

This template is to be used only by programs that have received specific written approval from the Provost's office to proceed with internal proposal development and review. A separate proposal must be submitted for each individual new degree program.

#### **DEGREE PROGRAM**

College/School(s) offering this degree: College of Liberal Arts and Sciences (CLAS)

Unit(s) within college/school responsible for program: School of Life Sciences (SoLS)

If this is for an official joint degree program, list all units and colleges/schools that will be involved in offering the degree program and providing the necessary resources: NA

Proposed Degree Name: Doctor of Philosophy (PhD) in History and Philosophy of Science (HPS)

Doctoral	<b>Degree</b>	Type:	PhD

Proposed title of major: History and Philosophy of Science

Is a program fee required? Yes  $\square$  No  $\boxtimes$ 

Requested effective term: Spring and year: 2012

(The first semester and year for which students may begin applying to the program)

#### PROPOSAL CONTACT INFORMATION

(Person to contact regarding this proposal)

Name: Jane Maienschein and Karin Ellison

Title: Director and Associate Director, Center for Biology and Society

Phone: (480) 965-8927

Email: maienschein@asu.edu; karin.ellison@asu.edu

#### **DEAN APPROVAL**

This proposal has been approved by all necessary unit and College/School levels of review, and the College/School(s) has the resources to offer this degree program. I recommend implementation of the proposed degree program. (*Note: An electronic signature, an email from the dean or dean's designee, or a PDF of the signed signature page is acceptable.*)

	m. (Note: An electronic signature, an email from the dean o e is acceptable.)	r dean's designee, or a PDF of the signe	a
Colle	ege Dean name: Robert Page		
	(Please see attached approval email)		
Colle	ege Dean signature	Date:	
	ege Dean name: re than one college involved)		
Colle	ege Dean signature	Date:	

# ARIZONA STATE UNIVERSITY PROPOSAL TO ESTABLISH A NEW GRADUATE DEGREE

This proposal template should be completed in full and submitted to the University Provost's Academic Council [mail to: curriculumplanning@asu.edu]. It must undergo all internal university review and approval steps including those at the unit, college, and university levels. A program may not be implemented until the Provost's Office notifies the academic unit that the program may be offered.

#### **DEGREE PROGRAM INFORMATION**

Doctoral Type: PhD (E.g. PhD or EdD)

Proposed title of major: History and Philosophy of Science (HPS)

#### 1. PURPOSE AND NATURE OF PROGRAM

**A. Brief program description** (This is a catalog type description of no more than 250 words. Include the distinctive features of the program that make it unique. Do not include program or admission requirements.)

This degree combines solid training in the core areas of philosophy with an emphasis on interdisciplinary studies of the sciences, and their:

- Conceptual structure
- Epistemology
- History
- Impacts on society

The strength of ASU's HPS program is to bring philosophy, history, and the study of science together.

This degree program is especially appropriate for students with a background in philosophy who seek to broaden their disciplinary studies with an historical perspective. Applicants will typically come from undergraduate programs that have included philosophical, historical, or history and philosophy of science training or with a master's degree in one of those fields. Science students are eligible as well, and will make up relevant undergraduate humanistic core courses during their first years. Most graduates will seek a career based in philosophical or historical analyses of the sciences.

- B. Total credit hours required for the program: 84
- C. Are any concentrations to be established under this degree program? \( \subseteq \text{Yes} \quad \text{No} \)
- 2. **PROGRAM NEED.** Explain why the university needs to offer this program (include data and discussion of the target audience and market).

Nationally, there is great interest in science and in understanding the nature of science and the forces that change scientific research. The job market in philosophy is strong for philosophers of science (and especially in the life sciences) with some positions remaining unfilled even when the market is intensely competitive in other areas. In addition, the history and philosophy of science are becoming strong disciplinary emphases with growing professional societies. Some programs elsewhere focus on just philosophy or just history, but those that bring the two together (notably University of Pittsburgh's Department of History and Philosophy of Science, Indiana University's Department of History and Philosophy of Science, and University of Toronto's Institute for the History and Philosophy of Science and Technology) are regarded as among the strongest in each area. In addition, at ASU we already have great research strength in this area and have developed a program in SoLS for students who come to HPS with backgrounds in the sciences. The objective here is to provide a program for students who come to HPS from the humanities and who seek a career based in historical or philosophical analysis of the sciences. We have the research strength competitive with

any program internationally and have already developed a strong graduate training program, including with support from the National Science Foundation that will bring students from around the country to ASU.

3. **IMPACT ON OTHER PROGRAMS.** List other academic units that might be impacted by the proposed program and describe the potential impact (e.g., how the implementation of this program might affect student headcount/enrollment, student recruitment, faculty participation, course content, etc. in other programs). Attach letters of collaboration/support from impacted programs.

The creation of a free standing PhD in History and Philosophy of Science will have no *new* impact on other programs at ASU. ASU has enrolled History and Philosophy Science students since Fall 2010, as students in the PhD in Philosophy, with a concentration in History and Philosophy of Science.

More broadly, HPS complements two other degrees at ASU—PhD in Biology with a concentration in Biology and Society and the PhD in Human and Social Dimensions of Science and Technology. Biology and Society is a concentration under the PhD in Biology, which provides similar training to the proposed HPS degree but attracts students from strong science backgrounds. The PhD in the Human and Social Dimensions of Science and Technology is an interdisciplinary degree program housed in the Graduate College. It trains students with a particular interest in using social science and science policy methods for exploring questions about science and society. The PhD in HPS will attract students with strong humanistic backgrounds and interest in the sciences and directs their training towards philosophical methods for answering science and society questions. The conjunction of the three degrees, with the resulting synergies and efficiencies, will allow this area to gain visibility nationally and helps students develop focused plans of study that will increase their employment opportunities and strengthen their training program. It also provides additional enrollment in small graduate seminars and draws philosophically trained faculty at ASU into interaction with the cohort of students in all three programs.

The Directors of the PhD in Biology with a concentration in Biology and Society (Juergen Gadau) and the PhD in Human and Social Dimensions of Science and Technology (Clark Miller) have both provided letters of support to make HPS a PhD degree. (See appendix.)

4. PROJECTED ENROLLMENT How many new students do you anticipate enrolling in this program each year for the next five years? Please note, The Arizona Board of Regents (ABOR) requires nine masters and six doctoral degrees be awarded every three years. Thus, the projected enrollment numbers must account for this ABOR requirement.

5-YEAR PROJECT	5-YEAR PROJECTED ANNUAL ENROLLMENT						
Please utilize the following tabular format.	ne following   1 Year   2 Year   3 Year   4 Year   5 Year   1 Year   2 Year   4 Year   5 Year   4 Year   5 Year   6 Year   7 Year						
Number of Students Majoring (Headcount)	3	5	8	10	13		

#### 5. STUDENT LEARNING OUTCOMES AND ASSESMENT

A. **List the knowledge, competencies, and skills** students should have when they graduate from the proposed degree program. (You can find examples of program Learning Outcomes at (http://www.asu.edu/oue/assessment.html).

See next page for copy of learning outcomes and assessments.

B. **Describe the plan and methods to assess** whether students have achieved the knowledge, competencies and skills identified in the Learning Outcomes. (You can find examples of assessment methods at (http://www.asu.edu/oue/assessment.html).

See next page.

#### Outcome 1

Graduates of the PhD in History and Philosophy of Science will be able to analyze scholary literature associated with a research question.

#### Measure 1.1 (Direct)

Dissertation prospectus

## Performance Criterion 1.1 (Required, and a second one is optional.)

At least 80% of the graduates' prospectuses will be approved by their committees as at or above mastery.

#### Measure 1.2 (Direct or indirect)

The oral defense of the graduates' written dissertation prospectuses

## Performance Criterion 1.2 (Required, and a second one is optional.)

At least 80% of the graduates will pass the oral defense of the prospectus at or above mastery.

#### Outcome 2

Graduates of the PhD History and Philosophy of Science will be able to conduct history and philosophy of science research.

#### Measure 2.1 (Direct)

The methods section or chapter of the dissertation.

## Performance Criterion 2.1 (Required, and a second one is recommended.)

At least 80% of the students will perform at or above mastery.

#### Measure 2.2 (Direct or Indirect)

The oral defense of the Ph.D. dissertation.

## Performance Criterion 2.2 (Required, and a second one is recommended.)

At least 80% of the students will perform at or above mastery.

Please save this file by naming it with the PlanCode for this program from the list on Page 1 of this document. Example: BA History = ASHISBA and route it to your college's assessment representative for approval and submission.

**6. ACCREDITATION OR LICENSING REQUIREMENTS (if applicable).** Provide the names of the external agencies for accreditation, professional licensing, etc. that guide your curriculum for this program, if any. Describe any requirements for accreditation or licensing.

NA

#### 7. FACULTY, STAFF AND RESOURCE REQUIREMENTS

#### A. Faculty

i. Current Faculty. List the name, rank, highest degree, area of specialization/expertise and estimate of the level of involvement of all current faculty who will teach in the program.

The core faculty for the PhD in History and Philosophy of Science will come from the School of Life Sciences. They are:

Last	First	Rank	Highest Degree	Area	Graduate Faculty Role
Armendt	Brad	Associate Professor	PhD	Philosophy of Science, Epistemology, Decision Theory	Chair
Creath	Richard	President's Professor	PhD	Philosophy of Science, Epistemology, History of Philosophy	Chair
Hamilton	Andrew	Assistant Professor	PhD	Biology and Society, Evolutionary Theory, Systematics	Chair
Hurlbut	Ben	Assistant Professor	PhD	Bioethics, Political Theory, and Science & Technology Studies	Chair
Laubichler	Manfred	Professor	PhD	Theoretical Biology, Evolutionary Developmental Biology, History of Biology	Chair
Maienschein	Jane	Regents' Professor, President's Professor, and Parents Association Professor	PhD	History and Philosophy of Science	Chair
Minteer	Ben	Associate Professor	PhD	Environmental Ethics, History and Philosophy of Conservation	Chair
Pyne	Stephen	Regents' Professor	PhD	Environmental History, History of Fire, History of Exploration	Chair
Robert	Jason	Associate Professor	PhD	Bioscience Ethics, Philosophy of the Life Sciences	Chair
White	Michael	Professor	PhD	History of	Chair

				Philosophy, History and Philosophy of Science, Mathematical Logic	
Ellison	Karin	Academic Professional	PhD	History of Technology, Research Ethics	Co-Chair

See also the attached copy of the full graduate faculty. As a concentration under the PhD in Philosophy, HPS has a graduate faculty separate from the Philosophy graduate faculty. Other than normal annual adjustments, the graduate faculty will not change as HPS moves from a concentration to a degree.

**ii. New Faculty.** Describe the new faculty hiring needed during the next three years to sustain the program. List the anticipated hiring schedule and financial sources for supporting the addition of these faculty.

No additional faculty members are needed immediately for launching HPS as a freestanding degree. Faculty requests in the longer term, if any, will go through normal SoLS processes.

**iii. Administration of the program.** Explain how the program will be administered for the purposes of admissions, advising, course offerings, etc. Discuss the available staff support.

The degree will be administered through the School of Life Sciences Graduate Programs Office. SoLS has a very efficient and experienced graduate program administrative office, and they have been administering HPS as a concentration under the PhD in Philosophy. The former SoLS Dean Robert Page suggested this option, and the current SoLS Director, Brian Smith supports continuing the arrangement.

To oversee that administration, an HPS steering committee will be created and consist of a graduate director and at least two others. All HPS steering committee members will be members of the HPS graduate faculty. For admissions, the committee will review all applications, and the graduate director will work with all faculty members who are prospective advisors to evaluate students for admission and financial support. After admission, each student will have an advisor charged with overseeing progress toward degree. By the end of the third semester, each student will appoint a supervisory committee and will meet with that committee at least once a year to evaluate progress. Once a year, the student will also file an annual review that must be approved by the student's supervisory committee. The HPS steering committee and the SoLS Graduate Associate Director will assess these reports to determine whether students are making satisfactory progress as well as whether they continue to qualify for financial support.

**B.** Resource requirements to launch and sustain the program. Describe any new resources required for this program's success such as new staff, new facilities, new library resources, new technology resources, etc

ASU already has the library, facilities, and equipment to support HPS as a degree. The degree will not require additional resources beyond those already supporting HPS concentration under the PhD in Philosophy and the complementary Biology and Society concentration under the PhD in Biology and the PhD in Human and Social Dimensions of Science and Technology programs. One beauty of offering this degree as a complement to two other degrees is that we can share resources and plan wisely to allow students to learn from a larger cohort of students and a larger roster of courses and faculty.

#### 8. CURRICULAR STRUCTURE OF THE PROPOSED PROGRAM

- **A.** Admission Requirements The requirements listed below are Graduate College requirements. Please modify and/or expand if the proposed degree has additional admissions requirements.
  - **Degree.** Minimum of a bachelor's degree (*or equivalent*) or a graduate degree from a regionally accredited College or University of recognized standing in a related field such as.

Modify or expand, if applicable:

Minimum of a bachelor's degree (or equivalent) or a graduate degree from a regionally accredited College or University of recognized standing in a related field such as history, philosophy, or history and philosophy of science. Students entering the degree should have the core background in history, philosophy, or history and philosophy of science, as well as a demonstrated background and interest in one or more sciences.

- **ii. GPA.** Minimum of a 3.00 cumulative GPA (scale is 4.0=A) in the last 60 hours of a student's first bachelor's degree program Modify or expand, if applicable: no changes
- iii. English Proficiency Requirement for International Applicants. If applicable list any English proficiency requirements that are higher than and/or in addition to the Graduate College requirement. See Graduate College website:

  (http://graduate.asu.edu/admissions/international/english proficiency)
  - TOEFL score of at least 600 (PBT) or 100 (iBT)
  - IELTS overall band score of at least 6.5 with no individual band below a 6.0
  - Pearson Test of English (PTE) score of at least 60

iv.	<b>Required</b> ⊠GRE	<b>Admission Exa</b> ☐GMAT	minations. ☐Millers Analogies	☐None Required
V.			s. Indicate all terms for vending application deadling	which applications for admissions are dates, if any:
		⊠ Fall	Deadline (month/year):	December 15*
		☐ Spring	Deadline (month/year):	
		Summer	Deadline (month/year):	

\*The HPS PhD Program will admit one cohort annually for programs of study that begin in the fall semester. The target date for applications is December 15 for students wishing to begin a program of study the following August. There is no guarantee that applications received after December 15 will be reviewed. The PhD in HPS Program plans to notify applicants of admissions status no later than the following April 15th. In unusual circumstances and with program approval, students admitted during the annual program admission process may begin studies in the Spring or Summer semesters prior to the regular August start date.

- **B.** Degree Requirements. Below provide the curricular requirements for the proposed degree program.
  - i. Total credit hours (cr hrs) required for the degree program: 84
  - **ii. Core courses.** List all required core courses and total credit hours for the core (required courses other than internships, thesis, dissertation, capstone course, etc). Omnibus number courses cannot be used as core courses. Permanent numbers must be requested by submitting course proposal to ACRES for approval.

#### Total cr hrs for required core courses: 6

Course prefix & number	Course title	Credit hours	New course?
HPS 620	Research Prospectus Writing	3	$Y \boxtimes N \square$
HPS 615	Biology and Society Lab*	3	$Y \square N \boxtimes$

\*HPS 615: Biology and Society Lab is a one-credit course focused on student presentations of works-in-progress. Students must register for it three times during their graduate study.

#### Total cr hrs for required (restricted) elective courses: 30

The HPS steering committee will develop a program form on which students will specify which courses listed in their plans of study meet the requirements listed below. The form must be approved by the advisor and the HPS graduate director and must be filed before unit approval of the iPOS.

Course prefix	Course title	Credit	New course?
& number		hours	
	Approved courses in history of science	6	Y 🗌 N 🖾
	Approved courses in philosophy of science	6	Y□N⊠
	Approved course(s) in history of philosophy	3	Y□N⊠
	Approved course(s) in value theory	3	Y 🗌 N 🖾
	Approved course(s) in advanced logic or equivalent	3	Y□N⊠
	Approved courses in philosophy, history, or the life	9	Y□N⊠
	sciences		

#### iii. Elective Courses

#### Total cr hrs for program electives: 24

Provide a sample list of elective courses:

Course prefix & number	Course title	Credit hours	New course?
HPS 512	Philosophy of Science	3	NO
HPS 513	Decisions and Strategies	1-3	NO
HPS 516	History of Biology	3	NO
BIO 515	Science, Technology, and Public Affairs	3	NO
BIO 516	Foundations of Bioethics	3	NO
HPS 591	Seminar: Embryo Project	3	NO
HPS 591	Seminar: Embryo Project, Editing Seminar	3	NO
HPS 591	Seminar: Philosophy of Biology	3	NO
HPS 591	Seminar: Carnap and Quine	3	NO
HPS 591	Seminar: History of Biomedicine/Historiography	3	NO
HPS 591	Seminar: Scientific Revolution and Law	3	NO
HPS 792	Research	1-24*	NO

<sup>\*</sup>Please note that HPS students are required to take at least 12 credit hours of research as outlined below, but may also elect to take additional research elective hours as part of their plan of study.

iv.	<b>400-Level Courses.</b> No more than 6 credit hours of 400-level coursework can be included graduate student program of study.					
	1.	Are 400-level ASU courses allowed on student program of study for this degree? ☐ Yes ☐ No				
	2.	If yes, how many credit hours? 6				

- v. Total cr hrs required for research (if applicable): 12 (HPS 792)
- vi. Culminating experience for the proposed program (please check all that apply and provide requested information): 12 credit hours

		Required?	Brief description of the applied project or the capstone course, as applicable.	Course prefix and number	Credit hours		
Thesis			the capstone course, as applicable.	and number	liours		
(master's o							
(master's o	nly) ¯						
Capstone (master's o	nly)						
Dissertat		$\boxtimes$		HPS 799	12 cr hrs		
vii.	student's supervisory committee, does the program allow up to 30 credit hours from a previously awarded master's degree to count towards the degree requirements for this doctoral program? ⊠Yes or □No						
ix.	For Doctoral Degrees, submission of a written dissertation prospectus and its oral defense are required. Please include any required timelines for successful defense of the prospectus. It is expected that the submission of a written dissertation prospectus and its oral defense by no later than the end of their fourth year.						
X.	<b>Committee:</b> Required Number of Thesis or Dissertation Committee Members (must be at least 3 including chair or co-chairs): 5						
xi.	Foreign Language Exam. Foreign Language Examination(s) required? ☐Yes ☐No						
xii.		a. Will a nev	<ul> <li>Course Prefix(es) Provide the following information for the proposed graduate program.</li> <li>a. Will a new course prefix(es) be required for this degree program?</li> <li>Yes □ No ☒</li> </ul>				

**xiii. New Courses Required for Proposed Degree Program.** Provide course prefix, number, title, and credit hours and description for any new courses required for this degree program.

HPS 620, Research Prospectus Writing, 3 hours -This is a workshop style course where students develop and peer review graduate level project prospectuses, such as those for NSF grant proposals, journal articles, theses, and dissertations. Specific topics include developing a "doable" research question, conducting literature reviews, defining appropriate methods, and establishing the significance of a research topic. Appropriate for graduate students in Biology and Society, History and Philosophy of Science, the life sciences, and related programs.

#### College of Liberal Arts and Sciences Curriculum Committee, Senate and Dean Approvals

#### PhD in History and Philosophy of Science Degree Program

----Original Message-----

From: Robert Page [mailto:Robert.Page@asu.edu] Sent: Wednesday, September 14, 2011 7:12 AM

To: curriculumplanning@asu.edu

Subject: FW: Proposal for PhD in History and Philosophy of Science

Importance: High

NOD	
Rob	
I approve.	

From: Jenny Smith < jenny.smith@asu.edu < mailto:jenny.smith@asu.edu >>

Date: Tue, 13 Sep 2011 15:07:57 -0700

To: Robert Page <<u>robert.page@asu.edu</u><<u>mailto:robert.page@asu.edu</u>>> Cc: Paul LePore <<u>paul.lepore@asu.edu</u><<u>mailto:paul.lepore@asu.edu</u>>>, Patty

<p.duncan@asu.edu<mailto:p.duncan@asu.edu>>

Subject: Proposal for PhD in History and Philosophy of Science

Dean Page,

The CLAS Curriculum Committee and Senate have approved the attached proposal for a PhD degree in History and Philosophy of Science. Please forward the proposal with your approval to curriculumplanning@asu.edu<mailto:curriculumplanning@asu.edu>

Thank you, Jenny

# Proposal to Establish a New Degee, History and Philosophy of Science PhD Attachments

Subject: Re: History and Philosophy of Science, Proposal to Establish a New Graduate Degree

Date: Thursday, September 15, 2011 8:20 PM
From: Juergen Gadau < Juergen. Gadau@asu.edu>

To: Karin Ellison < Karin. Ellison@asu.edu>

HI Karin

I fully support the establishment of a PhD degree in History and Philosophy of Science.

Ciao, Juergen

From: Karin Ellison < Karin. Ellison@asu.edu>
Date: Wed, 14 Sep 2011 11:46:09 -0700

To: Clark Miller <Clark.Miller@asu.edu>, Juergen Gadau <Juergen.Gadau@asu.edu>

Cc: Jane Maienschein < maienschein@asu.edu>

Subject: History and Philosophy of Science, Proposal to Establish a New Graduate Degree

History and Philosophy of Science, Proposal to Establish a New Graduate Degree Hi Juergen and Clark,

As you both know, Jane and I are working on converting the PhD in HPS from a concentration under the Philosophy PhD to a independent PhD. I have attached the proposal for reference. As part of the process, we need to submit "letters of collaboration/support from impacted programs." We have identified the concentration in Biology and Society under the PhD in Biology and the PhD in the Human and Social Dimensions of Science and Technology as the most closely related programs. Could you each send me a brief email reply to this inquiry supporting the HPS PhD on behalf of your respective programs?

Thanks!

Karin

KARIN D. ELLISON, Ph.D.

Associate Director, Center for Biology and Society

Executive Director, Biology and Society Graduate Programs

**School of Life Sciences** 

College of Liberal Arts and Sciences

Arizona State University | P.O. Box 87330 | Tempe, Arizona 85287-3301

480.727.7111 | e-mail: karin.ellison@asu.edu

## Proposal to Establish a New Degee, History and Philosophy of Science PhD Attachments

Subject: Re: History and Philosophy of Science, Proposal to Establish a New Graduate Degree

**Date:** Wednesday, September 14, 2011 8:56 PM **From:** Clark Miller <clark.miller@asu.edu>

To: Karin Ellison < Karin. Ellison@asu.edu>, Clark Miller < clark.miller@asu.edu>, Juergen Gadau

<Juergen.Gadau@asu.edu>

Cc: Jane Maienschein <maienschein@asu.edu>

Dear Karin,

I'm pleased to support the new PhD in History and Philosophy of Science. The proposed PhD nicely complements the PhD in the Human and Social Dimensions of Science and Technology by focusing on ASU's strengths in the philosophy of science and helping PhD students with an interest in philosophy of science put their work into broader historical contexts. This degree will help solidify ASU's growing presence as one of the top universities in the country offering students the opportunity to bring humanistic, social, and policy research to bear on science and its role in society.

Best,

Clark

On 9/14/11 11:46 AM, "Karin Ellison" <karin.ellison@asu.edu> wrote:

Hi Juergen and Clark,

As you both know, Jane and I are working on converting the PhD in HPS from a concentration under the Philosophy PhD to a independent PhD. I have attached the proposal for reference. As part of the process, we need to submit "letters of collaboration/support from impacted programs." We have identified the concentration in Biology and Society under the PhD in Biology and the PhD in the Human and Social Dimensions of Science and Technology as the most closely related programs. Could you each send me a brief email reply to this inquiry

Proposal to Establish a New Degee, History and Philosophy of Science PhD Attachments

supporting the HPS PhD on behalf of your respective programs?

Thanks!

Karin

KARIN D. ELLISON, Ph.D.
Associate Director, Center for Biology and Society
Executive Director, Biology and Society Graduate Programs
School of Life Sciences
College of Liberal Arts and Sciences
Arizona State University | P.O. Box 87330 | Tempe, Arizona 85287-3301
480.727.7111 | e-mail: karin.ellison@asu.edu

# Proposal to Establish a New Degee, History and Philosophy of Science PhD Attachments History and Philosophy of Science PhD Degree Graduate Faculty

Name	Unit	Graduate Faculty	Chair	Co Chair
Armendt, Brad	SOLS	racuity	X	Chair
	SOLS	———		
Collins, James		X		
Corley, Elizabeth	School Of Public Affairs		- V	
Creath, Richard	SOLS		Х	
Dietrich, Michael R.	ASU - Ctr for Bio and Society	X		
Ellison, Karin	SOLS			X
Fenichel, Eli	SOLS		Х	
Gereboff, Joel	School of Hist, Phil, Rel Stdies	X		
Gerson, Elihu M.	ASU - Ctr for Bio and Society	X		
Guston, David	School of Gov, Politics & Glob	X		
Hackett, Ed	SHESC	Х		
Hall, Brian	ASU - Ctr for Bio and Society	X		
Hamilton, Andrew L.	SOLS		Х	
Hoffman, Steve A.	SOLS		Х	
Honegger, Gitta	Theater and Film	X		
Kimbel, William	SHESC	X		
Kinzig, Ann	SOLS		Х	
Kobes, Bernard	School of Hist, Phil, Rel Stdies		X	
Koblitz, Ann Hibner	School of Social Transform	X		
Laubichler, Manfred	SOLS		X	
Luft, Julie	SOLS		X	
Lynch, John M.	Barrett Honors College			X
Maienschein, Jane	SOLS		X	
Martin, Tom W.	Barrett Honors College			X
Miller, Clark	School of Gov, Politics & Glob	X		
Minteer, Ben	SOLS	— ^ —	X	
Perrings, Charles	SOLS	-	$\frac{\hat{x}}{x}$	
Pigg, Kathleen	SOLS	X		
Pyne, Stephen	SOLS	<del>  ^</del>	X	
Robert, Jason	SOLS	_	X	
Sarewitz, Daniel	SOLS		X	
Smith, Andrew T.	SOLS		X	
	SOLS		$\frac{\hat{x}}{x}$	
Stromberg, Julie	Journalism & Mass Comm	<del> </del> x	_^_	_
Sylvester, Ed				_
Tillman, Hoyt C.	School of Hist, Phil, Rel Stdies	<del></del>	X	
Weitz, Rose	School of Social Transform	X	-	
Wetmore, Jamey	SCHESC	X		
White, Michael J.	SOLS		Х	