



ESTABLISHING GRADUATE CERTIFICATES
ARIZONA STATE UNIVERSITY
GRADUATE EDUCATION

This form should be used by programs seeking to establish a new graduate certificate. All sections should be completed.

The graduate certificate is a programmatic or linked series of courses in a single field or in one that crosses disciplinary boundaries. The graduate certificate facilitates professional growth for people who already hold the baccalaureate degree, and it may be freestanding or linked to a degree program. The graduate certificate enables the university to respond to societal needs while promoting university cooperation with corporate, industrial, and professional communities.

Submit the completed and signed (chairs, unit deans) proposal to the **Office of Graduate Academic Programs** in Graduate Education. Mail code: 1003 and electronic copies to eric.wertheimer@asu.edu or amanda.morales-calderon@asu.edu.

Please type.

Contact Name(s): Netra Chhetri; Mary Jane Parmentier; Nalini Chhetri	Contact Phone(s): (480)727-0747; (480)727-1156; (480)727-0745
College: School for the Future of Innovation in Society	
Department/School: School for the Future of Innovation in Society	
Name of proposed Certificate: Global Development and Innovation	
Requested Effective Term and Year: Fall 2016 (e.g. Fall 2014)	
Do Not Fill in this information: Office Use Only	
CIP Code:	

1. OVERVIEW. Below, please provide a brief overview of the certificate, including the rationale and need for the program, potential size and nature of the target audience, information on comparable programs (at ASU and/or peer institutions), how this program would relate to existing programs at ASU, and any additional appropriate information.

The urgency of charting pathways to sustainable and resilient global development is making ever greater demands on those in academia, governments, aid agencies, non-governmental organizations and markets. Pathways to sustainable development call for innovation with excellence and affordability and urge development practitioners to integrate critical thinking and practical experience for meaningful solutions. As a transdisciplinary certificate program, global development and innovation responds to the knowledge and skills gap development practitioners often struggle with and also links innovations that policymakers are seeking to desired social outcomes for more sustainable and resilient futures. The program caters to ASU graduates and professionals from around the world seeking to complement their experience and skill set with critical perspectives on innovation and development for managing and overseeing complex global challenges. This certificate provides a solid grounding on theories and practices on how innovations emerge, how they diffuse across societies, and what impacts they have on policies and practices to sustainable development challenges. The students will be equipped with the analytical and practical skills needed to engage critically in issues around innovation and development, to debate from a transdisciplinary perspective, and to work across the intersections of innovation, development policy, research and practice. This unique program features: (a) a curriculum designed to meet the needs of both young scholars continuing their academic training and career professionals motivated to deepen their expertise; and (b) a large faculty drawn from several academic units (Sustainability, and various concentrations under The Polytechnic School) at ASU, with exciting research agenda and extensive experience in innovation and global development. We expect the size to be anywhere between 10-15 in the first year, and the certificate will provide coherence and integration with other master's degrees offered at the School for the Future of Innovation in Society. Its faculty are leading researchers in both innovation and development fields, and the course will be designed so that students benefit from the knowledge of cutting-edge research and methodologies associated with it.

2. ADMINISTRATION AND RESOURCES

A. How will the proposed certificate be administered (including recommendations for admissions, student advisement, retention etc.)? Describe the administering body in detail, especially if the proposed certificate is part of a larger interdisciplinary agenda. How will the graduate support staffing needs for this proposed certificate program be met?

The program will be housed in the School for the Future of Innovation in Society (SFIS) and will be administered through SFIS. An Associate Director for Programs will oversee the certificate program, academically and administratively, and will be responsible for ensuring the availability of necessary course offerings. The program also will have available one full time staff member for graduate program support as well as a full time staff member who can act as the back-up for support. The staff member will coordinate with the Associate Director,

the student experience in the certificate program (admissions, advising, program development and assessment), and will also be responsible for ensuring the availability of necessary course offerings.

- B. What are the resource implications for the proposed certificate, including projected budget needs? Will new books, library holdings, equipment, laboratory space and/or personnel be required now or in the future? If multiple units/programs will collaborate in offering this certificate, please discuss the resource contribution of each participating program. Letters of support must be included from all academic units that will commit resources to this certificate program.**

We do not foresee new resources necessary for the formation of this certificate program.

3. ADMISSIONS PROCEDURES AND CRITERIA

- A. Admission criteria** – Applicants must meet the admissions criteria for Graduate Education. Please also include any other additional admission requirements, e.g. type of undergraduate degree, minimum GPA, tests and/or entry-level skills that are required for this certificate program.
(http://graduate.asu.edu/sites/default/files/GraduatePolicies_1.pdf)

Degree(s): Applicants must have earned a U.S. bachelor's degree or higher from a regionally accredited institution or the equivalent of a U.S. bachelor's degree from an international institution that is officially recognized by that country.

Some sample undergraduate majors who may be interested in this program include:

Sustainability, Geography, Engineering, Anthropology, Social Transformation, including other areas with approval of the academic unit

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. Minimum of 3.00 cumulative GPA (scale is 4.0 = A) in an applicable Master's degree.

INTERNATIONAL STUDENTS: International students who are studying at ASU in a full time graduate degree program with a valid F1 or J1 visa may apply to a certificate program. The F1 or J1 visa may not be extended solely to finish the certificate program. The certificate program would need to be completed in the duration of the degree program. International students residing in the USA on other visa types must provide a copy of their USA visa to be considered for admission.

English Proficiency Requirement for International Applicants: (See Graduate Education policies and procedures) (http://graduate.asu.edu/admissions/international/english_proficiency):

Same as Graduate Education policy.

Required Admission Examinations: GRE GMAT Millers Analogies None required

- B. Application Review Terms - Indicate all terms for which applications for admissions are accepted:**

To select desired box, place cursor on the left side of the box, right click mouse, select **Properties**, under **Default Value** select **Checked**, press **OK** and the desired box will be checked

- Fall (year): 2016
 Spring (year): 2017
 Summer (year):

- C. Projected annual admission/enrollment:** How many students will be admitted immediately following final approval of the certificate? What are enrollment projections for the next three years?

Year 1	Year 2	Year 3
10	12	15

4. ACADEMIC REQUIREMENTS

- A. Minimum credit hours required for certificate (15 credit hour minimum)**

15 credit hours

- B. Please describe the primary course delivery mode, (e.g., online, face-to-face, off-site etc.). Please note: If this proposed initiative will be offered completely online, clearly state that in this section.**

Face-to-Face/i-course hybrid

- C. As applicable, please describe culminating experience required (e.g., internship, project, research paper, capstone course, etc.)**

N/A

- D. What knowledge, competencies, and skills (learning outcomes) should graduates have when they complete this proposed certificate program? Examples of program learning outcomes can be found at (<https://uoeee.asu.edu/program-outcomes>).**

1. Students will gain understanding of theories, practices, and policy perspectives in global development and innovation
2. Students will be competent communicators in global development policies, the practice of development, and actual outcomes

- E. How will students be assessed and evaluated in achieving the knowledge, competencies, and skills outlined in 4.D. above? Examples of assessment methods can be found at (<http://www.asu.edu/oue/assessment.html>).**

Outcome 1: Students will be able to assess competing theories, practices, and policy perspectives on global development and innovation.

Measure 1: Students will be required to moderate a class discussion session in GTD 511 and will be evaluated on their understanding of theories, practices, and policy perspectives using a rubric with values from 1-5 (with 5 being the highest)

Performance Criterion 1: 80% of students must achieve an overall average of 3 (Satisfactory) or higher on the rubric

Measure 2: Students will be required to submit three critical essays in GTD 501

Performance Criterion 2: 80% of students must achieve an average grade of B or higher on the three essays.

Outcome 2: Students will successfully be able to communicate (verbal and written) global development policies, the practice of development, and actual outcomes.

Measure 1: Students will be required to moderate a class discussion session in GTD 511 and will be evaluated on their verbal communication using a rubric system with values from 1-5 (with 5 being the highest)

Performance Criterion 1: 80% of students must achieve an overall average of 3 (Satisfactory) or higher on the rubric.

Measure 2: Students will be required to submit a final paper as a case study in GTD 511

Performance Criterion 2: 80% of the students must achieve an grade of B or higher on the final paper

- F. Please state the satisfactory student academic progress standards and guidelines (including any time limits for completion).**

To be considered as making satisfactory progress toward the degree objective, a student must:

- Maintain continuous enrollment
- Maintain a cumulative GPA of 3.0 or higher (iPOS/graduate/cumulative)
- Successfully meet all deadlines for steps towards certificate completion
- Complete the certificate in at least six years*

*Based on *ASU Graduate Policies and Procedures*, "All coursework used to complete an ASU graduate certificate must be completed within a six-year time limit." However, students will be encouraged to complete the program in three semesters as shown in the sample Plans of Study. Students who require the maximum time limit to complete the certificate will be enrolled in Core and/or Restricted Elective courses (approved by the director) which have course content based on current events. This will keep the skills and knowledge obtained by the student relevant to the times.

- G. Will this proposed certificate program allow sharing of credit hours from another ASU degree program to be used as part of this certificate program? (Please note that a maximum of 12 graduate-level credit hours taken as a non-degree student at ASU, including as a part of a certificate program, may be used towards a future graduate degree at ASU).**

The Global Development and Innovation Certificate will allow sharing of up to 6 credit hours from another ASU degree program to be used as part of this certificate. The shared courses must be approved by the director(s) of the Global Development and Innovation Certificate program and must follow Graduate Education policy guidelines.

H. Below, please list all required and elective courses in the appropriate boxes (you may attach additional pages if necessary).

Please ensure that all new core course proposals have been submitted to the Provost's office through the Curriculum ChangeMaker online course proposal submission system before this initiative is put on the University Graduate Council and CAPC agendas. Please note: a minimum of 2/3 of the courses required for a graduate certificate must be at the 500-level or above.

Required Core Courses			Credit Hours
<i>(Prefix & Number)</i>	<i>(Course Title)</i>	<i>(New Course?) Yes or No?</i>	(Insert Section Sub-total) 6
GTD 511	Development Policy and Practices <small>(New Course Form is currently in process in ChangeMaker with a requested effective date of Fall 2016)</small>	Yes	3
GTD 501	Global Technology and Development	No	3
Electives			Credit Hours
<i>Students select 9 credit hours from the Restricted Elective list below. This list can change and/or increase over time as needed with unit director approval. Students may select a maximum of three (1-credit courses) towards fulfillment of the 9 total credits.</i>			
<i>(Prefix & Number)</i>	<i>(Course Title)</i>	<i>(New Course?) Yes or No?</i>	(Insert Section Sub-total) 9
GTD 503	Technology and the International Political System	No	3
HSD 517	Uncertainty and Decision Making	No	3
HSD 515	Science, Technology and Public Affairs	No	3
HSD 598	Special Topics: Human and Social Dimensions of Climate Change	No	3
HSD 598	Special Topics: Cultural Perspectives in Sustainability	No	3
HSD 598	Project Management for Science, Technology & Policy	No	3
SST 501	Foundations of Social Transformation	No	3
EGR 535	Engineering Innovation and Entrepreneurship	No	3
AEP 501	Practical and Professional Ethics	No	3
HSD 598	Special Topics: Science, Technology and Ethics	No	3
ESS 502	Political Ecology: Theory and Research	No	3
SOS 598	Special Topics: Tools for Transformational Local Leadership	No	1
SOS 598	Special Topics: Prep-Resilience in Earthquake Affected Nepal	No	1
Culminating Experience (if applicable)			Credit Hours (Insert Section Sub-total)
N/A			N/A
Total required credit hours			15

5. PRIMARY FACULTY PARTICIPANTS - Please list all primary faculty participants for the proposed certificate, including home unit and title. You may attach additional pages if necessary.

Name	Home Unit	Title
Netra Chhetri	School for the Future of Innovation in Society	Associate Professor
Mary Jane Parmentier	School for the Future of Innovation in Society	Clinical Associate Professor
Jennifer Richter	School for the Future of Innovation in Society	Assistant Professor
Gary Grossman	School for the Future of Innovation in Society	Associate Professor
Milan Shrestha	School of Sustainability	Lecturer

6. REQUIRED SUPPORTING DOCUMENTS

(Please label accordingly, i.e., Appendix or Attachment A, B, etc.)

Please include the following with your proposal:

- A. Sample plans of study for students in the proposed program – See Appendix II
- B. Statements of support from all deans and heads of impacted academic units – See Appendix III

7. APPROVALS - If the proposal submission involves multiple units, please include letters of support from those units.

DEPARTMENT CHAIR or SCHOOL DIRECTOR (PRINT/TYPE) David Guston	
SIGNATURE <i>David Guston</i>	DATE 1/19/16

DEAN (PRINT/TYPE)	
SIGNATURE	DATE

The following section will be completed by Graduate Education following the recommendations of faculty governance bodies.

DEAN FOR GRADUATE EDUCATION	
SIGNATURE	DATE

Please note: Proposals for new certificates also require the review and recommendation of approval from the University Graduate Council, Curriculum and Academic Programs Committee (CAPC), the Academic Senate, and the Office of the Provost before they can be put into operation.

The final approval notification will come from the Office of the Provost.

GF1112G-89

APPENDIX I
OPERATIONAL INFORMATION FOR GRADUATE CERTIFICATES
(This information is used to populate the [Graduate Programs Search](#) website.)

1. Provide a brief (catalog type - no more than 150 words) program description.

The graduate certificate in Global Development and Innovation responds to the knowledge and skills gap that development practitioners often struggle with and it also connects with innovations that policymakers seek for more sustainable and resilient futures. It provides current and critical perspectives on innovation and development for overseeing and managing complex global challenges, while fostering cultural sensitivities and dispositions. The graduates will contribute to improving development policy and practices through analysis, integration and incorporation of emerging insights and best practices, making them available to policymakers, practitioners and tech-innovators.

Requirements for the academic catalog:

Core (6)

GTD 501 Global Technology and Development (3)

GTD 511 Development Policy and Practices (3)

Electives (9)*

* Students select 9 credit hours from a Restricted Elective list. This list can change and/or increase over time as needed with unit director approval. Students may select a maximum of three (1-credit courses) towards fulfillment of the 9 total credits.

2. Contact and Support Information:

Office Location (Building & Room): INTDSB 366	Campus mail code: 5603
Campus Telephone Number: (480) 727-9498	Program Director (Name and *ASU ID): Netra Chhetri (nchhetri); Gary Grossman (ggrossma); Mary Jane Parmentier (mparment)
Program email address: sfisgrad@asu.edu	Program Support Staff (Name and *ASU ID): Andra Williams (andrawms)
Program website address: sfis.asu.edu	Admissions Contact (Name and *ASU ID): Andra Williams (andrawms)

* ASU ID (e.g. SHJONES)

3. Application and iPOS Recommendations: List the Faculty and Staff that will input admission/POS recommendations to Gportal and indicate their approval for Admissions and/or POS:

Name	ADMSN	POS
Andra Williams	X	X
Judith Weeks	X	X

4. Campus(es) where program will be offered: *
- | | | | |
|--------------------------|---------------|-------------------------------------|-------|
| <input type="checkbox"/> | Downtown | <input checked="" type="checkbox"/> | Tempe |
| <input type="checkbox"/> | Online (only) | <input type="checkbox"/> | West |
| <input type="checkbox"/> | Polytechnic | | |

* **To select desired box**, place cursor on the left side of the box, right click mouse, select **Properties**, under **Default Value** select **Checked**, press **OK** and the desired box will be checked

5. Keywords: (List all keywords that could be used to search for this program. Keywords should be specific to the proposed program.)

development, global, innovation, policy, practices, science, society, technology, international

6. Area(s) of Interest:

* **To select desired box**, place cursor on the left side of the box, right click mouse, select **Properties**, under **Default Value** select **Checked**, press **OK** and the desired box will be checked

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

- [Architecture & Construction](#)
- [Arts](#)
- [Business](#)
- [Communications & Media](#)
- [Education & Teaching](#)
- [Engineering & Technology](#)
- [Entrepreneurship](#)
- [Health & Wellness](#)
- [Humanities](#)
- [Interdisciplinary Studies](#)
- [Law & Justice](#)
- [Mathematics](#)
- [Psychology](#)
- [STEM](#)
- [Science](#)
- [Social and Behavioral Sciences](#)
- [Sustainability](#)

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

- [Architecture & Construction](#)
- [Arts](#)
- [Business](#)
- [Communications & Media](#)
- [Education & Teaching](#)
- [Engineering & Technology](#)
- [Entrepreneurship](#)
- [Health & Wellness](#)
- [Humanities](#)
- [Interdisciplinary Studies](#)
- [Law & Justice](#)
- [Mathematics](#)
- [Psychology](#)
- [STEM](#)
- [Science](#)
- [Social and Behavioral Sciences](#)
- [Sustainability](#)

APPENDIX II

Global Development and Innovation Graduate Certificate Sample Plans of Study

*Students may specialize their coursework in focus areas of their choosing with approval of the academic unit. Below are some samples.

Specialization in Ethics and Decision Making

TERM	COURSE	TITLE	HOURS	MODE
Fall 2016 – Session A	GTD 501	Global Technology and Development	3	Hybrid
Fall 2016 – Session B	GTD 511	Development Policy and Practices	3	Hybrid
Spring 2017	HSD 598	Special Topics: Science, Technology and Ethics	3	i course
Fall 2017	HSD 517	Uncertainty and Decision Making	3	In Person
Fall 2017	AEP 501	Practical and Professional Ethics	3	i course

Specialization in Practice and Policy

TERM	COURSE	TITLE	HOURS	MODE
Fall 2016 – Session A	GTD 501	Global Technology and Development	3	Hybrid
Fall 2016 – Session B	GTD 511	Development Policy and Practices	3	Hybrid
Spring 2017 – Session A	GTD 503	Technology and the International Political System	3	Hybrid
Spring 2017	HSD 598	Project Management for Science, Technology & Policy	3	In Person
Fall 2017	HSD 598	Special Topics: Cultural Perspectives in Sustainability	3	In Person

Specialization in Technology and Innovation

TERM	COURSE	TITLE	HOURS	MODE
Fall 2016 – Session A	GTD 501	Global Technology and Development	3	Hybrid
Fall 2016 – Session B	GTD 511	Development Policy and Practices	3	Hybrid
Spring 2017	EGR 535	Engineering Innovation and Entrepreneurship	3	In Person
Spring 2017 – Session A	GTD 503	Technology and the International Political System	3	Hybrid
Fall 2017	HSD 598	Special Topics: Human and Social Dimensions of Climate	3	In Person

APPENDIX III
Support Memos

The Polytechnic School – Support

From: David Guston <David.Guston@asu.edu>
Date: Friday, January 15, 2016 at 6:19 PM
To: Ann McKenna <Ann.McKenna@asu.edu>
Cc: Judith Weeks <Judith.Weeks@asu.edu>, Netra Chhetri <Netra.Chhetri@asu.edu>, Nalini Chhetri <Nalini.Chhetri@asu.edu>
Subject: Re: GDI Certificate Impact Statements: Polytech

Thanks Ann!

Sent from my iPhone

On Jan 15, 2016, at 6:01 PM, Ann McKenna <Ann.McKenna@asu.edu> wrote:

Hi Dave,

Many apologies for my delay in replying to you. **The Polytechnic School** is supportive of the GDI certificate and we are excited about ways we can leverage both our schools' courses and programs. The certificate has synergy with our humanitarian engineering emphasis, as well as a few other programs, so it would be great if we could share courses as appropriate. We approve the core course and using our EGR 535 course in the certificate.

Best,
Ann

School of Human Evolution and Social Change – Support

From: Alexandra Brewis Slade <Alex.Brewis@asu.edu>
Date: Monday, December 28, 2015 at 10:51 AM
To: David Guston <david.guston@asu.edu>
Cc: Judith Weeks <Judith.Weeks@asu.edu>, Netra Chhetri <Netra.Chhetri@asu.edu>, Nalini Chhetri <Nalini.Chhetri@asu.edu>
Subject: Re: GDI Impact Statements: SHESC

Yes, this is fine. Good luck with the new certificate.

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

From: David Guston <David.Guston@asu.edu>
Date: Sunday, December 27, 2015 at 4:33 PM
To: Alex Brewis <alex.brewis@asu.edu>
Cc: Judith Weeks <Judith.Weeks@asu.edu>, Netra Chhetri <Netra.Chhetri@asu.edu>, Nalini Chhetri <Nalini.Chhetri@asu.edu>
Subject: FW: GDI Impact Statements: SHESC

Dear Alex,

The School for the Future of Innovation in Society is in the process of creating a new graduate certificate in Global Development and Innovation. As part of the approval process, we need statements from other units that might have similar offerings to give their support, and we would also like to use one course in your course bank on our restricted electives list for the new certificate. It is ESS 502, Political Ecology: Theory and Research.

The new certificate responds to the knowledge and skills gap that development practitioners often struggle with and it also connects with innovations that policymakers seek for more sustainable and resilient futures. The program targets ASU graduates and professionals from around the world seeking to complement their experiences with critical perspectives on innovation and development for managing and overseeing complex global challenges.

Would you be willing to send me an email that reflects your approval of these items?

Thanks

Dave

School of Sustainability – Support

Dear Judith,

The School of Sustainability is pleased to support the new graduate certificate in Global Development and Innovation. I anticipate that many of the students in the program will benefit from the Graduate Development Scholars program in Research and Innovation housed in GIOS and supported by USAID and partners. I have copied Mohamed Abdalla, the program manager for this initiative. This program is open to all graduate students at ASU.

I also support the GTD 511 course and see it as valuable for students in our degree programs in SOS. You have my approval to list the two versions of SOS 598 as electives.

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

On Jan 13, 2016, at 11:02 AM, Judith Weeks <Judith.Weeks@asu.edu> wrote:

Hi Chris,

Dave Guston is in a workshop today and asked if I could get an update for you for an approval for our new GDI certificate. (The information is included below.) We would need approval in three areas—1) for the certificate itself, 2) for the new course GTD 511, and 3) to use two of your courses as restricted electives. Could we get an update? I appreciate it!

Thank you,

Judith Weeks

Coordinator, Academic Programming
ASU School for the Future of Innovation in Society
Interdisciplinary B 366 – Tempe / 480.727.0627
judith.weeks@asu.edu

School of Social Transformation – Support

From: Mary Fonow <MaryMargaret.Fonow@asu.edu>
Date: December 27, 2015 at 8:53:42 PM MST
To: David Guston <David.Guston@asu.edu>
Subject: Re: GDI Certificate: **SST** Impact Statement

Dear Dave. I am happy to support your certificate and the inclusion of the course. Best, Mary Margaret

Sent from my iPhone

On Dec 27, 2015, at 6:32 PM, David Guston <David.Guston@asu.edu> wrote:

Dear Mary Margaret,

The School for the Future of Innovation in Society is in the process of creating a new graduate certificate in Global Development and Innovation. As part of the approval process, we need statements from other units that might have similar offerings to give their support, and we would also like to use one course in your course bank on our restricted electives list for the new certificate. It is SST 501: Foundations of Social Transformation.

The new certificate responds to the knowledge and skills gap that development practitioners often struggle with and it also connects with innovations that policymakers seek for more sustainable and resilient futures. The program targets ASU graduates and professionals from around the world seeking to complement their experiences with critical perspectives on innovation and development for managing and overseeing complex global challenges.

Would you be willing to send me an email that reflects your approval of these items?

Thanks

Dave