

**The Ohio State University  
Colleges of the Arts and Sciences Concurrence Form**

The purpose of this form is to provide a simple system of obtaining departmental reactions to course requests. A letter may be substituted for this form.

An academic unit initiating a request should complete Section A of this form and send a copy of the form, course request, and syllabus to each of the academic units that might have related interests in the course. Initiating units should be allowed two weeks for responses.

Academic units receiving this form should respond to Section B and return the form to the initiating unit. Overlap of course content and other problems should be resolved by the academic units before this form and all other accompanying documentation may be forwarded to the Office of Academic Affairs.

**A. Information from the academic unit *initiating* the request**

History 5/7/08  
 \_\_\_\_\_  
 Initiating Academic Unit Date

History  
 \_\_\_\_\_  
 Book 3 Listing (e.g., Portuguese)

520.02	Science and Society in Modern Europe	U	5
Course Number	Title	Level	Credit Hours

Type of Request (underlined): **New Course**      Course Change      Course Withdrawal      Other

**(Please specify your department here)**

Academic unit asked to review the request

5/21/08  
 \_\_\_\_\_  
 Date response is needed (within two weeks of above date)

**B. Information from the academic unit *reviewing* the request should include a reaction to the proposal, including a statement of support or non-support (continued on the back of this form or a separate sheet, if necessary).**

The department is pleased to support the request for concurrence of the  
 \_\_\_\_\_  
 above course, History 520 02

**Signatures**

1.		Professor & Chair	Psychology	5/27/08	Date
	Gifford Weary	Position	Unit		
2.	Name	Position	Unit		Date
3.	Name	Position	Unit		Date

**The Ohio State University  
Colleges of the Arts and Sciences New Course Request**

**HISTORY**

Academic Unit  
HISTORY

Book 3 Listing (e.g., Portuguese)

520.02 Science and Society in Early Modern Europe

Number Title

SCI&SOC MOD EUR

18-Character Title Abbreviation

Level

Credit Hours

Summer Autumn Winter X Spring Year 2009

Proposed effective date, choose one quarter and put an "X" after it; and fill in the year. See the OAA curriculum manual for deadlines.

**A. Course Offerings Bulletin Information**

Follow the instructions in the OAA curriculum manual. If this is a course with decimal subdivisions, then use one New Course Request form for the generic information that will apply to all subdivisions; and use separate forms for each new decimal subdivision, including on each form the information that is unique to that subdivision. If the course offered is less than a quarter or a term, please complete the Flexibly Scheduled/Off Campus/Workshop Request form.

Description (*not to exceed 25 words*): A survey of science in modern Europe from the 18th to the 20<sup>th</sup> centuries.

Quarter offered: Distribution of class time/contact hours: 2-2hr classes

Quarter and contact/class time hours information should be omitted from Book 3 publication (yes or no):

Prerequisite(s): English 110 or 100 and junior or senior standing or permission of instructor

Exclusion or limiting clause:

Repeatable to a maximum of \_\_\_\_\_ credit hours.

Cross-listed with:

Grade Option (Please check): Letter  S/U  Progress  What is course is last in the series? \_\_\_\_\_

Honors Statement: Yes  No  GEC: Yes  No  Admission Condition  
Off-Campus: Yes  No  EM: Yes  No  Course: Yes  No

Other General Course Information:

(e.g. "Taught in English." "Credit does not count toward BSBA degree.")

**B. General Information**

Subject Code 540102 Subsidy Level (V, G, T, B, M, D, or P) B

For explanations see the following web sites: [www.ureg.ohio-state.edu/ourweb/srs/srscontent/cip/](http://www.ureg.ohio-state.edu/ourweb/srs/srscontent/cip/) or [www.regents.state.oh.us/hei/ci/STAGE\\_1/sld001.htm](http://www.regents.state.oh.us/hei/ci/STAGE_1/sld001.htm). If you have questions please email Jed Dickhaut at [Jdickhaut@exchange.ureg.ohio-state.edu](mailto:Jdickhaut@exchange.ureg.ohio-state.edu).

1. Provide the rationale for proposing this course:

This course is the second part of a two-part survey of the history of science, and the relations between science and society, in Europe from the early modern period to the end of the twentieth century. The first part covers the early modern period, focusing particularly on the thought and impact of Copernicus, Galileo and Newton, while the second part covers the eighteenth through twentieth centuries. Taken together, these courses offer students a detailed survey of the history of science and society in Europe.

2. List Major/Minor affected by the creation of this new course. Attach revisions of all affected programs. This course is (check one) Required  Elective  Other (Explain) :

3. Indicate the nature of the program adjustments, new funding, and/or withdrawals that make possible the implementation of this new course.

NA

4. Is the approval of this request contingent upon the approval of other course requests or curricular requests?

Yes  No  List:

5. If this course is part of a sequence, list the number of the other course(s) in the sequence: 520.01, .520.03

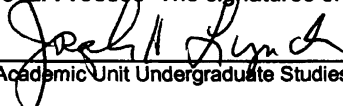
6. Expected section size: 45 Proposed number of sections per year: 1

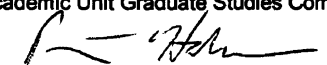
7. Do you want prerequisites enforced electronically (see OAA manual for what can be enforced)? Yes

8. This course has been discussed with and has the concurrence of the following academic units needing this course or with academic units having directly related interests (List units and attach letters and/or forms):  
Not Applicable

9. Attach a course syllabus that includes a topical outline of the course, student learning outcomes and/or course objectives, off-campus field experience, methods of evaluation, and other items as stated in the OAA curriculum manual.

**Approval Process** The signatures or actions on the lines in ALL CAPS ( e.g. ACADEMIC UNIT) are required.

1.  Academic Unit Undergraduate Studies Committee Chair Printed Name Joseph Lynch Date 4/28/08

2.  Academic Unit Graduate Studies Committee Chair Printed Name Peter Hahn Date 4/29/08

3. **ACADEMIC UNIT CHAIR/DIRECTOR** Printed Name Date

4. **AFTER THE ACADEMIC UNIT CHAIR/DIRECTOR SIGNS THE REQUEST, FORWARD IT TO THE COLLEGES OF THE ARTS AND SCIENCES CURRICULUM OFFICE, 161 DENNEY HALL, 164 WEST 17TH AVENUE. THE ASC CURRICULUM OFFICE WILL FORWARD THE REQUEST TO THE APPROPRIATE COLLEGE CURRICULUM COMMITTEE.**

5. **COLLEGE CURRICULUM COMMITTEE** Printed Name Date

6. **ARTS AND SCIENCES EXECUTIVE DEAN** Printed Name Date

7. Graduate School (if appropriate) Printed Name Date

8. University Honors Center (if appropriate) Printed Name Date

9. Office of International Education (if appropriate) Printed Name Date

10. **ACADEMIC AFFAIRS** Printed Name Date

## 520.02 Science and Society in Modern Europe

### Course Proposal

Dr. Chris Otter  
Department of History  
222 Dulles Hall  
Phone: (614) 292-4234  
Email: [otter.4@osu.edu](mailto:otter.4@osu.edu)

Office Hours: TBA

#### **Catalogue description:**

A survey of the history of science in modern Europe from the eighteenth to twentieth centuries

#### **Rationale:**

This course is the second part of a two-part survey of the history of science, and the relations between science and society, in Europe from the early modern period to the end of the twentieth century. The first part covers the early modern period, focusing particularly on the thought and impact of Copernicus, Galileo and Newton, while the second part covers the eighteenth through twentieth centuries. Taken together, these courses offer students a detailed survey of the history of science and society in Europe.

#### **Course description:**

This course looks at the history of science from the eighteenth through to the late twentieth century. The primary geographical focus is Western Europe (France, Germany and Britain), and there will be some focus on developments elsewhere in Europe (Italy, Russia), and in America. Throughout the course, the history of science will be related to broader developments in European history, notably social ones.

The course begins by looking at enlightenment science, and ends by examining the current debates surrounding human-made climate change. *En route*, students will study major developments in the physical, geological, biological and chemical sciences, such as thermodynamic theory, uniformitarian theory, evolutionary biology, germ theory, the creation of the periodic table of the elements, quantum theory and the discovery of the human genome. The course does not only study “successful” scientific ideas, but also ones which are now held open to ridicule, like catastrophism, phrenology and Lamarckianism. Students will learn to comprehend the socially-embedded nature of science, the complex relations between science and politics, and the vast efforts that are made to divide science from pseudoscience.

#### **Objectives:**

By completing the requirements for this course, students will

1. Acquire an understanding of the historical factors that shape human activity. Specifically, they will learn that something as apparently “objective” and “timeless” as scientific truth is actually historically and politically situated. This will enable them to develop critical thinking about progress and change in society.
2. Develop critical thinking through the study of diverse interpretations of historical events.
3. Apply critical reading skills through the analysis of primary and secondary sources.
4. Develop written and oral communications skills in exams, papers, and discussions.

Specifically, the goal of this course is

1. To acquaint students with the history of science in modern Europe.
2. To familiarize students with key intellectual and theoretical changes in the way modern Europeans think about the physical and biological world (including their own bodies).
3. To introduce students to the some critically important contemporary scientific concepts and debates, like those surrounding AIDS, the human genome project and climate science.
4. To incorporate the history of science into broader European histories (political, social, cultural and economic).

**All students must be officially enrolled in the course by the end of the second full week of the quarter. No requests to add the course will be approved by the Chair of the Department after that time. Enrolling officially and on time is solely the responsibility of the student.**

**Required readings:**

There is one required course book, which will be used for around half the readings. It will be available at SBX. This, and other readings for the class, will be placed on 2-hour reserve at Sullivant Library. Additional readings, including short excerpts from primary sources, are provided through Carmen (marked with asterisk (\*) on Class Schedule).

Peter J. Bowler and Iwan Rhys Morus, *Making Modern Science: A Historical Survey* (Chicago: University of Chicago Press, 2005).

## **Course Requirements:**

Attendance, participation, and discussion: 10%

Three reaction papers (each 10%): 30%

Final paper: 30%

Final exam: 30%

## **Assignments:**

At three points in the course, students will give a **reaction paper**, responding to a particular debate generated by the readings. These papers will be short (3 pages) and invite students to take a critical stance on a particular topic in the history of science.

The **final paper** will be 10 pages in length, and can be on any topic in the history of science in modern Europe, including subjects not discussed in class. Students must submit an outline, with a bibliography, by the end of week six.

The **final exam** will consist of two parts. In the first, students will be given a list of concepts or theories we have discussed in class, and will be asked to define them. In the second, students will be given a series of questions relating to lecture topics. They will pick one and write a short essay on it.

## **Course Policies:**

Students are expected to **attend** every class, on time, and not to leave before the end of class. More than two unexcused absences will result in a grade of 0 for the “attendance, participation and discussion” part of the course. A pattern of lateness will also result in a lowered grade for the class.

**Submission of assignments.** Students must submit all 5 assignments. Failure to submit an assignment will result in a grade of 0 for that assignment. In addition to that, I will lower the final grade by a letter (a B- will become a C-, for example). Failure to submit two assignments will result in a failing grade for the course.

**Academic Dishonesty.** The work you submit to me must be your own. Any cases of plagiarism and cheating will be referred to the appropriate University Committee on misconduct. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed, illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct ([http://studentaffairs.osu.edu/resource\\_csc.asp](http://studentaffairs.osu.edu/resource_csc.asp)).

**Enrollment.** In accordance with departmental policy, all students must be officially enrolled in the course by the end of the second full week of the quarter. No requests to add the course will be approved by the department chair after that time. Enrolling officially and on time is solely the responsibility of each student.

**Cellphones.** Please turn off cellphones at the beginning of class.

\*All students with disabilities who need accommodations should see me privately during my office hours to make arrangements. Please do so by the third week of class. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>\*

### **Class Schedule:**

#### Introduction

##### **What is the history of science?**

No reading; introductory discussion

#### Week One

##### **Historical Context: The Scientific Revolution**

Bowler and Morus, c1

##### **Natural History and Classification**

\* Paul Lawrence Farber, *Finding Order in Nature: The Naturalist Tradition from Linnaeus to E.O. Wilson* (Baltimore: Johns Hopkins, 2000), c1 and 2.

#### Week Two

##### **The Making of Modern Chemistry: Atoms and Elements**

Bowler and Morus, c3.

##### **Geology and the Age of the Earth**

Bowler and Morus, c5

#### Week Three

##### **Biological Science: From the Theory of the Humours to Modern Physiology**

Bowler and Morus, c7

##### **Germ Theory and Public Health**

\* Margaret Pelling, “Contagion/Germ Theory/Specificity,” and Dorothy Porter, “Public Health,” in W.F. Bynum and Roy Porter (ed.) *Companion Encyclopaedia of the History of Medicine* (London: Routledge, 1993), 309-334, 1231-1261.

**\*\*\*Reaction Paper 1 handed out\*\*\***

#### Week Four

##### **The Age of Calculation: Statistics, Standards and Computing**

\* Ken Adler, “A Revolution to Measure: The Political Economy of the Metric System in France,” in M. Norton Wise (ed.) *The Values of Precision* (Princeton: Princeton University Press, 1995), 39-72.

\* Theodore M. Porter, *The Rise of Statistical Thinking 1820-1900* (Princeton: Princeton University Press, 1986), c1.

**\*\*\*Reaction Paper 1 handed in\*\*\***

##### **Thermodynamics and Energy**

Bowler and Morus, c4

#### Week Five

##### **Evolutionary Biology and Eugenics**

Bowler and Morus, c6

##### **The Sciences of Man: Anthropology and Sociology**

Bowler and Morus, c13

#### Week Six

##### **Sexual Science**

\* Londa Schiebinger, *Nature's Body: Gender in the Making of Modern Science* (Boston: Beacon Press, 1993), c5.

\* Harry Oosterhuis, *Stepchildren of Nature: Krafft-Ebing, Psychiatry and the Making of Modern Sexual Identity* (Chicago: Chicago University Press, 2000), c17.

##### **Racial Science**

\* Stephen Jay Gould, *The Mismeasure of Man* (New York: Norton, 1996), c2 & c4.

**\*\*\*Reaction Paper 2 handed out\*\*\***

#### Week Seven

##### **Pseudoscience**



\* Seymour H. Mauskopf, "Marginal Science," in Olby et al. eds. *Companion to the History of Modern Science* (London: Routledge, 1990), 869-885.

\* Henry Bauer, *Science or Pseudoscience: Magnetic Healing, Psychic Phenomena, and Other Heterodoxies* (Urbana, Ill.: University of Illinois Press, 2001), 1-18, 83-118.

**\*\*\*Reaction Paper 2 handed in\*\*\***

### **Science and Religion**

Bowler and Morus, c15

### Week Eight

### **Psychology**

\* Roy Porter, *Madness: A Brief History* (Oxford: Oxford University Press, 2002), c7 & c.8.

\* Raymond E. Fancher, "Freud and Psychoanalysis," in Olby et al. eds. *Companion to the History of Modern Science* (London: Routledge, 1990), 425-441.

### **Einstein and Twentieth-Century Physics**

Bowler and Morus, c11

**\*\*\*Outline of Final Paper handed in\*\*\***

Week Nine

**Cosmology and the Big Bang**

Bowler and Morus, c12

**DNA and the Human Genome Project**

\* Daniel Kevles, "Out of Eugenics: The Historical Politics of the Human Genome Project," and Evelyn Fox Keller, "Nature, Nurture and the Human Genome Project" in Daniel Kevles and Leroy Hood, *The Code of Codes: Scientific and Social Issues in the Human Genome Project* (Cambridge, Mass: Harvard University Press, 1992), 3-36, 281-299.

**\*\*\*Reaction Paper 3 handed out\*\*\***

Week Ten

**AIDS and Public Health in the Twenty-First Century**

\* Peter Baldwin, *Disease and Democracy: The Industrialised World Faces AIDS* (Berkeley: University of California Press, 2007), c1 & c5

**\*\*\*Reaction Paper 3 handed in\*\*\***

**Science, Global Warming and Climate Change Denial**

\* Primary documents on CARMEN

**\*\*\*Final Paper handed in\*\*\***

**\*\*\*Final Exam: Date and time TBA\*\*\***