

Course Syllabus: Science's Social Legitimacy

Special Topics: Advanced Seminar in Philosophy of Science

In Person Meetings: Tuesdays and Thursdays 2:00 p.m. – 3:15 p.m.

Location of Class Meetings: Dugan Hall 104, South Campus

Course Number: PHIL 4001-201 (#12937)/ ELO: AH/Satisfies M&E for Philosophy Majors

Instructor

Dr. Alison K. McConwell

Email: alison_mcconwell@uml.edu (include 'Philsci' in the subject line)

Office Hours

- In person (starting week 2)
 - o Time: Mondays 12noon-2pm and Thurs 1030am-1130am
 - o Location: 200B Dugan Hall, South Campus
- Virtual
 - o Zoom or your preferred virtual medium by appointment

Welcome to Your Seminar on Advanced Topics in Philosophy of Science

Welcome to your advanced seminar in philosophy of science. This course is about science's social legitimacy. It is about how science presents itself and whether or not it meets those aims. In the course we will ask and answer four fundamental questions:

1. How Has Science Seen Itself?
2. How Has Science Presented Itself?
3. How Has Science Legitimated its Authority?
4. How Should Science's Relationship with Society Be?

Our approach to the first two questions will be primarily historical and sociological looking at ways science has seen and presented itself along with some classic philosophical sources about the nature of truth, fiction, and politics in science. Our approach to the third question will focus on understanding how images of epistemic authority become legitimate over time. In response to the fourth question, we will adopt a normative approach examining what science is like to determine what it ought to be, and how it ought to be in contrast to how it presents itself. This course is not based on a textbook. We are doing scholarship in this class. This means that many of the readings are instructively problematic, i.e., they raise problems or are problematic in ways that must be examined when we form a meta-dialogue about what the stakes are concerning these kinds of questions.

Please see below for '[Attendance and Class Structure](#).' Our meetings will primarily be discussion-based in a seminar-style format, thus students must come to class prepared having read the material with immediate access to the readings on hand. No textbook purchases are required and there will be no final exam. This class satisfies UML's Essential Learning Outcome AH requirements. It also satisfies the Metaphysics & Epistemology or 'M&E' Philosophy Program Requirement as an advanced topic in epistemology of science. Students must be philosophy majors for admittance unless otherwise permitted by the instructor in special cases where an advanced science major has achieved adequate contact with topics in the philosophy of science.

Course Learning Goals

By the completion of this course, students will be able to:

1. Formulate responses to research questions and produce original evaluations of historical and contemporary articles
2. Develop and justify persuasive positions on complex topics utilizing sources across historical, philosophical, and sociological disciplines
3. Assess and prepare significant and open-ended discussion questions
4. Lead group discussions respectfully and comprehensively in preparation for graduate seminars and advanced scholarly work
5. Explore and critically analyze contemporary and historical views on science's relationship to social issues

Affordability of Reading Materials & Schedule Information

Students are asked to consult the Master Schedule document uploaded to Canvas for readings, activities, assignments, due dates, and the general structure and weekly details of the course. In an effort towards affordability and accessibility of sources for all students, the readings and materials will be made available in PDF format (and/or e.g. links to videos, etc.) through Canvas by utilizing [UML's Library](#) in addition to what is freely available online. The [Philosophy of Science, Biology, and Values Library Hub](#) is a good starting place for additional research with lists of journals and related articles. There will be no textbook required for this course. There is no final exam.

Course Deliverables & Evaluation

Course Deliverable	Total Percent Value 100	Due Dates
Discussion Responses & In Class Participation	25%	Before readings are discussed in class
Discussion Leadership Presentation	15%	Send paper choice from syllabus by the end of week 2
Essay #1 (1500-1750 words)	20%	Sun Oct 5 11:59pm (week 5)
Essay #2 (1500-1750 words)	20%	Sun Nov 9 11:59pm (week 10)
Essay #3 (1500-1750 words)	20%	Sun Dec 14 11:59pm (week 15, if want comments) Tues Dec 16 11:59pm (no comments—final deadline)

Grade Scale Conversion:

Numeric Grade:	Letter Grade:
94-100	A
90-93	A-
87-89	B+
84-86	B
80-83	B-

Numeric Grade:	Letter Grade:
77-79	C+
74-76	C
70-73	C-
67-69	D+
64-66	D
60-63	D-
62 or below	F

*Note on the Pass-No Credit Grading Scheme: For more information on this form of grading and its availability to you, please consult [UML's Grading Policies](#). Students must follow a process for permission (e.g. request a pass-no credit grading scheme by certain deadlines), but please contact me if you have questions.

Descriptions of Course Deliverables and Associated Learning Objectives

Discussion responses & in-class participation worth 25%: Students are asked to show evidence of discussion preparation and participation. Your answers to the three questions below should be pasted into the discussion board on Canvas prior to the class meeting for this option, but students need to keep a record (e.g. access to Canvas, a word doc, pdf, or physical notebook, etc.) that can be accessed in class during discussions. There are usually two classes per week, so roughly 75-100 words per reading might be something to aim for. Consider your written preparation as both a participation and support activity to help you learn more actively and prepare for class discussion. There should be (1) a summary statement on the main take away(s) from the reading, (2) a question about the reading/topic, and (3) an explanation of that question. Entries must show evidence of reading engagement, e.g. by including page numbers, references to quotations and need to be submitted each week. Written evidence of discussion preparation must be submitted before readings are discussed together in class. You can report on these for the round table discussions. Since this will be submitted through Canvas and other student contributions will be visible, you may also engage with another student's contribution posted there, ditto for while we are in class (or invite them to say more about it). There are many ways to complete this assignment category, so creativity is encouraged. The purpose is to support your ability to discuss the paper in class with others. Entries will be evaluated altogether at the end of the course taking into consideration progress and in class participation.

Attendance is always expected unless there are extenuating circumstances and/or communication with the instructor. Submitted discussion preps will only be accepted if the student is present in class that day. Submission preps are not required the weeks other assignments are due. They are also not required the week the student is leading discussion (but students who are not presenting that week must still submit).

Discussion Leadership Presentation 15%: We will have a pair of papers assigned each week (one for the first meeting and one for the second). The instructor may open meetings with some comments and background, but not always. Discussion will commence in a "roundtable" format: students will be invited to share as much or as little as they like, which can be spontaneous responses to the reading, engagement with what peers have said, questions for the professor, etc. Then whoever leads the discussion will (1) summarize key points from the round table, (2) flag themes and summarize the points of the paper and any relevant background or background questions, and (3) pose a framing question for ongoing discussion about the piece. This question should be both difficult to answer and significant. This may take roughly 15 minutes or so. Thereafter, the discussion leader will act as moderator, with the help of the professor, until the close of discussion. As long as you lead at least one discussion respectfully and comprehensively (covering all above), this grade category is satisfied. You may bring aspects of the paper for analysis, e.g., page numbers with passages, etc. The professor will model this sort of leadership for discussion in the first few weeks. You

should plan to lead at least one discussion, preferably on a paper from the master schedule that interests you. Tell your professor which paper you prefer before the end of week 2.

Three Essays Worth a Total of 60% (20% each): This is an active research seminar, thus we are doing scholarship in this class to evaluate active research questions. Essay #1 will respond to Q1: How Has Science Seen Itself? Essay #2 will respond to Q2: How Has Science Presented Itself? Essay #3 will respond to the relationship between Q3 and Q4: How Has Science Legitimated Its Authority? And How Should Science's Relationship to Society Be? Essays may use any professional format you like (APA, MLA, Chicago, etc.,) but must use one such method. The essays must concretely engage with the course materials and show evidence of doing so. These papers should be approx. 1500-1750 words each or, depending on font size (e.g., 11-12) and spacing (e.g., double preferred) about 250 words/page at 6 pages minimum. The papers should (1) articulate the question and why it matters, (2) take a position or point of view, and (3) use course materials to facilitate that position (either using them critically or to help defend the position). Additional research is encouraged, but the essays must always contact course papers. Organizational clarity, grammar, evidence of analysis, and proper citation practices according to the discipline's formal requirements are all integral components.

These activities are distributed to encourage creativity and participation while supporting time management and tracking of course content. Consult the Master Schedule and the Canvas weekly modules, but students are expected to complete readings before class, and assignment submissions will be received up until 11:59 p.m. on the due date. **There will be no final exam for this course.**

Course Expectations

Late Assignment Policy. In an effort towards fairness for all students, late and/or make-up assignments will generally not be accepted unless there are extenuating circumstances. I can think of many reasons why assignments might be submitted late. Please contact your instructor if you anticipate an issue with an upcoming assignment or if you are having trouble submitting an assignment on time so we can plan accordingly. As you will notice, many assignments have flexibility already built in concerning different modes of completion, choices concerning content of submissions, and *recommended* timelines to not fall behind, for example. This is to support your time management goals for the semester; however, semesters do contain natural limits to that flexibility—they do end after all. Overall, communication is key. Late assignments will not receive qualitative written feedback, only rubric (if available) and numeric grade. Allowing a due date to pass by without communication only to reach out weeks later would be an example of not adhering to this policy. Letting due dates pass by and then scrambling (i.e., “assignment flooding”) at the end of the semester is also an example of not adhering to this policy.

Attendance & Class Structure. This class is a standard in person environment primarily based on discussion along with organizational support through weekly modules posted on Canvas. The modules on Canvas will be organized on a weekly basis and will contain everything you need in a step-by-step fashion. **This is a 4000-level research course, which means students must prepare by completing readings in advance.** Everyone reads differently, and people read imperfectly, they skim, focus on different aspects, maybe just the footnotes, etc. I recommend practicing the triage method: it is best to read the paper in full, and when that is not possible, skim the intro, section titles, and conclusion, and when that is not possible read the first page—the idea is to *make some kind of contact with the paper* so that we satisfy our collective responsibility to have a good conversation about it.

Human connection is the heart of a modern liberal arts education. *We can't learn without you.* Arrive prepared, ready to think out loud, and share confusions. I recognize that in person meetings may be difficult

to attend for some students while we navigate longstanding effects after the global health crisis. Our meetings are a common space and opportunity for community-based learning and connection. **As a policy I do not take attendance, but evidence of discussion prep cannot be accepted if the student is not in attendance during class. I have high expectations of students who choose to enroll in my course.**

Email: Students and instructors can interact directly by emailing alison_mconwell@uml.edu. Make sure to put 'Philsci' in the subject line. Students can expect replies within 24-48 hours. Use email as one contact option to reach out to your instructor for questions and clarifications. Emails to university professors need 3 things: (1) a subject line with the course name/number, (2) address the instructor by their title (e.g., 'Dr.' or 'Prof' unless told otherwise), and (3) signed with your name.

Office Hours (see p. 1 for times per term). Office hours are held at 200B Dugan Hall, South Campus. Office hours (or "student hours") are a space to check in and get to know one another. I will also be available for virtual office hours through zoom by appointment. Depending on the number of students enrolled in the class, I may also reach out to you during the first few weeks to offer a 5-10 minute check-in meeting at the start of the quarter. Please feel free to reach out if you would like a 5-10 minute check-in with me. We can talk about the weather, dogs, or anything for a quick meet and greet!

Engaging with Others. Engaging through forum replies, peer review activities, and discussion sections requires that everyone in the class must practice respect, integrity, and generally ethical behaviour when interacting with others. Students, instructors, and teaching assistants collectively set the tone for the course community. Students are expected to listen actively and respect others when they are speaking, to speak from one's own experiences instead of generalizing, to participate to the fullest of one's ability, to help one's self and peers to become more self-reflective, and to respect the confidentiality of personal disclosure. Community growth depends on the inclusion of every individual voice. Students should support one another if someone needs clarification, a chance to speak, a chance to quietly gather one's thoughts, or time to think or reflect before responding to a question.

Grading Practices & Timeliness. You are entitled to timely feedback and return of graded assignments from your instructor in addition to consistent tracking of scaffolding assignments like individual activities and discussion forums. I will aim to provide feedback either written or by grade entry within 7-10 days of assignment submission. For grading practices, I observe UML's recommendations for grading scales and calculations. [Grade Scope](#) within Canvas may be used for some activities/assignments.

Reading, Writing, & Problem-Solving in Philosophy. Many of us have learned reading skills that include linear reading from beginning to end, reading every single word, and reading only one time. These are not always effective strategies in college. Sometimes you might need (or want) to focus on one part of the reading over the rest, skip around, and even read something more than once. Moreover, what counts as effective writing styles can vary across disciplines. For some clear guidelines and tips, please consult [MIT's Guidelines on Writing a Philosophy Paper](#). And [Harvard's writing guide](#). How to write, revise, and incorporate feedback are skills that will be learned over the course of your university career. Tutoring Resources and Centers for Learning and Academic Support Services (CLASS) offers [tutoring](#) and [writing center services](#) both in person and virtually. And finally, there will be multiple types of problem-solving deployed in this class from identifying problems, classifying problems, surveying approaches, and identifying what concepts are applicable when trying to solve a problem. There may not always be a single correct answer, but instead many acceptable ways to approach a given issue. Your instructor is here to help you with developing these skills along with strategies for solutions and presentations of ideas.

Technology & Recording Policies. A device that connects to the internet is needed so students can access [Canvas](#), [Gradescope](#), and [Zoom](#). It is important that Zoom links or meeting passwords are not shared with anyone outside of the course to protect privacy. For policies regarding the recordings of shared spaces please visit [the disability services website on permissions to record](#).

Honor Code & Academic Integrity. Students are expected to abide by [UML's Policies on Academic Honesty and Integrity](#) concerning matters of copyright, plagiarism, etc.

A Note on AI Software: It is never acceptable to submit work represented as your own, when in fact it was not written by you. Submitting essays generated by AI software and/or generating essays with AI software which are then paraphrased and submitted as your own will result in an academic violation. Students must write their own work in all cases. No exceptions.

Supportive Statements & Commitments

Accessibility & Accommodations. I am committed to supporting the learning of all students in my class. For students seeking academic accommodations based on the impact of a disability, please initiate the request with [UML's Disability Services](#) as soon as possible. The Office of Disability Services is now offering virtual meetings. As stated on their website, Student Disability Services is committed to providing equal access by removing barriers, promoting diversity, employing universal design learning, and striving for inclusion. Students interested in learning more are encouraged to contact their office directly at disability@uml.edu or (978) 934-4574. To inquire about accommodations email access_students@uml.edu. The Office of Disability Services can also assist with time management and organization for students in their first year. Students might also find useful the [Read&Write Gold Software](#) offered by UML.

First-Generation and Low-Income Resources. As a first-generation student myself, I understand the particular challenges and obstacles associated with that background. Students of all backgrounds are welcome in Introduction to Philosophy of Science. UML is a First-Gen Forward Advisory Institution, and part of [the nation's first recognition program](#) acknowledging institutions like UML for their commitment to first-generation student success. There are many first-gen faculty and staff at UML and you can read some of their [stories](#). This means that many of your professors have faced the challenges of being first-generation students and gone on to become researchers and teachers. The website includes a directory to browse and connect with a faculty member on their FirstGen faculty list. [UML's River Hawk Scholars Academy](#) also has more resources and tips for navigating your first year as a #firstgen.

Food Pantry. Some of our students must choose between food and textbooks. For students who live in Lowell and surrounding areas, the [UMass Lowell \(UML\) Food Pantry](#) has moved to an online order system. To place an order please submit your [UML Online Order](#). Once the order is received, the order will be filled and ready for pick-up the next day. If you have any questions, please email: umlfoodpantry@uml.edu. For students living outside of this area, please consult the [Hunger & Health website](#) to find a foodbank or pantry near you.

Pregnant & Parenting Students. UML is motivated to make the campus family friendly with [resources, support services, and information about transportation and family friendly events](#). For specific questions or to provide feedback on how the university can better accommodate the needs to pregnant and parenting students, please email family@uml.edu or phone 978-934-5760.

Life at University Can Get Complicated. Your success in this class is important to me. I will make every possible effort to accommodate students in a timely, fair, and caring manner. Students are encouraged to

approach me with any other life circumstances that may affect their participation in the course. These may be personal, health-related, family-related issues, or other concerns. Students sometimes feel overwhelmed, lost, experience anxiety or depression, struggle with relationship difficulties or diminished self-esteem. Mental health factors including significant stress, mood changes, excessive worry, or problems with eating and/or sleeping can interfere with optimal academic performance. UML's [Wellness Center](#) offers a variety of medical, mental health, and wellness services.

If there are circumstances that may affect your performance in this class, please let me know as soon as possible so that we can work together to develop strategies for adapting assignments to meet both your needs and the requirements for the course. In the event that I suspect you need additional support, I will express my concerns and the reasons for them, and remind you of resources (e.g., Counseling Services, Career Services, etc.) that might be helpful to you. It is not my intention to know the details of what might be bothering you, but simply to let you know I am concerned and that help, if needed, is available. I want to especially call attention this semester to the counselling services available through UML via phone or video using HIPAA Compliant Zoom. Their phone number is (978) 934-6800 during business hours and their email is counselling@uml.edu. An on-call clinician is available 24/7 at 855-890-2879.

Getting help is a smart and courageous thing to do — for yourself *and* for those who care about you.

I am obligated to report conduct prohibited by Title IX. Title IX prohibits discrimination on the basis of sex, gender expression, gender identity, and pregnancy. Title IX prohibited conduct includes sexual violence, including sexual assault, dating or domestic violence and stalking, and sexual harassment. There are [resources for students](#) who want to discuss a Title IX related concern in a confidential manner, such as UMass Lowell's Counselling services at (978) 934-4991.

Gender-Inclusive Language (statement adapted from the City University of New York LGBTQ Center). Everyone has the right to be addressed by the name and pronouns that correspond to their gender identity, including non-binary pronouns, for example: they/them/theirs, ze/zir/zirs, etc. Rosters do not list gender or pronouns so you may be asked to indicate the pronouns you use so that I don't make assumptions based on your name and/or appearance/self-presentation (you are not obligated to do so). If you use a chosen name, please let me know. Chosen names and pronouns are to be respected at all times in the classroom. Mistakes in addressing one another may happen, so I encourage an environment of openness to correction and learning. I will not however, tolerate repeated comments which disrespect or antagonize students who have indicated pronouns or a chosen name. Chosen name and personal pronouns may evolve over time, so if at any point during the semester you would like to be addressed differently, please let me know.

The UML [LGBTQ+ Resource Center](#) promotes the university's commitment to diversity and works to create a safe and healthy campus environment through education, support, advocacy, and the fostering of equity for all students, regardless of sexual orientation or gender identity and expression. Additionally, The UMass Lowell [Center for Women and Work \(CWW\)](#) is a vibrant community of scholars who are dedicated to advancing knowledge about the relationship between gender and work through research, enhance understanding of this relationship through education and training, and challenge inequalities, particularly through institutional change.

International Students & Scholars. The International Students and Scholars Office is a resource for the unique challenges that our international scholars and students face. There is no federal law that requires proof of citizenship status for admission to or matriculation at any U.S. college or university. While all accepted students are welcome regardless of their status, UML's [Counseling Services](#) understands and is

sensitive to the unique barriers and challenges facing undocumented students. They have [compiled some resources](#) to mitigate these challenges. There are also [additional immigration resources](#) for faculty, staff and, students *not* already on a UMass Lowell sponsored immigration status. Please consult UML's policies concerning [international students and online learning](#). For questions, email international@uml.edu.

Diversity & Inclusivity of Course Material. Much of philosophy is historically built on a small subset of privileged voices. Integrating a diverse set of experiences is important for a more comprehensive understanding of philosophy and the histories of philosophy. While I aim to incorporate authors in a way that increases the diversity and inclusivity of the reading list, any suggestions or findings that contribute to that goal are encouraged and appreciated. Intellectual communities are enriched and enhanced by diversity along a number of dimensions including race, ethnicity and national origins, gender and gender identity, sexuality, socioeconomic status, religion, and culture. I am committed to increasing the representation of populations historically excluded from higher education.

Course Content & Triggering Topics. Some of the reading materials may be historical in their nature and use phrases or locutions that may be at odds with contemporary values. I will do my best to tell students when topics and readings are coming up that fit these descriptions. I also welcome students to inform me when they feel a reading or topic belongs in this category. As students may already know, there is a difference between being triggered (in the sense of post-traumatic stress disorder) and feeling uncomfortable. Feeling uncomfortable (and sometimes even angry or offended) is part of intellectual growth. Feeling triggered or psychologically traumatized is not. Please take care of yourselves and each other and let me know if I can do anything at all to help. Humanistic studies of science, to which a broad range of disciplines apply, increase our capacity to think beyond the polarized representations of scientific debates. I invite students of all disciplinary backgrounds to approach this course with an open mind and heart as we venture into the complexities of science's social legitimacy. [to show me that you've read this far, email me your favorite meme or gif for extra 2% credit towards your grade to be awarded at the end of the semester]



Figure 1 University of Massachusetts Lowell Logo

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