

## UMBC UGC New Course Request: HCST 499

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Proposed Effective Date: Spring 2020

	Name	Email	Phone	Dept
Dept Chair or UPD	Jessica Pfeifer (Co-Director, HCST)	pfeifer@umbc.edu	5-2014	PHIL
Other Contact	Suzanne Braunschweig (Co-Director, HCST)	sbraun@umbc.edu	5-1846	GES & INDSCI

### COURSE INFORMATION:

Course Number(s)	HCST 499
Formal Title	Advanced Topics in the Human Context of Science and Technology
Transcript Title (≤30c)	HCST Advanced Topics
Recommended Course Preparation	HCST 100
Prerequisite <b>NOTE:</b> Unless otherwise indicated, a prerequisite is assumed to be passed with a "D" or better.	
# of Credits Must adhere to the <u>UMBC Credit Hour Policy</u>	3
Repeatable for additional credit?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Max. Total Credits	9 <small>This should be equal to the number of credits for courses that cannot be repeated for credit. For courses that may be repeated for credit, enter the maximum total number of credits a student can receive from this course. E.g., enter 6 credits for a 3 credit course that may be taken a second time for credit, but not for a third time. Please note that this does NOT refer to how many times a class may be retaken for a higher grade.</small>
Grading Method(s)	<input type="checkbox"/> Reg (A-F) <input type="checkbox"/> Audit <input type="checkbox"/> Pass-Fail

### PROPOSED CATALOG DESCRIPTION (Approximately 75 words in length. Please use full sentences.):

Advanced investigation of selected topics in the Human Context of Science and Technology. Topics will be announced each semester, and the course may be repeated for credit so long as the topic is different.

### RATIONALE FOR NEW COURSE:

a) Why is there a need for this course at this time?

The HCST Program doesn't currently have a way to offer advanced courses specifically focused on the Human Context of Science and Technology. This course will allow faculty to develop and teach new interdisciplinary courses in the Human Context of Science and Technology, especially those that cross disciplinary boundaries in a way that doesn't fit into course offerings in other departments.

b) How often is the course likely to be taught?

This will vary depending on faculty interest and availability.

c) How does this course fit into your department's curriculum?

It counts towards the Electives required for the certificate.

d) What primary student population will the course serve?

Undergraduate students

e) Why is the course offered at the level (ie. 100, 200, 300, or 400 level) chosen?

The course is an upper-level course intended for juniors and seniors.

f) Explain the appropriateness of the recommended course preparation(s) and prerequisite(s).

HCST 100 is recommended preparation, since the course will be an advanced course in HCST. However, because the topics will vary, HCST 100 is not required.

g) Explain the reasoning behind the P/F or regular grading method.

This class might be taken as part of the HCST Certificate or by other students with an interest in the topic. Therefore, having all three options (Regular (A-F); Audit; and Pass-Fail) is appropriate.

h) Provide a justification for the repeatability of the course.

Since the course topic will vary, it is repeatable for credit so long as the topic is different.

**ATTACH COURSE SYLLABUS (mandatory):**

While the syllabus will change with topics, below is a sample syllabus.

# HCST 499: Special Topics in the Human Context of Science and Technology

## The Public Life of Science

### Course Description:

This course will explore the way that science shapes and is shaped by the public. Among the topics discussed will be: whether science is a public good; whether and how values shape and ought to shape science; how science shapes and is shaped by social structures; the relationship between science and democracy; the nature of expertise; science and public policy; and the role of citizens in science.

### Course Goals and Expectations:

The goal of the course is to expose students to issues and debates related these important issues in the human context of science and technology. The course is also aimed at helping students hone their critical thinking skills through reading, class discussion, and writing critical discussion essays. By the end of the course, students will be familiar with some of the central debates about the way that science shapes and is shaped by the public and be better able to critically analyze the arguments concerning science's role in the public sphere.

The course will consist of a combination of lecture and discussion. Students are expected to do the assigned reading before class, attend class, and participate in class discussion. I also strongly encourage you to make use of my office hours. If for some reason you cannot attend my scheduled office hours, appointments at other times can be arranged.

### Methods of Evaluation:

<b>Three critical discussion essays:</b>	Each worth 30%
<b>Class Attendance and Participation:</b>	10% of Final Grade

**Late Work:** Unless you have a very good excuse (serious illness, death in the family, etc.), late papers and exams will be graded down 1 percentage point for each day late. For example, if your work earns an 90%, but you turn it in 1 day late, you will receive an 89%.

**Class Attendance and Participation:** Class attendance and participation are required. One cannot learn to think critically without participating in class discussion. Moreover, I will be presenting material in class that is not in the reading. If you miss a class, try to get another student's notes, and you are always welcome (and encouraged) to discuss the material with me. Students are allowed up to 3 unexcused absences. More than that will result in a reduction in your Class Attendance and Participation grade of 1% for every 2 additional days missed. In other words, if you have four unexcused absences, the maximum for the Class Attendance and Participation Grade would be 9%.

### UMBC Statement of Values for Academic Integrity

By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. To read the full

Student Academic Conduct Policy, consult the UMBC Student Handbook, or the Office of Undergraduate Education.

## **Disclosures of Sexual Misconduct and Child Abuse or Neglect**

As an instructor, I am considered a Responsible Employee, per UMBC's Policy on Prohibited Sexual Misconduct, Interpersonal Violence, and Other Related Misconduct (located at <http://humanrelations.umbc.edu/sexual-misconduct/umbc-resource-page-for-sexual-misconduct-and-other-related-misconduct/>). While my goal is for you to be able to share information related to your life experiences through discussion and written work, I want to be transparent that as a Responsible Employee I am required to report disclosures of sexual assault, domestic violence, relationship violence, stalking, and/or gender-based harassment to the University's Title IX Coordinator.

As an instructor, I also have a mandatory obligation to report disclosures of or suspected instances of child abuse or neglect ([www.usmh.usmd.edu/regents/bylaws/SectionVI/VI150.pdf](http://www.usmh.usmd.edu/regents/bylaws/SectionVI/VI150.pdf)). The purpose of these reporting requirements is for the University to inform you of options, supports and resources; you will not be forced to file a report with the police. Further, you are able to receive supports and resources, even if you choose to not want any action taken. Please note that in certain situations, based on the nature of the disclosure, the University may need to take action.

### **If you need to speak with someone in confidence about an incident, UMBC has the following Confidential Resources available to support you:**

The Counseling Center: 410-455-2472

University Health Services: 410-455-2542

(After-hours counseling and care available by calling campus police at 410-455-5555)

### **Other on-campus supports and resources:**

The Women's Center, 410-455-2714

Title IX Coordinator, 410-455-1606

Additional on and off campus supports and resources can be found at:

<http://humanrelations.umbc.edu/sexual-misconduct/gender-equitytitle-ix/>.

## **Student Disability Services (SDS)**

UMBC is committed to eliminating discriminatory obstacles that may disadvantage students based on disability. Services for students with disabilities are provided for all students qualified under the Americans with Disabilities Act (ADA) of 1990, the ADA of 2009, and Section 504 of the Rehabilitation Act who request and are eligible for accommodations. The Office of Student Disability Services (SDS) is the UMBC department designated to coordinate accommodations that would allow students to have equal access and inclusion in all courses, programs, and activities at the University.

If you have a documented disability and need to request academic accommodations, please refer to the SDS website at [sds.umbc.edu](http://sds.umbc.edu) for registration information and to begin the process, or alternatively you may visit the SDS office in the Math/Psychology Building, Room 212. For questions or concerns, you may contact us through email at [disAbility@umbc.edu](mailto:disAbility@umbc.edu) or phone (410) 455-2459.

If you require accommodations for this class, make an appointment to meet with me to discuss your SDS-approved accommodations.

### **Schedule: (Subject to Revision)**

#### **Week 1: Science as a Public Good**

- Callon, Michel, "Is Science a Public Good?" *Science, Technology and Human Values*, 1994, 19(4):395- 424.

#### **Weeks 2-3: Science and Values**

- Heather Douglas, "The Origins of the Value-Free Ideal for Science," in *Science, Policy, and the Value-Free Ideal* (University of Pittsburgh Press, 2009), Chapter 2.
- Lorraine Daston & Peter Galison (1992) 'The Image of Objectivity,' *Representations* 40 (Fall): 81-128.
- Emily Martin. "The Egg and the Sperm: How Science Constructed a Romance Based on Stereotypical Male-Female Roles," *Signs* 16: 485–501 (1991).
- Heather Douglas, "The Moral Responsibilities of Scientists," in in *Science, Policy, and the Value-Free Ideal* (University of Pittsburgh Press, 2009), Chapter 4.

#### **Week 4: The Social World of Science**

- Karin Knorr Cetina, excerpt from *Epistemic cultures: How the sciences make knowledge*. (Harvard University Press, 1999).
- Jennifer Croissant and Laurel Smith-Doerr, "Organizational contexts of science: Boundaries and relationships between university and industry" in *The Handbook of Science and Technology Studies* (MIT Press 2008).
- Philip Kitcher, "Well-Ordered Science," in *Science, Truth, and Democracy* (Oxford University Press, 2001), Chapter 10.

#### **Weeks 5-6: Science and the Social World**

- Wendy Espeland and Michael Sauder, "Rankings and Reactivity, How Public Measures Recreate Social Worlds." *American Journal of Sociology* 2007, 113, 1-40.
- Sarah Igo, excerpt from *The Averaged American: Surveys, Citizens, and the Making of the Mass Public* (Harvard University Press, 2007).
- Rene Uruena. "Internally Displaced Population in Columbia." In Kevin Davis, Angelina Fisher, Benedict Kingsbury, and Sally Engle Merry (ed.) 2012. *Governance by Indicators: Global Power through Classification and Rankings*. Oxford: Oxford University Press. Chapter 10: pp. 249-281.

#### **Weeks 6-7: Science and Democracy**

- Yaron Ezrahi, "Science, Experimental Politics, and the Culture of Democratization," in *The Descent of Icarus: Science and the Transformation of Contemporary Democracy* (Harvard University Press, 1990).
- Andrew Jewett, "Science and the Promise of Democracy in America," *Daedalus* (Fall 2003): 64-70.
- Bruno Latour, excerpt from *Politics of Nature: How to Bring the Sciences into Democracy* (Harvard University Press, 2004).

- Philip Kitcher, “Elitism, Democracy, and Science Policy” in *Science, Truth, and Democracy* (Oxford University Press, 2001), Chapter 11.

### **Week 8: Expertise**

- Collins, Harry and Robert Evans, “The Third Wave of Science Studies: Studies of Expertise and Experience.” *Social Studies of Science* 2002, 32 (2):235-296.
- Steven Turner, excerpt from *Liberal Democracy 3.0: Civil Society in an Age of Experts* (Sage, 2003).

### **Week 9: Science and Public Policy**

- Sheila Jasanoff, *The Fifth Branch. Science Advisors as Policymakers*. (Harvard University Press, 1990), Chapter 1, pp. 1-19.
- Heather Douglas, “The Rise of the Science Advisor,” in *Science, Policy, and the Value-Free Ideal* (University of Pittsburgh Press, 2009), Chapter 2.
- Heather Douglas, “The Integrity of Science in the Policy Process,” in *Science, Policy, and the Value-Free Ideal* (University of Pittsburgh Press, 2009), Chapter 4.

### **Week 10-11: Citizens Governing Science and Citizen Scientists**

- Sheila Jasanoff, “Technologies of Humility: Citizen Participation in Governing Science,” *Minerva* 41: 223-244. 2003.
- Epstein, Steven. 1995. “The Construction of Lay Expertise: AIDS Activism and the Forging of Credibility in the Reform of Clinical Trials.” *Science, Technology, and Human Values* 20(4):408-437.
- Fischer, Frank, “Professional Knowledge and Citizen Participation,” in *Citizens, Experts, and the Environment: The Politics of Local Knowledge* (Duke University Press, 2000), Chapters 2.

### **Weeks 12-13: Public Understanding of Science**

- Brian Wynne, “Misunderstood Misunderstandings: Social Identities and Public Uptake of Science,” *Public Understanding of Science* 1 (1992): 281-304.
- Mark Elam and Margareta Bertilsson, “Consuming, Engaging and Confronting Science: The Emerging Dimensions of Scientific Citizenship,” *European Journal of Social Theory* 6 (2) (2003): 233-251.
- Locke, Simon. 2002. “Sociology and the Public Understanding of Science: From Rationalization to Rhetoric.” *British Journal of Sociology* 52(1):1-18.

### **Weeks 14-15: Ignorance**

- David Michaels, “Manufactured Uncertainty : Contested Science and the Protection of the Public's Health and Environment,” in *Agnatology: The Making and Unmaking of Ignorance* (Stanford University Press, 2008).
- Nancy Tuana, “Coming to Understand: Orgasm and the Epistemology of Ignorance” in *Agnatology: The Making and Unmaking of Ignorance* (Stanford University Press, 2008).
- Adrienne Mayor, “Suppression of indigenous fossil knowledge : from Claverack, New York, 1705 to Agate Springs, Nebraska, 2005,” in *Agnatology: The Making and Unmaking of Ignorance* (Stanford University Press, 2008).

- Kristian H. Nielsen and Mads P. Sørensen, “How to take non-knowledge seriously, or the unexpected virtue of ignorance,” *Public Understanding of Science* 2017, 26 (3): 385-392.