

Syllabus Summer 2024

COMU 096 Health & Medicine

Hybrid: July 1st – July 26

Meeting Time, Meeting Pattern, Location

This course is hybrid. The first two weeks (July 1st - July 14) are on site and will mainly take place at the College of Medicine (Med Ed100 and Given C443). Wet lab session will be in Jefford building (Room 125), whereas simulation lab session will be in Rowell building (Room 237).

The second part is asynchronous online (July 17 - July 26). However, students are expected to meet at least one time via Zoom to discuss their progress on their final assignments during the online part.

Instructor Name, Contact Information, Office Hours

Delphine Quénet

UVM – Larner College of Medicine – Med Ed 100 and Given C443, Lab: Jeffords 125

Delphine.Quenet@uvm.edu

Technical support for students

Students, please read this technology check list to make sure you are ready for classes.

<https://www.uvm.edu/it/kb/student-technology-resources/>

Students should contact the Helpline (802-656-2604) for support with technical issues.

Pre-requisites or co-requisites

No pre- or co-requisites.

Course Description

This summer course exposes students to the interdisciplinarity of modern science through hands-on learning in labs, interactive lectures, engaged discussions with researchers and medical professionals and group project. COMU096 provides a comprehensive overview of the different approaches and strategies needed to understand human health from basic research to patient care and treatment. Students will explore, and refine, their interests in STEM, while developing an understanding of potential career paths to determine if a career in.

Different educational formats will be used over this course, including book reading, video-recordings, active learning, simulation and wet lab, and discussion with guest speakers. Participation is expected during the 2 on site weeks. Components of the evaluation comprise active participation, a 2-page project on a disease, and a book report.

Course Learning Objectives

The course learning objectives are:

- Grasp the complexities of studying human health and the necessity for different modes of intervention.
- Appreciate the importance of transdisciplinary research for the understanding of, and development of treatments for human disease.
- Identify career paths of interest within research or healthcare.
- Understand and explore the skills, education, and experience needed for a career in research and medicine.
- Meet and engage in discussions with basic researchers and medical professionals whose work directly relates to human diseases.
- Practice critical reading, writing, and research skills in the context of a science-focused course.
- Develop teamworking skills necessary for a successful career in a research or healthcare.

Modality description/Outline

This course is hybrid. The first two weeks (July 1st - July 14) are on site, and the second part is asynchronous online (July 17 - July 26). This course should be completed by July 26.

Course information can be found on the UVM's Brightspace learning management system. Briefly, materials will be accessible on Brightspace. Students may have to review prep materials before coming to class (not more than 2 hours of preparation). **All assignments must be submitted through Brightspace.** Commented written assignments from the instructor, and other feedback, will be returned via Brightspace. Grades will be posted through Brightspace.

While no daily meeting will be scheduled over the 2 online weeks, at least one virtual meeting is expected with the instructor to check on student progress. If students need to interact with their peers, forum discussion will be accessible. Students will also have the opportunity to form small group to study. Additionally, students can also reach the instructor by e-mail and expect an answer generally within 24 hours on weekdays and 36-48 hours on weekend, as well as request Zoom meeting to answer specific questions.

Required Course Materials

The major material will be a computer with appropriate programs to open and potentially modify pdf and word documents. Suitable program to read the videos (mp4 format) is also required. All documents and files can be saved on student computer to work offline.

Students will have to read the book: *The Cure* by Geeta Anand, available in different formats including paperback and kindle. Link to purchase this book on Amazon is :

<https://www.amazon.com/Cure-Million-Medical-Establishment-Children/dp/006073440X>

If there are any limitations in obtaining these materials, students are invited to contact the instructor for accommodation.

Brightspace

We will be using UVM's Brightspace learning management system for this course, and as an enrolled student, you already have access to our course within the system. Your username is your UVM/email login (usually first initial and last name – up to eight characters) along with your corresponding password. In Brightspace, you will find a copy of the syllabus, a summary of the expectations for the course and each focus, the potential program for each focus, video-recorded lectures (with captions), assignments and grades. Brightspace will also be used for communication via e-mail. Student will receive copy of announcement and e-mails from instructor directly on their mailbox. To familiarize themselves with Brightspace, students may review the following page: <https://www.uvm.edu/it/kb/article/brightspace-for-students/>

Attendance Policy and Classroom Environment Expectations:

Attendance will be taken during the on-site period and will be part of the overall grade.

Students are invited to review the [Classroom Code of Conduct outlined in the Student Rights and Responsibilities section](#) of the Undergraduate Catalogue and the [Academic Integrity policy](#).

Illness

Students are encouraged to contact their instructor in case of illness that will affect their progress. Student may request an official qualifying health reason form, and Student Health Services (SHS) will send a notification to the appropriate student services office or designated staff member informing them of the situation, along with the dates the student is unable to attend. The SHS notification will specify whether the request for flexibility includes additional flexibility for assignments and tests because the student is too ill to participate. Students are responsible for working with their instructor to make up class content and work they miss due to a documented illness.

Grading Criteria/Policies

The following table summarizes the grading criteria:

Course Point Distribution	
Course component	%
Attendance	10.0%
Participation	20.0%

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Wet Lab	10.0%
Professional Development	10.0%
Mini-Project - Disease	25.0%
Book Report	25.0%
Total	100.0%

Assignments must be completed to Brightspace not later than the specified date to receive full credit work. Late quizzes/assignments will be penalized with a 15% deduction for each day, barring alternative arrangement with the instructor. Notifications of extenuating circumstances to request approval for a late submission must be presented before the due date. However, no late assignments will be accepted after July 26 (11:59AM EDT).

The University has a Letter Grade/Quality Point Equivalent system for calculating cumulative grade point average as shown in the following table. We will be issuing mid-term progress reports for students with a C or below.

Percentage	Student Grade
97 - 100	A+
93 - 96	A
90 - 92	A-
87 - 89	B+
83 - 86	B
80 - 82	B-
77 - 79	C+
73 - 76	C
70 - 72	C-
67 - 69	D+
63 - 66	D
60 - 62	D-
0 - 59	F

If affecting their progress, students should submit their **documented religious holiday schedule** for the semester to their instructor in writing by the end of the second day of class (Tuesday July 2nd by 11:59PM EDT). Other reasons of absence must be discussed in advance with the instructor.

Assessments - Graded Work

Attendance

Attendance will be taken at each session during the on-site period. It will also include the online session with the instructor. Altogether, attendance represents 10.0% of your course grade.

Participation

Participation is expected in this course. Participation is defined as the active and respectful contribution of students. It includes, but is not limited to, coming prepared to class by reading prep materials and participating to discussion and proposed activities in classroom. For each presentation by a guest speaker, student will have either to ask a question or state it on a form provided by the instructor. Participation represents 20.0% of your course grade.

Wet Lab

Student will spend couple of hours in biochemistry lab to address the topic of lactose intolerance. Students will receive safety training to work in lab as well as necessary background to maintain a lab notebook, perform experiments with appropriate controls and analyze their data. Respect of safety rules, and comprehension of the subject will be assessed and will represent 10.0% of the course grade.

Professional Development

To introduce student to consider their professional development, two sessions will be dedicated to a discussion around skills that can be acquired in college and outside for their professional career and how to build a CV/resume. The active participation to these sessions will be assessed by the finalization of a CV/resume by Friday, July 12 (11:59AM, EDT). This assignment will represent 10.0% of the course grade.

Mini-project - Disease

In a 2-page paper, students will present the biochemical aspect of a disease. Students will be assigned a human disease that is caused by a mutation affecting the sequence/function of a protein. The list will be posted on Brightspace at the beginning of the course and assigned in classroom.

This project should contain a clear title, sub-sections with title, a figure with legends, references (1-5, in APA or other professional format). Readers should expect learning about the pathology of the disease, the factor and/or metabolic pathway dysregulated, how this dysregulation is associated with the disease, and finally therapeutic strategies (current and/or potential). One figure illustrating the biochemical aspect of the disease should be included. **Your audience is your COMU 096 classmates.** Plagiarism will not be tolerated. For policy, students are invited to review the [Academic Integrity policy](#).

Format to follow is:

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- Font: Arial/Calibri/Times New Roman.
- Size font: 12.
- Line and paragraph spacing: 1.5-spaced, justify.
- Margin: normal.
- References: maximum 5 from peer-reviewed journals, inserted and formatted with the tool used in your field (e.g., EndNote, Mendeley).
- Submission as a pdf document.

The 2-page limit does not include the title, figure and references, which will be on different pages. **This assignment must be completed by Thursday, July 18 (11:59PM EDT).** Each student will then peer-review the paper of a classmate, by addressing specific questions from a **peer-review form due by Friday, July 26 (11:59AM EDT).** Every 24 hours that the paper or the peer-review is late will drop the grade by 15%. This mini-project represents 25.0% of the overall grade.

Rubric of the mini project	
Expectations	% Grade
Title – Informative, accurate	5.0%
Introductory sentences & rationale – Identify the subject and the importance of its study (e.g., medical or scientific reasons).	12.5%
Epidemiology and Pathology of the Disease – What are the major symptoms and is there a specific population affected by the disease?	12.5%
Biochemistry of the disease <ul style="list-style-type: none"> • Name the factor(s) and/or pathway associated with the disease. • Describe the role of the factor(s) and/or pathway in healthy person, especially its biochemical function. • Describe how the mutation in patients dysregulate the described biochemical function (e.g., enzymatic activity, dysregulated metabolism, alteration of genomic stability). • Explain the link between the dysregulated factor and/or pathway and the diseases at the biochemical level and if applicable or relevant at the patient level. 	12.5%
Therapeutic strategies – what are the current and/or potential therapeutic approaches?	12.5%
Figure – Supportive of the main text and appropriate (e.g., content, clear message, easy to read) .	10.0%
Figure legend – Describe the figure, written with student words.	5.0%
Organization - Good flow, logically organized	5.0%
Citations – Appropriate, 1-5	5.0%
Vocabulary, grammar, and spelling - Appropriate jargon	5.0%
Length and Format - Follow provided instructions	5.0%
Peer-review	10.0%
Total	100.0%

Book Report

In a 3-4 page paper, students will provide a report on the book: *The Cure* by Geeta Anand. The goal will be to summarize the story, define the essential points, link to what you have learn and/or not addressed in classroom, and provide your objective view. To help student in writing this report, questions will be provided, and can be used as an outline. However, this report is not a question-answer document.

Format to follow is:

- Font: Arial/Calibri/Times New Roman.
- Size font: 12.
- Line and paragraph spacing: 1.5-spaced, justify.
- Margin: normal.
- Submission as a pdf document.

This assignment must be completed by Friday, July 26 (11:59AM EDT). Every 24 hours that the paper or the peer-review is late will drop the grade by 15%. This book report represents 25.0% of the overall grade.

Research and Citation Help

For help selecting research topics, finding information, citing sources, and more, ask a librarian. The UVM Libraries are eager to help. You may ask questions by phone, e-mail, chat, or text, or make an appointment for an individual consultation with a librarian.

- Howe Library: <https://library.uvm.edu/askhowe>
- Dana Medical Library: <https://dana.uvm.edu/help/ask>
- Silver Special Collections Library: <https://specialcollections.uvm.edu/help/ask>

Course Evaluation

All students are expected to complete an evaluation of the course at its conclusion. The evaluations will be anonymous and confidential. Information gained, including constructive criticisms, will be used to improve the course.

General statement regarding potential changes during the semester

<http://catalogue.uvm.edu/>

The University of Vermont reserves the right to make changes in the course offerings, mode of delivery, degree requirements, charges, regulations, and procedures contained herein as educational, financial, and health, safety, and welfare considerations require, or as necessary to be compliant with governmental, accreditation, or public health directives.

Intellectual Property Statement/Prohibition on Sharing Academic Materials

Students are prohibited from publicly sharing or selling academic materials that they did not author (for example: class syllabus, outlines or class presentations authored by the professor, practice questions, text from the textbook or other copyrighted class materials, etc.); and

students are prohibited from sharing assessments (for example homework or a take-home examination). Violations will be handled under UVM's Intellectual Property policy and Code of Academic Integrity.

Tips for Success

Here are a few resources for students on remote/online learning:

- Checklist for success in <https://learn.uvm.edu/about/support-for-students/checklist-online-credit-courses/>
- Academic support for online courses: <https://www.uvm.edu/academicsuccess/online-learning-student-resources-remote-instruction>
- 30-minute webinar on online learning success (Mar 2020): https://www.youtube.com/watch?v=Xp_MYsqQyvE

Helpful resources other than the professor (e.g., [Undergraduate/Graduate Writing Center](#), [Supplemental Instruction](#), [Learning Co-op tutors](#), supplemental course materials).

Student Learning Accommodations:

In keeping with University policy, any student with a documented disability interested in utilizing ADA accommodations should contact Student Accessibility Services (SAS), the office of Disability Services on campus for students. SAS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations, which are communicated to faculty in an accommodation letter. All students are strongly recommended to discuss with their faculty the accommodations they plan to use in each course. Faculty who receive Letters of Accommodation with Disability Related Flexible accommodations will need to fill out the Disability Related Flexibility Agreement. Any questions from faculty or students on the agreement should be directed to the SAS specialist who is indicated on the letter. **Please note that, notice of accommodation are usually sent to the instructor 1-5 working days after submission.** Students should plan accordingly.

Contact SAS:

A170 Living/Learning Center;
802-656-7753
access@uvm.edu
www.uvm.edu/access

Important UVM Policies

Academic Integrity

The [Academic Integrity policy](#) addresses plagiarism, fabrication, collusion, and cheating.

Code of Student Conduct

[UVM's Code of Student Conduct](#) outlines conduct expectations as well as students' rights and responsibilities.

FERPA Rights Disclosure:

The purpose of UVM's [FERPA Rights Disclosure](#) is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974.

Final Exam Policy and Grade Appeals

The University [final exam policy](#) outlines expectations during final exams and explains timing and process of examination period.

If you would like to contest a grade, please follow the procedures [outlined in this policy](#).

Grading

[This link](#) offers information on grading and GPA calculation.

Religious Holidays

Students have the right to practice the religion of their choice. Each semester students should submit in writing to their Instructor by the end of the second full week of classes their documented religious holiday schedule for the semester. Faculty must permit students who miss work for the purpose of religious observance to make up this work.

Students may review the following document: <https://www.uvm.edu/registrar/religious-holidays>.

Promoting Health & Safety:

The University of Vermont's number one priority is to support a healthy and safe community:

[Center for Health and Wellbeing](#)

[Counseling & Psychiatry Services \(CAPS\)](#) Direct Phone Line: (802) 656-3340

C.A.R.E. If you are concerned about a UVM community member or are concerned about a specific event, we encourage you to contact the Dean of Students Office (802-656-3380). If you would like to remain anonymous, you can report your concerns online by [visiting the C.A.R.E. Team website](#).

Alcohol and Cannabis Statement:

Statement on Alcohol and Cannabis in the Academic Environment

As a faculty member, I want you to get the most you can out of this course. You play a crucial role in your education and in your readiness to learn and fully engage with the course material. It is important to note that alcohol and cannabis have no place in an academic environment.

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They can seriously impair your ability to learn and retain information not only in the moment you may be using, but up to 48 hours or more afterwards. In addition, alcohol and cannabis can:

- Cause issues with attention, memory and concentration
- Negatively impact the quality of how information is processed and ultimately stored
- Affect sleep patterns, which interferes with long-term memory formation

It is my expectation that you will do everything you can to optimize your learning and to fully participate in this course.

Important Deadlines, Course Calendar & Educational Plan

Students are invited to create their learning plan based on the due dates listed below. An example, that students can use is provided here.

Any updates that need to be made to the calendar during the semester will be posted on Brightspace.

Important Dates & Deadlines (EDT time)

First Day of Class --	July 1 st
On-site Sessions --	July 1 st - July 14
Fourth of July Holiday --	July 4 th
Online Sessions --	July 17 - 26
Mini-Project --	July 18 (11:59PM, EDT)
Peer-Review Mini-Project --	July 26 (11:59AM, EDT)
Book Report --	July 26 (11:59AM, EDT)
Last Day of Class --	July 26

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Here is provided the schedule from Summer 2023. The schedule for Summer 2024 will be provided as soon as it is finalized.

2023 Schedule for COMU 096: Health and Medicine Academy				
COURSE DIRECTOR: Delphine Quénet, PhD				
FORMAT: Onsite from July 3 rd to July 14 (9AM-3PM in Given C443 or MedEd 100 or Jeffords 125) Online from July 17 to July 28 (both synchronous and asynchronous)				
PROGRAM DESCRIPTION: This summer course exposes students to the interdisciplinarity of modern science through hands-on learning in labs, interactive lectures, engaged discussions with researchers and medical professionals and group project. COMU096 provides a comprehensive overview of the different approaches and strategies needed to understand human health from basic research to patient care and treatment. Students will explore, and refine, their interests in STEM, while developing an understanding of potential career paths to determine if a career in				
LEARNING OBJECTIVES: The course learning objectives are:				
<ul style="list-style-type: none"> - Grasp the complexities of studying human health and the necessity for different modes of intervention. - Appreciate the importance of transdisciplinary research for the understanding of, and development of treatments for human disease. - Identify career paths of interest within research or healthcare. - Understand and explore the skills, education, and experience needed for a career in research and medicine. - Meet and engage in discussions with basic researchers and medical professionals whose work directly relates to human diseases. - Practice critical reading, writing, and research skills in the context of a science-focused course. - Develop teamworking skills necessary for a successful career in a research or healthcare. 				
Schedule	Session/Module Topic	Learning Objective / Activities / Assessments	Instructor/Presenter	Location
Monday, July 3, 2023				
9:00AM-10:00AM	Welcome	Introduction to course: Syllabus, expectations	Dr. Delphine Quénet	MedEd 100
10:00AM-10:15AM	Break			
10:15AM-12:00PM	Student's introduction	Communication skills, competency development, flip classroom, elevator pitch	Dr. Delphine Quénet	MedEd 100
12:00PM-1:30PM	Lunch Break			
1:30PM-3:00PM	Introduction on metabolism and metabolic diseases:	Lecture, discussion, flip classroom.	Dr. Delphine Quénet	MedEd 100
3:00PM- 3:30PM	CatCard Office			
Tuesday, July 4, 2023				
NO CLASS				
Wednesday, July 5, 2023				
9:00AM-10:00AM	Importance of taking care of ourselves. Meditation - Practice	Personal care	TA	Given C443
10:00AM-10:15AM	Break			
10:15AM-12:00PM	Meet a professional: Metabolic Disease, Diabetes Mellitus - Introduction	Scientific knowledge, discussion	Dr. Tom Jetton	Given C443
12:00PM-1:15PM	Lunch Break			
1:15PM-3:00PM	Meet a professional: Metabolic Disease, Diabetes Mellitus	Scientific knowledge, discussion, case study	Dr. Lee-Anna Burgess	Given C443

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Thursday, July 6, 2023				
9:00AM-10:00AM	Summary of yesterday sessions on Diabetes mellitus	Discussion, peer Q&A session	Dr. Delphine Quénet	MedEd 100
10:00AM-10:15AM	Break			
10:15AM-11:45AM	Overview of metabolic diseases and link to metabolism	Discussion around metabolic diseases, flip classroom	Dr. Delphine Quénet	MedEd 100
11:45am-1:15pm	Lunch			
1:15PM-3:00PM	Meet a professional: How to diagnose a metabolic disease?	Discussion, group set-up, brainstorming on the project	Dr. Robert Wildin	MedEd 100
Friday, July 7 2023				
9:00AM-9:30AM	Meditation	Personal care	Dr. Delphine Quénet	MedEd 100
9:30AM-10:00AM	Overview of the project	Group assignment	Dr. Delphine Quénet	MedEd 100
10:00AM-10:15AM	Break			
10:15AM-11:45AM	Library training for electronic resources, literature search and application	Discussion, tool, flip classroom		MedEd 100
11:45AM-1:00PM	Lunch			
1:00PM-2:15PM	Library training for Electronic Resources, literature search and application, focus on your project	Discussion, tool, flip classroom		MedEd 100
2:15PM-2:30PM	Break			
2:30PM-3:00PM	Summary of the week, expectations for the following week	Discussion	Dr. Delphine Quénet	MedEd 100
Monday, July 10 2023				
9:00AM-9:30AM	Meditation	Personal care	Dr. Delphine Quénet	MedEd 100
9:30AM-9:45AM	Break			
9:45AM-11:45AM	Nutritional counseling	How does nutrition is contributing to the treatment of metabolic disease?	Sarah Krumholz	MedEd 100
11:45AM-1:15PM	Lunch			
1:15PM-2:15PM	How to read an article.	Discussion, competency development	Dr. Delphine Quénet	MedEd 100
2:15PM-2:30PM	Break			
2:30PM-3:30PM	Preparation for lab experiment. What is an experiment, a control? How to maintain a lab notebook?	Discussion, brainstorming, competency development, scientific process	Dr. Delphine Quénet	MedEd 100
Tuesday, July 11 2023				
9:00AM-11:00AM	Wet Lab: Looking into lactose. Explore enzymatic activity through investigating the mechanism behind lactose	Wet lab	Dr. Delphine Quénet	Jefford 125
11:00AM-12:00PM	Discussion around lab results	Discussion, brainstorming, critical thinking	Dr. Delphine Quénet	Jefford 125
12:00PM-1:30PM	Lunch			
1:30PM-2:30PM	Project	Discussion, group set-up, brainstorming on the project		MedEd 100
2:30PM-2:45PM	Break			
2:45PM-3:30PM	How to use BioRender	Tool, communication, competency development	Dr. Delphine Quénet	MedEd 100
Wednesday, July 12 2023				

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9:00AM-9:30AM	Meditation	Personal care	Dr. Delphine Quénet	MedEd 100
9:30AM-10:45AM	The process of science from bench to clinic	Discussion, scientific process	Dr. Delphine Quénet	MedEd 100
10:45AM-11:00AM	Break			
11:00AM-12:00PM	Scientific communications: Written and oral presentation: differences, similarities and tips	Tool, communication, competency development	Dr. Delphine Quénet	MedEd 100
12:00AM-1:30PM	Lunch			
1:30PM-3:30PM	Simulation lab	Listening to Harvey (lung/heart sounds) and Ultra-sound demonstration Work with Standardized Patients learning physical exams and taking a history	Simulation lab	Simulation lab
Thursday, July 13 2023				
9:00AM-9:30AM	Meditation	Personal care	Dr. Delphine Quénet	MedEd 100
9:30AM-10:45AM	Meet UVM students (UG, Ph.D., M.D.)	Networking	Panelists	MedEd 100
10:45AM-11:00AM	Break			
11:00AM–12:00PM	CV, resume	Professional development	Dr. Delphine Quénet	MedEd 100
12:00PM-1:30PM	Lunch			
1:30PM–2:15PM	Discussion Project	Discussion, Q&A session	Dr. Delphine Quénet	MedEd 100
2:15PM–3:00PM	Discussion Book reading	Discussion, Q&A session	Dr. Delphine Quénet	MedEd 100
3:00PM-3:30pm	Summary of the week, expectations for the online part	Discussion, brainstorming, critical thinking	Dr. Delphine Quénet	MedEd 100