

### DEFINITION

*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 at least two fields that cross 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. There will be a Mandatory Review of all certificates every five years.

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 an advanced specialization in lieu of professional degree  
Is granted to a program that does not currently have a major

### PROPOSAL PROCEDURES CHECKLIST

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 Curriculum and Academic Programs Committee and Academic Senate, and approved by the appropriate Vice Provost.

A complete proposal should include:

1. Justification for the request for Certificate approval. Why should this be a certificate rather than a concentration or a minor, since certificates, by definition, are interdisciplinary, they could not be minors or concentrations, which are housed in disciplines. This proposed certificate (check one):
- Is cross disciplinary or
  - Is certified by a professional or accredited organization/governmental agency or
  - Clearly leads to a professional degree or
  - Is granted to a program that does not currently have a major
- Justification: See attached memo
2. A supporting letter from the chair of each of the academic units verifying that:
- A. The proposed certificate has been reviewed and has received faculty approval through appropriate governance procedures in the units concerned.
  - B. The units have the resources to support the certificate as presented in the proposal, without impacting core course resources.

OFFICE OF THE EXECUTIVE VICE  
PRESIDENT AND PROVOST OF  
THE UNIVERSITY

3. A supporting letter from the *sponsoring departments and supervising dean(s)* verifying that the certificate has been reviewed and has received approval through appropriate governance procedures in the college(s).
4. 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.
5. A statement concerning the need or demand for the program (student/community/market).
6. A description of each units' strengths in relation to the proposed certificate.
- Who are the primary faculty participants? *Include full name, title/rank (faculty, lecturer, etc.)*
  - How does the certificate fit with their areas?
  - Who are the supporting faculty?
7. Procedures and qualifications for admissions to the certificate program.
8. A minimum residency requirement: How many hours of the certificate must be ASU credit?
9. A description of the requirements for this certificate illustrated with one or more model programs of study. Be specific in listing required courses as well as electives and specify the total minimum number of hours required for the certificate.
10. A description of advising procedures as well as measures for verification of completion of the certificate.
11. A description of the administration of the new certificate.
- How many students will be admitted?
  - Are any new courses required? If so, provide course syllabi and Proposal for Curriculum Action forms.
  - How will the certificate program be governed/administered?
  - What are the budgetary implications, e.g., will library and other forms of academic support resources, equipment, space and personnel services be needed? Specify the source for any additional resources.
  - How will student recruiting be funded and staffed?
  - Provide a procedure to check student transcripts and notify the registrar's Graduation Office so that the certificate appears on the transcript including the correct title.
12. Attach other information that will be useful to the review committees and the Office of the Provost.

**MEMORANDUM**

To: ASU Curriculum and Academic Programs Committee and Office of the Provost  
From: Thanassis Rikakis, Director, School of Arts Media and Engineering  
Date: July 26, 2010, revised Oct., 1, 2010

**RE: Proposal to Create a Certificate in Digital Culture**

**1. Supporting letter from the director.**

Please see the attached letter.

**2. Supporting letter from the dean and director.**

Please see the attached letter.

**3. Letters of Collaboration and Support.**

Please see the attached letter.

**4. Justification.**

The demand for courses in digital and new media is high both nationally and at ASU. The availability of such coursework across multiple disciplines at the university is an indication of the popularity and importance students place on digital technology.

Through the Digital Culture Initiative, the Herberger Institute for Design and the Arts focuses on the creative exploration of how new media is influencing our culture, or rather, the way we live, learn, create and communicate. We hope to graduate creative practitioners that can contribute significantly to the development of the next-generation of new media systems with cultural applications. The Herberger Institute established the digital culture emphasis in the BA in the Arts and the BA in Design Studies in fall 2009 and currently is proposing both a minor and certificate. Placed on a continuum, these curricular opportunities represent different levels of exploration for students from those who wish to complement a previous or current degree with a small group of courses on digital culture to those who want a complete emphasis on developing digital culture systems.

Digital Culture coursework will place students from the certificate, minor and degree emphasis in cross-disciplinary teams charged with studying, using and developing new media systems that integrate aspects of living, learning, creating and communicating. Examples of outcomes from these projects include the creation of an interactive gaming system that can be used as a tool for rehabilitating physical disabilities or fighting diabetes, the invention of a smart phone that

can sense environmental changes and anticipate and intuitively respond to local emergencies, or the development of a virtual bridge between various cultures and styles of design and the arts that facilitates the ability to experience the world's creative offerings regardless of location.

The School of Arts, Media and Engineering will be offering the core coursework for the new digital culture emphasis with 12 units from HIDA and other colleges also contributing. As our institute's two BA programs with emphasis in digital culture grow, we feel more and more students will be interested in taking a cluster of courses in new media for digital culture in addition to their major area of study. Enrollments in the two course offerings in the 2009-10 academic year have included majors from over 27 different disciplines.

The Digital Culture program plays an important role in diversifying the ASU community by creating multiple platforms for students to interact in the classroom as well as through projects. The Digital Culture certificate will allow Herberger Institute students and students outside of the Herberger Institute for Design and the Arts (in degrees like engineering, business, psychology and education) to enhance their program of study with integrated, interdisciplinary training in creative processes and technical skills in new media with cultural applications. The certificate integrates tool building into a conceptual framework that engages analysis and iterative collaborative approaches to pedagogy.

Recent graduates and working professionals also may wish to enhance their knowledge with these same new media skills. Bachelor of Arts in the Arts and the BA in Design Studies students pursuing a Digital Culture emphasis are not allowed to enroll in this certificate.

Interdisciplinary approaches to new media have become prevalent in computing and communications industries as well as education and business. Exposure to collaborative methods and creative solutions for decision-making and problem solving using new media systems enhances communication skills across professional fields and creates better employment opportunities for students. Digital Culture will actively embed collaborative projects in the greater regional community, thus strengthening the connections between on- and off-campus communities.

The Digital Culture Initiative is made possible by a sizable anonymous endowment to support the development, implementation and continued enhancement of the program, including its staff, facilities and all the necessary infrastructure for the development of hybrid, physical-digital cultural systems and experiences in a sustainable educational environment.

##### **5. How degree program will complement certificate program.**

The certificate in Digital Culture grows directly out of the major initiative, and complements the program by inviting students from all design and arts disciplines within the Herberger Institute, students in colleges external to the Herberger Institute and working professionals from the Phoenix metropolitan area to engage in this coursework, thus further diversifying the student

body as the program develops. The certificate program is critical for allowing pathways into the Digital Culture program from other colleges at ASU, as well as for working professionals in the Phoenix metropolitan area, and supports our interdisciplinary mission. New media is inherently interdisciplinary demanding a combination of arts, design, education, science, and engineering perspectives.

**6. Demand for program.**

The certificate would be open to all undergraduate and non-degree students at ASU and would enable them to enhance their own program of study with knowledge of new media tools within diverse cultural contexts. Students pursuing degrees in disciplines such as engineering, education, psychology, and business are increasingly looking for expanded training that integrates new media into their disciplinary studies, creative practices and collaborative experiences. Recent graduates from these disciplines also may wish to enhance their education with new media skills. Creation of this certificate will draw students looking for such training to ASU.

Enrollments in the two digital culture course offerings in the 2009-10 academic year have included majors from over 27 different disciplines. For the 2010-11 fall semester, there are students registered for the Digital Culture classes from the College of Liberal Arts and Sciences, W.P. Carey School of Business, the Fulton Schools of Engineering, the University College, the School of Letters and Sciences, the College of Technology & Innovation, the College of Nursing & Innovation, and the New College of Interdisciplinary Arts & Sciences.

**7. Description of units' strengths/faculty.**

The Digital Culture primary faculty is a diverse team of educators with expertise in new media and culture from the seven schools in the Herberger Institute for Design and the Arts and collaborating colleges. For a complete list including the faculty title, department, and the digital culture courses they are scheduled to teach, please see the attached faculty document or visit: [http://herbergerinstitute.asu.edu/degrees/digital\\_culture/faculty.php](http://herbergerinstitute.asu.edu/degrees/digital_culture/faculty.php).

**8. Admissions procedures and qualifications.**

For current ASU students, there is no special application process for the Digital Culture certificate. Students add the certificate by meeting with the academic advisor for their major and the Digital Culture education coordinator to develop the digital culture pathway that best meets the proficiencies for the work they are interested in pursuing. This pathway will be contingent upon the student's academic performance in 100-level coursework.

For students not currently enrolled at ASU, students must apply and be admitted to ASU in a degree or non-degree program. Students must meet with the Digital Culture Education Coordinator before enrolling in the certificate program. The coordinator and student will develop a pathway that best meets the proficiencies for the work he or she is interested in

pursuing. The coordinator will review the student's previous academic work to determine which proficiencies the student has completed.

Digital Culture certificate students will work with the Digital Culture education coordinator and successfully complete the required sequence of courses and proficiencies for a digital culture certificate (see attached curriculum). The Digital Culture education coordinator and the Digital Culture faculty committee in the Herberger Institute for Design and the Arts will help to craft the best path for the student.

#### **9. Residency requirements.**

The Digital Culture certificate requires 18 credit hours (12 upper division) in four areas:

- 9 hours – Digital Culture Core
- 3 hours – Media Arts and Design
- 3 hours – Media Engineering
- 3 hours – Capstone Culminating Project

Generous substitution rules allow for course flexibility. Students receiving the Digital Culture certificate can petition to substitute up to 6 credit hours. Three hours can come from any course related to Digital Culture and may be achieved through courses offered by any unit of ASU including the Polytechnic, Downtown, West (IAP), and the FMS program on the Tempe campus. Courses may include any on the related subject/substitution list (below) or courses with comparable content.

The other three substitution hours can be achieved through one of the following two paths:

1. The 3-hour media arts and design course requirement may be substituted with a 3-hour course in the digital culture related category.
2. The 3-hour media engineering requirement may be substituted with a 3-hour course in the digital culture related category, or by a related upper-level engineering course offered by one of the collaborating units (see attached curriculum).

#### **10. Description of requirements.**

The Digital Culture curriculum is outcomes based rather than course sequence based. The curriculum uses an innovative proficiency-based network to connect courses across academic disciplines, instead of traditional methods such as course prerequisites. Proficiencies in the Digital Culture curriculum identify generalized learning outcomes that are common across disciplines participating in digital culture coursework. Proficiencies provide the connections across disciplines in the digital culture network rather than the traditional pre-requisites.

An example of the benefit of proficiency requirements is this: a student may gain a 200-level proficiency in "Form and Composition" from either the 200-level Design course "Media Editing" or the 200-level Art course "Introduction to Visualization and Prototyping." In either case, that proficiency will provide part of the knowledge a student needs in order to take the 300-level

Computer Science course "Graphics and Information Visualization for Digital Culture."

Each proficiency can be earned at the 100-, 200-, 300- and 400-level. Earning a proficiency at a higher level, satisfies any requirement for a proficiency at a lower level. For example, if a student completes a course with the outgoing proficiency "Narrative Composition 200-level", that proficiency fulfills the requirement for any course with an incoming proficiency of "Narrative Composition 100-level" or "Narrative Composition 200-level".

For a list of all Digital Culture proficiencies, please see:

<http://digitalculture.asu.edu/proficiencies>.

Students can discover and create their own course paths involved with these proficiencies by using the course map tool: <http://digitalculture.asu.edu/map>.

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- 9 hours – Digital Culture Core
- 3 hours – Media Arts and Design
- 3 hours – Media Engineering
- 3 hours – Capstone Culminating Project

A minimum grade of a C and an overall GPA of 3.0 is required in all classes in the certificate. Courses in the certificate may not be used as part of a major. All upper division certificate coursework must be taken at ASU.

See [http://herbergerinstitute.asu.edu/degrees/digital\\_culture/](http://herbergerinstitute.asu.edu/degrees/digital_culture/) for more information.

Because the curriculum is proficiency based, students can follow unique paths through the coursework. For instance, a student who has completed ENG 102 and MAT 210 demonstrates the proficiencies necessary for the 200-level digital culture core courses and could by-pass the 100-level classes, whereas a student without ENG 102 and/or MAT 210 experience will need one of the 100-level courses. ENG 102 and MAT 210 are not required for the certificate, but are recommended.

Please see the attached curriculum for more detail. Course descriptions are available online at <http://digitalculture.asu.edu/courses>. These are new, specially developed courses for Digital Culture that initially will be offered as omnibus courses. The curriculum will be rolled out in a three year sequence of 100- and 200-level courses first, and then the 300-level and 400-level courses. Courses will be submitted to CAPC for permanent numbers in a four year sequence (100- and 200-level courses in the 2010-11 academic year, 300-level courses in the 2011-12 academic year, 400-level courses in the 2012-13 academic year). Please see the attached example syllabi for two 100- and 200-level courses.

**11. Description of advising procedures.**

Digital Culture will employ a specialized advisor/education program coordinator dedicated to advising all Digital Culture students. The advisor position will be supported by Digital Culture resources from the anonymous endowment. The advisor will be supervised by the Herberger Institute manager of academic success a faculty committee.

There is no special application process for the Digital Culture certificate. Students add the certificate by meeting with the academic advisor for their major and the Digital Culture education coordinator to develop the digital culture pathway that best meets the proficiencies for the work they are interested in pursuing.

Digital Culture certificate students enrolled in degree programs at ASU will work with their advisor in their major in their home department and with the Digital Culture education coordinator to plan and successfully complete the required sequence of courses and proficiencies for a digital culture certificate (see attached curriculum). The advisor in their discipline will collaborate with the Digital Culture advisor and the Digital Culture faculty committee in Herberger Institute for Design and the Arts to best craft the path of the student. Non-degree students will work with the Digital Culture advisor/education coordinator. All Digital Culture students work within a system of general proficiencies that emphasize synthesis and application of principles across a broad base of skills. Replacement rules would allow students to substitute courses from the digital culture list with other digital culture related courses.

**12. Description of administration of certificate.**

We anticipate enrolling 20 students per year in the Digital Culture certificate program. The new curriculum is made up of new courses specially developed for Digital Culture and will be offered as omnibus courses. Please see the attached example syllabi. The certificate program will be governed and administered by an undergraduate coordinating committee in collaboration with the administrators of participating departments. There will be no budgetary implications since the certificate program will be supported by new resources dedicated to Digital Culture. The Digital Culture advisor and collaborating faculty will help ensure that the recruitment goals are met. The Digital Culture advisor will follow the standard procedures to check student transcripts and notify the registrar's Graduation Office so that the certificate appears on the transcript.

**13. Other useful information.**

For a full review of the initiative, please visit the website at:  
[http://herbergerinstitute.asu.edu/degrees/digital\\_culture](http://herbergerinstitute.asu.edu/degrees/digital_culture)



## Digital Culture Certificate Curriculum

**TOTAL 18 HOURS** (12 upper division)

9 Digital Culture Core, 3 Media Arts and Design, 3 Media Engineering, 3 Capstone

Course descriptions are available online at <http://digitalculture.asu.edu/courses> for the new courses developed for Digital Culture. These are new, specially developed courses for Digital Culture that initially will be offered as omnibus courses. The curriculum will be rolled out in a three year sequence of 100- and 200-level courses first, and then the 300-level and 400-level courses. Courses will be submitted to CAPC for permanent numbers in a four year sequence (100- and 200-level courses in the 2010-11 academic year, 300-level courses in the 2011-12 academic year, 400-level courses in the 2012-13 academic year). Please see the attached example syllabi for two 100- and 200-level courses.

**9 hours:** Digital Culture Core Coursework

Choose at least 3 hours from this list (recommended):

AME 194 Introduction to Digital Culture  
AME 194 Computational Thinking for Digital Culture and Media Arts

Choose at least 3 hours from this list:

AME 294/ART 294 Introduction to Interactive Environments  
DSC 294 Media Editing  
ART 294 3D Tools  
AME 294 Programming for Media Arts  
DCE 294 Hybrid Action: Physical Intelligence in Digital Culture  
ANP 394/AME 394 How to Build a Digital-Physical System  
DSC 394 Digital Modeling  
AME 394 Collaborative Projects in Digital Culture  
AME 394/PSY 394 Memory and Cognition  
ANP 394 Digital Fabrication  
AME 394 Compositional and Computation Principles for Media Arts  
ANP 494 Digital Ecologies: Parametric Systems Design  
AME 494 Animating Virtual Worlds  
ART/AME 494 Media Installations  
AME 494 Integrated System Development for Digital Culture

**3 hours:** Media Arts and Design

Choose from:

ART 194 Digital Art and Culture  
ART 294 The Still Image in Digital Culture  
FMP 294 Introduction to Animation  
MUE 294 Open Minds Digital Ears  
FMP 394 Non-linear Editing  
MUE 394 Performing in Digital and Hybrid Music Groups  
MUE 394 Advanced Interactive Sound

ANP 494 Designing Hybrid Spaces  
ANP 494 Design by Algorithm  
ART 494 Visualizing and Prototyping

**3 hours: Media Engineering**

Choose from:

CSE 394 Data Structures, Analysis and Retrieval for Digital Culture  
EEE 394 Signal Analysis for Digital Culture  
CSE 394 Graphics and Information Visualization for Digital Culture  
EEE/CSE 494 Information Analysis and Search for Digital Culture  
EGR 499 Music and Engineering

**3 hours: Capstone Experience**

Internship, thesis or independent research project. Final synthesis project.  
Determined in consultation with faculty mentor. Many projects will be team based and embedded in real life settings.

**Related Digital Culture Coursework** (These courses are available for substitution purposes. See below for course substitution details.)

Choose from:

AME 394 Media Theory  
ART 398 Digital Ethnography in Virtual Worlds  
ASB 328 Rules, Games and Society  
ASB 344 Technology and Society  
ASB 430 Social Simulation  
EDT 329 Games, Simulations and Virtual Environments  
EDT 431 Computer Gaming Learning and Literacy  
ENG 394 Social Media and Digital Cultures  
ENG 394 Writing in Cyberspace  
MCO 435 Media 2.0 Social Media  
THP 294 Writing and Story Development for Interactive Gaming

**COURSE SUBSTITUTION**

All certificate coursework must be taken at ASU.

Generous substitution rules allow for course flexibility. Students receiving the Digital Culture certificate can petition to substitute up to 6 credit hours. Three hours can come from any course related to Digital Culture and may be achieved through courses offered by any unit of ASU including the Polytechnic, Downtown, West (IAP), and the FMS program on the Tempe campus. Courses may include any on the related subject/substitution list (below) or courses with comparable content.

The other three substitution hours can be achieved through one of the following two paths:

1. The 3-hour media arts and design course requirement may be substituted with a 3-hour course in the digital culture related category.

2. The 3-hour media engineering requirement may be substituted with a 3-hour course in the digital culture related category, or by a related upper-level engineering course offered by one of the collaborating units (see attached curriculum).

FMS 110	Introduction to New Media
FMS 270	Race, Sex and Identity in American Film (online section)
FMS 300	Media and Cultural Studies
FMS 350	Virtual Reality in Film and Media
FMS 351	Emerging Digital Media
FMS 394	Critical Studies in Animation
FMS 450	Technology, Culture and Media
FMS 480	Globalization Technology and Culture
FMS 481	Entertainment Technologies
FMS 482	Entertainment Industries
FMS 483	Techno Entertainment Convergences
IAP 103	Fundamentals of Interdisciplinary Media
IAP 104	Fundamentals of Sound Art
IAP 201	Intro. to Interdisciplinary Arts
IAP 202	Languages of Interdisciplinary Arts
IAP 294	Digital Installation
IAP 307	Art and War
IAP 322	Digital Multitrack Recording
IAP 325	Advanced Digital Multitrack Recording
IAP 334	Conceptual Development
IAP 361	Digital Editing and Media Literacy
IAP 363	Sound, Image, Media
IAP 364	Documentaries
IAP 365	Digital Interactivity
IAP 368	Digital Graphics Technologies
IAP 464	Media and Diversity
IAP 465	Media Technologies and the Arts
IAP 466	Digital Interactivity Advanced
IAP 467	Acoustic Ecology
IAP 469	Advanced Digital Audio
IAP 494	Advanced Audio Interactivity
IAP 494	Advanced Digital Video Production
CPI 101	Introduction to Informatics
CPI 200	Mathematical Foundations of Informatics
CPI 310	Information and Data Management
CPI 360	Informatics and Decision Making
CPI 400	Scientific Computing and Visualization
CPI 420	Technology and Society
CPI 430	Social Simulation



**Memorandum**

Date: July 28, 2010

To: Elizabeth D. Capaldi, Executive Vice President and Provost of the University

From: Kwang-Wu Kim, Dean and Director of the Herberger Institute for Design and the Arts

Re: Certificate in Digital Culture Curriculum Proposal

I have reviewed the attached proposal requesting the establishment of an interdisciplinary certificate in Digital Culture in the Herberger Institute for Design and the Arts.

As part of the Herberger Institute Digital Culture Initiative, this certificate will provide basic proficiency in digital culture tools and processes to ASU students, recent graduates and working professionals, and when combined with the knowledge gained from students' major areas of study, will make them significantly more marketable in our digital world.

The Herberger Institute Undergraduate Curriculum Committee reviewed the proposal and it has their unanimous support.

My signature indicates my support and approval for the establishment of this new certificate.

A handwritten signature in black ink, appearing to be "K. Kim", written in a cursive style.

**ASU**  
ARIZONA STATE UNIVERSITY

July 28, 2010

To whom it may concern,

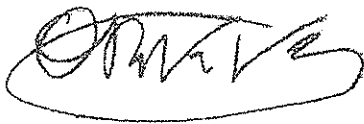
Please see the attached proposal to request the establishment of a Digital Culture certificate in the Herberger Institute for Design and the Arts. This certificate will allow undergraduate students from other disciplines outside of the Herberger Institute for Design and the Arts to gain an integrated experience in digital culture tools and processes that will make them significantly more marketable in our digital world.

By offering the Digital Culture certificate, the Digital Culture curriculum will be open to students from different disciplines thus diversifying the student body, establishing the needed interdisciplinarity for the overall curriculum and increasing the SCH and FTE of the Herberger Institute Digital Culture classes.

The proposal for establishing a Digital Culture certificate has been reviewed and approved by the Arts, Media and Engineering undergraduate committee. New resources have been secured so the proposed Digital Culture certificate will not impact core course resources.

We hope you agree that offering a Digital Culture certificate will enhance the ASU student experience and maximize transdisciplinary participation in the Digital Culture curriculum.

Sincerely,



Thanassis Rikakis  
Professor and Director, School of Arts, Media and Engineering  
Arizona State University

Herberger Institute for Design and the Arts  
Ira A. Fulton Schools of Engineering  
School of Arts, Media and Engineering

PO Box 878709 Tempe, AZ 85287-8709  
(480) 965-9438 Fax: (480) 965-0961  
<http://ame.asu.edu>

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A complete proposal should include:

- 1. Justification for the request for Certificate approval. Why should this be a certificate rather than a concentration or a minor, since certificates, by definition, are interdisciplinary, they could not be minors or concentrations, which are housed in disciplines. This proposed certificate (check one):
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  - Is certified by a professional or accredited organization/governmental agency or
  - Clearly leads to a professional degree or
  - Is granted to a program that does not currently have a majorJustification:
- 2. A supporting letter from the chair of each of the academic units verifying that:
  - A. The proposed certificate has been reviewed and has received faculty approval through appropriate governance procedures in the units concerned.
  - B. The units have the resources to support the certificate as presented in the proposal, without impacting core course resources.
- 3. A supporting letter from the *sponsoring departments and supervising dean(s)* verifying that the certificate has been reviewed and has received approval through appropriate governance procedures in the college(s).
- 4. 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.

- 5. A statement concerning the need or demand for the program (student/community/market).
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  - Who are the primary faculty participants? *Include full name, title/rank (faculty, lecturer, etc.)*
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  - What are the budgetary implications, e.g., will library and other forms of academic support resources, equipment, space and personnel services be needed? Specify the source for any additional resources.
  - How will student recruiting be funded and staffed?
  - Provide a procedure to check student transcripts and notify the registrar's Graduation Office so that the certificate appears on the transcript including the correct title.
- 12. A completed Appendix document. This information is to be used during the implementation phase to ensure this program appears correctly and completely on Degree Search.
- 13. Attach other information that will be useful to the review committees and the Office of the Provost.

**APPENDIX - PROPOSAL TO ESTABLISH A NEW UNDERGRADUATE CERTIFICATE**

(This information is used to populate the [Degree Search/catalog](#) website.  
Please consider the student audience in creating your text.)

**1. Program Description (150 words maximum)**

The Digital Culture certificate program in the Herberger Institute for Design and the Arts focuses on the creative exploration of how new media is influencing our culture, or rather, the way we live, learn, create and communicate. The Digital Culture certificate will allow students to enhance their program of study with integrated, interdisciplinary training in creative processes and technical skills in new media with cultural applications.

The Digital Culture curriculum is outcomes based rather than course sequence based. The curriculum uses an innovative proficiency-based network to connect courses across academic disciplines, instead of traditional methods such as course prerequisites. Proficiencies in the curriculum identify common generalized learning outcomes across disciplines participating in the initiative.

The Digital Culture certificate requires 18 credit hours (12 upper division):

- 9 hours – Digital Culture Core
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See [http://herbergerinstitute.asu.edu/degrees/digital\\_culture/](http://herbergerinstitute.asu.edu/degrees/digital_culture/) for more information.

**2. Contact and Support Information**

Office Location (Building & Room): Design South Room 101

Campus Telephone Number: 480.965.4495

Program email address: [Erica.G.Green@asu.edu](mailto:Erica.G.Green@asu.edu) (Digital Culture Education Coordinator)

Program website address: [http://herbergerinstitute.asu.edu/degrees/digital\\_culture/](http://herbergerinstitute.asu.edu/degrees/digital_culture/)

**3. Program Description** Provide applicable information regarding the degree such as curricular restrictions or requirements, specific course lists, or academic retention requirements.

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A minimum grade of a C and an overall GPA of 3.0 is required in all classes in the certificate. Courses in the certificate may not be used as part of a major. All upper division certificate coursework must be taken at ASU.

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The other three substitution hours can be achieved through one of the following two paths:

1. The 3-hour media arts and design course requirement may be substituted with a 3-hour course in the digital culture related category.
2. The 3-hour media engineering requirement may be substituted with a 3-hour course in the digital culture related category, or by a related upper-level engineering course offered by one of the collaborating units (see attached curriculum).

**4. 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.)

For current ASU students, there is no special application process for the Digital Culture certificate. Students add the certificate by meeting with the academic advisor for their major and the Digital Culture education coordinator to develop the digital culture pathway that best meets the proficiencies for the work they are interested in pursuing. This pathway will be contingent upon the student's academic performance in 100-level coursework.

For students not currently enrolled at ASU, students must apply and be admitted to ASU in a degree or non-degree program. Students must meet with the Digital Culture Education Coordinator before enrolling in the certificate program. The coordinator and student will develop a pathway that best meets the proficiencies for the work he or she is interested in pursuing. The coordinator will review the student's previous academic work to determine which proficiencies the student has completed.

Digital Culture certificate students will work with the Digital Culture education coordinator and successfully complete the required sequence of courses and proficiencies for a digital culture certificate (see attached curriculum). The Digital Culture education coordinator and the Digital Culture faculty committee in the Herberger Institute for Design and the Arts will help to craft the best path for the student.

**Digital Culture Certificate Curriculum****TOTAL 18 HOURS** (12 upper division)

9 Digital Culture Core, 3 Media Arts and Design, 3 Media Engineering, 3 Capstone

Course descriptions are available online at <http://digitalculture.asu.edu/courses> for the new courses developed for Digital Culture. These are new, specially developed courses for Digital Culture that initially will be offered as omnibus courses. The curriculum will be rolled out in a three year sequence of 100- and 200-level courses first, and then the 300-level and 400-level courses. Courses will be submitted to CAPC for permanent numbers in a four year sequence (100- and 200-level courses in the 2010-11 academic year, 300-level courses in the 2011-12 academic year, 400-level courses in the 2012-13 academic year). Please see the attached example syllabi for two 100- and 200-level courses.

**9 hours: Digital Culture Core Coursework**

Choose at least 3 hours from this list (recommended):

- AME 194 Introduction to Digital Culture
- AME 194 Computational Thinking for Digital Culture and Media Arts

Choose at least 3 hours from this list:

- AME 294/ART 294 Introduction to Interactive Environments
- DSC 294 Media Editing
- ART 294 3D Tools
- AME 294 Programming for Media Arts
- DCE 294 Hybrid Action: Physical Intelligence in Digital Culture
- ANP 394/AME 394 How to Build a Digital - Physical System
- DSC 394 Digital Modeling
- AME 394 Collaborative Projects in Digital Culture
- AME 394/PSY 394 Memory and Cognition
- ANP 394 Digital Fabrication
- AME 394 Compositional and Computation Principles for Media Arts
- ANP 494 Digital Ecologies: Parametric Systems Design
- AME 494 Animating Virtual Worlds
- ART/AME 494 Media Installations
- AME 494 Integrated System Development for Digital Culture

**3 hours: Media Arts and Design**

Choose from:

- ART 194 Digital Art and Culture
- ART 294 The Still Image in Digital Culture
- FMP 294 Introduction to Animation
- MUE 294 Open Minds Digital Ears
- FMP 394 Non - linear Editing
- MUE 394 Performing in Digital and Hybrid Music Groups
- MUE 394 Advanced Interactive Sound

ANP 494 Designing Hybrid Spaces  
ANP 494 Design by Algorithm  
ART 494 Visualizing and Prototyping

**3 hours:** Media Engineering

Choose from:

CSE 394 Data Structures, Analysis and Retrieval for Digital Culture  
EEE 394 Signal Analysis for Digital Culture  
CSE 394 Graphics and Information Visualization for Digital Culture  
EEE/CSE 494 Information Analysis and Search for Digital Culture  
EGR 499 Music and Engineering

**3 hours:** Capstone Experience

Internship, thesis or independent research project. Final synthesis project.  
Determined in consultation with faculty mentor. Many projects will be team based and embedded in real life settings.

**Related Digital Culture Coursework** (These courses are available for substitution purposes. See below for course substitution details.)

Choose from:

AME 394 Media Theory  
ART 398 Digital Ethnography in Virtual Worlds  
ASB 328 Rules, Games and Society  
ASB 344 Technology and Society  
ASB 430 Social Simulation  
EDT 329 Games, Simulations and Virtual Environments  
EDT 431 Computer Gaming Learning and Literacy  
ENG 394 Social Media and Digital Cultures  
ENG 394 Writing in Cyberspace  
MCO 435 Media 2.0 Social Media  
THP 294 Writing and Story Development for Interactive Gaming

**COURSE SUBSTITUTION**

All upper division certificate coursework must be taken at ASU.

Generous substitution rules allow for course flexibility. Students receiving the Digital Culture certificate can petition to substitute up to 6 credit hours. Three hours can come from any course related to Digital Culture and may be achieved through courses offered by any unit of ASU including the Polytechnic, Downtown, West (IAP), and the FMS program on the Tempe campus. Courses may include any on the related subject/substitution list (below) or courses with comparable content.

The other three substitution hours can be achieved through one of the following two paths:

1. The 3-hour media arts and design course requirement may be substituted with a 3-hour course in the digital culture related category.

2. The 3-hour media engineering requirement may be substituted with a 3-hour course in the digital culture related category, or by a related upper-level engineering course offered by one of the collaborating units (see attached curriculum).

FMS 110	Introduction to New Media
FMS 270	Race, Sex and Identity in American Film (online section)
FMS 300	Media and Cultural Studies
FMS 350	Virtual Reality in Film and Media
FMS 351	Emerging Digital Media
FMS 394	Critical Studies in Animation
FMS 450	Technology, Culture and Media
FMS 480	Globalization Technology and Culture
FMS 481	Entertainment Technologies
FMS 482	Entertainment Industries
FMS 483	Techno Entertainment Convergences
IAP 103	Fundamentals of Interdisciplinary Media
IAP 104	Fundamentals of Sound Art
IAP 201	Intro. to Interdisciplinary Arts
IAP 202	Languages of Interdisciplinary Arts
IAP 294	Digital Installation
IAP 307	Art and War
IAP 322	Digital Multitrack Recording
IAP 325	Advanced Digital Multitrack Recording
IAP 334	Conceptual Development
IAP 361	Digital Editing and Media Literacy
IAP 363	Sound, Image, Media
IAP 364	Documentaries
IAP 365	Digital Interactivity
IAP 368	Digital Graphics Technologies
IAP 464	Media and Diversity
IAP 465	Media Technologies and the Arts
IAP 466	Digital Interactivity Advanced
IAP 467	Acoustic Ecology
IAP 469	Advanced Digital Audio
IAP 494	Advanced Audio Interactivity
IAP 494	Advanced Digital Video Production
CPI 101	Introduction to Informatics
CPI 200	Mathematical Foundations of Informatics
CPI 310	Information and Data Management
CPI 360	Informatics and Decision Making
CPI 400	Scientific Computing and Visualization
CPI 420	Technology and Society
CPI 430	Social Simulation