

The completed and signed proposal should be submitted by the Dean's Office to: curriculumplanning@asu.edu. Before academic units can advertise undergraduate certificates or include them in their offerings as described in the university catalogs, they must be recommended for approval by the Senate Curriculum and Academic Programs Committee and the University Senate, and be approved by the Executive Vice President and Provost of the University.

Definition and minimum requirements:

These are the minimum requirements for approval. Individual undergraduate certificates may have additional requirements.

An undergraduate certificate is a programmatic or linked series of courses from a single field or one that crosses disciplinary boundaries and may be free-standing or affiliated with a degree program. The certificate provides a structured and focused set of courses that can be used to enhance a student's baccalaureate experience or professional development.

An undergraduate certificate program:

- Requires a minimum of 15 semester hours of which at least 12 semester hours must be upper division
- Requires a minimum grade of "C" or better for all upper division courses
- Consists of courses that must directly relate in whole or large part to the purpose of the certificate. Example: Geographic area certificates must include only courses specific to the title of the certificate, other than a non-English language
- Is cross disciplinary; or,
 - Certified by a professional or accredited organization/governmental agency; or,
 - Clearly leads to advanced specialization in a field; or,
 - Is granted to a program that does not currently have a major

College/School/Institute: Mary Lou Fulton Teachers College
Department/Division/School: Teacher Preparation
Proposed Certificate Name: Games and Impact
Requested effective Date: 2013-14
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 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: _____ **Title:** _____
Phone number: _____ **Email:** _____

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: Mari Koerner

Signature Mari Koerner **Date:** 9/28/2012

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. Overview

A. Provide a brief description of the new certificate.

The Certificate in Games and Impact is intended for undergraduates with a desire to become change agents in their current and future areas of interest, study and training. The Certificate provides a solid grounding in the theory, design and use of games as tools for effecting change in education, health, and social justice, among other fields. For this reason, it is appropriate for students in a wide range of majors, including interested students in design and programming. Students will study the ethics of design and its consequences, both intended and unintended, how games can lead to social change by improving understanding of complex global systems, transforming conflict and building skills in problem recognition and creative solution design. Certificate students will work on real games, alongside real experts and real clients, and learn how to design, test and evaluate their impact in real-world environments.

B. This proposed certificate (check one):

- Is cross disciplinary; or
- Is certified by a professional or accredited organization/governmental agency; or,
- Clearly leads to advanced specialization in a field; or,
- Is granted to a program that does not currently have a major.

C. Why should this be a certificate rather than a concentration or a minor?

The undergraduate certificate in Games and Impact will consist of a new set of courses developed and taught by faculty affiliated with ASU's Center for Games and Impact (<http://gamesandimpact.org/mission/>). The Center, newly established in 2012, is dedicated to research and innovation in the area of impact games – computer and video games that are tools for addressing a wide range of societal challenges. Over the last two decades games have shifted from niche entertainment to ubiquitous forms of public and popular discourse engagement. Supporting citizens and entrepreneurs in understanding and being able to leverage the potential for games to impact society is critical for an educated populace in the near future. Currently there is no degree program or set of courses at ASU or at other postsecondary institutions in Arizona that give students the opportunity to develop skills in and understanding of the entire life cycle of impact games, or the theoretical foundations of their design and implementation. The use of digital games and gamification to address educational, social, economic, and scientific challenges is becoming increasingly popular across a wide range of disciplines and institutions. The certificate will be relevant to students in many majors, from the social sciences to engineering.

D. Affiliation

If the certificate program is affiliated with a degree program, include a brief statement of how it will complement the program. If it is not affiliated with a degree program, incorporate a statement as to how it will provide an opportunity for a student to gain knowledge or skills not already available at ASU.

The proposed certificate is not affiliated with an existing degree program. Currently, Teachers College faculty affiliated with the Center teach special topics undergraduate courses on video games and learning, but these courses do not offer the opportunity for the depth and breadth of study that will be possible in the certificate program. The Fulton Schools of Engineering offers an undergraduate certificate in game design, but courses in that certificate focus on technical skills, such as how to use game design software and programming tools. The Games and Impact certificate will complement the game design certificate by giving students the tools and knowledge to understand gaming in a social context and for purposes beyond entertainment.

Note: The Fulton Schools of Engineering’s game design certificate currently has an optional three-course specialization in Education. These courses will be replaced by three courses associated with the new Games and Impact certificate.

E. Demand

Explain the need for the new certificate (e.g., market demand, interdisciplinary considerations).

As noted above, the use of digital games and gamification to address educational, social, economic, and scientific challenges is becoming increasingly popular across a wide range of disciplines and institutions. For example, a national conference on Games for Health is now in its eighth year (<http://www.gamesforhealth.org/>), the MacArthur Foundation and Gates Foundation have funded projects aimed at investigating the potential of digital games for learning, the National Academy of Science has published a report on how video games can support formal and informal education (http://books.nap.edu/catalog.php?record_id=13078), and games have been used to raise public awareness about social issues ranging from world hunger to sustainability. This popularity is reflected in the number and diverse backgrounds of ASU faculty who are Center fellows (currently 23, from fields ranging from Computer Science and Engineering to Law and Public Policy).

There are a small number of local programs that offer coursework focused on the design of games for entertainment. The ASU Fulton Schools of Engineering, as noted above, offers a certificate in game design, but its courses are focused more on technical skills (use of game design software, for example) than on understanding the entire lifecycle of games, how games fit in a broader social ecology, or how to marry games with impact goals. In Tempe, ITT Technical Institute offers a B.S. degree in Digital Entertainment and Game Design, and The University of Advancing Technology offers a B.S. in Game Programming, but again these programs are focused on technical skills and on games for entertainment. Similarly, The Art Institute of Phoenix offers a B.A. in Visual & Game Programming which is also focused on the development of technical skills and games for entertainment.

On a national level, we believe that this certificate will be one-of-a-kind. While programs and specializations in the design of games for entertainment are numerous, there are almost no other institutions that allow students to explore the design of games and impact in any depth. At best, other programs offer a single course on “serious games.”

F. Projected enrollment

What are enrollment projections for the first three years?

	1st Year	2nd Year (Yr. 1 continuing + new entering)	3rd Year (Yr. 1 & 2 continuing + new entering)
Number of Students (Headcount)	20	40	60

2. Support and Impact

A. Faculty governance

Provide a supporting letter from the chair of the academic unit verifying that the proposed certificate has received faculty approval through appropriate governance procedures in the unit and that the unit has the resources to support the certificate as presented in the proposal, without impacting core program resources.

B. Other related programs

Identify other related ASU programs and outline how the new certificate will complement these existing ASU programs. (If applicable, statements of support from potentially-affected academic unit administrators need to be included with this proposal submission.)

The Fulton Schools of Engineering's game design certificate currently has an optional three-course specialization in Education. These courses will be replaced by three courses associated with the new Games and Impact certificate.

C. Letter(s) of support

Provide a supporting letter from each college/school dean from which individual courses are taken.

3. Academic Curriculum and Requirements

A. Knowledge, competencies, and skills

List the knowledge, competencies, and skills (learning outcomes) students should have when they complete this proposed certificate. Examples of program learning outcomes can be found at (<http://www.asu.edu/oue/assessment.html>).

- Students completing the certificate will understand the theoretical and conceptual foundations of the use for games for social impact.
- Students completing the certificate will demonstrate a clear understanding of the full lifecycle and key considerations involved in developing an impact game project.
- Students completing the certificate will be able to design impact game experiences using best practices of game development and principles from the learning sciences.

B. Admissions criteria

List the admissions criteria for the proposed certificate. If they are identical to the admission criteria for the existing major and degree program under which this certificate will be established, please note that here.

The certificate will be open to ASU students in any major and to nondegree students (i.e. working professionals) who seek to gain skills and knowledge in the development of Games and Impact. Current ASU students interested in earning the certificate will be asked to complete a brief certificate enrollment form and submit it to the Games and Impact Center Office. They also must complete a Request to Add an Undergraduate Certificate and return it to the undergraduate academic advisor in Teachers College. Students will be able to take courses before they formally register for the certificate; however, they will be encouraged to complete the paperwork as soon as possible. No student will be able to register for the Capstone Project before enrolling in the certificate program.

Potential certificate students not currently enrolled at ASU must apply and be admitted to ASU as nondegree students. Once students have been admitted, they are eligible to enroll in courses to complete the certificate program. They must complete a brief certificate enrollment form and submit it to the Games and Impact Center Office. Students must also complete a Request to Add an Undergraduate Certificate and return it to the undergraduate academic advising office in Teachers College. Students will be able to take courses before they formally register for the certificate; however, they will be encouraged to complete the paperwork as soon as possible. No student will be able to register for the Capstone Project before enrolling in the certificate program.

Students will be admitted throughout the year.

C. Curricular structure

Provide the curricular structure for this certificate. Be specific in listing required courses and specify the total minimum number of hours required for the certificate.

Required certificate courses

<i>Prefix</i>	<i>Number</i>	<i>Title</i>	<i>Is this a new Course?</i>	<i>Credit Hours</i>
EDT	210	Games, Technology & Society	Yes	3
EDT	220	Understanding Games and Impact	Yes	3
EDT	310	Game for Impact: The Complete Life Cycle	Yes	3
EDT	340	Designing Games and Impact (or equivalent course)	Yes	3
Section sub-total:				12

Elective certificate courses

<i>Prefix</i>	<i>Number</i>	<i>Title</i>	<i>Is this a new Course?</i>	<i>Credit Hours</i>
			(Select one)	
			(Select one)	
			(Select one)	
			(Select one)	
			(Select one)	
Section sub-total:				

Other certificate requirements

	<i>Credit Hours</i>
E.g. – Capstone experience, internship, clinical requirements, field studies, foreign language skills as applicable	
Capstone Project	3
Section sub-total:	3
Total minimum credit hours required for certificate	15

D. Minimum residency requirement

How many hours of the certificate must be ASU credit?

A minimum of 12 credit hours must be completed at ASU.

E. New Courses

Provide a brief course description for each new course.

EDT 210 Games, Technology & Society (3 credits)

Provides an introduction to the role and significance of digital games in society, and to the process of designing Games and Impact, in areas such as education, healthcare, and social activism. Students will explore general theories about the relationship between technology and society, using games as examples, as well as develop a better understanding of methods that take a systemic, contextualized approach to designing Games and Impact.

EDT 220 Understanding Games and Impact (3 credits)

Explore the nature of learning in and around games designed for entertainment as well as games designed intentionally for impact. Draws on scholarship from a wide range of disciplines to develop an understanding of how gameplay and social interaction around games contribute to various forms of social and individual change.

EDT 310 Games and Impact: The Full Life-Cycle (3 credits)

Focuses on understanding the complete life cycle of impact games, from perceived need through design to evaluating impact. Project work includes developing an original impact game project proposal and publishing plan.

EDT 340 Designing Games and Impact (3 credits) [OR an equivalent course on game design]

Provides an introduction to the game design process. Students will apply design principles to the creation of a digital game prototype or game-based experience.

Note: All new required courses should be submitted in Curriculum Changemaker and ready for Provost’s Office approval before this certificate is put on Curriculum and Academic Programs Committee (CAPC) agenda.

4. Administration and Resources

A. Administration

How will the proposed certificate be administered (including admissions, student advisement, retention, etc.)?

The program will be administered by the existing structures in Teachers College including the staff of Division 1 Teacher Education. Student recruitment for the certificate will be done by staff at the Center for Games & Impact in collaboration with Teachers College personnel. Students will be advised by a faculty member designated as the Certificate Coordinator. Prior to enrolling in the Capstone Project, students will submit a checklist of their completed classes to be verified by the Coordinator. Verification of completion of all requirements will be done by the Certificate Coordinator.

B. Enrollment projections

What are enrollment projections for the next three years?

	1st Year	2nd Year (Yr. 1 continuing + new entering)	3rd Year (Yr. 1 & 2 continuing + new entering)
Number of Students (Headcount)	20	40	60

C. Resources

What are the resource implications for the proposed certificate, including any 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.

The Center for Games and Impact has its own collection of games and game platforms that will be available to students for course activities. The Center already has obtained approval and space for the creation of an Innovation Lab which can be used for student Capstone project work. In the long term, dependent on demand for the courses, additional instructional resources may be needed to support larger enrollments and will be negotiated through the College.

D. Primary Faculty

List the primary faculty participants regarding this proposed certificate. For interdisciplinary certificates, please include the relevant names of faculty members from across the University.

Name	Title	Area(s) of Specialization as they relate to proposed certificate
Dr. Sasha Barab	Professor and Pinnacle West Chair of Education	impact game design, learning theory, assessment of learning outcomes
Dr. James Gee	Professor and Mary Lou Fulton Presidential Chair of Literacy Studies	literacy and learning theory, game design principles, sociocultural context of learning
Dr. Elisabeth Hayes	Professor and Delbert & Jewell Lewis Chair in Reading & Literacy	literacy and learning theory, STEM impacts of games
Dr. Sinem Siyahhan	Assistant Research Professor, Social & Family Dynamics	the development and study of game-based technologies that foster intergenerational play, literacy, and learning.

5. Additional Materials

- A. Complete and attach the Appendix document.
- B. Provide one or more model programs of study (if appropriate).
- C. Attach other information that will be useful to the review committees and the Office of the Provost.

APPENDIX

OPERATIONAL INFORMATION FOR UNDERGRADUATE CERTIFICATES

(This information is used to populate the Degree Search/catalog website.

Please consider the student audience in creating your text.)

A. Proposed Certificate Name: Certificate in Games and Impact

B. Description (150 words maximum)

The Certificate in Games and Impact is intended for undergraduates with a desire to become change agents in their current and future areas of interest, study and training. The Certificate provides a solid grounding in the theory, design and use of games as tools for effecting change in education, health, and social justice, among other fields. For this reason, it is appropriate for students in a wide range of majors, including interested students in design and programming. Students will study the ethics of design and its consequences, both intended and unintended, how games can lead to social change by improving understanding of complex global systems, transforming conflict and building skills in problem recognition and creative solution design. Certificate students will work on real games, alongside real experts and real clients, and learn how to design, test and evaluate their impact in real-world environments.

C. Contact and Support Information

Building Name, code and room number: (Search ASU map)	Farmer 120
Program office telephone number:	480-965-5555
Program Email Address:	educationadvising@asu.edu
Program Website Address:	education.asu.edu

D. Program Requirements:

Provide applicable information regarding the program such as curricular restrictions or requirements, specific course lists, or academic retention requirements.

All students must complete the following courses:

- EDT 210 Games, Technology & Society (3 credits)
- EDT 220 Understanding Games and Impact (3 credits)
- EDT 310 Games and Impact: The Full Life Cycle (3 credits)
- EDT 340 Designing Games and Impact (3 credits) [OR an equivalent course on game design]

Capstone Project (3-6 credits) Students will take EDT 494 Capstone, in consultation with the Certificate coordinator.

Requirements:

- A minimum of 15 credit hours is required
- A grade of "C" or higher is required in all courses taken for the certificate.

E. 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.)

F. 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 Provost and Philip Regier (Executive Vice Provost and Dean) is required to offer programs through ASU Online.

G. Campus/Locations:

Indicate **all** locations where this program will be offered.

Downtown Phoenix Polytechnic Tempe West Other: online

September 14, 2012

To Whom It May Concern:

Mary Lou Fulton Teachers College Division of Teacher Preparation supports the development of the Certificate in Games and Impact. The proposal for this certificate has been reviewed and approved by the college Curriculum Review Committee and the college has the resources to support this certificate. Core course resources will not be impacted.

Respectfully,

A handwritten signature in cursive script that reads "Elizabeth R. Hinde".

Elizabeth R. Hinde, Ph.D
Associate Professor and Director
Division of Teacher Preparation
Mary Lou Fulton Teachers College

Teacher Preparation

4701 West Thunderbird Road
Glendale, AZ 85306-4908
602.543.6300 Fax: 602.543.7052
<http://education.asu.edu>

Subject: RE: memo of support

Date: Friday, October 19, 2012 10:21 AM

From: Yann-Hang Lee <yhlee@asu.edu>

To: Elisabeth Hayes <Elisabeth.Hayes@asu.edu>, Brian Nelson <Brian.Nelson@asu.edu>

Cc: Yoshihiro Kobayashi <ykobaya@asu.edu>, Ronald Askin <Ron.Askin@asu.edu>, Kurt VanLehn <Kurt.Vanlehn@asu.edu>

Betty,

Thanks for sending the course syllabi to us.

On the certificate in Games and Impact, we support your effort and have no objection to the proposal.

The program has a different objective from our Computer Gaming Certification and the Game Informatics focal area of Informatics BS degree. The courses included in the proposal are complementary to our game development courses. We look forward to collaborating with you on the exciting areas of games and impact.

Yann-Hang
(480) 727-7507

From: Elisabeth Hayes

Sent: Wednesday, October 17, 2012 11:48 AM

To: Yann-Hang Lee; Elisabeth Hayes; Brian Nelson

Cc: Yoshihiro Kobayashi; Ronald Askin

Subject: Re: memo of support

Yes - they are attached. Let me know if you need anything else!

Betty

On 10/17/12 10:47 AM, "Yann-Hang Lee" <yhlee@asu.edu> wrote:
Beth,

Do you have the syllabi of the courses in the POS?

Yann-Hang
(480) 727-7507

From: Elisabeth Hayes
Sent: Tuesday, October 16, 2012 2:49 PM
To: Brian Nelson; Elisabeth Hayes
Cc: Yann-Hang Lee; Yoshihiro Kobayashi
Subject: Re: memo of support

Thanks, Brian!

Yann-Hang: I have attached an overview of the certificate program. As Brian indicated, I have discussed it with him and Yoshi and we hope that our two programs will complement each other. I'd be happy to answer any questions you might have.

We are hoping to get your memo of support by the end of this week, if possible. An email indicating that you do not see any conflicts with the Game design certificate program would be sufficient. Thanks in advance for your help!

Betty

Elisabeth (Betty) Hayes
Professor
Delbert & Jewell Lewis Chair in Reading & Literacy
Mary Lou Fulton Teachers College
Arizona State University
P.O. Box 871811
Tempe AZ 85287-1811

On 10/16/12 1:03 PM, "Brian Nelson" <Brian.Nelson@asu.edu> wrote:
Hi Betty,

I think the memo of support needs to come from the program chair of CSE: Yann-Hang Lee. I've cced him here.

Yann-Hang, Betty Hayes is in charge of the proposed Games and Impact Certificate program in the Teachers College. Yoshihiro and I have met with her about it and think it looks like a good program that will not compete with our own. In fact, we are hoping to collaborate with Betty and the new program on enabling students from either program to take some classes from the other as electives.

Thanks,

Brian

From: Elisabeth Hayes <Elisabeth.Hayes@asu.edu>

Date: Tuesday, October 16, 2012 12:47 PM

To: Brian Nelson <brian.nelson@asu.edu>

Subject: memo of support

memo of support

Hi Brian - I've been asked to get a memo of support for our undergrad Games & Impact certificate from Engineering. Could you send that to me as the director of the Game Design certificate? An email message would be fine. If you think someone else should provide the memo, please let me know. Thanks much!

Betty