



INSTRUCTIONS FOR PROPOSING UNDERGRADUATE CERTIFICATES and USE OF PROPOSAL FORM

A certificate program is a designated set of for-credit courses focused upon a specific topic or theme that give students the opportunity to pursue a subject of interest in a formalized way that is documented on the transcript. Undergraduate certificates should complement students' degree/major programs and be designed to add opportunity for students without substantially adding to the requirements for instructional or academic student support resources.

PLANNING THE UNDERGRADUATE CERTIFICATE

- Planning starts with idea development among the program faculty and staff.
- If you are part of a planning group that thinks an undergraduate certificate is a good idea, start to fill out the [Undergraduate Certificate Proposal Form](#).
- When your ideas are starting to take shape, consult with your school/college dean's office. If you aren't sure who to talk to in your school/college dean's office or if you have questions and want to discuss your plans, contact Jocelyn Milner (Jocelyn.Milner@wisc.edu), Director of Academic Planning and Institutional Research.
- When you have a full draft of a completed [Undergraduate Certificate Proposal Form](#), and ideally before school/college approval, send the proposal to Jocelyn Milner (Jocelyn.Milner@wisc.edu) for a check in and proposal review. This will help make sure that the certificate meets all components of the UAPC guidelines and will identify any implementation questions.

APPROVAL STEPS FOR UNDERGRADUATE CERTIFICATES

1. The program faculty who are sponsoring the certificate program (most often a department) formally approve the certificate proposal.
2. The school/college that houses the certificate considers the certificate for approval, usually at the Academic Planning Council.
3. After school/college approval, the dean forwards the proposal to the provost with a copy to the director of Academic Planning and Institutional Research.
4. The provost will seek a recommendation for approval from the University Academic Planning Council.



FOR INFORMATION AND FORMS: <http://apir.wisc.edu/certificates.htm>

At this URL you will find links to the following information:

- These instructions and the Undergraduate Certificate Proposal Form, which includes detailed instructions
- Undergraduate Certificate Guidelines, which is the policy framework for the proposal form (adopted April 2013)
- Certificate Knowledge Base - The KB houses certificate forms and frequently asked questions.

QUESTIONS: Jocelyn Milner, Director, Academic Planning and Institutional Research (Jocelyn.milner@wisc.edu)
Sarah Kuba, Academic Planner, APIR (sarah.kuba@wisc.edu)



PROPOSAL FORM
UNDERGRADUATE CERTIFICATE PROGRAM

Undergraduate certificates are available to degree-seeking UW-Madison undergraduates and are intended to complement undergraduate degree/majors. This form is to be used in concert with the certificate guidelines. Complete the form and save as a Microsoft Word document.

1. Certificate name and academic home

- 1.1. Certificate name: Game Design Certificate
- 1.2. Home Department/Academic unit (Name/UDDS): Department of Curriculum and Instruction
- 1.3. Home School/College: Education, School of
- 1.4. Faculty director of the certificate program (name, title, email):
Matthew Berland, Associate Professor,
- 1.5. Primary faculty/staff contact (name, title, email):
Matthew Berland, Associate Professor, mberland@wisc.edu
- 1.6. Primary school/college dean's office contact (name, title, email):
Julie Mead, Assoc. Dean for Education, jmead@education.wisc.edu
- 1.7. Date form completed: [Click here to enter a date.](#)

2. Approval, Implementation and Review

- 2.1. School/College Approval Date: [Click here to enter a date.](#)
- 2.2. UAPC Approval Date: [Click here to enter a date.](#)
- 2.3. Expected first term of student enrollment (fall term after UAPC approval): fall term after UAPC approval
- 2.4. Year of first program review (5 years after first student enrollment): 2022
- 2.5. Are all academic programs in the home academic unit are up to date for program review? Yes
 - 2.5.1. If no, please provide an explanation:
Type an explanation here. (500 word limit)

Information to be completed by RO and APIR:

- Plan Code (assigned by the Registrar's Office):
- CIP Code (assigned by Academic Planning and Institutional Research):
- Primary Divisional Disciplinary Assignment (assigned by APIR for analysis purposes only):

3. Purpose, rationale, justification

Describe the purpose, rationale, and justification for the certificate:

- 3.1. What is the purpose of the certificate program? How does it contribute to the mission of the sponsoring unit(s)? What gap in the program array is it intended to fill?

This certificate will empower students with the skills, understanding, and background to create and produce games independently, to develop a body of work, and gain critical perspectives on games and game design. The certificate will focus on game design in the general sense: creating, testing, and understanding how to design gameplay to be fun, thoughtful, impactful, across board games, video games, gamification, and even classrooms.

Games are an emerging, growing medium that covers a wide variety of hard and soft skills which are relevant and applicable across a number of fields. This Game Design Certificate is a way for students to develop these skills in a way that is both technically challenging and creatively fulfilling. Countless students have requested a certificate in game design. In the absence of a formal program, ~150 students have joined a student club dedicated to game design (sponsored by Prof. Berland); they have weekly meetings, organize events, and, to some extent, advocate for more classes offered.

The certificate contributes to the core mission of Curriculum & Instruction, Art, and Computer Sciences.

To the mission of the C&I: A core commitment of the Digital Media program in C&I is that education, making, and play are deeply interrelated. By enabling more students to learn by playing and making games, we can explore and improve our understanding of teaching and learning outcomes and engage students who are both consumers and producers of knowledge.

To the mission of Art: Exploring games as a medium for aesthetic and critical engagement, both socially and formally, is one of the goals of the Game Design Certificate. Students will rethink the medium of games, its role in society and popular culture as well as its ability to effect change. Students will be encouraged to look at gaming technology as an extension of their aesthetic toolkit.

To the mission of Computer Sciences: Game design is complementary to sub-disciplines of computer science (such as graphics, AI) and an application of computer science. Many undergraduate computer science majors are interested in entering the game industry; game design is a core skill in that industry. This certificate does not cover game development; game development – programming videogames that scale – remains fully within the purview of existing classes in Computer Sciences.

Students of all skill levels in the tools of computer science, art, and education will use technical, creative work to build on their existing knowledge. This is fundamentally a cross-disciplinary experience, in which students from many different programs will develop and test their understandings together.

There is currently no game design certificate at UW–Madison, though many classes use game design as a means to teach or learn. We do not anticipate one single major to constitute the majority of the students. That said, games are a powerful medium to express and explore a variety of topics across the sciences, social sciences, arts, and humanities. In that way, it may complement many major programs.

By canvassing introductory classes across divisions and departments, we have found overwhelming demand for a game design program. In one case of asking a single class of around 400 undergraduates in CS 302 ("Introduction to Programming") more than half the class expressed interest in finding out more about game design classes. Despite overwhelming student demand and an enormous industry, game

design as an area of study is still relatively nascent in universities, and, to date, it has had only a limited presence for undergraduates at UW.

We envision two different, mutually complementary constituencies for the certificate: 1) students with an arts, humanities, or social science focus who would like to create and understand meaningful artifacts (which be analog – board games, activities, curricula); and 2) students with a more technical focus (who may have taken classes in CS prior to starting the certificate) who would like to build better games and better understand human factors in designing videogames. The Game Design Certificate provides a unique, deeply interdisciplinary meeting point that will draw diverse students from across UW.

3.2. How is designed to complement students' major program of study?

We do not anticipate a single major. That said, games are a powerful medium to express and explore a variety of topics across the sciences, social sciences, arts, and humanities. In that way, it may complement any of the students' major programs.

3.3. What is the evidence that there is a societal and student demand for the certificate program experiences?

Games are an ascendant medium, and, according to Fortune magazine, the games industry grossed \$23.5 Billion last year. In addition, by canvassing introductory classes across divisions and departments, we have found overwhelming demand for a game design program. Game design alumni from existing undergraduate programs have an 8% higher employment rate and roughly 1.5 times greater salary than national averages for college graduates (Higher Education Video Game Alliance report, 2015). Several of our peer institutions (MIT, NYU, UC Berkeley, CMU) have started growing significant cross-disciplinary game design programs which include undergraduate majors and graduate programs.

University of Wisconsin-Madison has significant talent in Game Design across multiple departments on campus, with a growing number of undergraduate courses taught that include game-related content. In Curriculum & Instruction, the CURRIC 277 Videogames and Learning course is the largest and most popular course in the department – one of the largest in the School of Education. Two topics courses, "Introduction to Video Games" (in the course proposal system as CURRIC 279) and "Game Design I" (CURRIC 357) are both in their second semester and have attracted more than 20 students per semester despite their status as topics courses fulfilling no campus General Education, School of Education Liberal Studies, or Letters and Science Liberal Arts and Science (LAS) requirements. Similarly, ART 107 Introduction to Digital Forms is one of the highest enrolled courses offered for undergraduates in the Art Department. Yet to date, we have no formalized program representing this expertise in game design.

The purpose of the Game Design certificate is to fill the undergraduate demand for courses in game design by capitalizing on the courses we are already offering to create a pathway for students wanting to complement their degrees with this new area of specialization. We believe this program will draw significant numbers of students on campus, build interdepartmental collaboration among talented faculty, and create a new area for grant-making and research in the next 3-5 years.

4. Curriculum

4.1. Delivery modality:

- Face-to-face
 Distance

Distance-delivered programs are those certificate or degree programs in which 50% or more of the required courses may be taken as distance-delivered courses.

4.2. Provide a complete list of requirements.

Students must complete 19 total credits: The foundational content is delivered in an Art course that addresses digital art and three 3-credit courses in Curriculum and Instruction that provide an introduction to game design and the use of video games for learning. Students also select one course from a menu of three 3-credit courses housed in the Department of Computer Science, all of which relate to computer programming. Finally, students would select one of three 4-credit digital art courses from the Art Department.

Program requirements should provide content that leads to the completion of certificate learning goals. See section 5. Assessment.

4.3. Provide a complete list of required and elective courses (department, course number, title, number of credits and last term taught) and any other program requirements.

Department & course #	Course Title	Credits	Last term taught
CURRIC 277 (required)	Videogames and Learning	3 credits	Fall 2017
CURRIC 357 (required)	Game Design I	3 credits	Fall 2017
CURRIC 432 (required)	Game Design II	3 credits (prereq CURRIC 357)	New course
ART 107 (required)	Introduction to Digital Forms	3 credits	Fall 2017
Select 1 Computer Science course from options below			
CS 200	Introduction to Computation	3 credits	Spring 2017
CS 301	Intro to Data Programming	3 credits	Spring 2017
CS 300	Introduction to Programming	3 credits	Spring 2017

Department & course #	Course Title	Credits	Last term taught
Select 1 Art course from options below			
ART 428	Digital Imaging Studio	4 credits (prereq ART 107)	
ART 429	3D Digital Studio I	4 credits (prereq ART 107)	
ART 529	3D Digital Studio II	4 credits (prereq ART 107)	

4.4. Total credits required: 19 credits (The additional credit beyond 18 occurs because studio art classes are all 4 credits.)
12 to 18 credits (up to 21 credits in exceptional circumstances)

Checklist for Verification of Curricular Policy Requirements*

You will have an opportunity to provide explanation and rationale for any Curricular Policy Requirements that have not been affirmed.

- Certificate requires no more than half of the credits required for a major in a related field.
- Courses for the undergraduate certificate are numbered 699 or lower.
- Courses are offered on a regular basis (at least once every two academic years as identified in the requirements list in 4.3).
- Courses have enrollment capacity for students in the certificate program.
- Courses in which a student elects the pass/fail option will not meet certificate requirements.
- Courses in the proposed certificate have been approved.
- Special topics courses are only used if all topics count for the certificate.
- All requirements must be met; exceptions that amount to waiving requirements are not permitted.
- Course substitutions to the certificate curriculum should be kept to a minimum; if substitutions are being made on a regular basis, the curriculum should be re-examined. When course substitutions are made, the substituted course should be formally added to the curriculum through governance for inclusion in the curriculum the following academic year.
- Substitutions are not permitted for any course unless the substitution would be provided for every student with the same substitution request.
- The certificate accommodates students who start both as new freshmen and as transfer students. If certificate requirements include freshmen-only courses or a four-year progression of UW-Madison-only courses, an alternative pathway is available for students (including transfer students) who become aware of and interested in the certificate later in their undergraduate career.
- At least half of the credits must be earned in residence (UW-Madison on campus, study abroad, or distance courses); exceptions to the minimum residency requirement are not permitted.
- Applicable transfer, retroactive, and test (AP, IB, CLEP, departmental exam) credits will satisfy certificate requirements.

- Students must earn a minimum 2.000 GPA on required certificate coursework. Completed courses listed within the certificate curriculum, whether or not they meet a specific requirement, are included in the calculation of the GPA.

*Provide explanation and rationale for any Curricular Policy Requirements that have not been affirmed. Type explanations for Curricular Policy Requirements not affirmed here.

5. Assessment

- 5.1. Attach the full Assessment Plan when submitting this proposal.
See the Basic Assessment Plan for Undergraduate and Graduate Certificate Programs for instructions and the accompanying template. The Basic Assessment Plan and Template are minimum expectations for this information. Programs that have developed plans that exceed what is specified in the basic plan may provide that information.
- 5.2. Provide a summary of the Undergraduate certificate assessment plan including learning goals, key methods and assessment approaches, and how assessment information will be reviewed and acted on.

See attached assessment plan.

6. Admission & Enrollment

- 6.1. Which students are eligible for the certificate?
- Undergraduates in all schools/colleges (this is the default eligibility)
 - Undergraduates in specific schools/colleges. List specific schools/colleges and provide a justification for limits. List schools/colleges here with justification for limits.
 - University Special (non-degree seeking students). See the appendix for Enrollment of University Special students in undergraduate certificates. Include the addendum form with the proposal.
- 6.2. Does the certificate have additional limits on admission? No. Students will be eligible to declare the certificate after completion of C&I 357 and either Art 107 or one of the listed Computer Science courses. Staff in the School of Education Academic Services office (EAS) will administer the application and declaration process.
- 6.2.1. If yes, explain criteria and application process.
Explain criteria and application process here. (500 word limit)
Admission limits should be related to interest or aptitude for the content and not based on a high GPA cut off; degree-seeking students have already faced competitive and selective processes for admission, so criteria should be designed to select for skill/aptitude/interest in the focused area.
- 6.3. Projected annual enrollment: 50-100
- 6.4. Maximum enrollment (using existing instructional and student services resources): 200
- 6.5. What are contingency plans for supporting enrollments higher than the stated maximum enrollment?

We have anticipated growth and have hired a faculty associate to teach classes in the program. Doctoral students can TA or teach additional sections of C&I 357 and 432, and both the Dean's office and the C&I department have offered support to do so. Funds earned from the delivery of summer courses (e.g. C&I 277) will help to fund additional instructors to meet demand.

Checklist for Verification of Admission Policy Requirements*

You will have the opportunity to provide explanation and rationale for any Admission Policy Requirements that have been affirmed in the text box that follows the checklist.

- The certificate will be declared and canceled using the SIS eDeclaration in consultation with a certificate program advisor.
- The certificate program advisor(s) will monitor students' progress on the certificate and assist students who do not intend to complete the certificate in cancelling it.
- Program faculty/staff will not advise students to declare or remain enrolled in a certificate if it will extend their time to graduation.

*Provide explanation and rationale for any Admission Policy Requirements that have not been affirmed. Type explanations for Admission Policy Requirements not affirmed here.

7. Advising

7.1. List certificate program advisor(s) with title and departmental affiliation(s).

Matthew Berland, Associate Professor, Curriculum & Instruction
Erica Halverson, Professor, Curriculum & Instruction
Aliah Darke, Faculty Associate, Curriculum & Instruction
Meg Mitchell, Associate Professor, Art
Gary Dahl, Faculty Associate, Computer Sciences
Bilge Mutlu, Associate Professor, Computer Sciences

7.2. How will the resource load of the additional advising will be met?

Describe how the advising resource load will be met here. (500 word limit)

Do the individuals or offices have the capacity to add this workload? Does the program have the resources to support all aspects of advising and student support?

Completion of the certificate requires completion of the listed courses. No other requirements are associated with the certificate. As such, it is not anticipated that there will significant demand for advising on certificate beyond making students aware of the certificate and the required and elective courses associated with it; decisions for departmental options will fall to departmental advisors and course instructors. Information about the certificate will be available on the School of Education website and the departmental websites maintained by Art, Curriculum & Instruction, and Computer Sciences. As noted earlier, the SoE's Academic Services office (EAS) will administer the process students will use to declare enrollment in the certificate once they have completed C&I 277 and either Art 107 or one of the listed Computer Science courses. The School of Education's Education Academic Services (EAS) office will be primarily responsible for student advising. They will consult appropriate departmental student advisors as necessary.

7.3. Program advisor(s) have been consulted and reviewed this proposal.

8. Governance & Faculty

8.1. The certificate is governed by:

- Existing department or school/college governance committees

New certificate governance committees

While the certificate is housed in Curriculum and Instruction, it was developed collaboratively in close consultation with all 3 departments involved. As noted in 7.1, program advisors have affiliations in all 3 departments as well. Governance of the certificate will continue that close collaboration and consultation.

- 8.2. If the certificate is governed by a new committee, define and outline governance structures and procedures for the certificate program.

Define and outline governance structures and procedures here. (500 word limit)

Provide information on how program faculty are identified and provisions for transition in the faculty program director. Who will appoint the director and to whom will the director report?

N/A

- 8.3. List the core program faculty and staff with title and departmental affiliation(s).

List core program faculty and staff here.

Matthew Berland, Associate Professor, Curriculum & Instruction

Erica Halverson, Professor, Curriculum & Instruction

Aliah Darke, Faculty Associate, Curriculum & Instruction

Meg Mitchell, Associate Professor, Art

Bilge Mutlu, Associate Professor, Computer Sciences

Gary Dahl, Faculty Associate, Computer Sciences

9. Related Programs

- 9.1. List majors and certificates that may not be earned in combination with this certificate.

N/A

Students may not earn a major or certificate with the same name/subject area. Students may not earn a certificate in which the certificate coursework overlaps 50% or more with another major or certificate. The list should include such majors and certificates. It is the responsibility of the department to monitor students and ensure they are not enrolled in overlapping certificates or major programs.

- 9.2. List majors that are anticipated to frequently be completed in combination with the proposed certificate. For each, describe how the certificate can be completed in combination with the major without increasing time to degree.

Education Studies, Computer Science, Art. For CS majors, the certificate adds only four courses that would not otherwise fill requirements: Art 107, Game Design I, Game Design II, and an elective class in Art. For Art majors, the certificate adds only three courses that would not otherwise fill requirements: Game Design I, Game Design II, and a class in CS. Research suggests that by providing students an opportunity to apply their primary major (e.g. CS), they will be more likely to persist in that major.

10. Resources and Ongoing Commitment

- 10.1. What resources are allocated to the undergraduate certificate program?

Describe certificate resources here. (500 word limit)

Is there a source of new funding? If the funding is from reallocation, what activities will be reduced as a result? Both the proposal from the program faculty and the school/college dean's office cover memo should specify that the resource commitment is being made to the program.

There is no new source of funding; the classes exist and are covered by departmental units. The additional certificate advising load is minimal given the structure of the certificate and would be handled by certificate program faculty and staff listed under 7.1.

Checklist for Verification of Ongoing Commitments*

You will have an opportunity to provide explanation and rationale for any Curricular Policy Requirements that have not been affirmed.

- If the program requires new instructional resources, space, advising, additions to the Library collections, or other support, a supporting letter is attached to demonstrate that the appropriate unit can provide the resources.
- The certificate program faculty are responsible for seeking appropriate governance approval for significantly altering the certificate's curriculum, suspending admissions or discontinuing the program.
- The faculty/staff will engage in program review five years after implementation and at least every ten years after that.
- The program faculty/staff will ensure the program is encoded into DARS and will work with the Registrar's Office DARS liaison to keep approved revisions to the curriculum current.
- The program faculty/staff will keep Undergraduate Catalog and program website material current and will keep all advising and information resources consistent.

*Provide explanation and rationale for any Ongoing Commitments that have not been affirmed.
Type explanations for Ongoing Commitments not affirmed here.

Required attachments

- Supporting letters/memos
Letters or memos from other academic units that will have overlapping interest (units that provide courses for the certificate, share a student audience, represent a closely related area of study, have overlapping faculty, have names that are similar) are required.
- Assessment plan
See the Basic Assessment Plan and Template for Undergraduate and Graduate Certificates for detail.
- Appendix – Form for enrolling University Special students, if relevant

Appendix: Enrollment of University Special students in undergraduate certificates

- A. When the proposed certificate is made available to University Special students it is only available to those who have earned a baccalaureate degree.
- B. Which University Special students are eligible for the certificate?
- University Special students who started the certificate as an undergraduate at UW-Madison, and graduated before completing the requirements; such students need a course or two to complete the certificate. (Note that this is the most common reason for making a certificate available to University Special students.)
 - University Special students who are members of the community that hold a bachelor's degree, but have not earned credits towards the certificate while a UW-Madison undergraduate. (Note that making a certificate available to this population is not common and requires additional justification for serving this population with an undergraduate certificate. Justification should include why a Capstone certificate would not better serve the community population instead of this undergraduate certificate.)
- C. Certificate program faculty and staff understand that Adult Career and Special Student Services (ACSSS) in the Division of Continuing Studies will serve as the advising, admissions, and academic dean's office for all University Special students.
- D. Describe certificate program procedures to advise students who do not complete the certificate to notify the program advisor if they re-enroll as a University Special student to complete the certificate.
Describe procedures here. (500 word limit)
- E. Certificate program faculty and staff will work with ACSSS to monitor and advise University Special students seeking a certificate.
- F. Describe certificate program procedures to notify ACSSS of those University Special students who are formerly unaffiliated with the program who intend to complete a certificate.
Describe procedures here. (500 word limit)
- G. Describe certificate program procedures to report to the Registrar's Office when a University Special student has completed the certificate and supply a list of courses that student used to fulfill certificate requirements. (Note that SIS eDeclaration and DARS are not available for University Special students.)
Describe procedures here. (500 word limit)
- H. Certificate courses have the enrollment capacity to accommodate University Special students. Certificate program faculty and staff understand that University Special students completing the certificate will not have enrollment priority over degree-seeking undergraduate students nor University Special students enrolled in capstone certificate programs.
- I. If completing the certificate as a University Special student, at least 12 credits towards the certificate must be earned in residence at UW-Madison, either while enrolled as a University Special student or from coursework earned while enrolled as an undergraduate at UW-Madison. (Note this is a higher residency requirement than is used for degree-seeking students.)