

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. The proposal template should be completed in full and submitted to the University Provost's Office [mailto: 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.

College/School/Institute: School for the Future of Innovation in Society
Department/Division/School:
Proposing Faculty Group (if applicable):
Is this an official joint degree program? No, this is not a joint degree program

If "Yes" List all the additional college(s)/school(s)/institute(s) that will be involved in offering the degree program and providing the necessary resources. Note: All units offering this program must have collaborated in the proposal development and completed the appropriate unit and college/school approvals.

Degree type: BA-Bachelor of Arts
 If other; provide degree type title and proposed abbreviation:
Name of degree program (major): Innovation in Society
Are any concentrations to be established under this degree program? No, concentrations will not be established.
Is a program fee required? No, a program fee is not required.
What is the first catalog year available for students to select on the undergraduate application for this this program? 2016-17
Delivery method: On-campus only (ground courses and/or iCourses)
Note: Once students elect a campus or On-line option, students will not be able to move back and forth between the on-campus and the ASU Online options. Approval from the Office of the University Provost and Philip Regier (Executive Vice Provost and Dean) is required to offer programs through ASU Online.

Campus/Locations: indicate all locations where this program will be offered.

Downtown Phoenix Polytechnic Tempe West Other: _____

Proposal Contact

Name:	Jameson Wetmore	Title:	Associate Professor
Phone number:	480-727-0750	Email:	Jameson.Wetmore@asu.edu

DEAN APPROVAL(S)

**This proposal has been approved by all necessary unit and College/School levels of review.
 I recommend implementation of the proposed organizational change.**

College/School/Division Dean name: David Guston

Signature _____

Date: 10/30/2015

College/School/Division Dean name:
 (if more than one college involved)

Signature _____

Date: / /20

Note: An electronic signature, an email from the dean or dean's designee, or a PDF of the signed signature page is acceptable.

1. Purpose and Nature of Program

Provide a brief program description. Include the distinctive features of the program that make it unique.

The new School for the Future of Innovation in Society (SFIS) is proposing to launch a series of undergraduate programs in Fall of 2016. The BA in innovation in society is designed to provide students with tools and concepts to analyze new and emerging innovations and the diverse local and global futures they enable. Students will be prepared to build more inclusive future societies and develop strategies that link innovation with social needs and values. The curriculum develops multidisciplinary perspectives that synthesize research and theory from the social sciences, humanities, natural sciences, and engineering. Students will learn qualitative methods to investigate how science and technology have shaped and reflect social values, in preparation for careers in public service, business, policy, and academia.

2. Student Learning Outcomes and Assessment Methods

A. Knowledge, competencies, and skills

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 (<https://uoeee.asu.edu/plan-outcomes>).

See 2B

B. Assessment

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 (<https://uoeee.asu.edu/creating-plan>).

Outcome 1: Think critically about innovation and the relationship between changes in technology and society

Assessment 1: This measure will be met if at least 70% of the students received grades B- or better in the final research paper of FIS 305 Ways of Knowing.

Outcome 2: Demonstrate knowledge of the influences, origins, histories, values, and risks across innovation systems

Assessment 2: This measure will be met if at least 70% of the students enrolled in the minor received grades of B- or better on the Charismatic Leadership paper in FIS 201 Innovation in Society.

Outcome 3: Apply foresight methods to assess emerging trends and plausible futures

Assessment 3: This measure will be met if at least 70% of students receive grades of B- or better on the group-based foresight project in FIS 307 Navigating Futures

Outcome 4: Compare local and global forces that shape innovation, and evaluate consequences for equity and justice

Assessment 4: This measure will be met if at least 70% of the students receive B- or better on the final research paper in FIS 308 Politics of Innovation.

Outcome 5: Engage critically with experts, professionals, decision makers, and the public

Assessment 5: This measure will be met if at least 70% of the students receive B- or better on the final project presentation and deliverables in FIS 480 Innovation in Society Studio

3. Academic Curriculum and Requirements

A. Major Map.

Attach a copy of the “proposed” major map for this degree program and each concentration(s) to be offered. Instructions on how to create a “proposed major map” in [BAMM](#) can be found in the [Build a Major Map Training Guide](#).

B. Summary of credit hours required for this program

Total credit hours must be 120 and include first year composition, general studies, core/required courses, program specific electives, and any additional requirements (e.g., concentration credits).

Requirements	Credit Hours
First Year Composition	6
ASU 101 (or Equivalent)	1
General Studies	44
Core/required courses	18
Program specific electives	6
Additional requirements	18
Other; please explain	27
Total	120

C. Core/Required Courses.**i. Total required and/or core course credit hours:**

There are 18 hours of Core Requirements and 6 hours of program specific electives.

ii. List the name, prefix, and credit hours for each required/core course for this program

FIS 111 – Welcome to the Future (3 credit)

FIS 201 – Innovation in Society (3 credits)

FIS 305 – Ways of Knowing (3 credits)

FIS 307 – Navigating Futures (3 credits)

FIS 308 – Politics, Markets, and Innovation (3 credits)

FIS 480 - Innovation in Society Studio (3 credits)

D. Program Specific Electives.**i. Total required program elective credit hours:**

Students will be required to have 6 program specific elective hours.

ii. List the name, prefix, and credit hours for any program specific electives for this program:

FIS 331 Technology and the Modern World (3 credit hours)

FIS 332 Risk and the Future (3 credit hours)

FIS 333 Governing Emerging Technologies (3 credit hours)

FIS 334 Science, Technology, and Inequality (3 credit hours)

FIS 335 Designing Knowledge (3 credit hours)

FIS 336 Science and Technology Policy (3 credit hours)

FIS 337 Innovation and Global Development (3 credit hours)

E. Additional Program Requirements, if any:

List and describe any capstone experiences, milestone, and/or additional requirements.

Students will be required to have 12 credits of foreign language (or up to 202 level).

Students will be required to take 6 credits of upper division related area electives in courses from across the university that cover topics important to SFIS majors (including courses from Sustainability, Anthropology, Biology, and Society, etc.)

Students will also need to complete 27 credits of free electives.

F. Concentrations

- i. Are any concentrations to be established under this degree program? **No, concentrations will not be established.**
- ii. If yes, are concentrations required? (Select One)
- iii. List courses & additional requirements for the proposed concentration (s):

Concentration Name	Total credit hours	Core/Required Courses for Concentration (Prefix, # & Title)	Total Core credit hours	Program Specific Electives (include course name and prefix)	Total Elective credit hours	Additional Requirements (i.e. milestones, capstones)

4. New Course Development

A. Will a new course prefix (es) be required for this degree program? Yes

If yes, list prefix name(s) (i.e. ENG- English) FIS

Note: A request for a New Prefix form must be completed for each new prefix required and submitted with this proposal: http://provost.asu.edu/files/shared/curriculum/Prefix_Request.doc.

B. New Courses Required for Proposed Degree Program.

List all new courses required for this program, including course prefix, number and course description.

FIS 101 SFIS: the ASU Experience (1 credit)

The 1-credit FIS 101 course is designed to welcome freshman students enrolled in the Innovation in Society major at ASU. It will introduce them to the array of resources available to them as ASU students, stimulate them to reflect on their choice of major, and provide an opportunity to hear about the career trajectories and interests of faculty and alumni from the School for the Future of Innovation in Society. This course is capped at sections of 20 students, to promote discussion and a sense of community.

FIS 111 Welcome to the Future (3 credits)

This class will explore the ways in which the future inspires, shapes, and motivates the present. It will illustrate how “possible futures” are used by people and institutions to advance agendas, shape conversations, and sell products. It will examine how science, technology, and other forces are mobilized to create change. And it will empower students to play a role in shaping our collective future.

FIS 201 Innovation in Society (3 credits)

In the modern age, governments, multinational corporations, and civil society movements have rallied around the idea that innovation is necessary for the maintenance of health, prosperity, and the good life in general. This course will examine the vast implications of this promise, the reasons why it is so powerful, and explanations for why it falls short. We will examine what innovation is, who funds it, and why some innovations succeed while others fail. In doing so we will link innovation with society to see how change happens differently in different places and how diverse populations are impacted.

FIS 305 Ways of Knowing (3 credits)

A core requirement in the B.A. in Innovation in Society, this course introduces students to research, beginning with the concept of research itself and its various purposes, highlighting knowledge and how it is created in different disciplinary approaches. Students will be exposed to historical and philosophical underpinnings of how research is conceptualized, presented, and implemented, including what constitutes information, knowledge and evidence. While material that would be in a traditional research design and methodology course will be introduced in this course, the emphasis will uniquely focus on knowledge creation, innovation, the nature of disciplinary knowledge, and its impact on society. The epistemological differences in problem identification and approaches to inquiry will be explored in the disciplinary perspectives of engineering, the sciences, and in the social sciences.

FIS 307 Navigating Futures (3 credits)

This course is designed to introduce students to foresight methods and their potentials as entry-points into public discussions about near- and mid-range technoscientific developments. Four elements will constitute the organizing axis of the course: (i) the history of foresight exercises in government agencies and business organizations; (ii) the methods of four forms of foresight exercises (technology foresight, science and technology studies, anticipatory governance, and scenario development); (iii) a comparative assessment of the these dominant forms; and (iv) a group-based application exercise using one of the foresight methods.

FIS 308 Politics, Markets, and Innovation (3 credits)

In this course, students study the roles that governments, markets and other factors play in promoting, disseminating and regulating science-based technological innovation. This will include examining the theoretical literature on factors that structure markets and shape diffusion, as well as case studies that illustrate the processes and mechanisms that govern innovations in society. In addition to studying the role of governments, firms, and universities, the course will also consider the role of publics as consumers who adopt innovations but also as citizens who may be skeptical of them. The course will also include case studies in agriculture, healthcare, biotechnology and digital rights, among other cases.

FIS 480 Innovation in Society Studio (3 credits)

This course will facilitate experiential learning and allow students to work with clients in the field of technology, innovation and sustainability. Through team projects with identified stakeholders, students will engage, plan, design, implement and assess projects while learning interpersonal skills and managing client relationships. This course will allow students to gain real world-experience and develop skills in project management, including planning, implementing and evaluating a complete project cycle. It will also allow students to manage both client-based projects and team relationships to complete projects. Students will carry out project-based research, conduct interviews and meetings, make site visits, develop work plans and scope of works, negotiate clear deliverables with clients, implement projects and give public presentations. The presentations will be grounded in the idea of conducting effective science communication.

Note: New course requests must be submitted electronically via [Curriculum ChangeMaker](#) and undergo all internal university review and approval steps including those at the unit, college, and university levels.

5. Program Need

Explain why the university needs to offer this program (include target audience and market).

The modern world is faced with a number of complex problems that can only be solved through bringing disparate sets of expertise together. The establishment of the new School for the Future of Innovation in Society (SFIS) and the proposed launch of the undergraduate degree programs in Innovation in Society are designed to facilitate interdisciplinary conversations about our collective future. This BA is designed to engage those students who have a background and/or interest in the humanities and qualitative social sciences and offer them a way to be leaders in and facilitators of the conversation

6. 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.

This major does not duplicate any existing ASU programs. Rather its creation would ensure the development of a number of courses that would allow students in any degree program at ASU to supplement their studies with instruction in innovation and the future. Students in the natural sciences, social sciences, engineering, and math, may choose to take courses offered through the major to help them think through the social and political implications of their core disciplines so that they are better prepared to promote the change they want to see in the world. SFIS has reached out to the deans and directors of a number of these programs including CLAS, CLS, FSE, Sustainability, and the New College.

7. Projected Enrollment

How many new students do you anticipate enrolling in this program each year for the next five years?

5-YEAR PROJECTED ANNUAL ENROLLMENT					
	1st Year	2nd Year (Yr 1 continuing + new entering)	3rd Year (Yr 1 & 2 continuing + new entering)	4th Year (Yrs 1, 2, 3 continuing + new entering)	5th Year (Yrs 1, 2, 3, 4 continuing + new entering)
Number of Students Majoring (Headcount)	20	40	70	100	110

8. 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.

N/A

9. Faculty & Staff**A. Current faculty**

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

David Guston, PhD, Professor (and Dean TBD), research and development policy, 10%
Daniel Sarewitz, PhD, Professor, relationships among knowledge, uncertainty, disagreement, policy, and social outcomes, 10%
Lee Gutkind, BA, Professor, creative nonfiction, Distinguished Writer-in-Residence CSPO, 10%
Netra Chhetri, PhD, Associate Professor, climate adaptation, energy and water, agriculture and food security, grassroots innovation, participatory development, and citizen engagement, 20%
Gary Grossman, PhD, Associate Professor, management of social, education, technology, and employment and training projects, 10%
Clark Miller, PhD, Associate Professor, science, technology & globalization, 10%
Jameson Wetmore, PhD, Associate Professor, engineering ethics, nanotechnology, and equity, 20%
Erik Fisher, PhD, Associate Professor, public policies, scientific practices and social science engagements, 20%
Cynthia Selin, PhD, Assistant Professor, future-oriented deliberation, 10%
Ira Bennett, PhD, Clinical Associate Professor, policies and politics of emerging technologies, nanotechnologies, 10%
Darlene Cavalier, MA, Professor of Practice, advocate for public participation in science and science policy, a writer, and an entrepreneur, (50% FTE) 10%
Elisabeth Graffy, PhD, public sector institutional leadership and innovation, strategic management of the science-policy interface, and public engagement, Professor of Practice, 10%
Rae Ostman, PhD, Associate Research Professor, public education of nanoscale science, engineering, and technology, (50% FTE) 10%
Mary Jane Parmentier, PhD, Clinical Associate Professor, role of technology in economic, social and political development, and the regions of North Africa and Latin American development, 10%
Jennifer Richter, PhD, Assistant Professor, justice, equity, and democracy in technology innovation, 20%
Gregg Zachary, BA, Professor of Practice, interplay of technology and culture, and science and politics, 20%
Emma Frow, Ph.D, Assistant Professor, standards and governance in contemporary life sciences, synthetic biology 10%
Michael Bennett, Ph.D. Associate Research Professor, emerging technoscience, nanotechnologies 10%
Andrew Maynard, PhD, Professor, risk innovation 10%
Diana Bowman, PhD, Associate Professor, public health law, legal and policy issues with emerging technologies 10%
Lekelia Jenkins, PhD, Assistant Professor, marine technology and conservation, diffusion of innovations 20%
Sasha Barab, PhD, Professor, design- and impact-based research methodologies 20%

B. 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 members.

The School for the Future of Innovation in Society will hire additional faculty (both track and non-track) to support this new undergraduate program. For the next three years projected future hires include for AY16-17: two professors of science communication and political behavior, a professor of biopolicy, a professor of education innovation, and two assistant professors of engineering education and design, joint with the Fulton Schools of Engineering. In AY17-18, projected hires include an assistant professor of innovation and global development and two to four faculty hires joint with the Fulton Schools of Engineering. In AY18-19 projected hires include two to four faculty hires joint with the Fulton Schools of Engineering and a senior hire in innovation and society. SFIS will also hire instructors and/or lecturers as needed to complement the teaching faculty.

C. 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.

This new undergraduate program will be supported by the existing infrastructure of the School for the Future of Innovation in Society including business staff, event and communication staff, and the current academic support staff of a Coordinator, Academic Programs and a Coordinator Sr, Education Programs. Additional staff will be hired as enrollment dictates.

10. Resources (necessary to launch and sustain the program)**A. Required resources:**

Describe any new resources required for this program's success, such as new support staff, new facilities, new library resources, new technology resources, etc.

New resources required for this program will include additional support staff including an undergraduate residential coordinator, an undergraduate offerings coordinator, and student success specialists.

B. Resource acquisition:

Explain how the resources to support this program will be obtained.

As this is a new program in a relatively new school, we will request initial establishing support from university central funding. Additional growth will be driven by enrollment.

APPENDIX
OPERATIONAL INFORMATION FOR UNDERGRADUATE PROGRAMS
(This information is used to populate the Degree Search/catalog website.)**1. Program Name (Major):** Innovation in Society**2. Program Description** (150 words maximum)

This BA in innovation in society provides students with tools and concepts to analyze new and emerging innovations and the diverse local and global futures they enable. Students will be prepared to build more inclusive future societies and develop strategies that link innovation with social needs and values. The curriculum develops multidisciplinary perspectives that synthesize research and theory from the social sciences, humanities, natural sciences, and engineering. Students will learn qualitative methods to investigate how science and technology have shaped and reflect social values, in preparation for careers in public service, business, policy and academia.

3. Contact and Support Information

Building Name, code and room number: (<i>Search ASU map</i>)	INTDB 366
Program office telephone number: (<i>i.e. 480/965-2100</i>)	480/727-8787
Program Email Address:	sfis@asu.edu
Program Website Address:	http://sfis.asu.edu

4. Delivery/Campus Information Delivery: On-campus only (ground courses and/or iCourses)

Note: Once students elect a campus or On-line option, students will not be able to move back and forth between the on-campus and the ASU Online options. Approval from the Office of the University Provost and Philip Regier (Executive Vice Provost and Dean) is required to offer programs through ASU Online.

5. Campus/Locations: indicate all locations where this program will be offered.

Downtown Phoenix Polytechnic Tempe West Other:

6. Additional Program Description Information

- A. Additional program fee required for this program? No
B. Does this program have a second language requirement? Yes

7. Career Opportunities & Concentrations

Provide a brief description of career opportunities available for this degree program. If program will have concentrations, provide a brief description for each concentration. (150 words maximum)

Governments, corporations, and nongovernmental organizations facing increasingly rapid change driven by or relating to science and technology need people who can respond effectively to change, develop and implement policy, understand the intersection of science, technology, and society, and have the analytical skills to deal with challenges. Students graduating from this program will have the skills to work in any of these sectors providing problem solving, analysis, quality assurance, futuring, and communication and facilitation on issues related to science, technology, innovation, and society. Graduates will be prepared for professional schools, public service and policy making, industry, entrepreneurship, or graduate research in a variety of disciplines.

8. Additional Admission Requirements

If applicable list any admission requirements (freshman and/or transfer) that are higher than and/or in addition to the university minimum undergraduate admission requirements.)

N/A

9. Keywords

List all keywords used to search for this program. Keywords should be specific to the proposed program.

innovation, society, science, technology, ethics, future, policy

10. Advising Committee Code

List the existing advising committee code to be associated with this degree. UGFI01- SFIS Undergraduate Advising

Note: If a new advising committee needs to be created, please complete the following form:

[Proposal to create an undergraduate advising committee](#)

11. First Required Math Course

List the first math course required in the major map. MAT 142

12. WUE Eligible:

Has a request been submitted to the Provost by the Dean to consider this degree program as eligible for WUE? (Select Yes/No)

Note: No action will be taken during the implementation process with regards to WUE until approval is received from the Provost.

13. Math Intensity:

- a. List the highest math course required on the major map. (This will not appear on Degree Search.) MAT 142
- b. What is the math intensity as indicated by the highest math required on the major map? Math intensity categorization can be found here: <https://catalog.asu.edu/mathintensity> General

14. CIP codes

Identify CIP codes that should be displayed on Degree Search. CIP codes can be found at: <http://www.onetonline.org/crosswalk/CIP/>.

45.0101	54.0104
45.9999	44.04
30.1501	44.0501
30.9999	
52.02	

Are any specific career codes (SOC/ONET codes) to be omitted from the CIP codes selected above? (i.e. "Omit 25-10312.00 Engineering Teachers, Postsecondary from CIP code 14.0501 Bioengineering and Biomedical Engineering.")

03.0104	19-204.03
	19-204.02

15. Area(s) of Interest

A. Select **one (1)** primary area of interest from the list below that applies to this program.

- | | |
|---|--|
| <input type="checkbox"/> Architecture & Construction | <input type="checkbox"/> Health & Wellness |
| <input type="checkbox"/> Arts | <input type="checkbox"/> Humanities |
| <input type="checkbox"/> Business | <input type="checkbox"/> <u>Interdisciplinary Studies</u> |
| <input type="checkbox"/> <u>Communications & Media</u> | <input type="checkbox"/> <u>Law, Justice & Public Service</u> |
| <input type="checkbox"/> Computing & Mathematics | <input type="checkbox"/> <u>STEM</u> |
| <input type="checkbox"/> Education & Teaching | <input type="checkbox"/> <u>Science</u> |
| <input type="checkbox"/> <u>Engineering & Technology</u> | <input checked="" type="checkbox"/> <u>Social and Behavioral Sciences</u> |
| <input type="checkbox"/> Entrepreneurship | <input type="checkbox"/> Sustainability |
| <input type="checkbox"/> <u>Exploratory</u> | |

B. Select **one (1)** secondary area of interest from the list below that applies to this program.

- | | |
|---|---|
| <input type="checkbox"/> Architecture & Construction | <input type="checkbox"/> Health & Wellness |
| <input type="checkbox"/> Arts | <input type="checkbox"/> Humanities |
| <input type="checkbox"/> Business | <input checked="" type="checkbox"/> <u>Interdisciplinary Studies</u> |
| <input type="checkbox"/> <u>Communications & Media</u> | <input type="checkbox"/> <u>Law, Justice & Public Service</u> |
| <input type="checkbox"/> Computing & Mathematics | <input checked="" type="checkbox"/> <u>STEM</u> |
| <input type="checkbox"/> Education & Teaching | <input type="checkbox"/> <u>Science</u> |
| <input type="checkbox"/> <u>Engineering & Technology</u> | <input type="checkbox"/> <u>Social and Behavioral Sciences</u> |
| <input type="checkbox"/> Entrepreneurship | <input type="checkbox"/> Sustainability |
| <input type="checkbox"/> <u>Exploratory</u> | |




The following fields are to be completed by the Office of the University Provost.




CIP Code: _____
 Plan Code: _____

2016 - 2017 Major Map

Innovation in Society, (Proposed)

BEVUJNA

Term 1	0 - 14 Credit Hours	Critical course signified by 	Hours	Minimum Grade	Notes
 FIS 101: SFIS - The ASU Experience			1		<ul style="list-style-type: none"> • An SAT, ACT, Accuplacer, IELTS or TOEFL score determines placement into first-year composition courses • ASU Mathematics Placement Test score determines placement in mathematics course • ASU 101 or college-specific equivalent First-Year Seminar required of all freshman students
 FIS 111: Welcome to the Future			3	C	
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition			3	C	
MAT 142: College Mathematics (MA) OR Mathematics (MA)			3		
2** Second Language: Requirement satisfied through the following: * Completion of secondary education at a school in which the language of instruction is not English; * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV; * Completion of upper division course(s) taught in a foreign language,taken in the United States or the relevant country.			4	C	
Term hours subtotal:			14		

Term 2	15 - 30 Credit Hours	Critical course signified by 	Hours	Minimum Grade	Notes
 CIS 105: Computer Applications and Information Technology (CS)			3		Complete First-Year Composition requirement
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition			3	C	
Humanities, Arts and Design (HU) OR Social-Behavioral Sciences (SB)			3		
2** Second Language: Requirement satisfied through the following: * Completion of secondary education at a school in which the language of instruction is not English; * Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV; * Completion of upper division course(s) taught in a foreign language,taken in the United States or the relevant country.			4	C	
Elective			3		
 Milestone: Complete First-Year Composition requirement.					
Term hours subtotal:			16		

Term 3	31 - 44 Credit Hours	Critical course signified by 	Hours	Minimum Grade	Notes
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📌 FIS 201: Innovation in Society	3	C
Natural Science - Quantitative (SQ)	4	
2** Second Language: Requirement satisfied through the following:		
* Completion of secondary education at a school in which the language of instruction is not English;		
* Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV;	4	C
* Completion of upper division course(s) taught in a foreign language,taken in the United States or the relevant country.		
Elective	3	
📌 Milestone: Complete Mathematics (MA) requirement		
Term hours subtotal:	14	

Term 4	45 - 60 Credit Hours	Critical course signified by 📌	Hours	Minimum Grade	Notes
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📌 FIS 305: Ways of Knowing	3	C
Humanities, Arts and Design (HU) OR Social-Behavioral Sciences (SB)	3	
Literacy and Critical Inquiry (L)	3	
Natural Science - General (SG) OR Natural Science - Quantitative (SQ)	4	
Elective	3	
Term hours subtotal:	16	

Term 5	61 - 75 Credit Hours	Necessary course signified by ⭐	Hours	Minimum Grade	Notes
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⭐ FIS 307: Navigating Futures	3	C
Global Awareness (G)	3	
Historical Awareness (H)	3	
Humanities, Arts and Design (HU) OR Social-Behavioral Sciences (SB)	3	
Elective	3	
Term hours subtotal:	15	

Term 6	76 - 90 Credit Hours	Necessary course signified by ⭐	Hours	Minimum Grade	Notes
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⭐ FIS 308: Politics, Markets, and Innovation	3	C
Upper Division Core FIS Elective	3	
Humanities, Arts and Design (HU) OR Social-Behavioral Sciences (SB)	3	
Upper Division Literacy and Critical Inquiry (L)	3	
Upper Division Elective	3	
Term hours subtotal:	15	

Term 7	91 - 105 Credit Hours	Necessary course signified by ★	Hours	Minimum Grade	Notes
★ FIS 480: Innovation in Society Studio			3	C	
Upper Division Related Area Elective			3		
Cultural Diversity in the U.S. (C)			3		
Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB)			3		
Upper Division Elective			3		
Term hours subtotal:			15		

Term 8	106 - 120 Credit Hours	Necessary course signified by ★	Hours	Minimum Grade	Notes
★ Upper Division Core FIS Elective			3		
Upper Division Related Area Elective			3		
Complete 3 courses: Upper Division Elective			9		
Term hours subtotal:			15		

Core FIS Electives	Upper Division Related Area Electives
FIS 331: Technology and the Modern World	FIS 431: Technology, Security, and Insecurity in Global Politics
FIS 332: Risk and the Future	ASB 452: Community Partnerships for Global Health (SB)
FIS 333: Governing Emerging Technologies	COM 312: Communication, Conflict, and Negotiation
FIS 334: Science, Technology, and Inequality	CEE 300: Engineering Business Practice (L)
FIS 335: Designing Knowledge	BIO 311: Biology and Society
FIS 337: Innovation and Global Development	BIO 312: Bioethics (HU)
FIS 336: Science and Technology Policy	BIO 320: Fundamentals of Ecology
	BIO 324: Environmental Ethics (HU)
	BIS 301: Foundations of Interdisciplinary Studies (L)
	JUS 445: Surveillance and Society
	JUS 456: Human Rights and Sustainability ((L or SB) & G)
	JUS 303: Justice Theory (L)
	JUS 325: Globalization and Socio-Economic Justice (SB & G)
	HST 345: Environmental History (L)

HST 318: History of Engineering ((L or SB) & G)

HPS 314: Philosophy of Science (HU)

HPS 322: History of Science (HU & H)

HPS 340: Biology and Society

GPH 314: Global Change (HU & G)

ECN 355: Economics of Healthcare

COM 314: Inner-City Families: The Cycle of Poverty

COM 421: Rhetoric of Social Issues (HU)

COM 426: Political Communication (SB)

ECN 445: Environmental Economics

PAF 300: Public Management and Administration

PAF 311: Leadership and Change (SB)

SOS 315: Energy Policy

SOS 321: Policy and Governance in Sustainable Systems

SOS 320: Society and Sustainability (L or SB)

SOS 322: International Development and Sustainability

SOS 327: Sustainable Food and Farms

SOS 328: Sustainability and Enterprise

TCL 447: Gender, Culture, and Development ((L or SB) & G)

WST 440: Politics of Women's Health (SB & C)

Total Hours: 120

Upper Division Hours: 45 minimum

Major GPA: 2.00 minimum

Cumulative GPA: 2.00 minimum

Total hrs at ASU: 30 minimum

Hrs Resident Credit for

Academic Recognition: 56 minimum

Total Community College Hrs: 64 maximum

General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)

- Humanities, Arts and Design (HU)
- Social-Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2016 - 2017 academic year.

Subject: RE: School for the Future of Innovation in Society impact statement
Date: Friday, October 30, 2015 8:50:36 AM Mountain Standard Time
From: Kyle Squires
To: David Guston
CC: James Collofello

Dave,

Thanks for the note and update concerning the degrees – looks like you all have come up with a solid set of initial offerings.

I shared your note with Jim Collofello (Sr. Associate Dean for Academic and Student Affairs) and we also do not currently see any large overlap with Fulton majors and minors, and do agree that some of these could be of interest to Engineering majors.

Concerning courses for your students, it is true that we tend to be quite full these days and that makes it challenging to accommodate non-majors. We continue to brainstorm and work on plans to better address our enrollments and if successful that will make it easier to accommodate non-majors. Let's keep the communication channels open.

Thanks again for looping me in – good luck!

-- Kyle

From: David Guston
Sent: Thursday, October 29, 2015 5:14 PM
To: Kyle Squires <squires@asu.edu>
Subject: School for the Future of Innovation in Society impact statement
Importance: High

Kyle,

As you know, the School for the Future of Innovation in Society was launched just a few months ago. One of our first big steps in the process of turning a research center into a school is the development of a number of undergraduate programs, and I wanted to give you a heads up on some of our plans as we develop a BA, a BS, a Minor, and a Certificate. We're a little off-sequence in our proposals, but we're working with the Provost's office in an effort to get the programs on the books in time for the 2016-2017 school year.

I wanted to discuss the potential impact on FSE. I don't foresee any large overlap between any of the FSE majors or minors. In fact I think we may be able to offer some programs that could benefit your students. Our certificate on "Innovation for Impact," for instance, would certainly be open to engineering students who want practice working to ensure that ideas can translate into real-world change. The minor in "Innovation in Society" would also be available for students who want to know more about the social and political aspects of science and technology in their studies.

In many ways we see our programs as a bridge between the social sciences, natural sciences and engineering. As part of this vision, we intent to require our BS students to take three courses in natural science, math, engineering, or quantitative social science beyond their university distribution

Subject: RE: School for the Future of Innovation in Society Undergraduate Programs
Date: Thursday, October 29, 2015 6:49:19 AM Mountain Standard Time
From: Duane Roen
To: Nalini Chhetri
CC: David Guston, Jameson Wetmore, Judith Weeks

Nalini,

Thanks for the note about your proposals for these exciting degrees.

I am happy to support them.

Best,
Duane

Duane Roen
Vice Provost, Polytechnic campus
Dean, College of Letters and Sciences
Dean, University College
Arizona State University | Undergraduate Academic Services Building, Room 228
Box 871901 | Tempe, AZ 85287-1901
Voice: 480-727-6513 | Fax: 480-727-6344 | Email: duane.roen@asu.edu

From: Nalini Chhetri
Sent: Wednesday, October 28, 2015 11:31 PM
To: Duane Roen <Duane.Roen@asu.edu>
Cc: David Guston <David.Guston@asu.edu>; Jameson Wetmore <Jameson.Wetmore@asu.edu>; Judith Weeks <Judith.Weeks@asu.edu>
Subject: School for the Future of Innovation in Society Undergraduate Programs

Dear Duane;

As you know, the School for the Future of Innovation in Society (SFIS) was launched just a few months ago. One of our first big steps in the process of turning a research center (CSPO) into a School is the development of undergraduate programs, and I wanted to brief you on some of our plans. We're a little off-sequence in our proposals, but we're working with the Provost's office in an effort to get the programs on the books in time for the 2016-2017 academic year. I am part of the undergraduate committee which Associate Professor Jamey Wetmore is chairing and we are planning our BA, BS, Minor, and Certificate programs that we and the senior administration hope will be ready for fall 2016.

We wanted to discuss any potential impact on CLS. Mark Searle and Fred also advised us to touch base with you on this matter. We do not foresee any significant overlap between the SFIS offerings and any of the CLS undergraduate programs. Still with the STS minor, we have been quite cognizant of potential overlaps and have been very careful to ensure our core courses do not do so. The courses we have proposed are at different levels and cover different topics in STS. So in looking at what we're proposing we do not think there is a single course that overlaps between the two. In fact we think, given its interdisciplinary sensibilities we expect that CLS students could benefit from our course offerings, our minor and our certificate program. Our certificate on "Innovation for Impact," for instance, would certainly be open to CLS students who want practice working to ensure that ideas can translate into real-world change. The minor in "Innovation in Society" would also be available for students who want to know more about the role of

Subject: RE: SFIS course impact statements
Date: Thursday, October 29, 2015 8:32:49 PM Mountain Standard Time
From: Duane Roen
To: David Guston
CC: Jameson Wetmore, Nalini Chhetri, Judith Weeks

I have no objections, Dave.

Good luck with the new courses and degree.

Best,
Duane

Duane Roen
Vice Provost, Polytechnic campus
Dean, College of Letters and Sciences
Dean, University College
228 Undergraduate Academic Services Building
Arizona State University
P.O. Box 871901, Tempe, AZ 85287-1901
Phone: 480-727-6513 | duane.roen@asu.edu

From: David Guston
Sent: Thursday, October 29, 2015 5:10 PM
To: Duane Roen <Duane.Roen@asu.edu>
Cc: Jameson Wetmore <Jameson.Wetmore@asu.edu>; Nalini Chhetri <Nalini.Chhetri@asu.edu>; Judith Weeks <Judith.Weeks@asu.edu>
Subject: SFIS course impact statements
Importance: High

Dear Duane,

Thank you again for your prompt response about the proposed undergraduate programs in SFIS.

We wanted to give you a heads up on two points of possible overlap as far as specific courses.

As part of our proposed courses we'd like to offer two that are similar to offerings in your STS major. The first, FIS 311 "Politics, Markets, and Innovation" may have some similarities with STS 260 "Politics of Science and Technology." It will differ from your offering in two important ways: First, we will be teaching it as an upper division course and second we will be spending a significant amount of the course focusing on markets and the role of corporations. The second course, FIS 337 "Innovation and Global Development" may have some similarities with your STS 110 "Global Technology and Development." In this case as well, our offering will be at the upper division and the course will examine science as well as technology. You should find short descriptions of these courses below.

These courses may be options for your students to take if they would like to build on their work in your degree program and examine these areas in more detail.

We will be submitting these courses shortly and would like to include your input on the impact of adding these courses.

Subject: Re: School for the Future of Innovation in Society impact statement
Date: Friday, October 30, 2015 7:55:56 AM Mountain Standard Time
From: Alexandra Brewis Slade
To: David Guston
CC: Jameson Wetmore, Nalini Chhetri, Judith Weeks, Alissa Ruth
Priority: High

SHESC is delighted to support all.

Is we haven't already, we might want a permanent FIS crosslist for ASB 344 — so can can add it to your new program mix and directly schedule as makes sense to you folks.

Alex

Alexandra Brewis Slade, President's Professor, Director, and AVP
<https://webapp4.asu.edu/directory/person/855688>

From: David Guston <David.Guston@asu.edu>
Date: Thursday, October 29, 2015 at 5:26 PM
To: Alex Brewis <alex.brewis@asu.edu>
Cc: Jameson Wetmore <Jameson.Wetmore@asu.edu>, Nalini Chhetri <Nalini.Chhetri@asu.edu>, Judith Weeks <Judith.Weeks@asu.edu>
Subject: School for the Future of Innovation in Society impact statement

Alex,

As you know, the School for the Future of Innovation in Society was launched just a few months ago. One of our first big steps in the process of turning a research center into a school is the development of a number of undergraduate programs, and I wanted to give you a heads up on some of our plans as we develop a BA, a BS, a Minor, and a Certificate. We're a little off-sequence in our proposals, but we're working with the Provost's office in an effort to get the programs on the books in time for the 2016-2017 school year.

I wanted to discuss the potential impact on SHESC. I don't foresee any large overlap between SFIS plans and any of the SHESC majors or minors. In fact I think we may be able to offer some programs your students could benefit from. Our certificate on "Innovation for Impact," for instance, would certainly be open to SHESC students who want practice working to ensure that ideas can translate into real-world change. The minor in "Innovation in Society" would also be available for students who want to know more about the social and political aspects of science, technology and innovation in their studies.

The one course that would be similar is FIS 331 "Technology and the Modern World." That course would have some overlap with ASB 344 "Technology and Society. Our 331 course would be a bit different because it would focus explicitly on systems rather than artifacts, but there is enough similarity that we would be happy to crosslist the courses if you would like.

We also believe that our students would benefit greatly from some of the courses offered in your

Judith Weeks

From: Christopher Boone
Sent: November 02, 2015 9:29 AM
To: Jameson Wetmore
Cc: Christopher Boone (cgboone@asu.edu); Nalini Chhetri; David Guston; Judith Weeks
Subject: Re: School for the Future of Innovation in Society undergraduate programs
Categories: IMPACT

Jamey,

I support the courses, degrees, minor, and certificate you outline below.

Chris
Christopher Boone
Dean, School of Sustainability
Senior Sustainability Scientist, Julie Ann Wrigley Global Institute of Sustainability



P.O. Box 875502 | Tempe, Arizona | 85287-5502
PH: 480-965-2236 | Main: 480-965-2975
<http://cgboone.personal.asu.edu> | Twitter: @cgboone
Dean's Executive Assistant: Lorraine.Protocollo@asu.edu
Stay connected! [Website](#) | [Facebook](#) | [Twitter](#)

On Oct 29, 2015, at 6:03 PM, Jameson Wetmore <Jameson.Wetmore@asu.edu> wrote:

Hi Chris,

I tried to get this to you yesterday, but for some reason I couldn't get it to your e-mail. I forwarded it to Lorraine, but I thought I'd try resending it to you today.

Hope you are well!

Jamey

Jameson M. Wetmore
Associate Professor, School for the Future of Innovation in Society
Co-director, Center for Engagement and Training in Science & Society
Arizona State University

From: Jameson Wetmore
Sent: Wednesday, October 28, 2015 6:28 PM
To: 'Christopher Boone'
Cc: Nalini Chhetri; David Guston; Judith Weeks
Subject: School for the Future of Innovation in Society undergraduate programs

Dear Chris,

Judith Weeks

To: Jameson Wetmore
Subject: RE: School for the Future of Innovation in Society Undergraduate Programs

From: Paul LePore
Sent: Wednesday, November 04, 2015 11:11 AM
To: Jameson Wetmore
Cc: Elizabeth Wentz; Laura Hanish
Subject: FW: School for the Future of Innovation in Society Undergraduate Programs

Hi Jamie,

See note from SSFD. Thanks Laura and Libby.

PL

PAUL C. LEPORE, Ph.D.
Associate Dean
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Foundation Building, Suite 110
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From: Elizabeth Wentz
Sent: Wednesday, November 04, 2015 10:27 AM
To: Paul LePore; Laura Hanish
Cc: Patrick Kenney
Subject: FW: School for the Future of Innovation in Society Undergraduate Programs

Dear Paul,

Laura and SSFD can provide input.

Libby

From: Laura Hanish <Laura.Hanish@asu.edu>
Date: Tuesday, November 3, 2015 at 4:24 PM
To: Elizabeth Wentz <wentz@asu.edu>
Subject: RE: School for the Future of Innovation in Society Undergraduate Programs

Hi Libby,

We are happy to work with the School for the Future of Innovation in Society to cross list SOC 334 and are able to work with the School regarding other issues as needed.

Thanks,

Laura

Laura D. Hanish, Ph.D.
Professor and Interim Director, T. Denny Sanford School of Social and Family Dynamics
Executive Director, Lives of Girls and Boys Enterprise
Co-Director, Dion Initiative

Arizona State University | P.O. Box 873701 | Tempe, Arizona 85287-3701
Phone: 480-965-8133 | E-mail: Laura.Hanish@asu.edu

From: Elizabeth Wentz
Sent: Monday, November 02, 2015 7:30 PM
To: DL.WG.LA.DEAN.SS.ACD
Cc: Gregory Freye
Subject: FW: School for the Future of Innovation in Society Undergraduate Programs

Dear chairs/directors,

As you know, units are asked to weigh in on new degree programs. The new School for the Future of Innovation in Society is planning several new degrees. Please respond by the end of this week if you want to comment on the proposed degrees.

Libby

From: Jameson Wetmore
Sent: Wednesday, October 28, 2015 6:34 PM
To: Paul LePore
Cc: David Guston; Nalini Chhetri; Judith Weeks
Subject: School for the Future of Innovation in Society Undergraduate Programs

Dear Paul,

As you know, the School for the Future of Innovation in Society was launched just a few months ago. One of our first big steps in the process of turning a research center into a school is the development of a number of undergraduate programs, and I wanted to reach out to you to give you a heads up on some of our plans. Right now I'm leading the committee that is developing a BA, a BS, a Minor, and a Certificate. We're a little off-sequence in our proposals, but we're working with the Provost's office in an effort to get the programs on the books in time for the 2016-2017 school year.

I wanted to touch base with you to discuss the potential impact on CLAS. I don't foresee any large overlap between any of the CLAS majors or minors. The Biology and Society program has some similarities, but in looking at what we're proposing I don't think there is a single course that overlaps between the two. In fact I think we may be able to offer some programs your students could benefit from. Our certificate on "Innovation for Impact," for instance, would certainly be open to CLAS students who want practice working to ensure that ideas can translate into real-world change. The minor in "Innovation in Society" would also be available for students who want to know more about the role of science and technology in their studies.

There would be some overlap in a few courses in our program. For instance we'd like to offer a 300 level course in "Technology in the Modern World" that would be similar to the ASB 344 / SOC 334 Technology and Society course. We could possibly crosslist those courses if you like.

We would like to support our students being heavily involved in CLAS courses as well. For instance all our majors would be required to take two "upper division related area electives" and we'd like that list to include a number of courses from majors such as Global Health, Justice, Biology and Society, and Women's Studies. And we would also like to send a number of our BS students to take courses in CLAS by requiring them to take three courses in natural science, math,

Judith Weeks

From: David Guston
Sent: November 04, 2015 2:45 PM
To: Richard Fabes
Cc: Jameson Wetmore; Nalini Chhetri; Judith Weeks
Subject: Re: School for the Future of Innovation in Society impact statement

Importance: High

Thanks, Rick!

David H. Guston
Founding Director and Professor, School for the Future of
Innovation in Society
Director, Center for Nanotechnology in Society at ASU
Co-director, Consortium for Science, Policy & Outcomes
Director, Virtual Institute for Responsible Innovation

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I am now the editor-in-chief of the Journal of Responsible Innovation, published by Taylor & Francis.

From: Richard Fabes <rfabes@asu.edu>
Date: Wednesday, November 4, 2015 2:15 PM
To: David Guston <david.guston@asu.edu>
Subject: Re: School for the Future of Innovation in Society impact statement

Hi Dave,

We have no problems with any of this. We would like to have FIS 331 cross-listed.

Rick

On 10/30/15, 11:25 AM, David Guston wrote:

Rick

Thanks!

Judith Weeks

From: Nalini Chhetri
Sent: November 09, 2015 9:45 PM
To: Judith Weeks
Cc: Jameson Wetmore
Subject: FW: School for the Future of Innovation in Society Undergraduate Programs

Importance: High

Wrong Judith copied.

Yeah ! We have everyone's, it seems.

From: Marlene Tromp <Marlene.Tromp@asu.edu>
Date: Monday, November 9, 2015 at 6:16 PM
To: David Guston <David.Guston@asu.edu>
Cc: Jameson Wetmore <Jameson.Wetmore@asu.edu>, Nalini Chhetri <Nalini.Chhetri@asu.edu>, Judith Guston <jmguston@comcast.net>
Subject: Re: School for the Future of Innovation in Society Undergraduate Programs

Dear Dave,

My apologies for the delay. I was waiting to hear back from one Director. New College has no concerns about these programs and wishes you all the best in launching!

Sincerely,
Marlene

--

Dr. Marlene Tromp, Vice Provost and Dean
New College of Interdisciplinary Arts and Sciences
4701 W. Thunderbird Rd., Glendale, AZ 85306-4908
P.O. Box 37100, M/C 1251, Phoenix AZ 85069-7100
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From: David Guston <David.Guston@asu.edu>
Date: Monday, November 9, 2015 at 3:12 PM
To: Marlene Tromp <marlene.tromp@asu.edu>
Cc: Jameson Wetmore <Jameson.Wetmore@asu.edu>, Nalini Chhetri <Nalini.Chhetri@asu.edu>, Judith Guston <jmguston@comcast.net>
Subject: Re: School for the Future of Innovation in Society Undergraduate Programs

Merlene

Judith Weeks

From: Jameson Wetmore
Sent: November 10, 2015 5:22 PM
To: Judith Weeks
Subject: FW: Response to Innovation Studies proposals

Hi Judy,

Not sure if I forwarded this to you yet or not.

This is SST. We should have this listed with Jen's Inequality course.

jamey

From: Kathryn Nakagawa
Sent: Monday, November 09, 2015 8:30 AM
To: Jameson Wetmore
Cc: Mary Fonow; Jenny Smith
Subject: Response to Innovation Studies proposals

Dear Jamey,

Thank you for the opportunity to review your proposed undergraduate programs in Innovation in Society. The focus on preparing students to “build more inclusive societies” and “analyze the diverse local and global futures” that innovation will enable is an exciting area of study!

As the program develops, we would encourage you to think very broadly about what is meant by inclusion and diversity and more systematically and thoughtfully include the study of race, gender, class and disability into your curriculum. Although we noted that a few of our JUS and WST courses are listed as potential electives, there are a number of other courses that might also be helpful to your program development. These are listed below. Please let me know if you need additional information.

Sincerely,
Kathy

Kathy Nakagawa
Associate Professor & Associate Director of Undergraduate Studies
School of Social Transformation
Arizona State University
nakagawa@asu.edu

List of SST suggested courses for Innovation Studies degrees, minor and certificate

AFR 317	Genes, Race & Society
AFR 380	Health Issues in the African American Society
APA 210	Introduction to Ethnic Studies in the U.S.
APA 352	Race, Space and the Production of Inequality
JUS 325	Global Politics and Human Rights

JUS 370 Cultural Diversity and Justice
JUS 415 Gender and International Development
SST 235 Disability, Justice and Advocacy
WST 340 Gender, Science and Technology
WST 365 Women and International Health
WST 447 Gender, Culture and Development