

University of New Hampshire*College of Life Sciences and Agriculture**Department of Molecular, Cellular & Biomedical Sciences**Biomedical Science: Medical Laboratory Science*Time & Room Schedule: Tues 12:40-2pm online via Zoom (links through Canvas)

Instructor: Stephanie Brown, MS, MT (ASCP)
Office: Kendall 228
Phone: 603-862-4010
E-mail: Stephanie.Brown@unh.edu

Office hours: By appointment via Zoom

COURSE DESCRIPTION

Hemostasis is the ability of the blood to remain fluid while simultaneously addressing vascular injury. In this course students will examine the tightly regulated processes of coagulation and fibrinolysis through understanding of the four components involved in hemostasis: platelets, vessels, coagulation factors and fibrinolytic proteins. By understanding normal hemostatic physiology, students will develop critical thinking skills and deductive reasoning to interpret clinical laboratory data in conjunction with patient presentation to evaluate, diagnose and propose treatment for hemostatic dysfunction.

COURSE OBJECTIVES

Upon successful completion of the BMS 646 course, the student will be able to:

1. *State the four components of the hemostatic system, including their functions.*
2. *Explain the pathophysiology underlying hemostatic disease processes.*
3. *Interpret laboratory data to determine the presence or absence of hemostatic disease states.*
4. *Evaluate laboratory testing data to determine which aspect of the hemostatic system is impacted, establish a diagnosis and discuss potential treatment options.*
5. *Investigate all hemostasis laboratory testing with an approach that includes pertinent pre-analytical, analytical and post-analytical considerations*

TEXT MATERIALS

Rodak's Hematology: Clinical Principles & Applications

****(OPTIONAL)****

Elaine Keohane, Catherine Otto & Jeanine Walenga, 6th edition

ISBN: 978-0-323-53045-3

The UNH bookstore is offering a digital copy of the text that is significantly cheaper than the paper version. Dimond Library has a physical copy on reserve that may be used for 24-hour periods. A copy is also available in the instructor's office for students to use.

ELECTRONICS

Laptops: Laptops are allowed in class for note-taking purposes only. There is a notable difference between someone who is attentive and taking notes on a laptop, and someone who is surfing the internet and reading mail. Individuals suspected of using a laptop for non-note taking purposes may be asked to discuss their computer use in a private meeting with the instructor and may have their privilege of using of a laptop in class revoked.

Cell phones: Please leave all cell phones on vibrate during class time. Cell phones may be used during the mid-class break only, except for emergency situations. If you are expecting an urgent call, please notify the instructor.

LEARNING ONLINE

Online learning and face-to-face learning are different. It is easier to be distracted and most students find it less engaging to listen to lectures remotely rather than in-person. If you are learning remotely this semester (either by choice or not), you will need to identify ways to keep yourself motivated, engaged and effective. Strategies for succeeding in an online learning environment will be circulated by the instructor at the beginning of the semester. Please be aware that lecture recordings may capture your audio or video and will only be utilized for and available to students in the course.

ACADEMIC STATEMENT OF HONESTY

As a collegiate level course, students are expected to work independently and demonstrate critical thinking, deductive reasoning and logic. It is expected that all homework, quiz, examination and discussion work is the student's own original material, and that when referencing other works primary sources will be cited appropriately using APA format. All students should have read and should be familiar with the University's Academic Honesty Policy, which can be found online. Plagiarism, cheating or failure to produce original work will result in a zero for the assignment in question, and may result in course failure and further academic sanctions. Examples include, but are not limited to, copying from someone else's work or allowing others to copy yours, resubmitting work previously submitted by another student, collaborating on an assignment without instructor permission and submitting assignments with identical wording as another student. The MLS program endorses students studying and working together as it is an appropriate way to facilitate learning and skill development. However, it is important that the completion of your assignments demonstrate individuality and independence. *****Please note that the instructor takes plagiarism very seriously. All work will be reviewed for evidence of unoriginal material. There are no warnings with regard to using someone else's work. All instances of cheating, in any form, will result in a grade of zero for the assignment in question and could result in failure of the course.*****

ATTENDANCE, LATE ASSIGNMENT POLICIES & ONLINE COURSE FORMAT

Participating in discussions and engaging in the course material are vital to your success. The course moves very quickly and is extremely content-heavy, and taking organized notes and asking questions during lectures will help you to succeed. While attendance will not be a formal component of your calculated grade, I will be taking attendance solely to ensure that I am keeping tabs on everyone and making sure that no one is slipping through the cracks. Repeated absences from class will prompt me to reach out to you to ensure everything is going well. I encourage all students to reach out and create a relationship with me: that helps us create a rapport beneficial when you have questions, need support or would like a future letter of recommendation. All students are expected to be respectful by arriving on time for class. Repeated tardiness may result in a discussion with the instructor. Students should expect to spend about three hours outside of class for every one hour spent inside of it, meaning that 90 minutes hours of hemostasis lecture time per week should equate to roughly five hours of time outside of hemostasis lecture working on material.

Assignments are expected to be submitted on time. **No late exam or readiness quiz submissions will be accepted.** Since the remainder of the assignments are graded as complete/incomplete anything not submitted at the assigned due date/time will be graded as incomplete.

Because of the tenuous nature of the fall 2020 semester and the untenable amount of unknowns, I am electing to make BMS 646 an online only offering. I cannot in good conscience find it

ethical to ask you to convene in large groups for extended periods of time. I do not find the risk acceptable for your health or my own, and I am seeking to minimize exposure for you, your friends and family as well as myself and my friends and family. While it is certainly not ideal, we CAN learn online under extraordinary circumstances and with effort and understanding we can make it effective. The decision to move online is made out of safety, and facilitates an easy transition should the university need to move all courses to this format anyway ahead of the scheduled date in November.

UNDERSTANDING THE COURSE STRUCTURE

BMS 646 will be operating in what is called a “flipped classroom” format: this means that instead of having homework assigned AFTER class, students have pre-work assigned BEFORE class. A separate handout explaining the benefits of this structure will be given at the start of the semester. Ahead of each class period, students will be assigned a series of short videos to watch, take notes on and study from. The expectation is that when students arrive in class they are prepared to take a “readiness quiz” on the assigned material. The readiness quiz will be 5-10 questions administered at the beginning of class with a time limit of approximately 5-10 minutes. Following completion of the readiness quiz, students will complete worksheets, play games or answer case studies involving application of the assigned material to ensure understanding. All of these assignments will be submitted at the end of class and will be graded as complete/incomplete.

COURSE SCHEDULE**

Week	Day	Date	Topic	Notes
<u>Unit 1: Introduction to Hemostasis & Vascular/Platelet Disorders</u>				
1	T	Aug 31	Introduction & Course Overview; Defining Hemostasis	
2	T	Sept 8	Vascular Disorders Platelet Structure & Function	
3	T	Sept 15	Quantitative Platelet Disorders	
4	T	Sept 22	Qualitative Platelet Disorders	
5	T	Sept 29		
6	T	Oct 6	Exam 1	
<u>Unit 2: Factor Disorders</u>				
7	T	Oct 13	Introduction to Coagulation Factors & Testing Evaluation & Diagnosis of Hemostatic Dysfunction	
8	T	Oct 20	NO CLASS—FOLLOWS MONDAY SCHEDULE	
9	T	Oct 27	Evaluation & Diagnosis of Hemostatic Dysfunction Single Factor Deficiencies	
10	T	Nov 3		
11	T	Nov 10	Lab day! Field trip to SLS G-27 to see coag in action	
12	T	Nov 17	Exam 2	
<u>Unit 3: Factor Disorders & Fibrinolysis</u>				
13	T	Nov 24	Fibrinolysis	
14	T	Dec 1	Therapeutic Anticoagulants & Excessive Regulation of the Cascade	
15	T	Dec 8	Seeing the Big Picture: Tying it All Together	

****Schedule is subject to change**

GRADE DISTRIBUTION

Exams (2) 60%

In-class readiness quizzes 10%

In-class activities.....	10%
Final exam.....	<u>20%</u>
	100%

Grading scale:

93-100% = A (4.00)	80-82% = B- (2.67)	67-69% = D+ (1.33)
90-92% = A- (3.67)	77-79% = C+ (2.33)	63-66% = D (1.00)
87-89% = B+ (3.33)	73-76% = C (2.00)	60-62% = D- (0.67)
83-86% = B (3.00)	70-72% = C- (1.67)	<60% = F (0.00)

MLS majors pursuing a clinical internship **must** pass all BMS courses, including this one, with a C or better in order to be eligible for internship. This is an elective course for BMS: MLS majors not pursuing the clinical internship. Students outside the BMS: MLS major should consult with their academic advisor regarding specific grade requirements for degree credit.

EXAMS

Exams will not be rescheduled, nor will repeats be allowed, except in special situations with prior instructor approval. No late exam submissions will be accepted. Questions may be discarded at the discretion of the instructor in fairness to the students. Grades will not be scaled, and no grades will be dropped. Questions may be in multiple choice and short answer formats, and may also include calculations, drawing, matching, fill in the blank or labeling. Please note that partial credit for calculations will NOT be given on exams. Students will receive knowledge of what material will be covered on each exam in advance. A review session will be held before each lecture exam as well as the final exam. Please note that Respondus LockDown Browser will be utilized for this course for exams and quizzes. The LockDown Browser must be installed ahead of starting an assessment, and it will prevent you from searching or utilizing any online resources until you submit your quiz or exam.

IN-CLASS READINESS QUIZZES

On the vast majority of class sessions, the first 5-10 minutes of class will be devoted to taking a readiness quiz. These quizzes are designed to test how well students are comprehending and understanding the material presented in the assigned videos watched ahead of class time. These are low stakes quizzes to ensure that students are preparing for lecture without heavily penalizing them for occasional misunderstandings. No quiz scores will be dropped and no late submissions will be accepted.

CLASS PARTICIPATION & IN-CLASS ACTIVITIES

The more you engage, the more you will take out of the course experience. The majority of in-class activities will be conducted in groups and exercises will be graded as complete/incomplete. It is expected that you will be prepared for all class periods: failure to adequately prepare to work with your group may impact your course grade. In-class activities will consist of a variety of things: Pictionary, Memory, one-minute papers, group quizzes, pin the tail on a chart or graph, etc and are subject to change by the instructor as necessary. The purpose of the activities is to help students determine whether they have grasped the concepts presented in the assigned pre-class videos and apply the concepts ahead of an exam.

FINAL EXAM

The final exam will be cumulative and will consist of 75 multiple choice questions and will be cumulative. A review session will be held before the final exam. The final exam will be conducted

online utilizing the LockDown Browser. Students are expected to adhere to all academic honesty standards and policies.

STUDENT ACCESSIBILITY SERVICES

According to the Americans with Disabilities Act (as amended, 2008), each student with a disability has the right to request services from UNH to accommodate his/her disability. If you are a student with a documented disability or believe you may have a disability that requires accommodations, please contact Student Accessibility Services (SAS) at **201 Smith Hall**. Accommodation letters are created by SAS with the student. Please follow-up with your instructor as soon as possible to ensure timely implementation of the identified accommodations in the letter. Faculty have an obligation to respond once they receive official notice of accommodations from SAS, but are under no obligation to provide retroactive accommodations. For more information refer to www.unh.edu/studentaccessibility or contact SAS at 603.862.2607, 711 (Relay NH) or sas.office@unh.edu.

PREFERRED NAME AND GENDER PRONOUNS

Who you are and how you identify are important to me, and should be (and will be) respected within my classroom in terms of race, culture, religion, politics, sexual orientation, gender, gender variance and nationality. When I receive my course rosters from the Registrar's office they contain your legal name, which may not be your preferred name. You may change your preferred name with the University at: <https://www.unh.edu/registrar/preferred-name>. I will honor any requests you have to address you by an alternate name or gender pronoun. Please be sure to notify me early in the semester so that I may update my records. Any mistakes I make with preferred names or pronouns are unintentional and not intended to convey disrespect.

EMOTIONAL, MENTAL & SEXUAL HEALTH

Your academic success and overall mental health are very important to me. If, during the semester, you find you are experiencing emotional or mental health issues, please contact the University's Psychological and Counseling Services (PACS) (3rd floor, Smith Hall; 603-862-2090/TTY: 7-1-1) which provides counseling appointments and other mental health services. If urgent, students may call PACS M-F, 8 a.m.-5 p.m., and schedule an Urgent Same-Day Appointment. The University of New Hampshire and its faculty are committed to assuring a safe and productive educational environment for all students and for the university as a whole. Please note that the university requires faculty members to report to the university's Title IX Coordinator (Donna Marie Sorrentino, dms@unh.edu, 603-862-2930/1527 TTY) any incidents of sexual violence and harassment shared by students. If you wish to speak to a confidential support service provider who does not have this reporting responsibility because their discussions with clients are subject to legal privilege, you can find a list of resources [here](#). For more information about what happens when you report, how the university considers your requests for confidentiality once a report is made to the Title IX Coordinator, your rights and report options at UNH (including anonymous report options) please visit [this site](#).

INSTRUCTOR BELIEFS

It is my sole goal to help you succeed in this course and to make you excellent clinicians, critical thinkers and well prepared students for whatever your next steps in life may be. You will always find that I will meet you halfway provided you put forth the requisite effort. I firmly believe that each student is capable of success, and that as the instructor part of my job is to create the right environment for you to realize your potential. All students are important, and all students can succeed when they embrace the idea that learning is an active process that requires more than sitting in a classroom and taking notes. My goal is not simply to teach you things that you can remember for three months: my goal is to transform how you approach problem solving, influence the way you see the human body and challenge your limits as a learner. I encourage all students to meet with me whenever necessary: I

maintain an open-door policy and am always available to you. I welcome all feedback (good, bad and ugly), because without knowing what you do and don't like and what is and isn't working, I can't make any positive changes. I want this course to be meaningful for each of you and I am willing to make adjustments as necessary to ensure that you take away the most from our time together.

Finally, my personal mantra: *Excuses are what you give yourself when you didn't want to put in the work.*