

Course Syllabus

 Edit

BIOL88

COURSE DESCRIPTION

This online, asynchronous class provides an interdisciplinary, multicultural and historical perspective of medicine focused primarily upon therapy and practice. My hope is that at the end of this class you will be better able to understand how medical knowledge is gained and where it has come from; that you will be better equipped to evaluate medical claims that you see in the popular media; and that you will be better able to work productively with medical professionals to direct your own care or that of family members.

Medicine is defined as the treatment of disease, and as a prerequisite to understanding therapy; it is necessary to view the whole spectrum of disease, its various causes and evolution over time. Therapy can then be explored from the distinct categories psychological, physical and chemical methods. Human attempts to understand and deal with disease will be seen as evolving from the spiritual and mystical to the more rational and finally to the scientific thinking of the Renaissance and beyond. Even after hundreds of years of basic science knowledge, by 1900, therapy beyond the symptomatic (that which actually reduces morbidity or mortality) will be seen as severely limited to a few surgical techniques and a handful of botanical compounds. This will serve to highlight the incredible difficulties in treating major disease even after causes are understood.

History is a valuable tool for understanding the evolution of theories, knowledge and practices within medicine that can also demonstrate the many examples of myth, misconception and wishful thinking that have occurred along the way. The history of medicine begins prior to recorded human history and involves all human cultures. As the experiences of the Covid-19 pandemic illustrate all too vividly, the history continues to be written. This class will touch on some of the major themes and important episodes of that history, but cannot cover it all. If there are topics or issues that particularly interest or concern you, please contact me so that we can discuss them.

This course was developed by myself and retired physician, Dr. Greg Gates. You will see Dr. Gates in many of the course videos.

Note that this course is entirely online, and largely self-paced. However I encourage you to attend my office hours and correspond with me. Furthermore, this summer class is only 5 weeks long, and runs at twice the pace as the normal academic year version of this class. It is therefore doubly important that you keep up with the course and its assignments.



CLASS WEBSITE

This course is hosted on Canvas. From the course Home page, you will see the weekly modules. The Week 0 module contains links to a variety of resources and descriptions of course policies. At the end of the week 0 module, there is a short quiz and a survey. The survey will help me better understand you, your interests and prior knowledge.

Each week has an A and B module. Each module begins with a checklist that describes the week's videos, readings and assignments. There is also a Key Concepts page that lists that module's key themes. I suggest that you focus on doing the reading and watching the videos for the A module on Mondays and Tuesdays, and the B module on Wednesdays and Thursdays. Furthermore, you will see that each module has a quiz (due on Sundays) and short writing assignment (due on Fridays), and most of the writing assignments require that you comment on 2 of your classmates's essays by Sunday evening.

COURSE INSTRUCTOR

Grant Hartzog

Email: hartzog@ucsc.edu (<mailto:hartzog@ucsc.edu>)

OFFICE HOURS - Office hours will be held via Zoom on Wednesdays from 3-4 pm except for the week of July 8th, when the office hours will be held on Thursday the 11th.

Zoom Link: <https://ucsc.zoom.us/j/97941380130?pwd=I1EX1cmLgoKnzWtmvNDHPzMbFP12Vk.1>

[🔗 \(https://ucsc.zoom.us/j/97941380130?pwd=I1EX1cmLgoKnzWtmvNDHPzMbFP12Vk.1\)](https://ucsc.zoom.us/j/97941380130?pwd=I1EX1cmLgoKnzWtmvNDHPzMbFP12Vk.1)

Meeting ID: 979 4138 0130

Passcode: 556618

Please feel free to reach out to me for an appointment if these times don't work for you. I will be happy to meet with you at another time.

QUESTIONS AND DISCUSSIONS - For questions or discussions about course content, please post to the [course discussion forum \(https://canvas.ucsc.edu/courses/74315/discussion_topics\)](https://canvas.ucsc.edu/courses/74315/discussion_topics) so that all students can benefit. For help with technical issues or private matters, please [email Grant \(mailto:hartzog@ucsc.edu\)](mailto:hartzog@ucsc.edu) directly.

LEARNING OUTCOMES

By the end of the course, students should be able to:

1. View disease as vast, ancient spectrum of basically natural phenomena that can be categorized for better understanding.
2. Understand the basic causes of disease and their overlapping combinations.
3. Define the "art" of medicine within the context of a patient therapist relationship, the use of hope, faith and reassurance, expressions of caring and compassion, diagnostic pattern recognition and the subtle methods of history taking.
4. Understand the historic attempts to unravel the mysteries of disease with various theoretical models and numerous therapeutic methods that have over time come to be recognized as mere placebo.
5. Contrast the separate realms of holistic vs. reductionist thinking in the approach to disease and their differing effectiveness in terms of diagnosis or treatment.
6. View "western", "ethnic" or "alternative" medicine objectively from either positive or negative perspectives.
7. Understand basic mind-body interactions and the role of stress in disease.
8. Recognize the characteristics of pseudoscience as a tool for better consumer protection.
9. Speculate upon the future of medicine from within each of the distinct realms of psychological, physical or chemical therapies.
10. Appreciate the ethical dilemmas of placebo.

ASSIGNMENTS AND GRADING

The grade in this class will be assigned on the basis of weekly quizzes (35%), weekly written responses to reading assignments and subsequent discussions (40%), a take-home final exam (25%). All assignments can be found in the [modules \(https://canvas.ucsc.edu/courses/74315/modules\)](https://canvas.ucsc.edu/courses/74315/modules).

READING ASSIGNMENTS AND VIDEO LECTURES

There will be weekly video lectures reading assignments, which can be found in the [modules \(https://canvas.ucsc.edu/courses/74315/modules\)](https://canvas.ucsc.edu/courses/74315/modules). I will expect you to have completed the reading prior to class so that you will be able to participate fully in class discussions.

EXPECTED EFFORT

This is a 5 unit course, which means that you are expected to work an average of 30 hours per week (!) on course work over the 5 weeks of the summer session I term.

ACADEMIC INTEGRITY

This class is for you! From having taught this course many times, I know that all of you are capable to doing outstanding work. Your weekly writing assignments must be your own product, and you must appropriately cite the work of others. Merely rewriting another's work, using AI, or directly quoting without attribution will be considered plagiarism. More importantly, you will have cheated yourself out of the opportunity to think more deeply about the course material and to practice your writing skills. Similarly, I expect that you complete the quizzes and final exam on your own. The reason I expect this of you is that I want you to get the full value out of this class. If you find that you are overwhelmed with your other classes or outside obligations, please don't be tempted to copy the work of others or cheat on an exam. Instead, please contact me for help.

You can learn more about plagiarism, how to avoid it, and UCSC's academic integrity policies at these websites:

Citation and Plagiarism: <https://guides.library.ucsc.edu/c.php?g=148148&p=971575>
(<https://guides.library.ucsc.edu/c.php?g=148148&p=971575>)

Academic integrity: <http://registrar.ucsc.edu/navigator/section1/academic-integrity.html>
(<http://registrar.ucsc.edu/navigator/section1/academic-integrity.html>)
(<http://registrar.ucsc.edu/navigator/section1/academic-integrity.html>)

If you have questions about this policy, please contact me.

ACCESSIBILITY



I aim to make this course as engaging and accessible in this time of pandemic, remote instruction, and repeated episodes of racist violence and upheaval. Despite my best efforts, it is quite possible that you are or will face challenges to your success in this class that may impact your ability to fully engage with the course material and be as successful as you hope. If that is the case, please contact me and I will work with you to see what we can do.

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please affiliate with the DRC. I encourage all students to benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu. For students already affiliated, make sure that you have requested Academic Access Letters, where you intend to use accommodations.














If you are experiencing software, computer connectivity or other technological issues that are impacting your ability to fully engage with this course, see the [Getting Help](https://canvas.ucsc.edu/courses/74315/pages/how-to-find-help?)
(<https://canvas.ucsc.edu/courses/74315/pages/how-to-find-help?>)















[module_item_id=g0bb8a3b6c18593dfe6054d27d0d132ac](#))_page for this course, and the [Keep Learning \(https://keeplearning.ucsc.edu/\)](#) UCSC page. Contact the instructor if you are not getting the help you need.
















Course Summary:





Date	Details	Due
Mon Jun 24, 2024	 Lecture: Historical Patterns of Infectious Disease	to do: 11:59pm
	 Lecture: How Did Disease Begin?	to do: 11:59pm
	 Lecture: What Causes Disease?	to do: 11:59pm
	 Lecture: What is Disease?	to do: 11:59pm
	  Archibald Garrod and "Metabolic Errors"	to do: 11:59pm
Wed Jun 26, 2024	 Lecture: "I Shall Please": The Placebo Response	to do: 11:59pm
	 Lecture: The Art of Medicine	to do: 11:59pm
	 Lecture: The Origins of Therapy	to do: 11:59pm
Fri Jun 28, 2024	 Week 1A Discussion: Introduce Yourself https://canvas.ucsc.edu/courses/74315/assignments/597488	due by 11:59pm
	 Week 1B Writing Assignment https://canvas.ucsc.edu/courses/74315/assignments/597495	due by 11:59pm
Sun Jun 30, 2024	 Week 1A Quiz https://canvas.ucsc.edu/courses/74315/assignments/597479	due by 11:59pm

Date	Details	Due
Mon Jul 1, 2024	 Week 1B Quiz (https://canvas.ucsc.edu/courses/74315/assignments/597494)	due by 11:59pm
	 Lecture: Early Schools of Medicine: A Comparison	to do: 11:59pm
	 Lecture: Early Schools of Medicine: China	to do: 11:59pm
	 Lecture: Early Schools of Medicine: China (updated)	to do: 11:59pm
	 Lecture: Early Schools of Medicine: Egypt	to do: 11:59pm
	 Lecture: Early Schools of Medicine: Greece	to do: 11:59pm
	 Lecture: Early Schools of Medicine: India	to do: 11:59pm
	 Lecture: Anatomy in the Renaissance	to do: 11:59pm
	 Lecture: Malthusian Forces in the Middle Ages	to do: 11:59pm
	Wed Jul 3, 2024	 Lecture: Medicine in the Islamic World
 Lecture: Surgery in the Renaissance		to do: 11:59pm
 Lecture: The Collapse of the Roman Empire		to do: 11:59pm
Fri Jul 5, 2024	 Week 2A Discussion: Ancient Diagnoses (https://canvas.ucsc.edu/courses/74315/assignments/597487)	due by 11:59pm
	 Week 2B Discussion: Was Covid-19 Our Plague?	due by 11:59pm

Date	Details	Due
	(https://canvas.ucsc.edu/courses/74315/assignments/597486)	
	 Syllabus Acknowledgement (New Quiz) (https://canvas.ucsc.edu/courses/74315/assignments/597489)	due by 11:59pm
Sun Jul 7, 2024	 Week 2A Quiz (https://canvas.ucsc.edu/courses/74315/assignments/597496)	due by 11:59pm
	 Week 2B Quiz (https://canvas.ucsc.edu/courses/74315/assignments/597497)	due by 11:59pm
	 Lecture: Germ Theory of Disease	to do: 11:59pm
	 Lecture: Medical Advances from 1700 to 1900	to do: 11:59pm
Mon Jul 8, 2024	 Lecture: The Beginnings of Microbiology	to do: 11:59pm
	 Lecture: The Rise of Science and Pseudoscience	to do: 11:59pm
	 Lecture: The Superficiality of Pseudoscience	to do: 11:59pm
	 Lecture: Medicine in 1900	to do: 11:59pm
Wed Jul 10, 2024	 Lecture: Turn-of-the-Century Advances	to do: 11:59pm
	 NPR Throughline: Outbreak	to do: 11:59pm
	 Week 3A Discussion: Science or Pseudoscience? (https://canvas.ucsc.edu/courses/74315/assignments/597485)	due by 11:59pm
Fri Jul 12, 2024	 Week 3B Discussion: Miracle Cures (https://canvas.ucsc.edu/courses/74315/assignments/597484)	due by 11:59pm

Date	Details	Due
Sun Jul 14, 2024	 Week 3A Quiz https://canvas.ucsc.edu/courses/74315/assignments/597498	due by 11:59pm
	 Week 3B Quiz https://canvas.ucsc.edu/courses/74315/assignments/597499	due by 11:59pm
Mon Jul 15, 2024	 Lecture: How Do Drugs Work?	to do: 11:59pm
	 Lecture: The Beginnings of Modern Pharmacology	to do: 11:59pm
	 Lecture: The European Pharmaceutical Story	to do: 11:59pm
Wed Jul 17, 2024	 Lecture: Alternative Medicine	to do: 11:59pm
	 Lecture: Nutrition	to do: 11:59pm
	 Lecture: Reconsidering the ways we think about body weight and health	to do: 11:59pm
	 Lecture: The Art of Diagnosis	to do: 11:59pm
Fri Jul 19, 2024	 Week 4A Discussion: How do drugs work? https://canvas.ucsc.edu/courses/74315/assignments/597483	due by 11:59pm
	 Week 4B Discussion: Alternative Medicine https://canvas.ucsc.edu/courses/74315/assignments/598972	due by 11:59pm
Sun Jul 21, 2024	 Week 4A Quiz https://canvas.ucsc.edu/courses/74315/assignments/597500	due by 11:59pm
	 Week 4B Quiz https://canvas.ucsc.edu/courses/74315/assignments/597501	due by 11:59pm
Mon Jul 22, 2024	 Lecture: Antibiotics & Vaccines	to do: 11:59pm

Date	Details	Due
	 Lecture: Breakthroughs in Chemistry	to do: 11:59pm
	 Lecture: Current State of the Art: Physical Therapies	to do: 11:59pm
	 Lecture: Holism and Preventive Medicine	to do: 11:59pm
	 Lecture: Medical Ethics	to do: 11:59pm
	 Lecture: Probiotics	to do: 11:59pm
	 Lecture: Superbugs and Ethical Dilemmas	to do: 11:59pm
	 Lecture: Medical Systems	to do: 11:59pm
	 Lecture: Precision Medicine	to do: 11:59pm
Wed Jul 24, 2024	 Lecture: Studies in Medicine: A Coda	to do: 11:59pm
	 Lecture: The Future of Medicine	to do: 11:59pm
	 Video: Revenge of the Bacteria	to do: 11:59pm
Fri Jul 26, 2024	 Week 5A Discussion: The Most Serious Medical Issue of Our Time (https://canvas.ucsc.edu/courses/74315/assignments/597482)	due by 11:59pm
	 Week 5B Discussion: Living in the Future (https://canvas.ucsc.edu/courses/74315/assignments/597481)	due by 11:59pm
	 Week 5A Quiz (https://canvas.ucsc.edu/courses/74315/assignments/597502)	due by 11:59pm
	 Week 5B Quiz	due by 11:59pm

Date	Details	Due
	https://canvas.ucsc.edu/courses/74315/assignments/597493	
Sun Jul 28, 2024	 Take Home Final https://canvas.ucsc.edu/courses/74315/assignments/597490	due by 11:59pm
	 Pre-Class Survey https://canvas.ucsc.edu/courses/74315/assignments/597480	
	 Syllabus Acknowledgement https://canvas.ucsc.edu/courses/74315/assignments/563133 (New Quiz)	
	 Week 1 Checklist https://canvas.ucsc.edu/courses/74315/assignments/597492	