 2159918475

Fax:

dd38@drexel.edu

Course Title: Medical Neuroscience

**Start Date:** 6/9/2025

Subject: Neuroscience

**End Date:** 7/11/2025

Application Deadline & Fees: Application Deadline: June 6, 2025; Fee: \$2200

Course Description: Drexel University College of Medicine (DUCOM) offers a make-up course in Medical Neuroscience, which is administered through Blackboard LEARN. The course material will be available from June 9th until July 11th with the midterm exam held on Wednesday, June 25th and the final exam held on Friday, July 11th. There will be approximately 60 hours of streaming video in addition to web-based interactive tutorials, quizzes, brain atlas, brains slides, animations and interactive diagrams. The course manual can also be downloaded or viewed simultaneously with the streaming video. A Medical School faculty member is available for questions and answers via bulletin board, telephone, or email. The Course is divided into 6 sections, which follow a weekly progression that students may access at their own pace. After completing each section the student takes an exam for self-assessment. Each Section Exam is taken through the Blackboard LEARN system and requires a computer. Success in each Section Exam is required in order to progress to the next section. Grades will be averaged from performance on the midterm and final exam for a Satisfactory (70% and above) or Unsatisfactory (69% and below) grade. Exams will use the Respondus Lockdown Browser and be proctored by the student's Administrator at the home institution or an approved alternate site.

**Pre-requisites:** Students must be registered in an accredited USA Medical or Dental School, Physician Assistant, post baccalaureate program or equivalent, and provide written approval from their appropriate Administrator (usually the Dean of Students). Students take the course at their own institution. They must also supply written assurance from their Administrator that a proctor will be supplied to administer the midterm and final exam.

Other Information: Details concerning technical requirements and registration can be found on our website: <a href="http://drexel.edu/medicine/about/departments/neurobiology-anatomy/related-programs/summer-medical-neuroscience/">http://drexel.edu/medicine/about/departments/neurobiology-anatomy/related-programs/summer-medical-neuroscience/</a> Some modular options will be available for remediation involving multidisciplinary integrated courses. Arrangements beyond the course timing are possible. Please contact us for pricing and availability.

#### **Course Contact:**

Jed Shumsky, Ph.D. Professor Neurobiology and Anatomy 2900 W Queen Lane Philadelphia, PA 19129 Phone: 2159918401

js52@drexel.edu

# Ponce Health Sciences University

**Subject:** Medical Biochemistry

Course Title: Medical Biochemistry Make-up Course

**Start Date:** 6/9/2025 **End Date:** 7/11/2025

Application Deadline & Fees: Application Deadline: June 9, 2025 Course Fee: \$2,030

Course Description: The Ponce Health Sciences University (PHSU) Medical Biochemistry remedial summer course is an online five-week course. The course is divided into two independent sections: Section 1 consists of the following two units (one unit to be covered per week): I. Structural Biology (structure and function relationships in proteins, membrane structure) and Enzymology; and, II. Molecular Biology (genome organization and function, gene expression and its regulation, signal transduction and cell cycle control). Section 2 consists of the following three units: I. Introduction to Metabolism & Carbohydrate Metabolism; II. Lipid Metabolism; and, III. Nitrogen compounds metabolism. Students can enroll in only one section or in both sections, depending on their needs, however the same fee of \$2,030 is applicable in both cases. There will be only one enrollment process for either or both sections, and the enrollment process is due on June 9, 2025. Course material includes a collection of videos corresponding to the different lectures, to be accessed for streaming through the Canvas platform (approximately 70 hours of streaming for Sections 1 and 2). Each lecture has an accompanying PDF handout available for download by enrolled students, and the class textbook is Thomas Devlin's Textbook of Biochemistry with Clinical Correlations, 7th Edition. The course will have two in-class session meetings per unit to review material and discuss problem sets and practice questions. Students are expected to join the in-class sessions via the Zoom platform. In addition to the in-class sessions, PHSU participating faculty will be available during specified office hours to answer questions and assist students in person, or remotely via Zoom, email, or telephone.

**Pre-requisites:** Written permission of student's dean or appropriate administrator is required. This is a remedial course, and therefore students must have completed and failed a Medical Biochemistry course in their institutions. For non-PHSU visiting students, an application fee of \$85 for a non-degree special admission must be paid at the time of enrollment in the make-up course.

Other Information: Exams: The entire course, encompassing Sections 1 and 2 has a total of 4 partial exams divided as follows: One exam per unit in Section 1 for a total of two exams; In Section 2, there will be one exam for Unit I and another exam covering Units II and III, for a total of two exams. Partial exams will be administered using the ExamSoft application, and each student is responsible for installing the application on their devices, either tablets or laptops. For non-PHSU students, the Department Chair at their home institution is responsible for ensuring and certifying in writing that the student will take the exams under the strict supervision of a designated proctor. It is also a requirement for the completion of the course for all students to take an NBME customized examination covering all topics discussed in the course. Each of the two sections has an NBME examination and each student will take the NBME examination according to the sections in which the student is enrolled (both sections or only one section). The NBME exam accounts for 20% of the grade of each section. PHSU students are expected to be present in-person in a designated room for taking the exams. Non-PHSU students are responsible for making the arrangements for taking the exams, including the NBME examination, at their home institutions under the supervision of a proctor. Grade Calculation: Regardless of whether the student enrolls in one or both sections, the final grade will be calculated from the NBME Biochemistry exam(s) (20%) with the remaining 80% derived from the partial exams, each counting equally. For example, a student enrolled in only one section will have the grade calculated as follows: two partial exams for 40% of the grade each (80% total), plus 20% of the grade from the NBME exam. For students enrolled in both sections, each of the four partial exam accounts for 20% of the grade (80% total), and the remaining 20% will come from the two NBME exams (one for each section), each NBME examination accounting for 10% of the grade. A minimum final grade of 70% is required to pass the course. Technical Requirements: Students must download and install the ExamSoft application in the device they intend to use for exam taking. A high-speed internet connection is required for video streaming and Zoom sessions. Upon enrollment, students will be given access to remote learning and communication platforms (Canvas, Zoom links and invites). Computer and devices used in the course must be capable of video/audio playback. Students will need a microphone and camera in their computers for Zoom remote sessions.

#### **Course Contact:**

Pedro Santiago, PhD Professor Basic Sciences- Biochemistry Division PO Box 7004 Ponce, PR 00732

Phone: 787-840-2575, ext. 2208

Fax:

psantiago@psm.edu

## Tulane School of Medicine

Subject: Biochemistry

Course Title: Remedial Biochemistry

**Start Date:** 5/19/2025 **End Date:** 7/18/2025

**Application Deadline & Fees:** Tuition for one course module is \$900 (either Cellular or Metabolic Biochemistry). Tuition for both course modules is \$1600. Upon confirmation of tuition and completion of the application process (see below), the student will be provided a link and access to the remedial course website. The student will only have access to learning resources for the appropriate course modules.

Course Description: The course is broken into two course modules, Metabolic Biochemistry and Cellular Biochemistry. Depending on their remedial needs, students can opt to take either or both course modules. The Metabolic Biochemistry module covers six content blocks, including (1) Fundamentals and Kinetics, (2) Carbohydrate Metabolism, (3) Energy Production, (4) Lipid Metabolism, (5) Nitrogen Metabolism, and (6) Complex Disease States. The Cellular Biochemistry module covers an additional six content blocks, including 1) DNA/RNA/Proteins, (2) Glycobiology, (3) Protein Trafficking and Structural Proteins, (4) Blood, (5) Signal Transduction, and (6) Cell Cycle and Cancer. If a student only needs remediation in the Cellular Biochemistry module, some Metabolic Biochemistry Fundamentals topics are included.

**Pre-requisites:** Students must be registered in an accredited US Medical School, or equivalent. Students take the course modules on-line at their own institution. A letter must be supplied from the institutional Dean of Students, providing the following information: (1) written approval to take the course module(s),(2) which module(s) is(are) to be taken, (3) assurance that a passing grade in the summer remedial course is acceptable for removing the student's weaknesses or deficit, (4) that a proctor will be supplied to administer the course module exams (please provide contact information for the proctor) OR that a proctored ONLINE exam is acceptable OR proctored locally on Tulane's Downtown Campus, and (5) that students will not be required to take any simultaneous curricular course work that might interfere

with the student's success in the summer remedial course.

Other Information: (1) Application Process: The application, tuition and letter of support from the Dean of Students must all be submitted before the application is considered complete. Further instructions are supplied in the application. Please contact the course administrator (Kelly Ragland Boyd, 504-988-0395, <a href="mailto:kraglan@tulane.edu">kraglan@tulane.edu</a>) if you have any questions. (2) Housing: N/A. (3) High Speed Internet: All lectures are presented as streaming video, which are optimized for high bandwidth Internet connections (e.g., DSL, cable modem, T1). (4) Multimedia Computer: Since all lectures consist of both audio and video, computers must be capable of playing audio, and have speakers or headphones. The monitor must be capable of displaying a resolution of at least 1024x768 pixels. It is recommended that computers (either PC or Mac) be capable of playing Windows Media .asx and .wmv files, and have Windows Media Player 11 (or higher), Microsoft Office Word and PowerPoint, and Adobe Reader software. Remote proctoring can be agreed upon with your home institution. Contact Tulane for more information.

## **Course Contact:**

Dr. David Franklin, PhD Course Director Biochemistry & Molecular Biology 1430 Tulane Avenue #8643 New Orleans, LA 70112 Phone: 5049888868

Fax:

franklin@tulane.edu

# West Virginia University

Subject: Microbiology and Immunology

Course Title: Immunity, Infection, and Disease

**Start Date:** 6/30/2025 **End Date:** 8/8/2025

Application Deadline & Fees: Application Deadline: June 23, 2025; Application fee \$60; Course Fee

\$6,696.00. Please contact Brooke Phillips for the course application link

Course Description: This course is primarily designed for medical students who need to remediate or refresh current concepts in Medical Microbiology and Immunology. Students attend a virtual classroom of recorded lectures and interact with faculty through an online forum. It is a fast-paced self-studying course, which covers extensive basic science material in microbiology and immunology designed for students who were already taught this knowledge, which needs to be reviewed and solidified in preparation for medical curriculum. Progress in this course is evaluated by online weekly examinations and performance on the NBME Microbiology + Immunology Subject Examination (if NBME Exam is required by the student's home institution). The NBME Subject Examination will be administered at WVU or at the student's home institution, if this institution has a NBME-certified proctor for administration of web based subject exams.

Pre-requisites: It is the prerogative of the student's home institution to accept (or not accept) course

credit in fulfillment of educational requirements for the M.D. degree. Students of related professional degrees may also enroll in this course to remediate deficiencies in microbiology and immunology. Therefore, students are strongly encouraged to communicate closely with their home institution before seeking enrollment.

**Other Information:** Students are responsible for lodging and travel expenses to WVU for the NBME Subject Examination. If student has permission to take the NBME Subject Examination at their home institution, the exam cost is assumed by the student or home institution. Basic science subject examinations are not currently offered at Prometric Testing Centers.

#### **Course Contact:**

Brooke Phillips Program Specialist Microbiology, Immunology, and Cell Biology PO Box 9177 HSN, 64 Medical Center Drive Morgantown, WV 26506-9177

Phone: 304-293-2649

Fax:

bphillips@hsc.wvu.edu

**Subject:** Pharmacology

Course Title: Summer Medical Pharmacology, PCOL 801

**Start Date:** 6/9/2025 **End Date:** 7/18/2025

**Application Deadline & Fees:** Application deadline: 6/2/25 Fees: \$6,696

Course Description: Summer Medical Pharmacology is a 9-credit, online course, designed as a summer make-up course for second-year medical students and other graduate-level health professional students. It is a comprehensive pharmacology course that covers the basic principles of drug action and the drug classes and specific drugs currently used in medical practice. Content is organized into units on foundations, chemotherapy, immune system, nervous system, hematology, cardiovascular and renal systems, respiratory system, musculoskeletal system, endocrine system, reproductive system, and gastrointestinal system. Lectures can be viewed in a self-paced format via streaming and downloadable video (Panopto/mp4) and audio (mp3). Course materials are also available in PowerPoint format. Weekly question and review sessions are provided via Zoom, and weekly exams are given online, at a preset time, using a secure browser and are proctored via Zoom. Medical students (MD, DO) will register PCOL 801, a course in which the NBME Subject Exam in Pharmacology (i.e., the "shelf board") is used as the final exam. It may be taken at the student's home institution if that institution has an NBME-certified proctor for the administration of electronic subject exams. If this is not possible, the student must take the NBME exam at WVU or another NBME-certified location. The NBME Equated Percent Correct (EPC) score will be used as 10% of the student's final grade; the weekly exams will constitute the other 90% of the final grade. Students will be graded on a 10-point letter grade scale. Students in other health professions (e.g., podiatry, dentistry, pharmacy) will register for PCOL 770. The final exam in this course does not assume that students have clinical diagnosis knowledge that medical students will have acquired throughout their pre-clerkship curriculum. Students in PCOL 770 will take a proctored WVU-written final instead of the

NBME exam. Students will be graded on a 10-point letter grade scale.

**Pre-requisites:** Status as a student in a graduate health profession (e.g., medicine, pharmacy, dentistry, podiatric medicine) who has taken pharmacology, or course director's permission.

**Other Information:** Online registration for the course is available. Please follow the instructions under "Registration Information" at bit.ly/summerpharm-WVU

### **Course Contact:**

Karen Woodfork, Ph.D. Teaching Professor Physiology, Pharmacology, & Toxicology P.O. Box 9229, Room 3049 Health Sciences North Morgantown, WV 26506-9229

Phone: 304 293-1997

Fax:

kwoodfork@hsc.wvu.edu

**Subject:** Physiology

Course Title: Summer Medical Physiology

**Start Date:** 6/9/2025 **End Date:** 7/18/2025

**Application Deadline & Fees:** 6/9/25 Tuition: \$5283 (\$744/cr + \$75 online learning student support fee)

+ \$75 non-refundable application fee

Course Description: This 7-credit, online course is designed for medical students who need to remediate all of Medical Physiology, or their school's equivalent course (consistent with molecular, sub-cellular, cellular, and tissue components, organ system and whole-body function, human health, and disease). The overall goal is to provide students with the basic information they need for the development of the skills to solve therapeutic problems concerning the practice of medicine. Lectures can be viewed in a self-paced format via streaming video. Course materials are also available in PowerPoint, mp3, and text formats. Weekly exams are given online. Accommodations for the final exam (NBME Subject Exam in Physiology (allopathic medicine students), or equivalent NBOME/COMAT exam (osteopathic medicine students) are to be arranged by the student with their home institution, administration, or remediated course director. If the student is unable to arrange accommodations at their home institution, that student will be required to travel to Morgantown, WV to take the exam on-site. Positive identification is required for admission to the NBME/NBOME subject exam. The subject exam is weighted as 10% of the final course grade, calculated based on the equated percent correct score provided by the reporting body.

**Pre-requisites:** Require medical physiology course remediation

**Other Information:** Contact Dr. Hardy (<a href="mailto:shardy@hsc.wvu.edu">shardy@hsc.wvu.edu</a>) for registration instructions and application link. Please indicate for what course you are registering.

### **Course Contact:**

Steven L. Hardy, PhD Professor Physiology, Pharmacology, and Toxicology 3072A Health Science Center, North Morgantown, WV 26506

Phone: 3042931501

Fax:

shardy@hsc.wvu.edu

**Subject:** Physiology

Course Title: Medical Physiology 1

**Start Date:** 6/9/2025 **End Date:** 7/7/2025

Application Deadline & Fees: Application deadline: 6/9/25 Tuition: \$3051 (\$744/cr + \$75 online

learning student support fee) + \$75 non-refundable application fee

Course Description: This 4-week, online course is designed for Professional students enrolled in the WVU School of Medicine Summer Remedial Program, who need to remediate the first half of the complete medical physiology course, including membrane, cell, cardiovascular, respiratory, and muscle physiology. Students will attend a virtual classroom by viewing online lectures, available at any time, and may interact with faculty and classmates through pre-arranged online discussion forum and chat room. This course integrates the basic knowledge (molecular, sub-cellular, cellular, and tissue components) of body organ system function, and whole body functions. This course further applies basic science to the understanding of human health and disease. The overall goal of this course is to expose the students to basic science information and allow them to develop the skills needed to solve therapeutic problems concerning the practice of medicine. Students taking this course can expect to spend, on average, 5 hours per day during the week viewing recorded lectures in preparation for online exams. Thorough note-taking and review of textbook materials is also highly recommended.

**Pre-requisites:** For students who require partial remediation of medical physiology in cell, CV, respiratory, and muscle physiology

**Other Information:** Contact Dr. Hardy (<a href="mailto:shardy@hsc.wvu.edu">shardy@hsc.wvu.edu</a>) for registration instructions and application link. Please include for which course you are registering.

## **Course Contact:**

Steven L. Hardy, PhD Professor Physiology, Pharmacology, and Toxicology 3072A Health Science Center, North Morgantown, WV 26506 Phone: 3042931501

Fax:

shardy@hsc.wvu.edu

**Subject:** Physiology

Course Title: Medical Physiology 2

**Start Date:** 6/9/2025 **End Date:** 7/7/2025

**Application Deadline & Fees:** Application deadline: 6/9/25 Tuition: \$3051 (\$744/cr + \$75 online

learning student support fee) + \$75 non-refundable application fee

Course Description: This 4-week, online course is designed for Professional students enrolled in the WVU School of Medicine Summer Remedial Program, who need to remediate the second half of the complete medical physiology course, including renal, acid-base, endocrine, reproductive, and gastrointestinal physiology. Students will attend a virtual classroom by viewing online lectures, available at any time, and may interact with faculty and classmates through pre-arranged online discussion forum and chat room. This course integrates the basic knowledge (molecular, sub-cellular, cellular, and tissue components) of body organ system function, and whole body functions. This course further applies basic science to the understanding of human health and disease. The overall goal of this course is to expose the students to basic science information and allow them to develop the skills needed to solve therapeutic problems concerning the practice of medicine. Students taking this course can expect to spend, on average, 5 hours per day during the week viewing recorded lectures in preparation for online exams.

**Pre-requisites:** For students who require partial remediation of medical physiology in renal, acid-bae, endocrine, reproductive, and gastrointestinal physiology

**Other Information:** Contact Dr. Hardy (<a href="mailto:shardy@hsc.wvu.edu">shardy@hsc.wvu.edu</a>) for registration instructions and application link. Please include for which course you are registering.

### **Course Contact:**

Steve Hardy Professor Physiology, Pharmacology, and Toxicology 3072A Health Science Center, North Morgantown, WV 26506 Phone: 3042931501

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shardy@hsc.wvu.edu