

2018-2019

Senior Project Handbook History of Science, Medicine & Public Health

HSHM 490, 491, & 492

SENIOR PROJECT DIRECTOR: CAROLYN ROBERTS

YALE UNIVERSITY

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A Note from the Chair

To Senior Majors in the History of Science, Medicine, and Public Health:

Welcome to your senior year and to the senior project!

What you are about to begin can be the most rewarding and exciting task of your undergraduate career. The senior project is an intellectual adventure that can be both exhilarating and daunting. As you begin, you may well feel uncertain about how to proceed. You will probably find yourself making several false starts. Along the way, you will discover new evidence that will compel you to abandon some of your original ideas and to find new ways to deal with your subject. At times you will wonder whether you have lost your way.

Do not allow yourself to feel anxious or discouraged. As you gain knowledge and experience as a researcher, you will become increasingly absorbed in your subject and find satisfaction in having the opportunity to explore a topic in depth. You will unearth material from the past that is unknown to your contemporaries and to your mentors and that will surprise you as well.

Communicating your discoveries and the reasoning that led you to them is the ultimate and most exciting part of the senior project. Begin writing before you feel ready to write and expect that it will take several drafts to achieve effective and graceful prose. Remember that writing is in itself a creative process, an aspect of thinking and discovery, and even the most distinguished historians have to struggle to make sense of a dense tangle of historical evidence. We can't stress enough how important it is to allow yourself ample time for this process of revising and refining.

Remember, too, that you are not alone on this journey. Your adviser is there as a sounding board for your ideas and to guide and support you. The *Handbook* is intended to brief you about the adventure on which you are embarking. We urge you to read it with great care at the outset, and to return to it frequently. You should feel free to discuss any questions that you have with your advisor, and with Professor Carolyn Roberts, the Senior Project Director. Be sure to get started in the best possible way by seeking advice and information about the project.

I am certain that, by the time you have completed the senior project, you will agree with students of previous years who consider it the most engaging and fulfilling part of their undergraduate years.

Best of luck!

Prof. Deborah Coen
Chair, HSHM Program

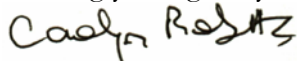
Welcome to the Senior Project!

Dear Seniors in the History of Science, Medicine and Public Health:

I am thrilled to be your Senior Project Director and to assist you in completing a successful project! In order to make this process as productive as possible, here are a few tips to keep in mind as you embark on this journey:

- If you are struggling to find a topic, ask yourself: “What do I desire to learn more about? What excites, angers, confuses, or frustrates me that I would like to wrestle with? What critical issues of health, medicine, the body, science, or technology fascinate me?” Remember, you do not need to know anything about your topic prior to the thesis project.
- Don’t worry if your topic feels overly broad or unfocused at the beginning of this process. As you embark on your reading and research, the topic will become more focused as you proceed.
- Meet regularly with your advisor, even if your progress is slow or you feel bogged down. They can suggest ways to move ahead, help you refine your thinking, and provide support in various ways. Consider scheduling a series of several meetings with your advisor ahead of time rather than setting up meetings one by one.
- You will need to formulate a preliminary argument earlier than might feel comfortable. Remember, that at this stage your argument is only provisional. You should continually return to your sources so that you can adjust and modify your argument based on the evidence and your interpretation of the evidence. Only at the end of the process, should your argument be considered final. Do not build a case for a preconceived idea by cherry-picking the evidence. This will be obvious to your readers and will result in a weak project.
- From the very beginning of the process take good notes. This includes identifying material by its source and being scrupulous about attribution and quotations. Note these details from the very beginning! It is incredibly time-consuming to go back through your sources to figure out where a particular quotation or idea came from.
- Keep your computer backed up! Crashes, thefts, and data corruption happen every year, but they are not acceptable excuses for a poor or late project.
- Ask for help! If you have issues or concerns about your project, talk to your advisor and other faculty as well. Feel free to consult the Senior Project Director. I am here to help you succeed! Do not wait until the last minute to ask for help if you need it.

Wishing you a great year ahead,



Carolyn Roberts
Senior Project Director, HSHM Program

What Kind of Project?

You have the option of choosing between several paths for the senior project. It is important to make these major decisions early and in conversation with your faculty advisor.

Will you pursue a two-term or a one-term project?

For students graduating in May, a two-term project begins in the fall and is due just after spring break. A one-term project is completed in the fall only, and students who complete a one-term project are required to take an additional HSHM course in the spring. (Students who will graduate in December 2018 or who have other major constraints on their schedule should contact the Senior Project Director about alternative arrangements.)

Note! Only seniors who complete a two-term project will be eligible for senior-project prizes or for Distinction in the Major. Likewise, only seniors pursuing two-term projects are eligible for support from the Research Travel Fund administered by the history department (other funding may, however, be available from the Colleges and other sources).

What form will your project take?

Most students' projects will be a written essay. Writing is the only universally accepted form of communication in history, and an essay project will be excellent preparation for future research and a wide range of careers. For two-term projects, this essay will be no more than 12,500 words (roughly 40 pages). One-term projects are limited to 7,500 words (roughly 25 pages). Essay projects will also include notes, a bibliography, and a bibliographic essay – see page 13 for details.

It is also possible to pursue a non-written project. The decision to do a non-written project should be made only after consultation with faculty (see below for formal approval requirements), and you should think carefully about how your project will advance your intellectual and career goals. Here are some possibilities:

- **Website.** You will need to be able to write all necessary code and find space to host the site. Evaluation of the project will be based on both its design and its content.
- **Exhibition.** You'll have to find a suitable place to host the exhibition; you'll also need to locate and mount all materials. Yale libraries, museums, and archives have all expressed interest in hosting student exhibits.
- **Exhibition Catalog.** Preparing a catalog requires a different set of skills from mounting an exhibit, and you can do one without the other. Layout and graphics skills will be important, but again the evaluation will be based on both form and content.
- **Film.** This can be a traditional documentary film (complete with interviews, animations, etc.), or it can be more experimental. Format, length, and possible screening locations should be determined in conversation with your advisor.
- **Historical Map or Atlas.** You will need to undertake primary research and craft a historical argument. Attention to cartographic technique and visual language will also be crucial. Maps can be printed on large-format paper or prepared for the web.
- **Historical Data Reconstruction.** Many scientific fields rely on data from historical sources, including astronomy, epidemiology, meteorology, seismology, ecology, and many others.

Interpreting old data, however, requires precise attention to historical scientific theories, instrumentation, and cultural, institutional, and political context.

The list above is only meant to be suggestive, and you should feel free to propose something else. In all cases, however, the project must be realized – it cannot simply remain a proposal, no matter how well conceived or researched.

All non-written projects must be accompanied by a written analysis of your argument, goals, and methods. This description cannot exceed 3,000 words. Part of this text may resemble a bibliographic essay, but the primary purpose is to explain what you have done – and why. You must also submit a bibliography of primary and secondary sources (see page 13). Expectations for the number, type, and variety of sources are the same for written and non-written projects.

Note! To pursue a non-written project, you must receive formal pre-approval from your advisor; keep in mind that some faculty may not be able to advise a non-written project. You must also receive pre-approval from a *second* faculty member who will agree to evaluate the project once it is completed. At least one of these two faculty members must be from the HSHM program. All non-written projects must also be specially approved by the Senior Project Director.

Senior Project Timeline, 2018–2019

Due indicates something due to the Senior Project Director. Submit this material to Erica Lee at erica.lee@yale.edu by 5:00 p.m. on the date indicated.

Assignment indicates something due to your advisor.

Two-Term Projects

FALL SEMESTER, 2018

- | | | |
|-----------|----|--|
| August | 29 | Register for HSHM 490 during shopping period |
| | 30 | MANDATORY senior project meeting: 4:00 p.m. Location: 81 Wall St. 201 Gordon Parks Room |
| September | 7 | Research Travel Fund applications available in EM 414 . |
| | 10 | Due: Statement of Intention, signed by your advisor. Turn in to Erica Lee erica.lee@yale.edu by 5:00 p.m. Register for a Library Research One-On-One by emailing melissa.grafe@yale.edu ; you must meet by September 28th |
| October | 5 | Research Travel Fund applications due by 4:00 p.m. to Essie Lucky-Barros in EM 414 . |
| | 15 | Assignment: Research Plan due to advisor. |
| | 29 | Assignment: Three-page Prospectus due to advisor. |
| November | 5 | Assignment: Annotated Bibliography due to advisor. |
| | 26 | Assignment: Ten-page draft or full outline due to advisor. |

SPRING SEMESTER, 2019

- | | | |
|----------|----|--|
| January | 14 | Register for HSHM 491 during shopping period |
| February | 18 | Assignment: Complete draft of project due to your advisor. Consult with your advisor regarding possible graders. |

- 25 **Due:** Senior Project Title Form. Turn in to Erica Lee erica.lee@yale.edu.
 Remind your advisor to turn in a list of suggested graders.
- April** 1 **Due:** Senior Projects due in **EM 314** by 5:00 p.m.

One-Term Projects

FALL SEMESTER, 2018

- August** 29 **Register** for HSHM 492 during shopping period
- 30 **MANDATORY** senior project meeting: 4:00 p.m.
 Location: **81 Wall St. 201 Gordon Parks Room**
- September** 4 **Due:** Statement of Intention, signed by your advisor. Turn in to
 Erica Lee erica.lee@yale.edu by 5:00 p.m.
 Register for a Library Research One-On-One by emailing
 melissa.grafe@yale.edu; you must meet by **September 21st**
- 28 **Assignment:** Research Plan due to advisor.
- October** 22 **Assignment:** Three-page Prospectus due to advisor.
 Assignment: Annotated Bibliography due to advisor.
 Consult with your advisor regarding possible graders.
- November** 5 **Due:** Senior Project Title Form. Turn in to Erica Lee erica.lee@yale.edu
 Remind your advisor to turn in a list of suggested graders.
- 26 **Assignment:** Complete draft of project due to your advisor.
- December** 3 **Due:** Senior Projects due in **EM 314** by 5:00 p.m.

Detailed Explanation of Assignments

Statement of Intention

You must have an advisor in order to undertake a senior project. You are responsible for finding an appropriate faculty member for this purpose. We will not select an advisor for you. If your first-choice advisor can take no more advisees, ask that person for his or her advice for someone else who might be a good advisor. Beginning on page 25 you will find a listing of HSHM and History faculty by their fields of interest. The Senior Project Director can also help to suggest appropriate faculty advisors.

In consultation with your advisor, you must decide on a topic for your project as soon as possible. The Statement of Intention form is the place for you to formally propose your project and summarize your preliminary goals. This form must be signed by your advisor and submitted to Erica Lee erica.lee@yale.edu. Submission of the Statement of Intention is a mandatory requirement for credit in HSHM 490 or 492. If your topic or advisor should change after you begin your research, you must immediately submit a new signed form to Erica Lee.

Library Research One-On-One

You must email Melissa Grafe melissa.grafe@yale.edu, the librarian for the HSMMPH major, to schedule a one-on-one meeting about your project. She will be sure you meet with a librarian who has expertise relevant to your topic; these meetings will help you brainstorm for sources and find what you need, either at Yale or elsewhere. These meetings are mandatory and must be completed before you turn in your Research Plan.

Research Plan

This one- or two-page research plan is due to your advisor. This plan will restate your topic, reflecting the research you have done so far and giving a brief mention of the major secondary works in the field. It must also pose several important questions you will raise about the topic. These questions will shape the direction of your research. You will also need to tell your advisor about the primary sources you will use and where they are located. If you need to travel to archives, you should consider when you can visit them and whether you will be applying for travel grants from your college or the department to visit them.

If you need materials that aren't available at Yale, it is important to request these ASAP from Inter-Library Loan or Borrow Direct.

Prospectus

Your three-page prospectus is a fuller and more developed version of what you included in your Statement of Intention. This prospectus should open with a short description of the topic and present your preliminary thesis statement. The thesis statement is the *argument* you hope to make based on your source materials; it is the *conclusion* that will indicate the significance of what you have written. The prospectus should also indicate what unique contribution you hope to make by describing the major secondary literature that exists on your topic and how your research will augment or modify it. Also include a discussion of the primary sources you will use.

Annotated Bibliography

This preliminary bibliography should include all sources that you have consulted and that you expect to consult, as well as every source cited in your notes. It should be approximately five pages long and should be divided into Primary Sources and Secondary Sources, with Primary Sources first. Your list of secondary sources should include every secondary source that you think is important to your topic. (You should select three or four areas of historical literature on which your project touches and identify the major secondary sources in those areas.) Write a few lines about each book, stating how it relates to your project.

Excerpt or Outline (for Two-Term Projects only)

You will need to choose between submitting a draft of ten pages of prose or a detailed outline of your entire project; make this decision in consultation with your advisor. If you choose to submit a detailed outline, you should provide a timetable describing a possible set of writing deadlines you would like to meet to complete the project on time. Planning a calendar of writing is an excellent way of breaking down a large task into easily manageable smaller ones.

Selection of a Grader

You should discuss ideas for graders with your advisor. The Senior Project Director will assign graders in consultation with your advisor. Since the grading load needs to be distributed relatively evenly over all faculty, no commitments to any particular grader are possible.

Complete Draft of Senior Project

This is very important! Do not plan to finish your project immediately before the deadline. Getting feedback on a *full* and *polished* draft will improve the final product immensely and can help to avoid major blunders. This includes the bibliographic essay. At the end of the process, projects usually divide into two major camps: successful projects that were revised based on the advisor's feedback, and less successful projects that seem undercooked, confused, or incomplete.

You will probably write several drafts before you have a draft you want to submit to your advisor. You may also want to ask your college writing tutor to edit your rough draft to help you repair awkward phrasing, disorganized paragraphs, and grammatical errors before you present the draft to your advisor.

Senior Project Title Form

This form will enable the Senior Project Director to assign the most appropriate grader for your project. Clever, engaging, and provocative titles are fine (and encouraged!), so long as the title clearly indicates the place, time period, and subject matter addressed by the project.

Submission of the Senior Project

Your completed project must be turned in to Erica Lee by 5:00 p.m. This deadline is non-negotiable. For projects with digital or other non-paper components, the burden is on *you* to show your advisor and your grader that you have stopped work by the deadline. For example, you can turn in a USB drive or CD/DVD of any digital content, including web pages, video, or photographs of a finished exhibition. Be sure to make appropriate arrangements well in advance.

Registration and Grading

Registration

For those pursuing a **two-term project**: Register for **HSHM 490** in the fall and **HSHM 491** in the spring. You will receive a temporary grade of SAT (satisfactory) or NS (not satisfactory) for the fall term; this grade will eventually be replaced by the final grade you receive on the project. (Students who receive an NS in HSHM 490 must still register for HSHM 491 and complete their projects on schedule.)

For those pursuing a **one-term project**: Register for **HSHM 492** in the fall term. Your grade in this course will be the same as the final grade you receive on your project.

For students who will graduate in December 2018 or who have other major constraints on their schedule: Contact the Senior Project Director.

First-Semester Evaluation (for Two-Term Projects)

The Senior Project Director assigns first-semester grades in consultation with your advisor.

You must have completed all these assignments to receive a grade of SAT:

- Register for HSHM 490
- Attend mandatory senior-project meeting
- Submit a signed Statement of Intention to Erica Lee
- Register for and attend a Library Research One-On-One
- Submit a research plan to your advisor
- Submit a three-page prospectus to your advisor
- Submit an annotated bibliography to your advisor
- Submit either a ten-page draft or detailed outline of your entire project to your advisor

Students who receive an NS in HSHM 490 must still register for HSHM 491 and complete their projects on schedule. No incompletes will be given in HSHM 490.

Final Evaluation

Your project will be graded by a member of the History or HSHM faculty who is not your advisor. (Graders from other departments are also possible, with prior approval.) Your grader will consult with your advisor before submitting their final report; see page 23 for a copy of the form that your grader will use. You will receive a completed copy of your grader's report roughly one month after the final deadline.

Prizes

Both your advisor and your grader may nominate your project for prizes. Senior Project Prize Day will be held the Friday afternoon of commencement weekend; families and guests are encouraged to attend. Students nominated for prizes will be notified by e-mail.

Final Deadline and Submission

The final deadline is a REAL deadline!

As stated in the Blue Book: “If the essay is submitted late without an excuse from the student’s Residential College Dean, the penalty is one letter grade for the first day and one-half letter grade for each of the next two days past the deadline. However, no essay that would otherwise pass will be failed simply because it is late. Late essays will not be considered for departmental or Yale College prizes.”

Extensions to the Deadline

Only major, incapacitating illnesses and dire family emergencies will be considered as legitimate cause for an extension of this deadline by your college dean, who must consult with the Senior Project Director prior to issuing the excuse. Students who do not turn in a project by the end of the semester are automatically given a grade of F. This grade of F may be replaced after the end of the semester if the student submits a project to finish his or her degree. Such exceptionally late projects receive no grade deduction penalty, since not graduating on time is considered penalty enough. These late projects will be read and graded within sixty days after the following term begins.

Number of Copies Required

On the date that projects are due you will need to bring **one bound copy** and **one unbound copy** of all written material to Erica Lee in EM 314. You may choose a company such as TYCO Print+Promo to bind your essays or, if you have the means you may bind the copies yourself. You should, of course, keep a copy for yourself as well. For projects with digital or other non-paper components, the burden is on *you* to show your advisor and your grader that you have stopped work by the deadline. For example, you can turn in a USB drive or CD/DVD of any digital content, including web pages, video, or photographs of a finished exhibition. Be sure to make appropriate arrangements well in advance.

On that same day, you must also forward an electronic copy of your project to Erica Lee, HSHM Registrar at erica.lee@yale.edu and Essie Barros, Undergraduate Registrar for the Department of History, at essie.barros@yale.edu. Erica and Essie will be archiving all the senior projects for History of Science, Medicine, and Public Health and for History. For projects with significant digital content, please keep file sizes reasonable.

Structure and Style of Written Work

All senior projects – even those that don't take the form of an essay – require clear, elegant, and convincing prose. All writing should follow these guidelines.

Structure

Essay projects will consist of at least three parts: the text itself, a bibliography, and a bibliographic essay. Non-written projects will include an analytic essay and a bibliography. You may also choose to include a title page, table of contents, acknowledgements, appendices, or other supplementary material.

Style

When writing, you should use *A Manual for Writers* by Kate Turabian, which is available at the Yale Bookstore. It provides the only styles acceptable for your writing and citations. You will need to consult this manual from the moment you begin to take notes.

Length

For two-term projects, the text portion of your essay is limited to 12,500 words. For one-term projects, the limit is 7,500 words. Non-written projects must be accompanied by an analytic description of no more than 3,000 words. The word count for your text must be included on the last page of text – *before* your bibliography. While there is no minimum word limit, most successful senior projects approach these limits. Appendices, bibliography, notes, and the bibliographical essay do not count towards the word limit.

Footnotes or Endnotes?

You may use either footnotes or endnotes. Complete instructions for both can be found in *A Manual for Writers*. It is critical that your notes be complete and correct, including page numbers for citations from published sources and box and file numbers from manuscript sources.

The Bibliography

The bibliography should include all your sources: everything cited in your notes *and* everything you consulted but did not cite. Divide the sources into Primary Sources and Secondary Sources, with Primary Sources first. Alphabetize all sources within these headings; do not subdivide your sources by format, subject, or date. Your project will be judged incomplete (or late) if it does not include a bibliography.

The Bibliographical Essay

A separate bibliographical essay is required for all essay projects; it should be no more than 2,000 words in length (most are shorter). The bibliographical essay is a set of critical reflections on the most important sources you have used, and it allows you to explain how you developed your ideas as your research progressed. You should identify the strengths, weaknesses and limitations of the research material you have used to write your essay. An example of an excellent bibliographical essay can be found on page 14. Your project will be judged incomplete (or late) if it does not include the bibliographical essay.

Sample Bibliographic Essay

from an HSHM Senior Project, April 2006

The mononucleosis studies carried out at Yale in the 1950s and 1960s lent themselves well to primary source material. Because the setting of my study was so local, and the time so recent, I had access to ample primary documents about the Yale experiments and to the still-living people who could comment on the mononucleosis story. Thus, while general information about the time period and about the developing status of virology depended on secondary sources, the bulk of my paper is based on primary documents, archives, newspaper articles, and personal interviews.

The framework of the mononucleosis story was built on published documents, including scientific papers and newspaper articles. The published works of Alfred Evans on mononucleosis and seroepidemiology, of John Paul on clinical epidemiology and serology, and of James Niederman on mononucleosis at Yale anchored the essay in time and place, and provided a jumping off point for further investigation. Alfred Evans was a prolific writer, with over 230 publications during his career, mostly concentrating on mononucleosis and public health. Paul, also prolific, wrote one book dedicated to his philosophy of clinical epidemiology, edited another containing several articles about serological epidemiology, and also published numerous scientific papers. James Niederman and Bob McCollum were co-authors on various papers about mononucleosis, including the first paper to reveal the connection between Epstein-Barr Virus and mononucleosis. Finally, Gertrude and Werner Henle published their discoveries relating to the Epstein Barr Virus, including its prevalence, significance with respect to Burkitt's Lymphoma, and, of course, its connection to mononucleosis. All of these scientific papers contributed to a factual data set that comprised the "official" scientific record of what happened.

While these formal statements of events provided a skeleton, I turned to the personal archives of the scientists involved to flesh out the details. My first attempt to find a significant primary source, the archives of Alfred S. Evans, proved unsuccessful. Despite his long and fruitful career at Yale, none of Evans' papers seemed to have been kept by the Yale Manuscripts and Archives. Two of his three children also didn't think they had much of use; the third posited that he might have some of his father's material stored away in boxes, but that they would not be available until after this year because he was remodeling his home and all of his possessions were in storage. None of Evans'

former colleagues whom I was able to contact knew where his papers had been stored, and after several weeks of investigation I abandoned the search.

Fortunately, however, I had better luck with the archives of Dr. Paul and Dr. Horstmann, both of which were meticulously preserved in Manuscripts and Archives. Neither archive was able to paint a very clear picture of the relationships among scientists on the Yale faculty, most likely because the communication among them would have been primarily conducted either in person or on the phone and not through letters. However, Paul's Archive was helpful in illustrating how the Department of Epidemiology and Public Health came into existence, as well as how he viewed serology and clinical epidemiology.

The next archives I searched were those of Drs. Werner and Gertrude Henle, which are located in Bethesda, MD. Through the papers of these scientists, I was able to piece together a lot of information about Alfred Evans and his place in the mononucleosis story, as well as exactly how the connection between EBV and mononucleosis had been made in the Henle lab.

Many of the gaps that were left in the mononucleosis story after sifting through these archives were filled by personal interviews. I conducted interviews with the central characters including Dr. James Niederman and Dr. Bob McCollum, as well as with more peripheral but still useful scientists and historians: Dr. Howard Spiro, who conducted the pepsinogen study with Dr. Niederman; Dr. William Summers, who was a former student and friend of Al Evans; Dr. George Miller, who was a former colleague of Evans' and who currently studies Epstein-Barr Virus; Dr. Nancy Ruddle, who was very familiar with the work and life of Dorothy Horstmann and who had also interacted with Niederman and Evans; Dr. Curtis Patton, a professor at the School of Public Health who was a colleague of both Niederman and Evans; Dr. Gerard Burrow, author of *A History of Yale's School of Medicine*; David Hershey, a member of the undergraduate Yale class of 1962 who had been subjected to the mononucleosis experiment in its inaugural year; Dr. Phillip Brachman, who was a colleague and close friend of Evans'; Dr. Nancy Mueller, also a colleague and friend of Evans'; Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases and advisor to the White House on global AIDS issues; Dr. Mark Kaplan, a virologist and infectious disease specialist who has dedicated his career to AIDS treatment and research and who was part of the Gallo team that co-authored the landmark paper published in *Science* identifying HIV as the cause of AIDS; and finally Dr. Daniel S. Rowe, Medical Director of the Department of University Health Services starting in 1971. Each of these people contributed significantly to my research by providing context, personal insight, and memorable details about the story I was trying to tell.

As I continued my research, it became clear that the scientific story in and of itself did not provide a complete picture, and that the historical and social context in which this research took place would offer a lot of insight as to how and why progress was made. To this end, my greatest primary resources were newspapers of the time, which reported on trends in virology and informed consent, as well as the perceived scientific strength of Yale University. The *New York Times* in particular covered developments at Yale well, given Yale's proximity to New York City, while popular magazines like *Life* helped paint a picture of the public perception of mononucleosis at the time. These newspapers confirmed some of the trends and ideas that had been recalled in the personal interviews, which helped solidify some of my conclusions.

In addition to the primary sources discussed above, I also consulted secondary sources to find out if the themes I saw emerging in the mononucleosis situation had more general significance. For example, Heather Munro Prescott's "Using the Student Body: College and University Students as Research Subjects in the United States during the Twentieth Century" confirmed the relevance of student participation in experimentation, and its rise and fall along with the emerging informed consent laws. Similarly, Joshua Lederberg's "Infectious History" and Peter Radetsky's *The Invisible Invaders* both captured the rising prominence of virology in the mid-twentieth century as feared diseases like polio and mumps were conquered one after another. Secondary sources were also essential for context, particularly Gerard Burrow's *A History of Yale's School of Medicine*. This volume gave me a sense of how the mononucleosis story fit into the general trajectory of the Yale Medical School, and highlighted, in particular, the relative importance of Paul's contributions.

Some of the most interesting moments of my research occurred when sources conflicted, leaving me to make my own judgment as to what really happened. How the mono study was conceived and by whom, in particular, became more and more ambiguous with each source; Dr. Niederman himself presented one picture, while Dr. Howard Spiro presented another and Dr. Bob McCollum a third. The archived papers of John Paul provided some official records from the Department of Epidemiology and Public Health that partially clarified the details, but the exact nature and sequence of events, where the memories of the players involved diverge from the written record, remains a mystery. If I had had more time, one of the most valuable additions to this source list would have been the papers of Alfred Evans, which may become at least partially available later this spring. Perhaps an interesting continuation of this paper would use these papers to shed additional light on the study of mononucleosis and serology in the twentieth century.

Prizes

PRIZES AWARDED BY THE HSHM PROGRAM

Martin Klein and George Rosen Prize

Established by the program in the History of Science and Medicine in 2006, the prize honors two distinguished former members of the faculty: Klein, a historian of physics, and Rosen, a historian of medicine and public health. Awarded to the senior who has written the most outstanding senior essay in history of science and/or medicine. Essays submitted by seniors majoring in History and History of Science, Medicine, and Public Health in fulfillment of the respective major requirements are considered as entered in competition.

Elias E. Manuelidis Prize

The Manuelidis Prize, established in 2017, is presented for an outstanding senior essay in the field of the history of medicine, with preference for topics related to social justice.

PRIZES AWARDED BY THE HISTORY DEPARTMENT

Max Bildner Prize

The Bildner Prize is presented for the best senior essay in Latin American history.

Percival W. Clement Prize

Established in 1994 for the best essay by a junior or senior in American studies (embracing history) that supports the U.S. Constitution.

Robert D. Gries Prize

This prize is for the best essay in a field in history other than American or European. Robert Gries established it in 1981.

John Addison Porter American History Prize

Mrs. Porter established the prize in 1901 in memory of her husband, John A. Porter, B.A. 1878. It does to a junior or senior for the best original essay completed during the current academic year on a subject bearing on U.S. political, constitutional, or economic history, or on the condition or future of the United States.

Edwin W. Small Prize

Carmel R. Small established the prize in 1990 in memory of Edwin W. Small, B.A. 1934, for recognition of outstanding work in the field of American History.

Winifred Sturley Prize

Richard A. Sturley '49, M. Eng. '50, and Michael F. Sturley '77, J.D. '81 established the prize in honor of Winifred Sturley, Hon. 55. It is awarded to the student in the History Department who submits the best senior essay on a topic in English history.

Andrew D. White Senior Essay Prize

Established in 1902 and first awarded in 1907, the White prize was the gift of Professor Guy Stanton Ford of the University of Illinois in honor of Andrew D. White, B.A. 1853, and endowed by a bequest from Mr. White for the best essay in English, European, or non-western history.

Howard Roberts Lamar Prize

Named for distinguished History Professor Howard Lamar, the prize is awarded to the best undergraduate essay on a topic in the history or culture of the American West.

David Morris Potter Prize

The Potter Prize is awarded to the best undergraduate essay on a topic in American history or culture.

Walter McClintock Prize

The McClintock Prize is awarded to the best undergraduate essay on a topic in Native American history.

PRIZES AWARDED BY OTHER YALE PROGRAMS**Asian American Studies Prize**

The Asian American Studies Prize is for the best essay in Asian American Studies, given by the American Studies Department.

Canadian Studies Prize

The Canadian Studies Prize is for the best essay on a Canadian topic, awarded by the Canadian Studies Council.

GALA Prize

The Yale Gay and Lesbian Alumni/ae Association established the GALA Prize to be administered through the fund for Lesbian and Gay Studies for the best senior essay in any area of gay and lesbian studies. Submit essays to the office of the Fund for Lesbian and Gay Studies, WLH 315. Call for deadline date.

Library Map Prize

The Map Collection of Sterling Memorial Library awards a prize for the best senior essay making good use of maps. Submit essays to Curator, Map Collection.

Lily Rosen Prize in Women's Health

Awarded annually to an undergraduate in Yale College for the best essay that contributes to knowledge about women's health. Essays may be in any field of the humanities or social, physical or natural sciences and may deal with any aspect of women's physical or mental health.

Manuscripts and Archives

Manuscripts and Archives offers up to two undergraduate student prizes each year, in memory of our colleague Diane E. Kaplan, who was instrumental in making these prizes available to Yale College seniors. **The prizes are for an outstanding senior essay, on any topic (including Yale history), based substantially on research done in Manuscripts and Archives.**

Steere Prize in Women's Studies

The Women's, Gender, and Sexuality Studies Program awards a prize for the best essay accentuating women or gender roles or using feminist theory. Submit essays to the Women's, Gender, and Sexuality Studies Program, WLH 315.

Williams Prize in East Asian Studies

Submit essays with a faculty letter of endorsement to the Williams Prize Committee, Council of East Asian Studies, YCIAS, Luce Hall.

Wrexham Prize

The Yale College Dean's Office awards the Wrexham Prize to the best senior essay in the field of the humanities. A committee nominates the History Department's entries.

Senior Project Statement of Intention

History of Science, Medicine, and Public Health

Complete and return this form to Erica Lee erica.lee@yale.edu

Two-Term Statement due September 10, 2018 by 5:00 p.m.

One-Term Statement due September 4, 2018 by 5:00 pm.

Your Name: _____ College: _____

E-mail: _____ Telephone: _____

Two-Term Project: _____ One-Term Project: _____

Academic Advisor's Name: _____

Project Advisor's Name: _____

Type of Project (essay, website, exhibition, etc.): _____

Grader's Name (for non-written projects): _____

Attach a printed, one-page description of your proposed project. State the topic and your focus concisely. Indicate what types of primary sources you might use.

In addition, please summarize your project in one sentence:

List all courses you have taken that are relevant to your topic (including courses in progress):

Do you have the language skills necessary for the project? Explain:

Will this project also be submitted to a program other than HSHM? Yes / No

If so, what is the other program? Who is your advisor in that program?

Have you registered for a Library Research One-On-One? Yes / No

Advisor's Signature: _____

For non-written projects, sign only after consultation with the grader and the Senior Project Director.

Senior Project Title Form

History of Science, Medicine, and Public Health

Complete and return this form to Erica Lee erica.lee@yale.edu

For one-term projects: due November 5, 2018 at 5:00 p.m.

For two-term projects: due February 25, 2019 at 5:00 p.m.

This form will enable the Senior Project Director to assign the most appropriate grader for your project. Clever, engaging, and provocative titles are fine (and encouraged!), so long as the title clearly indicates the place, time period, and subject matter addressed by the project.

Your Name: _____

College: _____

E-mail: _____

Telephone: _____

Project Advisor's Name: _____

Project Title: _____

Type of Project (essay, website, exhibition, etc.): _____

Sample Titles of Past Senior Projects

A 'Burning' Issue: Battling Blood Loss in Neurosurgery:
Harvey Cushing's Embrace of Electrosurgery

Building a New Public Health Tradition:
The End of Routine Smallpox Vaccination in the United States

Caffeine's Conquest of America:
Caffeine's Rise to Celebrity in Twentieth-Century America

Let the Dead Teach the Living:
The Rise of Body Bequeathal in Twentieth-Century America

When Heroin Was New:
The Introduction of Heroin into American Medicine

Federal Science and Western Rangelands:
American Entanglements in the Plant Industry, 1890–1910

Science Writing in Modern American Newspapers

Unmasking Autism in Twentieth-Century America

Sweet Stain:
Social Stigma and Type 1 Diabetes in Twentieth-Century America

Maginot Line in the Sky:
Scientists and Statesmen in the Safeguard ABM Debate

"Hail to the Patents!"
The Ethics, Politics, and Economics of the Early Modern Patent

System Rifles in War and Peace:
The American Arms Industry in the Mid-Nineteenth Century

Profiles in Innovation:
ENIAC, Microprocessor, IMP

For more sample titles and sample essays please visit the senior essay section of the HSHM website: <http://hshm.yale.edu/undergraduate-major/senior-project>

Senior Project Evaluation Report
History of Science, Medicine, and Public Health
Class of 2019
Due: April 29, 2019
Senior Project Director: Carolyn Roberts

Student's name: _____

College: _____

Project Advisor: _____

Grader's Name: _____

Final grade: _____

Grader's Signature: _____

Date: _____

Evaluation of Materials Used:

A. Primary Sources:

B. Secondary Sources:

C. Student's Bibliographical Essay (for essay projects):

Evaluation of Structure and Style:

A. Organization of Project:

B. Style of writing (or other method of presentation):

C. Typographic and scholarly style (spelling, grammar, notes, etc.):

Evaluation of Argument:

A. Is the proposed subject adequately treated?

B. Is the interpretation well substantiated?

C. Does the student weigh the evidence judiciously?

D. General appraisal and criticism:

Have you consulted with the advisor regarding your grade? Yes / No

Have you sent this report to the advisor by email? Yes / No Date sent: _____

Would you recommend this project for publication? Yes / No

Are you recommending this project for the HSHM prize? Yes / No

Are you recommending this project for a non-HSHM prize? Yes / No

Which prize(s)? _____

If you feel this project should be recommended for a prize, please contact Carolyn Roberts or Erica Lee at your earliest convenience.

Faculty Fields for Advising

If you have questions about a faculty member's availability, contact them directly. It is possible, but rare, to be advised by different faculty in the fall and spring.

HISTORY OF SCIENCE AND MEDICINE

Sakena Abedin

Medicine's encounter with the social world; history of clinical and social research on patient behavior; history of healthcare for underserved populations; history of racial disparities in health in the U.S.

Rene Almeling

Sociology, gender, genetics, health, reproduction, assisted reproductive technologies, men's reproductive health

Toby Appel

American medicine in the nineteenth and early twentieth centuries, especially women in medicine and science, Connecticut and Yale medical history, medical and scientific societies and institutions, and health professions including alternative physicians.

Paola Bertucci – (On Leave Spring 2019)

Pre-1800 science, technology and medicine; museums and collecting; material culture of science; scientific and industrial travels; scientific and medical instruments; secrecy and science, science and art; history of scientific exhibitions.

Simone Browne – (Visiting Associate Professor 2018-2019)

Surveillance studies and black diaspora studies

Ivano Dal Prete

Earth sciences (ca. 1300-1800): generation in the long eighteenth century; the material culture of astronomy; science, religion and society in early modern Italy.

Rachel Elder

History of Medicine; Health and the Body; History of Technology; Disability History; History of Neurology and Psychology; U.S. Gender and Sexuality

Melissa Grafe

History of medicine in early America, history of medical collections and libraries, medical education

Tess Lanzarotta

History of American medicine and public health; Native American and indigenous studies; Arctic studies; history of global health; history of ecology and epidemiology; biomedical technology

Joanna Radin (On Leave AY 2018-2019)

History of biology, medicine, and anthropology since 1945; human subjects research, collections; global health; biomedical technology; science fiction; feminist and postcolonial STS

Chitra Ramalingam – (limited advising)

Cultural history of the physical sciences (18th century to the present), science and visual culture, visual studies, material culture studies, history and theory of photography, modern British history.

Bill Rankin – (On Leave AY 2018-2019)

Physical and earth sciences since the mid-nineteenth century; military, industrial, and governmental science; history of cartography; science and architecture; visual studies; environmental history

Carolyn Roberts

Medicine and slavery in the Atlantic world; race, medicine, and science; history of medicine in Africa and the African diaspora; health and protest in African American history; non-Western medicine and global health

Naomi Rogers

History of twentieth-century medicine and public health in North America including policy, activism, alternative medicine, and gender and medicine; science and feminism; feminist health movements.

Jason Schwartz

Vaccines and vaccination programs, decision-making in public health policy, the structure and function of scientific expert advice to government. The ways in which evidence is interpreted, evaluated, and translated into regulation and policy in medicine and public health.

Zoe Todd – (Visiting Assistant Professor 2018-2019)

fish, art, Métis legal traditions, the Anthropocene, extinction, and decolonization in urban and prairie contexts, human-animal relations, colonialism and environmental change in north/western Canada.

John Warner

Nineteenth- and twentieth-century U.S. medicine and health cultures; comparative history of medicine (U.S., Britain, France); cultural history of science and medicine.

UNITED STATES HISTORY

Jean-Christophe Agnew

American Cultural and Intellectual history; 19th and 20th centuries; Market relations and Consumer culture; Cultural theory

Ned Blackhawk

Native American History and Native American Law

David Blight

Civil War and Reconstruction era, African American history, and American cultural and Intellectual history

Crystal Feimster

African American studies; racial and sexual violence

Joanne Freeman

Revolutionary and Early National American history with special interest in politics and culture, Early American journalism and print culture, regionalism

John Lewis Gaddis

Cold War history, Historical Methodology, Biography, Grand Strategy

Beverly Gage

U.S. 20th Century and U.S. politics, terrorism, war and society

Glenda Gilmore - (On phased retirement)

Twentieth-century U.S. history, African American history since 1865, U.S. women's and gender history since 1865, history of the America south, reform movements, 1890 to the present

Jay Gitlin

U.S. cultural history (esp. music-related and popular culture); Native American and American west; American colonial: Canadian history; social history (esp. urban/suburban history)

Matthew Jacobson

U.S cultural history, 19th and 20th century immigration, ethnicity and race, U.S. expansionism

Jennifer Klein – (On Leave Fall 2018)

Twentieth-century U.S. history: urban history, labor history, New Deal and post-World War II politics and policy

Naomi Lamoreaux (On Leave AY 2018-2019)

U.S. Economic, Business, and Technological History

George Levesque

History of religious thought in America, History of Education, and History of American Colleges and Universities, 18th & 19th century intellectual history

Mary Lui

Asian American history; U.S. urban history; race and ethnicity; and immigration, gender and sexuality

Joanne Meyerowitz – (Chair of History Fall 2018, On Leave Spring 2019)

Twentieth-century, social, cultural, and intellectual history, Gender, and Sexuality

George Miles – Beinecke Library - (limited advising)

Native American history, frontier, American West

Nicholas Parrillo

U.S: legal history; history of the administrative state; political development

Stephen Pitti

History of Mexican Americans, U.S. West, Latinos, 19th and 20th Century Immigration, the U.S.-Mexico border, labor history

Ariel Ron

Intersection of economic and political development and the history of capitalism in the nineteenth-century United States

Edward Rugemer

Comparative Slavery and Abolition; Antebellum United States; Atlantic history

Paul Sabin

Environmental Studies

Judith Ann Schiff Manuscripts & Archives - (limited advising)

History of New Haven and Yale, Women in Connecticut; Aviation, Jewish history

Harry Stout - (limited advising)

Early America, American Religious history, American civil war

John Witt (Yale University Law School)

American Legal History

LATIN AMERICAN HISTORY

Marcela Echeverri

Latin America: Andes; social and political history; law; race and ethnicity; comparative revolutions, slavery, and abolition; political theory; history of anthropology

Anne Eller – (On Leave AY 2018-2019)

Slavery and emancipation in the Caribbean and Latin America, the Haitian Revolution, pan- Caribbean migration and political movements, Latin American independence, and the African Diaspora

Gilbert Joseph – (On Leave Spring 2019)

Modern Latin American History, Mexican and Central American History; U.S.–Latin American Relationships; social and revolutionary movements in Latin America, sports in Latin America

Stuart Schwartz

Latin America history, Brazil

ANCIENT HISTORY

Joseph Manning

Ancient Egyptian history, and Ancient North Africa history

EUROPEAN AND BRITISH HISTORY

Jennifer Allen – (On Leave AY 2018-2019)

Modern German history; cultural history of modern Europe; theories and practices of memory; grassroots activism; the politics of space; Europe after the Cold War

Paul Bushkovitch

Russia to 1725; Russian foreign policy; Ukraine

Becky Conekin

British History

Carolyn Dean

Intellectual and cultural historian of modern Europe with a particular interest in France, Germany, and Italy; genocide studies; gender studies

Carlos Eire

Early modern Europe: intellectual, social, cultural, and religious history; Protestant Reformation; Catholic Reformation (Spain, France, Germany)

Paul Freedman

Medieval European history

Bruce Gordon

Early German Reformation and Christianity history

Paul Kennedy

Great power relations, 19th and 20th centuries; Military and Naval history British Foreign and Imperial history; contemporary Global Security issues; United Nations studies

Ivan Marcus – (On Leave Spring 2019)

History of the Jews in medieval Europe; History of Jewish culture; Jewish-Christian relations; Jewish mysticism and pietism; the Jews and Islam

John Merriman

Modern France; urban and social history; modern European History since the Renaissance

Isaac Nakhimovsky

Political thought and intellectual history, primarily in 17-19th century Europe

Stuart Semmel

British politics, culture, and thought since 1760, popular culture, politics, and political social thought, European cultural and intellectual history.

Marci Shore – (On Leave AY 2018-2019)

European Cultural and Intellectual history

Timothy Snyder – (On Leave AY 2018-2019)

Modern Eastern Europe

David Sorkin

Intersection of Jewish history and European history since the 16th century

Eliyahu Stern

Jewish History

Anders Winroth – (On Leave Fall 2018)

Medieval history, Scandinavia, church history, intellectual history; legal history

Keith Wrightson – (On Leave Spring 2019)

British History, 1500–1750, especially social, cultural issues; history of the family; local community studies; class and social structure

AFRICA, ASIA, AND MIDDLE EAST

Abbas Amanat

Modern Middle East; and Classical Islam; Iran; Ottoman Empire, the Arab World, Modern Indian subcontinent to the 19th century; history of US-Middle East relations

Daniel Botsman – (On Leave CY 2019)

Japanese History

Rohit De

Modern South Asia (India, Pakistan, Bangladesh), global legal history, law and society, law and colonialism, British Empire, nationalism and decolonization in Asia and Africa, comparative constitutionalism

Fabian Drixler

Japanese History and Demographic history around the world

Valerie Hansen – (On Leave Fall 2018)

China to 1600; Chinese religious and legal history; history of the Silk Road

Robert Harms

Sub-Saharan Africa

Denise Ho – (On Leave AY 2018-2019)

Modern China, Cultural Revolution, museum studies, material culture

Ben Kiernan

Southeast Asia, early and modern, esp. Cambodia and Vietnam, Indonesia and East Timor: comparative colonialism, nationalism, communism, genocide, and environmental history

Daniel Magaziner

20th Century South and Southern Africa popular culture; intellectual history, religious history, political history and environmental history; South Africa the African Diaspora, East Africa; Africa in the colonial and post-colonial age. Black Nationalism in South Africa, Black visual artists in 20th Century South Africa

Alan Mikhail – (Chair of History Spring 2019, On Leave Fall 2018)

Middle East, Early Modern Muslim World, Ottoman Empire, Egypt, environmental history, early modern history, history of medicine

Peter Perdue – (On Leave Spring 2019)

Chinese History

Lamin Sanneh

History of Islam; history of religion in Africa; cross-cultural studies; religion language and society

Jonathan Wyrzten

North Africa and Middle East: Comparative Empire and colonialism, Ethnicity and Nationalism, Morocco, Urban and Rural contentious politics