New Proposal

Date Submitted: 11/10/23 12:03 pm

Viewing: **Game Development: Art, MS**

Last edit: 01/09/24 8:10 am

Changes proposed by: Lisa Bievenue
Proposal Type

Proposal Type:
Concentration (ex. Dietetics)

Administration Details

<table>
<thead>
<tr>
<th>Official Program Name</th>
<th>Game Development: Art, MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma Title</td>
<td>Master of Science in Game Development</td>
</tr>
<tr>
<td>Sponsor College</td>
<td>Information Sciences, School of Informatics</td>
</tr>
<tr>
<td>Sponsor</td>
<td>Judith Pintar</td>
</tr>
<tr>
<td>Sponsor Department</td>
<td>Informatics</td>
</tr>
<tr>
<td>Sponsor Name</td>
<td>Judith Pintar</td>
</tr>
<tr>
<td>Sponsor Email</td>
<td><a href="mailto:jpintar@illinois.edu">jpintar@illinois.edu</a></td>
</tr>
<tr>
<td>College Contact</td>
<td>Lisa Bievenue</td>
</tr>
</tbody>
</table>
List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

College Contact/Director, Lisa Bievenue

Does this program have inter-departmental administration?

No

### Proposal Title

| Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs) |
|---|---|
| Establish the concentration in Art in the Master of Science in Game Development in the School of Information Sciences and the Graduate College |

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

This Concentration proposal, concentration in Art in the Master of Science in Game Development (key 1224) is related to the MS Major proposal Master of Science in Game Development (key 1196) and other Concentration proposals Design (key 1222), Narrative (key 1221), Production (key 1223), Programming (key 1215)

### Program Justification
Game Studies and Design (GSD), an Informatics program hosted by the School of Information Sciences, proposes an interdisciplinary, online, self-supporting professional Master’s degree program, the Master of Science in Game Development (MS in Game Development), with the following five concentrations:

--Art (this proposal)
--Design
--Production
--Programming
--Narrative

This concentration will provide professional training for students interested in working in game studios, game-adjacent industries, or in other work places where game-related programming skills are in demand. This innovative interdisciplinary program will be organized around university-studio partnerships; students will gain industry experience as they acquire the skills that they need. Across all concentrations, the degree program will emphasize ethics and inclusivity.

In the Art concentration students will not only learn art development tools and techniques for games, they will learn to work as part of an art team on distributed projects, and how to work with design, narrative, programming and production teams to contribute to the broad and diverse effort required to develop and market a high-end game.

ONLINE – As a reflection of the current movement toward remote game development seen in major game studios, this program will be offered online; courses will include synchronous, asynchronous, and flipped learning designs. Most courses will include a live component with an instructor. The online format has multiple advantages. It allows us to more easily scale up as our capacity increases, to welcome international students for whom travel and resettlement makes the program prohibitive, and to be able to include non-traditional students, including professionals already working in full time jobs who wish to retrain for the game industry, or who are already in game development and wish to further their skills in other design areas.

ADMINISTRATION – This program will be administered by Informatics Programs, hosted by the School of Information Sciences. Administration of the program will be funded as a fixed cost of the program, from tuition revenue as described in the budget section.

GOVERNANCE – Program requirements, curriculum, courses, and admissions will be governed by Informatics Programs through cross-campus faculty committees as follows.

1. Program Committee. This committee will be charged with overall oversight of the program, core curriculum (including required courses), admissions requirements, graduation requirements, and program components, practicum courses and internships. This committee will be formed by the Director of Informatics Programs,
with input from the Games Studies & Design Program Director, and shall include at least one representative from each of the following departments: Art & Design, Computer Science, and Information Sciences. Other committee members may be invited from any other department.

2. Curriculum Committee. Informatics Programs will propose a group of faculty from across campus to make up this committee, to be approved by the Program Committee. The committee is charged with oversight of the program curriculum, including the content of core required courses, approval of elective courses, and requirements for the practicum courses.

3. Admissions Committees. Each concentration will have an admissions committee of faculty members recommended by Informatics Programs and approved by the Program Committee. Admissions committees will be charged with the oversight of the admissions process including review of applications and acceptance decisions. Admissions processes will be supported by Informatics/Game Studies & Design staff. Faculty from any department is eligible but each committee must have at least two members from Art & Design.

PROGRAM and COURSE OWNERSHIP
• The MS in Game Development program will be housed in Informatics Programs, hosted by the School of Information Sciences and governed by the Program Committee.
• Core required courses will be owned and managed by Informatics Programs, with oversight by the Curriculum Committee.
• Elective courses may be owned, controlled and managed by any UIUC Department. Program tuition income will fund these courses according to the following tuition distribution model.

TUITION DISTRIBUTION
• Tuition will flow to Informatics Programs to distribute.
• Ten percent (10%) of the total tuition income will be reserved for scholarships.
• Fixed costs to operate the program will be subtracted from the total remaining tuition income and retained by Informatics Programs.
• The net tuition income will be divided by the total number of credit hours enrolled in by the MS in Game Development students to determine a per credit hour rate. Each department offering a course in which MS in Game Development students are enrolled will receive a distribution equal to the number of credit hours for MS in Game Development students multiplied by the annually calculated per credit hour rate.

Note: GSD 522, 523, 530, and 540 have been approved, effective Fall 2024, and will show as course not found until the Academic Catalog rolls to the next Academic Year, in early 2024. See CIM Course approval document in Program of Study section.

Instructional Resources
Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?
Does the program include other courses/subjects outside of the sponsoring department impacted by the creation/revision of this program?

No

Program Regulation and Assessment

Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program’s student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

The goal of the MS in Game Development: Art program is to provide practical, technical, critical, and ethical training, awareness, and experiences to students who are interested in working in professional game studios, game-adjacent industries, or in other work places where game-related skills are required. To this end, the program includes four shared objectives for students across all concentrations:

1. Practical Training: Understand the roles and specifications involved in the professional development of games and interactive media, using industry-standard practices for communication, collaboration, and process flow at every stage in the development process.
2. Technical Training: Demonstrate polished game development skills in a chosen specialization sufficient to create or significantly contribute to a publishable interactive experience.
3. Critical Training: Be knowledgeable about and conversant with social, psychological, economic, and technological contexts and impacts of games and simulations in society.
4. Ethical Training: Develop the ethical, relational, and collaborative skills necessary for working on a diverse and inclusive research or design team.

Learning objectives for the Art concentration include:

1. Mastery of a primary art style through digital creation tools such as Adobe tools, Blender, Maya, 3DS Max.
2. Proficiency with a secondary art style through digital creation tools.
3. Adaptation of art style to client needs and requirements.
4. Proficiency with studio processes such as design, organization, naming conventions.

Describe how, when, and where these learning outcomes will be assessed.
Overview

The MS in Game Development Program Coordinator will collect data that reflects on the success of the program as a whole, and the fulfillment of our student learning objectives. Each core course, as well as the elective courses developed for the degree, will have well-articulated individual learning outcomes, which will describe the concepts and skills to be gained as they relate to one or more of the program-level learning objectives.

An Assessment of students’ attainment of learning objectives will occur annually. Grades, homework assignments and class projects as well as exhibitions and presentations of student work will provide a regular source of direct assessment data.

Assessment of Specific Outcomes

1. Practical Training - Practical training will take place in core courses (GSD 511 Game Development I, GSD 512 Game Development II, GSD 513 Practicum in Game Development I, GSD 514 Practicum in Game Development II and GSD 515 Professionalization Seminar (any topic). Direct assessment data will be provided through grades on assignments, exams, and projects, as well as self-assessments, peer review, and reports from internship sponsors.

2. Technical Training - Technical proficiency will be attained and assessed through the required “Tools & Techniques” course for the Art concentration (520), as well as GSD 513 Practicum in Game Development I, GSD 514 Practicum in Game Development II, as well as elective courses in GSD and Art & Design. Direct assessment data will be provided through grades on assignments, exams, and projects, as well as self-assessments, peer review of group work, as well as exhibitions, demonstrations, and other presentations.

3. Critical Training - Core courses (GSD 511 Game Development I, GSD 512 Game Development II) contextualize the work that students in the program are being trained to do. Direct assessment data will be provided through grades on assignments, exams, and projects, including contributions to an MS in Game Development blog series, associated with student involvement in interest groups that track key issues in the field.

4. Ethical Training - Core practicum and professionalization courses will provide this training as it is implemented in the practices of working together in a creative team. Grades on homework, assignments, and exams, self-assessments, and peer review in Practicum in Game Development I, GSD 514 Practicum in Game Development II. GSD 515 Professionalization Seminars will also address these topics as a matter of central concern.
Overview
The assessment at the end of students’ first year in the program will flag any issues students may be having that has to do with their practical understanding of the field, and in the second year, to determine whether students have earned their degree. Students will be expected to complete each required course with a C or better, have an overall GPA of at least 2.75, and have a “final portfolio” rated as satisfactory by a faculty member in Art & Design or GSD, to receive the degree of Master of Science in Game Development: Art.

Assessment of Specific Expectations

1. Practical Training - In order to assess students’ attainment of practical training objectives, students will be expected to complete each required course (identified above) with a C or better. In practicum courses, students will be assessed on their collaborative practices within a team project. Their attainment of the practical training objective also will be evaluated through self-assessment, and peer reflections on the group projects.

4. Technical Training - In order to assess students’ attainment of technical training objectives, students will be expected to complete each Tools and Techniques course with a C or better, have an overall GPA of at least 2.75. In practicum courses, students will be assessed on their technical contributions to a team project, which will be exhibited at the end of the year. Additionally, reports from their internship sites will provide us with evaluations of students’ technical proficiency within a real-world team. Students’ “final portfolio” will be evaluated by a faculty member in Art & Design or GSD.

5. Critical Training - In order to assess students’ knowledge and critical thinking, students will be expected to complete each core courses (identified above) with a C or better. They will be expected to participate in a research-based interest group. Participation will be evaluated through attendance at group events and the contribution of a blog post each semester.

4. Ethical Training - In order to assess students’ understanding of ethical and appropriate, and collaborative practices in studio settings, students will be expected to complete each required course addressing these issues with a C or better. Self-assessments and peer review of team-based work, behavior consistent with academic integrity and studio codes of conduct, will also be used to assess students’ attainment of this objective.
Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

For all Informatics Programs education programs, a representative campus-wide committee of faculty govern the program. As part of that governance, assessment results are reviewed on an annual basis and recommendations provided to Informatics staff to implement recommendations as appropriate. Evaluation of the program will take place in a two year rotation between (year one) macro-level analysis of curriculum, and (year two) a more focused scrutiny of course content/syllabi. In both years, an agile “Assessment and Action,” process will occur during which assessment data related to students will be analyzed and used to make programmatic or course changes as quickly as possible, to improve student learning in relationship to our stated outcomes. An Assessment and Action report will be prepared each Spring by the MS in Game Development Program Coordinator to be shared with the MS in Game Development Program Committee, the Director of Game Studies and Design (GSD) and the Director of Informatics.

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

Program of Study

*Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses“ (source: https://www.ibhe.org/assets/files/PublicAdminRules2017.pdf). For proposals for new bachelor’s degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.

Attach Program of Study-related information such as sample sequences (for undergraduate programs) or college-level forms:

- **GSD 522_ Tools & Techniques_ Contemporary Techniques of 3D Art for Games.pdf**
- **GSD 540_ Tools & Techniques of Game Production.pdf**
- **GSD 530_ Tools & Techniques of Game Design.pdf**
- **GSD 523_ Tools & Techniques_ Contemporary Techniques of 3D Animation for Games.pdf**
The Art Concentration of the Master of Science in Game Development (MS in Game Development) degree provides technical training and practical experience for students interested in working in professional game studios, game-adjacent industries or other businesses where game-related programming skills are increasingly in demand. The program fosters critical skills in collaboration, communication, integration and professional business practices, along with technical skills in game programming. After the first year of coursework, students will shift the balance of their course work towards in-studio experiences within a professional game-development environment. The Art concentration will serve traditional graduate students as well as industry professionals who are interested in attaining a post-graduate degree while diversifying their professional skills.

Statement for Programs of Study Catalog

Course List

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Major Required Courses</strong></td>
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<tr>
<td>GSD 511</td>
<td>Game Development I</td>
<td>4</td>
</tr>
<tr>
<td>GSD 512</td>
<td>Game Development II</td>
<td>4</td>
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<tr>
<td></td>
<td><strong>Choose one or both of the following for a total of 16 credit hours:</strong></td>
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<tr>
<td>GSD 513</td>
<td>Practicum in Game Development I (Internal Studio)</td>
<td></td>
</tr>
<tr>
<td>GSD 514</td>
<td>Practicum in Game Development II (External Studio)</td>
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<tr>
<td></td>
<td><strong>Art Concentration Required Courses</strong></td>
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</tr>
<tr>
<td></td>
<td><strong>Choose 12 credit hours from the following:</strong></td>
<td>12</td>
</tr>
<tr>
<td>GSD 520</td>
<td>Tools and Techniques of Game Art</td>
<td></td>
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<tr>
<td>GSD 521</td>
<td>Tools &amp; Techniques: Contemporary Techniques for 2D Art for Games</td>
<td></td>
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<tr>
<td>GSD 522</td>
<td>Tools &amp; Techniques: Contemporary Techniques of 3D Art for Games</td>
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<tr>
<td>GSD 523</td>
<td>Tools &amp; Techniques: Contemporary Techniques of 3D Animation for Games</td>
<td></td>
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<tr>
<td>GSD 529</td>
<td>The Art of Games</td>
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<td></td>
<td><strong>Art Concentration Electives</strong></td>
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<tr>
<td></td>
<td><strong>Choose 12 credit hours from the following:</strong></td>
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<tr>
<td>GSD 515</td>
<td>Professionalization Seminar: Portfolio Production &amp; Personal Branding</td>
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<tr>
<td>GSD 530</td>
<td>Tools &amp; Techniques of Game Design (may be repeated if topic varies)</td>
<td></td>
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<tr>
<td>GSD 531</td>
<td>Tools &amp; Techniques: Contemporary Techniques in Game Design</td>
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<tr>
<td>GSD 540</td>
<td>Tools &amp; Techniques of Game Production (may be repeated if topic varies)</td>
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<tr>
<td>GSD 541</td>
<td>Tools &amp; Techniques: Contemporary Techniques of Game Production</td>
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<tr>
<td>GSD 551</td>
<td>Tools &amp; Techniques: Contemporary Techniques for Programming of Games</td>
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<tr>
<td>GSD 561</td>
<td>Tools &amp; Techniques of Game Narrative: Contemporary Techniques in Writing for Games</td>
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Total Hours 48

Other Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td></td>
<td><strong>Minimum GPA</strong></td>
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**Program Relationships**

Corresponding Program(s):

<table>
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<tr>
<th>Corresponding Program(s)</th>
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<tbody>
<tr>
<td>Game Development, MS</td>
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</table>

**Program Features**

Academic Level: Graduate

Is This a Teacher Certification Program?

- No

Will specialized accreditation be sought for this program?

- No

Additional concentration notes (e.g., estimated enrollment, advising plans, etc.)

**Delivery Method**

This program is available:

- Online Only - The entire program is delivered online, students are not required to come to campus.

Describe the use of this delivery method:

All courses will be online. The practicum courses will be conducted online (discussions and assignments) but will utilize both physical and online studios. Partnering studios may require face to face and/or online participation.

**Number of Students in Program (estimate)**

| Year One Estimate | 10 | 5th Year Estimate (or when fully implemented) | 24 |

**Budget**

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

- Yes

Please explain/describe:
There are two components to this program: Course Instruction and a Game Development Studio to support practicum courses and internships.

The estimated faculty required for the Art Concentration is 2.0 FTE.

We plan to hire specialized faculty by design: 1) this allows us to hire non-traditional faculty with industry experience, and 2) we especially do not want to commit to long-term faculty for program such as the MS in Game Development, which needs to evolve with the industry and some turnover of faculty will enable us to keep current. Hiring specialized faculty, however, will not translate to significant cost-savings compared to tenure-track faculty since we will need to keep our salaries competitive with the industry jobs they could otherwise seek. Additional specialized faculty and adjuncts will be added as the program expands to Chicago in year 5.

Additional Budget Information
This concentration is a component of the proposal to establish the Master of Science in Game Development. The budget to support this concentration is a part of the overall budget for the MS program overall. Those files are also attached here for reference.

Financial Resources
How does the unit intend to financially support this proposal?

1. Investment for Growth grant
Informatics has received $918k to start up this program. This will cover 1 year of staffing + some faculty support + equipment (see attached budget).

2. Support from the School of Information Sciences
The iSchool is committed to fund a tenure-track faculty in the area of critical game studies (matching support we requested from this Investment for Growth), appointed and a Games Studies & Design program director (1 summer month and 1 course release) for four years beginning in FY23)

3. Tuition revenue
We propose a self-supporting Master’s. We expect that if it is approved in 2023, we can develop courses and hire faculty in Spring 2024 to start in Summer 2024, and begin recruiting and admitting MS in Game Development students for a Fall 2024 launch. We are planning to charge tuition above the campus minimum to account for the added expenses of hiring experienced industry professionals as specialized faculty, as well as the extensive computing and emerging technologies equipment we plan to make available to students. We expect that some of the positions will be filled by people who have academic backgrounds that allow them to also have appointments in our participating departments, particularly in Studio Art. The program, at full capacity, will generate more than enough tuition to cover expenses, and will begin to accrue significant surplus by FY26, with which we will be able to adjust for unforeseen expenses, such as the added cost to establish a program in Chicago, or to invest in additional tenure-track faculty who add to the broad community of game related research and critical game studies.

4. Contracted Research & Development Revenue
As described in the Program Description already groups on and off campus are looking to us for their game development and research interests. Based on on-going discussions and grants we expect this avenue to yield significant self-supporting activity as not just a service unit, but as a collaborating center of interest and partner in research. For example, two GSD-affiliated faculty are partnering with Sandia on a Laboratory Directed Research & Development project on evaluation of war game simulations. Other faculty have requested proposals to develop mobile games for health and an outside organization has requested to partner on a large-scale project for health advocacy. The elegance of this source of income is that it is both supported by and helps to support the MS in Game Development. The infrastructure required for the Master’s is what enables the infrastructure for this capacity and this capacity is what will make the Master’s unique and successful. Master’s students will be involved in real-world transformative game projects and this source of expertise will make those projects possible. And not only will this model fund the resources needed to complete the contracted work, it will enhance the reputation of the U of I for transformative game research AND development, which will in turn generate demand for more projects that can be used to scale the educational programs.

Will the unit need to seek campus or other external resources?
No
Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

Many of the faculty and staff required to offer this Master's program will need to be hired. Existing full time faculty and staff who are developing the program, and who will be responsible for hiring new faculty and staff (along with the cross-campus committee of faculty) include the following:

Judith Pintar - Associate Teaching Professor (iSchool), GSD Program Director
Lisa Bievenue - Director of Informatics Programs
Dan Cermak - Instructor, Industry Liaison and Studio Director
Katryna Starks - Postdoc, Instructor, Program Coordinator

In addition to the above core GSD faculty and staff, specialized faculty will be hired for the Art concentration, and some affiliated faculty in Art & Design will open their courses for MS in Game Development: Art students to enroll in as electives.

Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

In our discussions with personnel in the Library, the understanding and support for popular culture, gaming, and game design includes several members of the Library’s faculty, with one already holding degrees in 3D Animation/Game Design and Media Studies. The Library already holds several of the key textbooks in Game Design, and supports many serials related to Game Studies and Design. The Information Science Librarian (Christopher Bailey) has indicated support for additional resources that may be needed by this degree program.

HLC Section

Credit Hours

| Existing or repackaged curricula (Courses from existing inventory of courses): | Number of Credit Hours: | 0 | Percent of Total: |
| Revised or redesigned curricula (Courses for which content has been revised for the new program): | Number of Credit Hours: | 0 | Percent of Total: |
| New curricula (Courses developed for): | Number of Credit Hours: | 48 |
New Faculty Required

Will new faculty expertise or new faculty members be needed to launch this program?

Yes

Please explain new needs, indicating whether the institution will need to hire new faculty members for this program in order to secure appropriately credentialed people or to have enough faculty members to appropriately support the program.

Additional faculty will be required to offer this program. Some existing faculty will be teaching many of the elective courses, and a few may teach 1 of the required courses, but we expect to require at least two additional specialized faculty positions in Art & Design or a related field.

Note that we plan to hire specialized faculty by design: 1) this allows us to hire non-traditional faculty with industry experience, and 2) we especially do not want to commit to long-term faculty for program such as the MS in Game Development: Art, which needs to evolve with the industry and some turnover of faculty will enable us to keep current. Hiring specialized faculty, however, will not translate to significant cost-savings compared to tenure-track faculty since we will need to keep our salaries competitive with the industry jobs they could otherwise seek.

Additional Funds

Will the proposed program require a large outlay of additional funds by the institution?

No

Institutional Funding

Please explain institutional funding for proposed program:

A FY24 Investment for Growth grant will provide more than $700k funds to hire faculty and staff for this program.

EP Documentation

EP Control Number
EP.24.056

Attach Rollback/Approval Notices
This proposal requires HLC inquiry

**DMI Documentation**

Attach Final Approval Notices

Banner/Codebook Name

Program Code:

<table>
<thead>
<tr>
<th>Minor Code</th>
<th>Conc Code</th>
<th>Degree Code</th>
<th>Major Code</th>
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</table>

Senate Approval Date

Senate Conference Approval Date

BOT Approval Date

IBHE Approval Date

HLC Approval Date

DOE Approval Date

Effective Date:

Attached Document

Justification for this request

Program Reviewer Comments

**Brooke Newell (bsnewell) (08/29/23 3:48 pm):** Rollback: Email sent to Lisa

**Brooke Newell (bsnewell) (09/05/23 8:50 pm):** Rollback: Email sent to Lisa regarding Program of Study table, Instructional Resources section, and Financial Resources section.

**Mary Lowry (lowry) (09/19/23 1:51 pm):** Rollback: Please see email dated 9-19-23

**Brooke Newell (bsnewell) (10/12/23 11:33 am):** Rollback: Per request from Lisa

**Mary Lowry (lowry) (10/24/23 3:33 pm):** Rollback: re phone call

**Mary Lowry (lowry) (11/03/23 4:57 pm):** Rollback: Please see email from 11-3-23

**Mary Lowry (lowry) (11/10/23 10:16 am):** Rollback: Please see email just sent.
PROGRAM TUITION WAIVER POLICY PROPOSAL

Proposals to establish or revise tuition waiver policy for a graduate program will follow a shared governance approval process (Department, School, College, Graduate College).

Definitions of Tuition Waiver Policy Designations:

Traditional Programs. Programs either designated as generating full or base-rate tuition waivers. Base rate waivers waives only the Resident Graduate Base tuition amount. Non-Residents or students in a program with an additional tuition differential will be responsible for the remaining portion of tuition.

Reimbursable Programs. Programs identified as programs that would be reimbursed from an appointing unit outside their academic college.

Cost-recovery and self-supporting programs. Students in approved cost-recovery and self-supporting programs are not eligible to receive tuition and fee waivers except statutory waivers. Students in these programs are not eligible to hold a waiver generating graduate appointment (Assistantship or Fellowship). Full time employees may be admitted to these programs, but their employee waiver is not eligible for use towards a program with this designation.

Additional information related to these tuition waiver designations can be found here: http://www.grad.illinois.edu/gradhandbook/2/chapter7/ tuition-waivers#otherprovisions.

PROGRAM INFORMATION

COLLEGE OR SCHOOL: Graduate College

PROGRAM(s) (Include Program Codes if applicable):
Master of Science in Game Development: Art

REQUESTED DESIGNATION (Select desired designation type):

Self-Supporting

Comments:
The program will be administratively supported by Informatics Programs in the School of
JUSTIFICATION: On a separate sheet, please address the following.

1. Describe the reasons for this request and explain: (a) the pros and cons of the classification requested, and (b) how the requested classification will benefit and not adversely affect the academic quality of the program.

2. What type of financial assistance will be offered to students in the program?

3. Has this program had past practice of offering graduate assistantships? If so, please describe.

4. What provisions will be made to communicate the new classification to prospective and newly admitted students?

APPROVALS: (May use Adobe Signature or print and sign the document)

Department Executive Officer Signature and Date: _________________________________

Disciplinary College Signature and Date: __________________________________________

Graduate College Signature and Date: ____________________________________________
JUSTIFICATION

1. Describe the reasons for this request and explain: (a) the pros and cons of the classification requested, and (b) how the requested classification will benefit and not adversely affect the academic quality of the program.

(a) Because the MS/GD program aims to provide an authentic learning and practice community and environment in game design and it is necessary to employ a number of teaching faculty with industry experience. The industry value and experience of these faculty will demand higher than average teaching faculty salaries and the impact and benefit of those faculty is not likely to reach students outside of the MS/GD program. This is the very definition of a self-contained, self-supported program. One potential downside of this designation is that the program may benefit from the teaching and/or research expertise of the students and will not be able to hire them as Teaching or Research Assistants (TA/RA). This impact is minimal since the Game Studies & Design program includes a graduate minor, from which many talented students can be selected for open TA and RA positions. A second issue is that some students may not be able to afford the costs of tuition without the possibility of a waiver. However, since MS/GD program is specifically designed to prepare students for jobs in the game development industry, the value of this degree for the student includes the likelihood of considerable economic benefit.

(b) The self-supporting designation will provide the needed funding to sustain the program and offer access to world-class expertise.

2. What type of financial assistance will be offered to students in the program?

The program budget is structured to include scholarships for 10% of the students. Scholarships will include both partial and full funding for qualified students who are not otherwise able to pay to participate in the program. In addition, game development companies are being asked to support scholarships in order to promote diversity and inclusivity in the program. Scholarships will be used to promote and maintain diversity.

3. Has this program had past practice of offering graduate assistantships? If so, please describe.

This is a new program.

4. What provisions will be made to communicate the new classification to prospective and newly admitted students?

All recruiting information will include information on the tuition and ineligibility of students for tuition waivers.
Course Change Request

Viewing: **GSD 522 : Tools & Techniques: Contemporary Techniques of 3D Art for Games**

Changes proposed by: Lisa Bievenue

**General Information**

- **Effective Term:** Fall 2024
- **College:** Information Sciences, School of
- **Department/Unit Name (ORG Code):** Illinois Informatics Institute (1468)
- **Course Subject:** Game Studies & Design (GSD)
- **Course Number:** 522
- **Course Title:** Tools & Techniques: Contemporary Techniques of 3D Art for Games
- **Abbreviated Title:** Contmpry Techniq 3D Game Art

**Course Description:**

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**Completed Workflow**

1. **U Course Review**
   - Approved for U Course Review

2. **1468 Head**
   - Approved for 1468 Head

3. **LP Committee Chair**
   - Approved for LP Committee Chair

4. **LP Dean**
   - Approved for LP Dean

5. **Grad Dean**
   - Approved for Grad Dean

6. **COTE**

7. **Provost**

8. **Registrar**

9. **Banner**

**Approval Path**

1. 10/05/23 2:32 pm
   - Brooke Newell (bsnewell): Approved for U Course Review

2. 10/05/23 3:41 pm
   - Karin Readel (kereadel): Approved for 1468 Head

3. 10/06/23 1:03 pm
   - Lisa Bievenue (bievenue): Approved for LP Committee Chair

4. 10/12/23 9:29 am
   - Amber Holmes (aflowers): Approved for LP Dean

5. 10/19/23 10:29 am
   - Mary Lowry (lowry): Approved for Grad Dean

6. 10/20/23 12:22 pm
   - Suzanne Lee

---

https://nextcourses.illinois.edu/courseleaf/courseleaf.cgi?page=/courseadmin/13439/index.html&step=tcadiff&diffversion=6&view=history&_=_1698763…
Advanced techniques for exploring modern 3D artistry for game development. From characters to environments, students will gain a comprehensive skillset in creating immersive game visuals, equipping them with 3D modeling and design to craft captivating game assets, building a strong foundation for Game Art Development. Blender, a powerful 3D creation software used by game development and special effects studios, will be used; students are expected to be familiar with Blender's interface, navigation, and tools.

**Justification**

Justification for change:

The content of this course teaches advanced techniques in 3D art and is designed to prepare students for work in the game development and adjacent industries where 3D art is used for games and game-like features. 3D art is a critical component aspect of the art used in games of all kinds and no other course with this content exists at UIUC. The course supports the proposed Master in Game Development serving as a choice among several required "Tools and Techniques" courses in the proposed Master of Science in Game Development (MGSD). Students in the MSGD Art Concentration will be required to have 12 credits from their choice of GSD 520 sections, 521 (Contemporary Techniques for 2D Art in Games), 522 (this course), and GSD 523 (Contemporary Techniques for 3D Animation in Games).
Courses Information

Course Credit

Course credit:

Undergraduate:

Graduate: 4

Professional:

Justification for Change in Graduate Credit:
This course assumes prior 3D art courses and builds on that to focus specifically games. The content teaches advanced techniques in 3D art and is designed to prepare students for work in the game development and adjacent industries where 3D art is used for games and game-like features. The course supports the proposed Master in Game Development.

Registrar Use Only:

Banner Credit: 4
Billable Hours: 4

Grading Type

Grading type: Letter Grade

Alternate Grading Type (optional):

Available for DFR: No

Repeatability

May this course be repeated? No

Credit Restrictions
Credit Restrictions:

Advisory Statements

Prerequisites:
Credit or concurrent enrollment in GSD 511, or consent of instructor.

Concurrent Enrollment Statement:

Restricted Audience Statement:

Registrar Use Only: Banner Advisory Statement:
Credit or concurrent enrollment in GSD 511, or consent of instructor.

Cross-listing

Cross Listed Courses:

Class Schedule Information

Class Schedule Information:

Fees

Is a fee requested for this course? No

Course Description in the Catalog Entry

This is how the above information will be represented in the Catalog:

Advanced techniques for exploring modern 3D artistry for game development. From characters to environments, students will gain a comprehensive skillset in creating immersive game visuals, equipping them with 3D modeling and design to craft captivating game assets, building a strong foundation for Game Art Development. Blender, a powerful 3D creation software used by game development and special effects studios, will be used; students are expected to be familiar with Blender's interface, navigation, and tools. Course Information: 4 graduate hours. No professional credit. Prerequisite: Credit or concurrent enrollment in GSD 511, or consent of instructor.
Additional Course Notes

Enter any other course information details to be included in the catalog:

Course Detail

Frequency of course:
- Every Fall
- Every Spring

Duration of the course: Full

Anticipated Enrollment: 12

Expected distribution of student registration:
- Graduate: 100%
- Professional: N/A

General Education

General Education Category

Additional Course Information

Does this course replace an existing course? No

Does this course impact other courses? No

Does the addition of this course impact the departmental curriculum? No

Has this course been offered as a special topics or...
other type of experimental course?

Will this course be offered on-line?
  Online and Face-to-Face

Faculty members who will teach this course:
  Jiovanie Velazquez

Course ID: 1012836

Comments to Reviewers:

Course Edits
Proposed by:
  Lisa Bievenue

Course Reviewer
Comments
  **Brooke Newell (09/21/23 10:05 am):** Rollback: Email sent to Lisa regarding requested revisions.
  **Brooke Newell (10/03/23 9:09 pm):** Rollback: Include in the Justification information to Justify the course in terms of new subject matter.
# Course Change Request

**Viewing:** **GSD 540 : Tools & Techniques of Game Production**

Changes proposed by: Lisa Bievenue

## General Information

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<tr>
<th>Effective Term:</th>
<th>Fall 2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>College:</td>
<td>Information Sciences, School of</td>
</tr>
<tr>
<td>Department/Unit Name (ORG Code):</td>
<td>Illinois Informatics Institute (1468)</td>
</tr>
<tr>
<td>Course Subject:</td>
<td>Game Studies &amp; Design (GSD)</td>
</tr>
<tr>
<td>Course Number:</td>
<td>540</td>
</tr>
<tr>
<td>Course Title:</td>
<td>Tools &amp; Techniques of Game Production</td>
</tr>
<tr>
<td>Abbreviated Title:</td>
<td>Tools&amp;Techniq: Game Production</td>
</tr>
<tr>
<td>Course Description:</td>
<td></td>
</tr>
</tbody>
</table>

## Completed Workflow

1. **U Course Review**
   - 09/26/23 8:31 pm
     - Brooke Newell (bsnewell): Approved for U Course Review

2. **1468 Head**
   - 09/27/23 10:06 am
     - Karin Readel (kereadel): Approved for 1468 Head

3. **LP Committee Chair**
   - 09/27/23 2:22 pm
     - Lisa Bievenue (bievenue): Approved for LP Committee Chair

4. **LP Dean**
   - 09/27/23 8:33 pm
     - Catherine Blake (clblake): Approved for LP Dean

5. **Grad Dean**
   - 10/02/23 11:12 am
     - Mary Lowry (lowry): Approved for Grad Dean

6. **Banner**
   - 10/02/23 2:12 pm
     - Suzanne Lee (suzannel):
Allows for affiliated Game Studies & Design faculty to propose and offer new courses on emerging and special game production topics of immediate interest. Students will experience an in-depth exploration of significant and emerging tools, methods, and concepts of game production and development.

**Justification**

**Justification for change:**

This course allows for affiliated Game Studies & Design faculty to propose and offer new courses on emerging and special game production topics of immediate interest. These sections will serve as a choice of several required "Tools and Techniques" courses in the proposed Master of Science in Game Development (MGSD). This course allows for additional topics as they become relevant in game development. Students in the MSGD Production Concentration will be required to have 12 credits from their choice of these GSD 540 sections, 541 (Contemporary Techniques in Game Production), and GSD 549 (Design, Performance, and Production). Requiring students to enroll in special topics of emerging importance in game development will ensure our students graduate on the cutting edge prepared for the jobs of tomorrow.

**Repeatability:** Because the course allows for any number of sections and topics, students may want to have access to multiple sections. The value of the GSD degrees is the innovative interdisciplinary design of the program, and the claim that they can adapt to changes in the game development industry. To be able to stay current with changes, which happen quickly in the game industry, the Game Studies programs need
to be able to quickly adapt and offer new and emerging topics in a timely manner; and this may mean that the sections of this course will be more relevant to students than other courses.

Please Note: a syllabus is required for General Education review:
GSD 540 Syllabus Template.docx

Course Information

Course Credit

Course credit:

Undergraduate: 

Graduate: 1 TO 4

Professional:

Justification for Change in Graduate Credit:
This course supports the innovative and cutting edge nature of the proposed Master in Game Development. Faculty who teach the courses will be responsible for the graduate level rigor with an intent to cover advanced topics not appropriate for students without the required background (e.g., degree in Design or equivalent experience).

Justify variable or differential credit:
Since this special topics course is designed to enable emerging concerns the production of games, the time required to study each concern is unknown. Thus, it is important to allow different sections of GSD 540 to be offered for different credit hours. Some may only require one credit hour to cover the content, others 2, 3, or 4.

Registrar Use Only:

Banner Credit: 1 TO 4
Billable Hours: 1 TO 4
Grading Type

Grading type: Letter Grade

Alternate Grading Type (optional):

Available for DFR: No

Repeatability

May this course be repeated? Yes

Indicate one type for the course:
Special topics, seminars

May students register more than once in the same term? Yes

For how many total hours? Graduate: 8

Is "if topics vary" a qualifier? Yes

Repeatable statement: May be repeated up to 8 hours in same semester or up to 12 hours in separate semesters, if topics vary.

Credit Restrictions

Credit Restrictions:

Advisory Statements

Prerequisites:
Credit or concurrent enrollment in GSD 511, or consent of instructor.

Concurrent Enrollment Statement:
Restricted Audience Statement:

Registrar Use Only:
Banner Advisory Statement:
Credit or concurrent enrollment in GSD 511, or consent of instructor.

Cross-listing

Cross Listed Courses:

Class Schedule Information

Class Schedule Information:

Fees

Is a fee requested for this course? No

Course Description in the Catalog Entry

This is how the above information will be represented in the Catalog:

Allows for affiliated Game Studies & Design faculty to propose and offer new courses on emerging and special game production topics of immediate interest. Students will experience an in-depth exploration of significant and emerging tools, methods, and concepts of game production and development. Course Information: 1 TO 4 graduate hours. No professional credit. May be repeated up to 8 hours in same semester or up to 12 hours in separate semesters, if topics vary. Prerequisite: Credit or concurrent enrollment in GSD 511, or consent of instructor.

Additional Course Notes

Enter any other course information details to be included in the catalog:

Course Detail

Frequency of course:
Every Fall
Every Spring

Duration of the course: Full

Anticipated Enrollment: 10

Expected distribution of student registration:
- Graduate: 100 %
- Professional: N/A

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**General Education**

General Education Category

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**Additional Course Information**

Does this course replace an existing course? No

Does this course impact other courses? No

Does the addition of this course impact the departmental curriculum? No

Has this course been offered as a special topics or other type of experimental course? No

Will this course be offered on-line? Online and Face-to-Face

Faculty members who will teach this course:
- TBD. Any Game Studies & Design faculty affiliate may propose a topic to be offered in this course.

Course ID: 1012815
Comments to
Reviewers:

Course Edits
Proposed by:
Lisa Bievenue

Course Reviewer Comments

Brooke Newell (09/21/23 8:50 pm): Rollback: Email sent to Lisa
Course Change Request

Viewing: **GSD 530: Tools & Techniques of Game Design**

Changes proposed by: Lisa Bievenue

**General Information**

- **Effective Term:** Fall 2024
- **College:** Information Sciences, School of
- **Department/Unit:** Illinois Informatics Institute (1468)
- **Name (ORG Code):** Game Studies & Design (GSD)
- **Course Number:** 530
- **Course Title:** Tools & Techniques of Game Design
- **Abbreviated Title:** Tools & Techniq: Game Design
- **Course Description:**

---

**Completed Workflow**

1. **U Course Review**
   - 09/27/23 9:14 pm
     - Brooke Newell (bsnewell): Approved for U Course Review

2. **1468 Head**
   - 09/28/23 9:52 am
     - Karin Readel (kereadel): Approved for 1468 Head

3. **LP Committee Chair**
   - 09/28/23 9:56 am
     - Lisa Bievenue (bievenue): Approved for LP Committee Chair

4. **LP Dean**
   - 09/28/23 10:55 am
     - Amber Holmes (aflowers): Approved for LP Dean

5. **Grad Dean**
   - 10/02/23 11:09 am
     - Mary Lowry (lowry): Approved for Grad Dean

6. **COTE**
   - 10/02/23 2:11 pm

7. **Provost**

8. **Registrar**

9. **Banner**

**Approval Path**

1. 09/27/23 9:14 pm
   - Brooke Newell (bsnewell): Approved for U Course Review

2. 09/28/23 9:52 am
   - Karin Readel (kereadel): Approved for 1468 Head

3. 09/28/23 9:56 am
   - Lisa Bievenue (bievenue): Approved for LP Committee Chair

4. 09/28/23 10:55 am
   - Amber Holmes (aflowers): Approved for LP Dean

5. 10/02/23 11:09 am
   - Mary Lowry (lowry): Approved for Grad Dean

6. 10/02/23 2:11 pm
   - Suzanne Lee (suzannel):
Allows for affiliated Game Studies & Design faculty to propose and offer new courses on emerging and special game design topics of immediate interest. Students will experience an in-depth exploration of significant and emerging tools, methods, and concepts of game design and game development.

**Justification**

Justification for change:

This course allows for affiliated Game Studies & Design faculty to propose and offer new courses on emerging and special game design topics of immediate interest. These sections will serve as a choice of several required "Tools and Techniques" courses in the proposed Master of Science in Game Development (MGSD). This course allows for additional topics as they become relevant in game development. Students in the MSGD Design Concentration will be required to have 12 credits from their choice of these GSD 530 sections, and 531 (Contemporary Techniques in Game Design). Requiring students to enroll in special topics of emerging importance in game development will ensure our students graduate on the cutting edge prepared for the jobs of tomorrow.

Repeatability: Because the course allows for any number of sections and topics, students may want to have access to multiple sections. The value of the GSD degrees is the innovative interdisciplinary design of the program, and the claim that they can adapt to changes in the game development industry. To be able to stay current with changes, which happen quickly in the game industry, the Game Studies programs need to be able to quickly adapt and offer new and emerging topics in a timely manner; and
this may mean that the sections of this course will be more relevant to students than other courses.

Please Note: a syllabus is required for General Education review:
[link to syllabus]

**Course Information**

**Course Credit**

Course credit:

| Undergraduate: | 1 TO 4 |
| Graduate:     | 1 TO 4 |
| Professional: |        |

**Justification for Change in Graduate Credit:**
This course supports the innovative and cutting edge nature of the proposed Master in Game Development. Faculty who teach the courses will be responsible for the graduate level rigor with an intent to cover advanced topics not appropriate for students without the required background (e.g., degree in Design or equivalent experience).

**Justify variable or differential credit:**
Since this special topics course is designed to enable emerging concerns in game design, the time required to study each concern is unknown. Thus, it is important to allow different sections of GSD 530 to be offered for different credit hours. Some may only require one credit hour to cover the content, others 2, 3, or 4.

**Registrar Use Only:**

| Banner Credit: | 1 TO 4 |
| Billable Hours: | 1 TO 4 |
Grading Type

Grading type: Letter Grade
Alternate Grading Type (optional): 
Available for DFR: No

Repeatability

May this course be repeated? Yes

Indicate one type for the course:
Special topics, seminars

May students register more than once in the same term? Yes

For how many total hours? 
Graduate: 8
Is "if topics vary" a qualifier: Yes

May this course be repeated in separate terms? Yes

For how many total hours? 
Graduate: 12
Is "if topics vary" a qualifier: Yes

Repeatable statement: May be repeated up to 8 hours in same semester or up to 12 hours in separate semesters, if topics vary.

Credit Restrictions

Credit Restrictions:

Advisory Statements

Prerequisites:
Credit or concurrent enrollment in GSD 511, or consent of instructor.

Concurrent Enrollment Statement:
Restricted Audience Statement:

Registrar Use Only: Banner Advisory Statement:
Credit or concurrent enrollment in GSD 511, or consent of instructor.

Cross-listing
Cross Listed Courses:

Class Schedule Information
Class Schedule Information:

Fees
Is a fee requested for this course? No

Course Description in the Catalog Entry
This is how the above information will be represented in the Catalog:

Allows for affiliated Game Studies & Design faculty to propose and offer new courses on emerging and special game design topics of immediate interest. Students will experience an in-depth exploration of significant and emerging tools, methods, and concepts of game design and game development. Course Information: 1 TO 4 graduate hours. No professional credit. May be repeated up to 8 hours in same semester or up to 12 hours in separate semesters, if topics vary. Prerequisite: Credit or concurrent enrollment in GSD 511, or consent of instructor.

Additional Course Notes
Enter any other course information details to be included in the catalog:

Course Detail
Frequency of course:
Every Fall
Every Spring

Duration of the course: Full

Anticipated Enrollment: 10

Expected distribution of student registration:
- Graduate: 100%
- Professional: N/A

General Education

General Education Category

Additional Course Information

- Does this course replace an existing course? No
- Does this course impact other courses? No
- Does the addition of this course impact the departmental curriculum? No
- Has this course been offered as a special topics or other type of experimental course? No
- Will this course be offered on-line? Online and Face-to-Face

Faculty members who will teach this course:
- TBD. Any Game Studies & Design faculty affiliate may propose a topic to be offered in this course.

Course ID: 1012813

Comments to
Reviewers:

Course Edits
Proposed by:
Lisa Bievenue

Course Reviewer
Comments

**Brooke Newell (09/26/23 8:31 pm):** Rollback: Include in Syllabus the learning outcomes that could be applied across all sections of this course.
## Course Change Request

**Viewing: GSD 523: Tools & Techniques: Contemporary Techniques of 3D Animation for Games**

Changes proposed by: Lisa Bievenue

### General Information

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<th>Fall 2024</th>
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</thead>
<tbody>
<tr>
<td>College:</td>
<td>Information Sciences, School of</td>
</tr>
<tr>
<td>Department/Unit</td>
<td>Illinois Informatics Institute (1468)</td>
</tr>
<tr>
<td>Name (ORG Code):</td>
<td>Game Studies &amp; Design (GSD)</td>
</tr>
<tr>
<td>Course Number:</td>
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<tr>
<td><strong>Course Title:</strong></td>
<td>Tools &amp; Techniques: Contemporary Techniques of 3D Animation for Games</td>
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<tr>
<td><strong>Abbreviated Title:</strong></td>
<td>Contmpry Techniq 3D Animation</td>
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</table>

### Approval Path

1. 09/27/23 9:13 pm  
   Brooke Newell (bsnewell): Approved for U Course Review  
2. 09/28/23 9:52 am  
   Karin Readel (kereadel): Approved for 1468 Head  
3. 09/28/23 9:56 am  
   Lisa Bievenue (bievenue): Approved for LP Committee Chair  
4. 09/28/23 10:55 am  
   Amber Holmes (aflowers): Approved for LP Dean  
5. 10/02/23 11:08 am  
   Mary Lowry (lowry): Approved for Grad Dean  
6. 10/02/23 2:11 pm  
   Suzanne Lee
The principles and techniques of creating 3D animation. Students will develop basic skills and knowledge in 3D modeling and rigging, as well as the fundamentals of animation principles. The course will utilize Blender to create a variety of animation projects.

**Justification**

Justification for change:
The content of this course teaches advanced techniques in 3D animation and is designed to prepare students for work in the game development and adjacent industries where 3D animation is used for games and game-like features. The course supports the proposed Master in Game Development serving as a choice among several required "Tools and Techniques" courses in the proposed Master of Science in Game Development (MGSD). Students in the MSGD Art Concentration will be required to have 12 credits from their choice of GSD 520 sections, 521 (Contemporary Techniques for 2D Art in Games), 522 (Contemporary Techniques for 3D Art in Games), and GSD 523 (this course). Animation is a critical component aspect of the art used in games of all kinds and no other course with this content exists at UIUC.

Please Note: a syllabus is required for General Education review:

[GSD 523 Animation.docx](https://nextcourses.illinois.edu/courseleaf/courseleaf.cgi?page=/courseadmin/13480/index.html&step=tcadiff&diffversion=4&view=history&_=1698763...)

History

1. **Oct 6, 2023 by Lisa Bievenue (bievenue)**

   The principles and techniques of creating 3D animation. Students will develop basic skills and knowledge in 3D modeling and rigging, as well as the fundamentals of animation principles. The course will utilize Blender to create a variety of animation projects.
Course Information

Course Credit

Course credit:

Undergraduate:

Graduate: 4

Professional:

Justification for Change in Graduate Credit:
This course assumes prior 3D art courses and builds on that to focus specifically on animation in games. The content teaches advanced techniques in 3D animation.

Registrar Use Only:

Banner Credit: 4

Billable Hours: 4

Grading Type

Grading type: Letter Grade

Alternate Grading Type (optional):

Available for DFR: No

Repeatability

May this course be repeated? No

Credit Restrictions

Credit Restrictions:

Advisory Statements

Prerequisites:
Credit or concurrent enrollment in GSD 511, or consent of instructor.
Concurrent Enrollment Statement:

Restricted Audience Statement:

Registrar Use Only: Banner Advisory Statement:
Credit or concurrent enrollment in GSD 511, or consent of instructor.

Cross-listing

Cross Listed Courses:

Class Schedule Information

Class Schedule Information:

Fees
Is a fee requested for this course? No

Course Description in the Catalog Entry

This is how the above information will be represented in the Catalog:

The principles and techniques of creating 3D animation. Students will develop basic skills and knowledge in 3D modeling and rigging, as well as the fundamentals of animation principles. The course will utilize Blender to create a variety of animation projects. Course Information: 4 graduate hours. No professional credit. Prerequisite: Credit or concurrent enrollment in GSD 511, or consent of instructor.

Additional Course Notes

Enter any other course information details to be included in the catalog:

Course Detail

https://nextcourses.illinois.edu/courseleaf/courseleaf.cgi?page=/courseadmin/13480/index.html&step=tcadiff&diffversion=4&view=history&_=1698763
Frequency of course:
Every Fall
Every Spring

Duration of the course: Full

Anticipated Enrollment: 12

Expected distribution of student registration:
Graduate: 100 %
Professional: N/A

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**General Education**

General Education Category

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**Additional Course Information**

Does this course replace an existing course? No

Does this course impact other courses? No

Does the addition of this course impact the departmental curriculum? No

Has this course been offered as a special topics or other type of experimental course? No

Will this course be offered on-line? Online and Face-to-Face

Faculty members who will teach this course:
TBD, Jiovanie Valezquez and others
Course ID: 1012812

Comments to Reviewers:

Course Edits
Proposed by: Lisa Bievenue

Course Reviewer Comments
Brooke Newell (09/21/23 10:09 am): Rollback: Email sent to Lisa
Brooke Newell (09/26/23 8:52 pm): Rollback: Email sent to Lisa re: Justification
MS in GAME DEVELOPMENT BUDGET NARRATIVE

The attached spreadsheet provides detail on the projected expenses to implement and maintain this MS degree program over a span of 5 years. The Tuition Calc sheet is used to estimate the tuition rate per credit hour, based on a 2-year program limited to 60 students per cohort. The expenses are averaged over a five-year period and include both fringe benefits and overhead. The Overhead Fixed Cost sheet is used to estimate the central expenses to operate the program in order to establish a per credit hour rate of net tuition revenue to be distributed to departments funding the instruction for any course in which the MS in Game Development starts are enrolled. Departments will receive a share of the revenue when any MS in GD students are enrolled in any of their courses at the annually calculated rate (net tuition divided by total enrolled credit hours of MS in Game Development students). The estimate for a per credit hour rate of return to departments is $576. The Growth Projections sheet is used to estimate both startup expenses and growth expenses, expecting to add a second hybrid (online and face to face) program at the Chicago DPI facility with startup in year 4 and program start in year 5. Fringe benefits are not included for the first three years, but are included in years 4 and 5, anticipating the possible shift of responsibility for benefits to the University. Chicago staff salaries are estimated 25% higher than Urbana salaries. Overhead is included and will be used for space, basic IT support, and administrative support (HR, finance, office).

Annual Budget Estimates

To maintain an online program the following annual expenses are expected.

Faculty:

Faculty Program Director (Faculty from one of the primary partnership departments: Information Sciences, Computer Science, Art & Design, Theatre, English.) – This position will be responsible for guidance and direction on potential changes and overall academic integrity of the program. The current program director has been given 1 course release and 1 summer month from the iSchool. We have found that this position requires more time and warrants an additional course release and/or and additional summer month. Included in this budget is 2 summer months, leaving the course release to be supported by the host department. This is a fixed cost required to operate the program.

Tenure-stream faculty – It is anticipated that this program will support 1.0 FTE faculty split among 2-3 departments. The individuals will be faculty in a home department and part of their time will be dedicated to Game Studies. In the Growth Projections sheet this program’s contribution to faculty positions ramps up beginning with 33% of on faculty.

Studio Director – this person will not only be responsible for the operation of the Studio and mentoring students, but also teaching a practicum course in the MS program. Ideally this is a person with extensive industry experience and we expect this will require a higher salary. Since the Studio Director is expected to teach one of the practicum courses, only 50% of this position is considered a fixed cost.
Teaching Faculty – We expect to need six teaching faculty (one for each of the concentrations, and 1 for the core courses) and propose $95,000 salaries for 9/12 contracts. Industry talent will be recruited for these positions, thus requiring competitive salaries.

Staff:

Program Manager (1.0 FTE) – this position is required for overall management of the MS, overseeing and coordinating all staffing functions including recruiting & admissions, advising & student records, course schedule and faculty assignments. This is a fixed cost required to operate the program.

Studio Liaison (1.0 FTE) – this position is required to develop and manage connections with industry studios that will accommodate practicum placements for students in their 2nd year of the program. This is a fixed cost required to operate the program.

Communications (0.5 FTE) – this position will be responsible for all promotion and communication regarding the Game Studies programs. This is a fixed cost required to operate the program.

Recruiting/Admissions (0.5 FTE) – this position will be responsible for recruiting both students and adjunct faculty, as well as managing the admissions process. This is a fixed cost required to operate the program.

Graduate Students:

Teaching Assistants – required to support the 30-60 student core courses

Non-Personnel Expenses

Marketing support from CITL – estimated at $25,000/year and is a fixed cost.

Travel & Conference Registration – required for recruiting and conference travel (the Game Developer’s Conference). This is a fixed cost required to operate the program.

Materials & Supplies – computers and peripherals required for game development in the Studio. This is a fixed cost required to operate the program.

Computer Services – to share, track, and manage development projects. This is a fixed cost required to operate the program.

Space Rental – for the additional staff hired to manage this program. This is a fixed cost required to operate the program.

Tuition Calculations

Tuition is calculated by taking the 5 year annual average cost to offer the program ($2,532,447) divided by the total number of paying students (allowing for 10% program-funded scholarships) for a per student cost of $23,449. Assuming students enroll in 12 credit hours per semester, the estimate for the per credit hour tuition cost is $977. This is within the range of other programs’ online CRN-based tuition rates at UIUC: https://registrar.illinois.edu/online-crn-rates-ay24/. This rate is also in line with other
game development programs, and significantly less than highly ranked programs. For comparison, note the rates for comparable MS programs in Game Design or Development:

- DePaul University (Chicago) – $918/credit hour (https://offices.depaul.edu/student-financial-accounts/tuition-fees-and-other-expenses/tuition/Pages/Tuition-Rates-2023-2024.aspx)
- Full Sail (Florida) – $867/credit hour (https://www.fullsail.edu/admissions/tuition?sortby=campus#breakdown)
- University of Southern California - $2,386/credit hour (https://cinema.usc.edu/admissions/tuition.cfm)
- New York University – $3,007/credit hour (https://www.nyu.edu/students/student-information-and-resources/bills-payments-and-refunds/tuition-and-fees.html?currentOrProspective=current&enrollmentType=graduate&semester=Fall%202023&school=Tisch%20School%20of%20the%20Arts&credits=12)
- Southern Methodist University – $1,628/credit hour (https://www.smu.edu/EnrollmentServices/bursar/CostofAttendance/Graduate/Fall2023-Spring2024; https://catalog.smu.edu/preview_program.php?catoid=25&poid=5107)

Fixed Program Costs

This sheet is used to estimate what the fixed costs will be for the Urbana campus, averaged over 5 years. Personnel required to operate this program include a Faculty Program Director, Studio Director, Program Manager, Studio Liaison, Communications Staff, and Specialized IT support. Other support (HR, Finance, Office) is included as an overhead calculation at 26% (the approved office campus instructional rate). Non-personnel expenses are also included to support online platform fees, computer services, recruitment and professional development. The total estimated cost per year is $872,227.

The net tuition distribution to departments, at a per credit hour rate, is also calculated in this sheet. The total estimated tuition net income for the program is $1,660,220 ($2,532,447 total income, minus the annual fixed cost of $832,091). The per credit hour rate to distribute to departments funding a course in which a MS in Game Development is enrolled is then estimated at $576.47 (the net income after fixed costs divided by total credit hours in which MS in Game Development student are enrolled). The per credit hour rate will be calculated annually based on actual fixed costs, tuition income and enrolled credit hours.

Growth Projections

In this model, year 1 is used to hire required staff, prepare to hire faculty, and establish the studio. This requires:

- Faculty Program Director
- Studio Director (75% of the year)
- Program Manager (75% of the year)
- Student Services/Advisor (25% of the year)
• Communications (33% of the year)
• Travel, Materials, Computer Services, Conference Registration

In year 2 each of those positions increases to the full year, plus faculty are added:

• 1 tenure stream faculty with expenses shared with department (Art & Design in year 2, Information Sciences in year 3, unnamed in year 4)
• 3 teaching faculty, increased to 6 in year 3 when there are 2 cohorts
• 3 TAs
• Online learning support (CITL), Increased Travel, Materials, Computer Services, Conference Registration

In year 4 Urbana cohorts increase to 75 students and expansion to Chicago begins (adjust salaries by 25% for COLA in Chicago):

• Studio Director (75% of the year)
• Program Manager (75% of the year)
• Student Services/Advisor (25% of the year)
• Communications (33% of the year)
• Travel, Materials, Computer Services, Conference Registration

In year 5 a new cohort is added in Chicago:

• Staffing costs increase to full annual salaries
• 3 teaching faculty, to be increased to 6 in year 6
• 3 TAs
• Online learning support, Increased Travel, Materials, Computer Services, Conference Registration
### A. Senior Personnel

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Applicable F&amp;A Rate</th>
<th>Applicable F&amp;A Basis</th>
<th>Tuition Remission Rate</th>
<th>MTDC</th>
<th>Fringe Benefit Rate (SURS)</th>
<th>Fringe Benefit Rate (GRA ≥ Half Time Enrollment)</th>
<th>Fringe Benefit Rate (GRA &lt; Half Time Enrollment)</th>
<th>Fringe Benefit Rate (Student Hourly ≥ Half Time Enrollment)</th>
<th>Fringe Benefit Rate (Non-SURS &amp; Student Hourly &lt; Half Time Enrollment)</th>
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<td>$ 2,128</td>
<td>$ 2,185</td>
<td>$ 2,251</td>
<td>$ 106,184</td>
<td>$ 743,279</td>
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<td>Faculty Salary</td>
<td>$ 2,000</td>
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### B. Other Personnel

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<th>Applicable F&amp;A Rate</th>
<th>Applicable F&amp;A Basis</th>
<th>Tuition Remission Rate</th>
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<th>Fringe Benefit Rate (SURS)</th>
<th>Fringe Benefit Rate (GRA ≥ Half Time Enrollment)</th>
<th>Fringe Benefit Rate (GRA &lt; Half Time Enrollment)</th>
<th>Fringe Benefit Rate (Student Hourly ≥ Half Time Enrollment)</th>
<th>Fringe Benefit Rate (Non-SURS &amp; Student Hourly &lt; Half Time Enrollment)</th>
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### C. Fringe Benefits

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<td>Fringe Benefit Rate (Non-SURS &amp; Student Hourly &lt; Half Time Enrollment)</td>
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<td>Off Campus</td>
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### A. Senior Personnel

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<tr>
<th>Activity Type</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
<th>Period 4</th>
<th>Period 5</th>
<th>Total</th>
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<tbody>
<tr>
<td>Faculty Program Dire Salary</td>
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<td>$20,600</td>
<td>$21,218</td>
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<tr>
<td>Studio Dir/Instr (50%) Salary</td>
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<td>Teaching Prof Salary</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
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<tr>
<td>Core reqs + electives Fringe</td>
<td>$-</td>
<td>$-</td>
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<tr>
<td>Salary</td>
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<td>$-</td>
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</tr>
<tr>
<td>Fringe</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
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### B. Other Personnel

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
<th>Period 4</th>
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<td>$-</td>
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<tr>
<td>Fringe</td>
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<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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<tr>
<td>Student Services Salary</td>
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<td>0.00%</td>
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<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Studio Liaison Salary</td>
<td>$100,000</td>
<td>$103,000</td>
<td>$106,090</td>
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<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Communications Salary</td>
<td>$35,000</td>
<td>$36,050</td>
<td>$37,132</td>
<td>$38,246</td>
<td>$39,393</td>
<td>$185,821</td>
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<td>0.00%</td>
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<tr>
<td>Recruiting/Admission Salary</td>
<td>$35,000</td>
<td>$36,050</td>
<td>$37,132</td>
<td>$38,246</td>
<td>$39,393</td>
<td>$185,821</td>
</tr>
<tr>
<td>Fringe</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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<tr>
<td>Other Professional Salary</td>
<td>$-</td>
<td>$-</td>
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<tr>
<td>Fringe</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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<td>$23,400</td>
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<td>9.82%</td>
<td>9.82%</td>
<td>9.82%</td>
<td>9.82%</td>
<td>9.82%</td>
<td>9.82%</td>
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<tr>
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<td>17.47%</td>
<td>17.47%</td>
<td>17.47%</td>
<td>17.47%</td>
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<tr>
<td>Student Hourly Salary</td>
<td>$-</td>
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<td>Fringe ≥ Half Time Enrollment</td>
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<td>9.82%</td>
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<tr>
<td>Fringe &lt; Half Time Enrollment</td>
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<td>17.47%</td>
<td>17.47%</td>
<td>17.47%</td>
<td>17.47%</td>
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<tr>
<td>Admin. Salary*</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
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<tr>
<td>Fringe</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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<tr>
<td>Non-SURS Employee Salary</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td>Fringe</td>
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<td>7.66%</td>
<td>7.66%</td>
<td>7.66%</td>
<td>7.66%</td>
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<tr>
<td>Subtotal Salary</td>
<td>$310,200</td>
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<td>$329,092</td>
<td>$338,965</td>
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<tr>
<td>Fringe</td>
<td>$6,894</td>
<td>$7,100</td>
<td>$7,313</td>
<td>$7,533</td>
<td>$7,759</td>
<td>$36,599</td>
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</table>

### C. Fringe Benefits

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
<th>Period 4</th>
<th>Period 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Personnel Fringe</td>
<td>$6,894</td>
<td>$7,100</td>
<td>$7,313</td>
<td>$7,533</td>
<td>$7,759</td>
<td>$36,599</td>
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### D. Equipment

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Total Fringe</td>
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### E. Travel - Domestic

<table>
<thead>
<tr>
<th>Activity Type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Total Fringe</td>
<td>$2,588,050</td>
</tr>
</tbody>
</table>

- Inflation Rate - Expenses 3.00%
- Inflation Rate - Salaries 3.00%
- Tuition Remission Rate 64.00%
- Fringe Benefit Rate (SURS) 0.00%
- Fringe Benefit Rate (GRA ≥ Half Time Enrollment) 9.82%
- Fringe Benefit Rate (GRA < Half Time Enrollment) 17.47%
- Fringe Benefit Rate (Student Hourly ≥ Half Time Enrollment) 0.01%
- Fringe Benefit Rate (Non-SURS & Student Hourly < Half Time Enrollment) 7.66%
- Fringe Benefit Rate (Non-SURS Employee) 0.00%
- Student Hourly Salary 6,894$ - 7,100$ per period
- Graduate Assistant(s) Salary 22,600$ - 23,000$ per period
- Postdoctoral Research Salary 6,894$ - 7,100$ per period

Total:
- $2,588,050 for Travel - Domestic
- $2,596,050 for Equipment
- $2,586,050 for All Personnel

SPA v.20220131

Last Updated: 2/1/2024
<table>
<thead>
<tr>
<th></th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
<th>Period 4</th>
<th>Period 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel - International</td>
<td>$</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
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<td>- $</td>
</tr>
<tr>
<td>F. Participant Support Costs</td>
<td>$</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Other Direct Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Materials &amp; Supplies</td>
<td>$ 40,000</td>
<td>$ 41,200</td>
<td>$ 42,436</td>
<td>$ 43,709</td>
<td>$ 45,020</td>
<td>$ 212,365</td>
</tr>
<tr>
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<td>$</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
</tr>
<tr>
<td>Consultant Services (Professional Servi</td>
<td>$ 25,000</td>
<td>$ 25,750</td>
<td>$ 26,523</td>
<td>$ 27,319</td>
<td>$ 28,139</td>
<td>$ 132,731</td>
</tr>
<tr>
<td>Computer Services</td>
<td>$</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
</tr>
<tr>
<td>Computer Services - Exempt (Cloud Co</td>
<td>$ 25,000</td>
<td>$ 25,750</td>
<td>$ 26,523</td>
<td>$ 27,319</td>
<td>$ 28,139</td>
<td>$ 132,731</td>
</tr>
<tr>
<td>Subaward: 1</td>
<td>$</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
</tr>
<tr>
<td>Subaward: 2</td>
<td>$</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
<td>- $</td>
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<tr>
<td>Exempt Subaward Costs (&gt;25k)</td>
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<td>- $</td>
<td>- $</td>
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<tr>
<td>Subtotal Other-Other</td>
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<td>$ 61,800</td>
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<td>$ 65,563</td>
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<td>$ 318,547</td>
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<tr>
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<td>$ 154,500</td>
<td>$ 159,136</td>
<td>$ 163,910</td>
<td>$ 168,828</td>
<td>$ 796,374</td>
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<tr>
<td>H. Total Direct Costs</td>
<td>$ 657,094</td>
<td>$ 676,806</td>
<td>$ 697,112</td>
<td>$ 718,027</td>
<td>$ 739,569</td>
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<td>$ 651,056</td>
<td>$ 670,589</td>
<td>$ 690,708</td>
<td>$ 711,430</td>
<td>$ 3,355,877</td>
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<tr>
<td>I. Total Indirect (F&amp;A) Costs</td>
<td>$ 164,344</td>
<td>$ 169,275</td>
<td>$ 174,353</td>
<td>$ 179,584</td>
<td>$ 184,972</td>
<td>$ 872,528</td>
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<tr>
<td>J. Total Direct and F&amp;A Costs</td>
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<td>$ 846,081</td>
<td>$ 871,465</td>
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<td>$ 924,541</td>
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### A. Senior Personnel

<table>
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<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
<th>Period 4</th>
<th>Period 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Program Dir Salary</td>
<td>$ 20,000</td>
<td>$ 20,600</td>
<td>$ 21,218</td>
<td>$ 21,855</td>
<td>$ 22,511</td>
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<td>2 summer months Fringe</td>
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<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
<td></td>
</tr>
<tr>
<td>Studio Dir/Instr Salary</td>
<td>$ 105,000</td>
<td>$ 144,164</td>
<td>$ 148,489</td>
<td>$ 296,329</td>
<td>$ 354,447</td>
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<tr>
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<td>Core reqs + electives Fringe</td>
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<td>42.32%</td>
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<td></td>
</tr>
<tr>
<td>Subtotal Salary</td>
<td>$ 100,833</td>
<td>$ 396,781</td>
<td>$ 408,686</td>
<td>$ 558,658</td>
<td>$ 918,012</td>
<td>$ 2,382,970</td>
</tr>
<tr>
<td>Fringe</td>
<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$ 131,162</td>
<td>$ 446,901</td>
<td>$ 408,686</td>
<td>$ 770,876</td>
<td>$ 1,269,119</td>
<td>$ 3,026,744</td>
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### B. Other Personnel

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
<th>Period 4</th>
<th>Period 5</th>
<th>Total</th>
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<tbody>
<tr>
<td>Program Coordinator Salary</td>
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<td>$ 82,379</td>
<td>$ 84,851</td>
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<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
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</tr>
<tr>
<td>Student Services Salary</td>
<td>$ 17,500</td>
<td>$ 72,100</td>
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<td>$ 177,268</td>
<td>$ 441,525</td>
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<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
<td></td>
</tr>
<tr>
<td>Studio Liaison Salary</td>
<td>$ 100,000</td>
<td>$ 103,000</td>
<td>$ 106,090</td>
<td>$ 245,864</td>
<td>$ 554,954</td>
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<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
<td></td>
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<tr>
<td>Communications Salary</td>
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<td>42.32%</td>
<td>42.32%</td>
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<tr>
<td>Admissions/Recruiting Salary</td>
<td>$ 11,667</td>
<td>$ 36,051</td>
<td>$ 37,133</td>
<td>$ 54,183</td>
<td>$ 88,637</td>
<td>$ 227,671</td>
</tr>
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<td>Fringe</td>
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<td></td>
</tr>
<tr>
<td>Graduate Assistant(s) Salary</td>
<td>$23,400</td>
<td>$ 70,200</td>
<td>$ 72,306</td>
<td>$ 74,475</td>
<td>$ 115,064</td>
<td>$ 332,045</td>
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<td>9.82%</td>
<td>9.82%</td>
<td>9.82%</td>
<td></td>
</tr>
<tr>
<td>Subtotal Salary</td>
<td>$ 100,833</td>
<td>$ 396,781</td>
<td>$ 408,686</td>
<td>$ 558,658</td>
<td>$ 918,012</td>
<td>$ 2,382,970</td>
</tr>
<tr>
<td>Fringe</td>
<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
<td>42.32%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$ 131,162</td>
<td>$ 446,901</td>
<td>$ 408,686</td>
<td>$ 770,876</td>
<td>$ 1,269,119</td>
<td>$ 3,026,744</td>
</tr>
</tbody>
</table>

### C. Fringe Benefits

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
<th>Period 4</th>
<th>Period 5</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>All Personnel Fringe</td>
<td>$ 30,329</td>
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### D. Equipment

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<thead>
<tr>
<th>Activity Type</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
<th>Period 4</th>
<th>Period 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials &amp; Supplies</td>
<td>$ 20,000</td>
<td>$ 20,600</td>
<td>$ 21,218</td>
<td>$ 21,855</td>
<td>$ 22,511</td>
<td>$ 106,184</td>
</tr>
</tbody>
</table>

### G. Other Direct Costs

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
<th>Period 4</th>
<th>Period 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publication / Dissemination</td>
<td>$ 20,000</td>
<td>$ 41,200</td>
<td>$ 42,436</td>
<td>$ 43,709</td>
<td>$ 90,040</td>
<td>$ 237,385</td>
</tr>
<tr>
<td>Consultant Services (Professional Servi)</td>
<td>$ 25,000</td>
<td>$ 25,750</td>
<td>$ 26,523</td>
<td>$ 27,319</td>
<td>$ 104,592</td>
<td></td>
</tr>
<tr>
<td>Computer Services</td>
<td>$ 25,000</td>
<td>$ 25,750</td>
<td>$ 26,523</td>
<td>$ 27,319</td>
<td>$ 104,592</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 1</td>
<td>Period 2</td>
<td>Period 3</td>
<td>Period 4</td>
<td>Period 5</td>
<td>Total</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>Computer Services - Exempt (Cloud Co)</td>
<td>$10,000</td>
<td>$25,600</td>
<td>$26,368</td>
<td>$27,159</td>
<td>$41,961</td>
<td>$131,088</td>
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<tr>
<td>Other</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td>Space Rental</td>
<td>$50,000</td>
<td>$51,500</td>
<td>$53,045</td>
<td>$136,590</td>
<td>$291,135</td>
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<tr>
<td>Conference Registration</td>
<td>$3,000</td>
<td>$5,150</td>
<td>$5,305</td>
<td>$5,464</td>
<td>$11,256</td>
<td>$30,175</td>
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<tr>
<td>Subtotal Other-Other</td>
<td>$3,000</td>
<td>$55,150</td>
<td>$56,805</td>
<td>$58,509</td>
<td>$147,846</td>
<td>$321,310</td>
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<tr>
<td>Total Other Direct Costs</td>
<td>$33,000</td>
<td>$146,950</td>
<td>$151,359</td>
<td>$155,900</td>
<td>$307,166</td>
<td>$794,375</td>
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<tr>
<td>H. Total Direct Costs</td>
<td>$289,162</td>
<td>$1,093,615</td>
<td>$1,419,852</td>
<td>$2,466,724</td>
<td>$4,262,869</td>
<td>$9,532,223</td>
</tr>
<tr>
<td>MTDC Base Cost</td>
<td>$279,162</td>
<td>$1,018,015</td>
<td>$1,341,984</td>
<td>$2,386,520</td>
<td>$4,084,318</td>
<td>$9,110,000</td>
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<tr>
<td>I. Total Indirect (F&amp;A) Costs</td>
<td>$72,582</td>
<td>$264,684</td>
<td>$348,916</td>
<td>$620,495</td>
<td>$1,061,923</td>
<td>$2,368,600</td>
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<tr>
<td>J. Total Direct and F&amp;A Costs</td>
<td>$361,744</td>
<td>$1,358,299</td>
<td>$1,768,768</td>
<td>$3,087,219</td>
<td>$5,324,792</td>
<td>$11,900,823</td>
</tr>
</tbody>
</table>