

**Michael D. Gordin**  
**Spring Semester 2022**  
**MW 11am-12:20pm**  
**LOCATION**  
**OFFICE HOURS**

## **History 398: The Einstein Era (KB)**

### **Course Description:**

Albert Einstein is the most renowned, and most recognizable, scientist of the twentieth century — and possibly of all time. (He also bears the even more impressive distinction of being Princeton's most famous resident.) In addition to covering Einstein's core scientific and philosophical contributions, this course uses his life as a frame to explore broader historical issues, including war and pacifism, Zionism and Nazism, civil rights, celebrity, gender, and the nuclear arms race.

### **Prerequisites:**

None. No prior scientific or historical background is required.

### **Course Requirements:**

*Participation: 25%*

*First Archival Paper: 15%*

*Second Archival Paper: 25%*

*Final Project: 35%*

### **Punctuality Policy:**

We start class exactly on time; please be there when we begin. Persistent lateness will detract from your participation grade. (The key word is *persistent* — we all have slip-ups now and then.)

Assignments are due when the syllabus says they are due. They are listed in the syllabus so that you can plan ahead, and thus there will be no extensions (barring something truly catastrophic and unexpected). Late essays and papers will be penalized a third of a letter grade for every 8 hours (a full letter grade over 24 hours). Papers five days late will receive a zero.

### **Device Policy:**

Technologies have advanced in the past decade faster than the ability of etiquette protocols and norms of polite behavior to keep up. Hence I must include this section in the syllabus. Please read it carefully.

Some of you may wish to do the readings for this course electronically — whether because you are more used to this mode, or to save trees, or for any other reason — and the articles are available on Canvas precisely to facilitate this choice. However, it greatly inhibits classroom conversation when a wall of laptop screens, somewhat like a War Room, surrounds the table. Therefore, I ask that if you bring your laptop to class, you

leave it closed during discussions *unless you are looking something up right then*, and then you should close it immediately afterward. (Needless to say, “looking something up” must relate to the class; your Instagram feed doesn’t fall into this category.) It is perfectly fine to have tablet devices (iPads, Kindles) open on the table at all times. You are obviously welcome to print out hard copies of the readings and/or bring in physical copies of books. During lectures, you are welcome to take notes on your computers, but please refrain from wandering off to distant corners of the Web. Surfing, texting, and answering your email is distracting to two sets of people: a) to me, because when you are not paying attention it is harder for me to deliver the lecture; b) and to your peers next to you and behind you, because they can see what you are doing. Please be considerate.<sup>1</sup>

I can think of no reason why you might need a phone during class. Please turn off your phones. Put them away. I will do the same to mine. If I suspect you are looking at your phone because you are staring dreamily into your lap, I will warn you, perhaps publicly; if I see you doing it again, you will be marked absent for that class and any future class in which it happens, without warning. It is really much easier if you just turn off your phone and put it away.

### **Required Books:**

{*Readings on the syllabus marked with a (\*) are available on Canvas. All books are also available on reserve at Firestone Library.*}

Albert Einstein, *Ideas and Opinions*, tr. Sonja Bargmann (New York: Three Rivers Press, 1995 [1954]). [\$13.95; ISBN: 978-0517884409]

Albert Einstein, *Relativity: The Space and the General Theory — 100th Anniversary Edition* (Princeton: Princeton University Press, 2015). [\$16.99; ISBN: 9780691191812] {Available online at [www.jstor.org/stable/j.ctv7h0s4k](http://www.jstor.org/stable/j.ctv7h0s4k)}

Albert Einstein and Mileva Marić, *The Love Letters*, eds. Jürgen Renn and Robert Schulmann (Princeton: Princeton University Press, 1992). [\$20.95; ISBN: 9780691088890] {Available online at [www.jstor.org/stable/j.ctv10vm1c5](http://www.jstor.org/stable/j.ctv10vm1c5)}

Fred Jerome and Rodger Taylor, *Einstein on Race and Racism* (New Brunswick, NJ: Rutgers University Press, 2005). [\$22.45; ISBN: 9780813539522]

David E. Rowe and Robert Schulmann, eds., *Einstein on Politics: His Private Thoughts and Public Stands on Nationalism, Zionism, War, Peace, and the Bomb* (Princeton: Princeton University Press, 2007). [\$19.95; ISBN: 9780691160207] {Available online at <https://doi-org.ezproxy.princeton.edu/10.1515/9781400848287>}

### **Assignments:**

Participation: Participation is a vital part of the course, and you are expected to come prepared to every meeting, ready to engage with the material. This course has two basic types of meetings: lectures and discussions (indicated by L and D on the syllabus).<sup>2</sup> For lectures: come ready to The most essential of these is that you come to each class, ready either to listen and ask questions for the L meetings, or to talk during the D

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<sup>1</sup> The easiest way to facilitate concentration is to disable your WiFi while in class; this will remove temptation.

<sup>2</sup> There is also an “A,” for “Archives,” to mark our visit to Princeton’s Rare Books and Special Collections department.

meetings. You should always do the reading *before* the class for which it is assigned; they are listed on the schedule right under the title. Most L meetings have no readings, or very short ones; readings for the Ds vary significantly in size — please plan ahead for the heavier weeks! At the first meeting, the class will be divided into two groups; members of each group have an additional responsibilities before the D meetings to which it is assigned on the syllabus. By 6pm the day *before* the discussion, each member of the designated group must post a paragraph on Canvas. These comments ought to include some thoughts about the readings/topic for that upcoming session, as well as some questions that you would like to discuss. There are six (6) discussion meetings assigned to each group; each student is responsible for doing five (5) of them. (That is, each of you gets to take one day off — which one is entirely up to you.) Your five Canvas posts will be factored into your participation grade, alongside your active engagement with the class.

*First Archival Paper:* [**Due at the beginning of Meeting 8, on 16 February!**] Go to Firestone and find an unpublished document in the Albert Einstein Duplicate Archive (or some other relevant collection). It doesn't matter how long it is or what it is about.<sup>3</sup> *Without doing any further research*, write a 3-4 page paper<sup>4</sup> analyzing this source. What is it about? Who wrote it, to what audience, and why? What is its historical significance? If this were the only document surviving on this topic, what would you be able to learn from it? This paper is to be a *close reading* of the source, to develop an interpretation of a single text. Be sure to include a proper citation to the document! (If you can, including a scan/photocopy of it would also be great.)

*Second Archival Paper:* [**Due at the beginning of Meeting 18, on 30 March!**] This is a similar assignment to the First Archival Paper, about a *different* unpublished archival document. (It can be on a related topic, if you wish.) This time *you are supposed to do further research* into primary and secondary literature to contextualize the document. This paper should be 5-6 pages<sup>5</sup> long.

*Final Project:* [**Due Dean's Date, 3 May 2022!**] The most common form of final project would be a 20-page<sup>5</sup> historical research paper, which draws its topic from one of the themes addressed in the course. (It does not have to rely on unpublished archival documents, but it should be based on primary literature. You are more than welcome to build on the work you did in either of your Archival Papers.) You are free to select another format for your final project, such as a website, a film, a guided tour of Einstein's Princeton,<sup>6</sup> etc. The topic and format of any final project must be approved by the instructor by Meeting 20 of the class (that's 6 April).

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<sup>3</sup> While many of these documents, especially for the first half of Einstein's life, are in German — and you are free to use those if you know German or any other language represented in the collections — there are a large number of documents available in English. (Plus, those documents are less likely to be already published in *The Collected Papers of Albert Einstein*.)

<sup>4</sup> Normal font size, normal margins.

<sup>5</sup> Normal font size, normal margins; the page-count does not include the bibliography.

<sup>6</sup> If you opt for this, you must take me on the tour. Be forewarned: I will ask questions!

**Schedule of Meetings**  
**(L = Lecture; D = Discussion; A = Archive)**

**Meeting 1, 24 January: Albert Einstein, 1879-1955 (L)**

**Meeting 2, 26 January: The Einstein Papers (A)**

{Visit the Department of Rare Books and Special Collections in Firestone Library to learn about the Albert Einstein Duplicate Archive and other unpublished and published Einsteiniana in Princeton University's libraries.}

**Meeting 3, 31 January: Einstein in Princeton (D, Group 1)**

*Readings:*

Jerome and Taylor, *Einstein on Race and Racism*, whole book. [160]

**Meeting 4, 2 February: Relativity (L)**

*Readings:*

\* Albert Einstein, "On the Electrodynamics of Moving Bodies [1905; selection]," in John Stachel, ed., *Einstein's Miraculous Year: Five Papers that Changed the Face of Physics* (Princeton: Princeton University Press, 1998): 123-139. [17]

**Meeting 5, 7 February: Relativity (D, Group 2)**

*Readings:*

Einstein, *Relativity*, 11-121. [110]

Einstein, *Ideas and Opinions*, 227-249, 276-290. [38]

**Meeting 6, 9 February: Einstein the Celebrity (L)**

**Meeting 7, 14 February: Einstein and Gender (D, Group 1)**

*Readings:*

Einstein and Marić, *The Love Letters*, 3-80. [78]

Einstein, *Ideas and Opinions*, 7-8, 76-77. [2]

\* John Stachel, "Albert Einstein and Mileva Marić: A Collaboration that Failed to Develop," in Stachel, *Einstein from B to Z* (Boston: Birkhäuser, 2002), 39-55. [17]

\* Roger Highfield and Paul Carter, *The Private Lives of Albert Einstein* (New York: St. Martin's Press, 1993), 189-217. [29]

\* Margaret W. Rossiter, "The ~~Matthew~~ Matilda Effect in Science," *Social Studies of Science* 23, no. 2 (May 1993): 325-341. [17]

**FIRST ARCHIVAL PAPER DUE BY THE BEGINNING OF MEETING 8!**

**Meeting 8, 16 February: The Jewish Question (L)**

**Meeting 9, 21 February: Judaism, Anti-Semitism, Zionism (D, Group 2)**

*Readings:*

Einstein, *Ideas and Opinions*, 36-54. [19]

Rowe and Schulmann, *Einstein on Politics*, 104-109, 120-127, 139-188, 269-282, 287-314, 318-355. [143]

**Meeting 10, 23 February: Quantum Theory (L)**

**Meeting 11, 28 February: Quantum Theory (D, Group 1)**

*Readings:*

\* A. Einstein, B. Podolsky, and N. Rosen, "Can Quantum-Mechanical Description of Physical Reality Be Considered Complete?" *Physical Review* 47 (1935): 777-780. [4]

Einstein, *Ideas and Opinions*, 290-323. [34]

\* Niels Bohr, "The Bohr-Einstein Dialogue," in A. P. French and P. J. Kennedy, eds., *Niels Bohr: A Centenary Volume* (Cambridge, MA: Harvard University Press, 1985): 121-140. [20]

\* Arthur Fine, "Einstein's Critique of Quantum Theory: The Roots and Significance of EPR," in *The Shaky Game: Einstein, Realism, and the Quantum Theory*, 2d. ed. (Chicago: University of Chicago Press, 1996): 26-39. [14]

\* David Kaiser, "Bringing the Human Actors Back on Stage: The Personal Context of the Einstein-Bohr Debate," *British Journal for the History of Science* 27, no. 2 (June 1994): 129-152. [24]

**Meeting 12, 2 March: The Spirit of Locarno: Interwar Europe (L)**

**Meeting 13, 14 March: Einstein and Pacifism (D, Group 2)**

*Readings:*

Rowe and Schulmann, *Einstein on Politics*, 192-222, 235-260, 282-286. [62]

Einstein, *Ideas and Opinions*, 106-111. [6]

\* Ofer Ashkenazi, "Reframing the Interwar Peace Movement: The Curious Case of Albert Einstein," *Journal of Contemporary History* 46, no. 4 (2011): 741-766. [26]

**Meeting 14, 16 March: Nazism and Science (L)**

**Meeting 15, 21 March: Nazism and Science (D, Group 1)**

*Readings:*

\* Klaus Hentschel and Ann M. Hentschel, eds. and trs., *Physics and National Socialism: An Anthology of Primary Sources* (Basel: Birkhäuser Verlag, 1996), 6-16, 54-61, 100-129, 152-161, 172-178, 184-186. [69]

**Meeting 16, 23 March: The Manhattan Project (L)**

*Readings:*

Rowe and Schulmann, *Einstein on Politics*, 359-363. [5]

**Meeting 17, 28 March: Einstein and the Bomb (D, Group 2)**

*Readings:*

- \* Silvan S. Schweber, "Albert Einstein and Nuclear Weapons," in *Einstein and Oppenheimer: The Meaning of Genius* (Cambridge, MA: Harvard University Press, 2010), 33-100. [68]
- Rowe and Schulmann, *Einstein on Politics*, 373-378, 488-493. [11]

<b>SECOND ARCHIVAL PAPER DUE BY THE BEGINNING OF MEETING 18!</b>
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**Meeting 18, 30 March: Communism and Anti-Communism (L)**

**Meeting 19, 4 April: Einstein and the FBI (D, Group 1)**

*Readings:*

- Rowe and Schulmann, *Einstein on Politics*, 470-487, 494-501. [25]
- \* Extracts from Albert Einstein's FBI File. [54]

**Meeting 20, 6 April: Dawn of the Nuclear Arms Race (L)**

**Meeting 21, 11 April: The Scientists' Movement (D, Group 2)**

*Readings:*

- \* Morton Grodzins and Eugene Rabinowitch, eds., *The Atomic Age: Scientists in National and World Affairs* (New York: Basic Books, 1963): 53-75, 100-134. [57]
- \* Peter Galison and Barton Bernstein, "In Any Light: Scientists and the Decision to Build the Superbomb, 1952-1954," *Historical Studies in the Physical and Biological Sciences* 19, no. 2 (1989): 267-347. [81]
- "Russell-Einstein Manifesto," available at <https://www.atomicheritage.org/key-documents/russell-einstein-manifesto>.

**Meeting 22, 13 April: Posthumous Einstein (L)**

**Meeting 23, 18 April: Einstein's Brain (D, Group 1)**

*Readings:*

- \* Michael Paterniti, "Driving Mr. Albert: A Trip Across America with Einstein's Brain," *Harper's* 295, no. 1768 (October 1997): 35-58. [24]
- \* Dean Falk, "New Information about Albert Einstein's Brain," *Frontiers in Evolutionary Neuroscience* 1 (May 2009): 1-6. [6]
- \* Terence Hines, "Neuromythology of Einstein's Brain," *Brain and Cognition* 88 (July 2014): 21-25 [5]
- \* Michael Hagner, "Skulls, Brains, and Memorial Culture: On Cerebral Biographies of Scientists in the Nineteenth Century," *Science in Context* 16, no. 1-2 (March 2003): 195-218. [24]

**Meeting 24, 20 April: Baby Einstein (D, Group 2)**

*Readings:*

- \* Albert Einstein, “Autobiographical Notes,” tr. Paul Arthur Schilpp (La Salle, IL: Open Court, 1979 [1949]): 2-17. [16] {You will notice that the German original faces the English translation; you of course only have to read the English, but feel free to take a peek at the German.}
- \* Max Talmey, “Formative Period of the Inventor of the Relativity Theory,” in Talmey, *The Relativity Theory Simplified, and the Formative Period of Its Inventor* (New York: Falcon Press, 1932): 159-179. [21]