Date Submitted: 01/19/23 11:45 am

Viewing: **BS-GDEM BS-GEM** : Bachelor of

Science in Game Design and Experiential Media

Last approved: 12/09/22 11:52 am

Last edit: 01/24/23 1:04 pm

Changes proposed by: zsulliv1

Program Status Active

Requestor Name <u>Zack Sullivan</u> Carly Kocurek E-mail

zsulliv1@iit.edu ckocurek@iit.edu

Origination Date <u>2023-1-19</u> 2022-10-

21

Is this an Yes

interdisciplinary

program?

Academic Unit Humanities

College Lewis College of Science and Letters

Contributing
Academic Unit(s)

Academic Units

Information Technology & Mgmt

Institute of Design

Program Title

Bachelor of Science in Game Design and Experiential Media

Effective Academic 2023 - 2024 Effective Term

Year Fall 2023

Academic Level Undergraduate

Program Type Degree

Degree Type

Bachelor of Science (BS)

CIP Code

In Workflow

- LS Interdisciplinary
 Curriculum
 Committee Chair
- 2. Academic Affairs
- 3. Undergraduate Academic Affairs
- 4. LS Dean
- 5. Undergraduate Studies Committee Chair
- 6. Faculty Council
 Chair
- 7. Academic Affairs

Approval Path

- 1. 01/19/23 11:46 am
 Carly Kocurek
 (ckocurek):
 Approved for LS
 Interdisciplinary
 Curriculum
 Committee Chair
- 2. 01/24/23 1:04 pm Patty Johnson Winston (winston): Approved for Academic Affairs
- 3. 01/25/23 3:26 pm Joseph Gorzkowski (jgorzkow): Approved for Undergraduate Academic Affairs
- 4. 02/02/23 1:08 pm Jennifer deWinter (jdewinter): Approved for LS Dean

History

$\underline{09.0702}$ $\underline{50.0411}$ - $\underline{Digital\ Communication\ and\ Media/Multimedia.}$ $\underline{Game\ and\ Interactive\ Media}$ $\underline{Design.}$

Program Code <u>BS-GDEM</u> BS-GEM

Program Attribute

Total Program 126

Credit Hours

Please provide a summary and rationale for the requested program revision.

This update is a minor change of the CIP code that is being made on the advice of the program committee and Vice President for Enrollment Management and Student Affairs Mallik

Sundharam. The new CIP code better reflects the significant curricular involvement and input of both ITM and Psychology and is STEM-aligned.

Program Narrative and Justification

Narrative description of how the institution determined the need for the program. For example, describe what need this program will address and how the institution became aware of that need. If the program is replacing a current program(s), identify the current program(s) that is being replaced by the new program(s) and provide details describing the benefits of the new program(s). If the program will be offered in connection with, or in response to, an initative by a governmental entity, provide details of that initiative.

Game Design and Experiential Media (GEM) is an established academic and professional field. In 2021, the video game market in the U.S. alone totaled nearly 86 billion, showing strong growth even during the global pandemic and more than doubling in the past decade. Illinois is in the top 10 markets for game design job postings. Burning Glass analysis shows a strong need for creative, collaborative (more than 50% of postings), communication (more than 37% of postings), and problem solving (18% of postings) skills alongside technical proficiencies. Illinois Tech is uniquely situated to offer a program in this area given its role as the only technical university in Chicago, making the planned degree distinct from those offered by area schools like Columbia and DePaul. Particularly strong growth is projected for jobs in quality assurance, Unreal Engine development, prototyping, and level design. Given that most jobs in this field require a bachelor's degree, a B.S. is an ideal degree for this field. Additionally, this is a degree well suited to articulation with local CC curricula and should well serve students who have completed an A.A. or A.S. degree and wish to continue towards a B.S. Burning Glass projects a growth of 9.3% in the number of game design jobs over the next decade. 97% of advertised positions in game and interactive design require a bachelor's degree. Current starting salaries average \$77,879 for those with 2 or fewer years of experience, increasing to \$89,630 for those with 3-5 years of experience, and then \$99,021 for those with 6 or more years of experience, indicating strong earnings potential for graduates. Game and Interactive Media Design is also a recognized academic discipline. WPI established the first degree in this area (under the name Interactive Media and Game Design) in 2005. Today, there are programs in all 50 states in the U.S., including advanced graduate degree programs, with prominent programs including those at the University of Southern California, New York University, and Rochester Institute of Technology. Professional and academic organizations in the field often overlap, as exemplified by Foundations of Digital Games (FDG) and Digital Games Research Association (DiGRA). The International Game Developers Association (IGDA) is the largest professional organization, and Illinois Tech students have recently established a student chapter—the only campus chapter in the Chicago area at this time.

Game and Interactive Media Design is a field that Illinois Tech students already demonstrate significant interest in. The humanities department has offered a minor in Game Studies and Design for several years. While the number of students completing the minor has been relatively small (likely due to difficulties with course scheduling), interest in the required courses has been substantial; HUM 371 Fundamentals of Game Design, for example, has had a waitlist every time it has been offered, and HIST 373 History of Video Games generally fills 60 to 80 seats depending on the size of the class. Students have expressed strong interest in additional educational opportunities related to game design, and there's an increase in related activity on campus, including the gamebIITes exhibit of student games, the IPRO Game Lab, the Illinois Tech eSports program, and student clubs dedicated to games ranging from chess to Warhammer. Students have also formed an Illinois Tech chapter of the IGDA.

The proposed program addresses this existing student interest and will appeal to students

who may currently choose other technical universities over Illinois Tech; currently, we are one Narrative description of how the program was designed to meet local market needs, or for an online program, of a very few technical universities that does not have a program in the proposed degree is to be housed in the Humanities Department as a collaboration systems Information was used, and/or if State, regional, or local workforce agencies were consulted. Include how between Humanities Department are regional, or local workforce agencies were degree, the course content, program length, academic fevel, admission requirements, and prerequisites were decided; will use a shared model detailed in section 8 of this proposal, including information received from potential employers about course content; and information regarding the target students and employers.

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The committee solicited reviews from field leaders including both professionals in the games industry and leaders of similar academic programs; this feedback was incorporated into the degree plan.

Narrative description of any wage analysis the institution may have performed, including any consideration of Bureau of Labor Statistics wage data related to the new program.

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Narrative description of how the program was reviewed or approved by, or developed in conjunction with, one or more of the following: a) business advisory committees; b) program integrity boards; c) public or private oversight or regulatory agencies (not including the state licensing/authorization agency and accrediting agency); and d) businesses that would likely employ graduates of the program. For example, describe the steps taken to develop the program, identify when and with whom discussions were held, provide relevant details of any proposals or correspondence generated, and/or describe any process used to evaluate the program.

An initial program was developed by a program committee convened by ITM faculty member Jeremy Hajek. This committee consisted of Hajek, ITM faculty member James Papademas, and Humanities faculty member Carly Kocurek. Input was also sought from ID interim dean Anijo Matthew.

After completing the initial program development, the committee solicited reviews from field leaders including both professionals in the games industry and leaders of similar academic programs; this feedback was incorporated into the degree plan.

What are the enrollment estimates?

Year 1 10 Year 2 20 Year 3 40

Attach Additional GAIM Proposal 452022.docx

Program
Justification
Document(s)

Academic Information

Advising

Since quality advising is a key component of good retention, graduation, and career placement, how will students be mentored? What student professional organizations will be formed? How will the department work with the Career Services office to develop industry connections?

- Program Committee (faculty). Responsible for the content of curriculum. Runs program assessment. Updates curriculum based on assessment results. Supports professional development activities for students on campus and works with related student organizations to help support the campus ecosystem for GEM. This committee should have a minimum of 3 members with at least one drawn from each of HUM, ID, and ITM. Committee will report on program to the chairs of HUM, ID, and ITM and the dean of Lewis College.
- Program Adviser (staff). Responsible for front-line advising of students to ensure students understand degree requirements and take the necessary courses. Points students to other resources, including program committee members, when they need specialized or additional support. Tracks majors through graduation.

Program Resources

Which program resources are necessary to offer this program?

Proposed Bulletin Entry

Admission

Requirements

Illinois Tech requires a four-year bachelor's degree* conferred with a minimum cumulative undergraduate grade-point average of 3.0/4.0 (or its equivalent) from an accredited institution for regular admission. GEM has no additional admission requirements.

Course Requirements

Required Courses

Course Requirement		(38)
LCHS 100	Introduction to the Professions	2
HUM 371	Fundamentals of Game Design	3
HUM 372	Interactive Storytelling	3
HIST 373	History of Video Games	3
HUM 374	Game Design Level 2	3
COM 424	Document Design	3
<u>ITM 311</u>	Introduction to Software Development	3
<u>ITMO 356</u>	Introduction to Open Source Operating Systems	3

<u>ITMD 361</u>	Fundamentals of Web Development	3
<u>ITMD 362</u>	Human-Computer Interaction and Web Design	3
<u>ID 410</u>	Introduction to Design Processes	3
HUM 400	Game and Interactive Media Design Capstone 1	3
HUM 401	Game and Interactive Media Design Capstone 2	3
Ethics Requirement		(3)
Select one course from	om the following	3
PHIL 374	Ethics in Computer Science	3
PHIL 381	Artificial Intelligence, Philosophy and Ethics	3
Graphics Requireme	ent	(6)
Select 2 courses from	m the following; select Columbia partnership classes also applicable based on adviser	6
approval.		
EG 225	Engineering Graphics for Non-Engineers	3
EG 325	Advanced Engineering Graphics for Non-Engineers	3
EG 425	Computer Graphics for Non-Engineers	3
Technical Electives		(12)
Select 4 courses from	m the following	12
<u>COM 421</u>	Technical Communication	3
<u>COM 425</u>	Editing	3
<u>HUM 352</u>	Gender and Technological Change	3
<u>HUM 375</u>	Practical Magic: Designing Entertainment Experiences.	3
<u>HUM 380</u>	Topics in Humanities	3
<u>IDN 506</u>	Research Planning and Execution	1.5
<u>IDX 560</u>	Introduction to Design Thinking	3
<u>ITMD 455</u>	Open-Source Intelligent Device Applications	3
<u>ITMT 492</u>	Introduction to Smart Technologies	3
<u>ITMD 413</u>	Open Source Programming	3
<u>ITMD 441</u>	Web Application Foundations	3
STEM Module		(16)
Select 16 credit hour	rs from the following ¹	16
Choose 5-6 credit	t hours of Mathematics	
Choose 10-11 cre	edit hours of Natural Science or Engineering	
Interprofessional Pro	ojects (IPRO)	(6)
See Illinois Tech Cor	<u>e Curriculum, section E</u>	6
Humanities and Soc	ial Science Requirements	(21)
See Illinois Tech Cor	<u>e Curriculum, sections B and C</u>	21
Free Electives		(24)
Select 24 credit hour	rs of free electives	24
Total Credit Hours		126
Computer Science C	ore Curriculum is fulfilled in course requirements	
computer science C	ore curricularit is fulfilled in course requirefficitis	

Sample

Curriculum/Program

Requirements

Bachelor of Science in Game Design and Experiential Media Curriculum

			Year 1
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
<u>LCHS 100</u>	2	<u>ITM 311</u>	3
GRAPHICS CLUSTER ¹	3	HUM 371	3
ITMO 356	3	GRAPHICS CLUSTER	3
MATH	3	FREE ELECTIVE	3
HUM/SS	3	SCIENCE	5
FREE ELECTIVE	3		
	17		17
			Year 2
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
HIST 373	3	ETHICS REQUIREMENT ²	3
ITMD 361	3	COM 424	3
MATH	3	<u>HUM 372</u>	3
FREE ELECTIVE	3	<u>ITMD 362</u>	3
HUM/SS	3	SCIENCE	5
	15		17
			Year 3
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
IPRO	3	IPRO	3
HUM/SS	3	HUM/SS	3
FREE ELECTIVE	3	HUM 374	3
FREE ELECTIVE	3	FREE ELECTIVE	3
TECHNICAL ELECTIVE	3	TECHNICAL ELECTIVE	3
	15		15
			Year ²
Semester 1	Credit	Semester 2	Credit
	Hours		Hours
HUM 400	3	<u>HUM 401</u>	3
TECHNICAL ELECTIVE	3	TECHNICAL ELECTIVE	3
HUM/SS	3	HUM/SS	3
<u>ID 410</u>	3	HUM/SS	3
FREE ELECTIVE	3	FREE ELECTIVE	3
	15		15
Total Credit Hours: 126			-
1			

See GEM Graphics Cluster list for possible courses

See degree requirements for course options

Program Outcomes and Assessment Process

What are the learning goals for this program?

Learning goal	Courses/student work used to assess achievement of this goal
Collaboratively create games and/or experiential media projects.	Portfolio artifacts; final projects from HUM 371 (game and post mortem), 372 (game and post mortem; self and peer eval), 374 (game and post mortem; self and peer eval), ID 410 (report), ITM (post mortem
2. Proficiently apply creative processes such as agile, scrum, peer review, iterative design, and/or other emerging industry standards.	Portfolio artifacts; final projects from HUM 371 (game and post mortem; self and peer eval), 372 (game and post mortem; self and peer eval), 374 (game and post mortem; self and peer eval), ID 410 (design project and reflection), ITM (design project), capstone (game and report)
3. Analyze games and interactive media in their ethical, cultural, and professional contexts.	Portfolio artifacts; final projects from ITP (industry analysis; game and post mortem), HUM 372 (narrative analysis), HIST 373 (essay and exams), PHIL 3XX (paper and exams),

In what semesters will the data be collected to assess this learning goal, and by whom?

Capstones and portfolios will be collected and assessed by the steering committee each year.

Course artifacts will be assessed on a rotating basis.

- Year 1: ITMO 356, ITM 311, HUM 371
- Year 2: HIST 373, ITM 361
- Year 3: HUM 374, ITMD 362
- Year 4: ID 410, HUM 372

Faculty for the courses scheduled for assessment will be asked to collect student work (projects or exams) with which the course can be assessed. For smaller classes (<24 students), a full set is requested. For larger classes, a random subset (20%) should be chosen.

Data analysis will be conducted by steering committee.

Provide the name of the rubric that

will be used to assess the extent to which students are achieving this learning goal.

GAIM Rubric for assessment

How often and by whom will the data be analyzed? What benchmarks or targets will be used to interpret your results?

The program will aim for 90% or higher of portfolio projects to rank at a 4 or higher. Course assessments will be used to ensure students are gaining the fundamental skills they need to complete high-level capstone and portfolio work.

Assessment results will be used to revise curriculum at the course and program level and to inform development of cocurricular supports and opportunities.

Data analysis will be conducted by steering committee.

Briefly describe the process that will be used to share the results with faculty and use these to motivate program improvement.

Assessment results will be included in the annual report distributed to program faculty and relevant unit heads. The steering committee will initiate and support needed curricular changes.

Attach Additional
Assessment
Document(s)

GAIM Proposal 452022.docx

Undergraduate Program Requirements

Undergraduate Degree Requirements

Minimum credit

126

hours

Specialization required?

No

Minor required?

No

Proposed General Curriculum

List Major Course Requirements Courses required for all students Course Requirement (38)**LCHS 100** Introduction to the Professions 2 3 **HUM 371** Fundamentals of Game Design Interactive Storytelling 3 **HUM 372** 3 **HIST 373** History of Video Games 3 **HUM 374** Game Design Level 2 COM 424 **Document Design** 3 Introduction to Software Development 3 ITM 311 3 Introduction to Open Source Operating Systems ITMO 356 3 ITMD 361 Fundamentals of Web Development **ITMD 362** Human-Computer Interaction and Web Design 3 Introduction to Design Processes 3 <u>ID 410</u> **HUM 400** Game and Interactive Media Design Capstone 1 3 3 **HUM 401** Game and Interactive Media Design Capstone 2 **Ethics Requirement** 3 (3)Choose 1 from the following 3 **PHIL 374 Ethics in Computer Science** 3 **PHIL 381** Artificial Intelligence, Philosophy and Ethics **Graphics Requirement** (6)6 Choose 2 from the following EG 225 **Engineering Graphics for Non-Engineers** 3 EG 325 Advanced Engineering Graphics for Non-Engineers 3 EG 425 Computer Graphics for Non-Engineers 3 Technical Electives (12)12 Choose 4 from the following **Technical Communication** COM 421 3 3 COM 425 **Editing** 3 **HUM 352** Gender and Technological Change Practical Magic: Designing Entertainment Experiences. 3 **HUM 375** 3 HUM 380 Topics in Humanities 1.5 IDN 506 Research Planning and Execution IDX 560 Introduction to Design Thinking 3 ITMD 445 Web Real-Time Communication 3 <u>ITMD 413</u> **Open Source Programming** 3 <u>ITMD 441</u> Web Application Foundations 3 Introduction to Smart Technologies 3 <u>ITMT 492</u> See Illinois Tech Core Curriculum, section D 5

List Mathematics Requirements List Science Requirements See Illinois Tech Core Curriculum, section D Some students may fulfill part of this requirement with graphics cluster List Computer Science Requirements Fulfilled by degree requirements. List Humanities and Social Sciences Requirements See Illinois Tech Core Curriculum, sections B and C 21 hours List Interprofessional Project (IPRO) Requirements See Illinois Tech Core Curriculum, section E 6 hours List Technical **Elective Course** Options Technical electives. Any four courses from: **Technical Communication** COM 421 3 COM 425 **Editing** 3 **HUM 352** Gender and Technological Change 3 **HUM 375** Practical Magic: Designing Entertainment Experiences. 3 **IDN 506** Research Planning and Execution 1.5 Introduction to Design Thinking 3 **IDX 560** 3 ITMD 455 Open-Source Intelligent Device Applications **Open Source Programming** 3 ITMD 413 Web Application Foundations 3 **ITMD 441 ITMD 455** Open-Source Intelligent Device Applications 3 Introduction to Smart Technologies 3 **ITMT 492** List Free Elective 24 Credit Hours (if applicable) Semester-bysemester plan of

study for the				Year 1
degree program	Semester 1	Credit	Semester 2	Credit
		Hours		Hours
	<u>LCHS 100</u>	2	<u>ITM 311</u>	3
	GRAPHICS CLUSTER See GEM Graphics Cluster list for possible courses	3	<u>HUM 371</u>	3
	<u>ITMO 356</u>	3	GRAPHICS CLUSTER	3
	MATH	3	FREE ELECTIVE	3
	HUM/SS	3	SCIENCE	5
	FREE ELECTIVE	3		
		17		17
				Year 2
	Semester 1	Credit	Semester 2	Credit
		Hours		Hours
	HIST 373	3	ETHICS REQUIREMENT See degree	3
	<u>ITMD 361</u>	3	requirements for course options COM 424	3
	MATH	3	HUM 372	3
	FREE ELECTIVE	3	ITMD 362	3
	HUM/SS	3	SCIENCE	5
	1101111/35	15	BEILIVEL	17
		13		Year 3
	Semester 1	Credit	Semester 2	Credit
	30.1.3333	Hours		Hours
	IPRO	3	IPRO	3
	HUM/SS	3	HUM/SS	3
	FREE ELECTIVE	3	HUM 374	
	FREE ELECTIVE	3	FREE ELECTIVE	3
	TECHNICAL ELECTIVE	3	TECHNICAL ELECTIVE	3
		15		12
				Year 4
	Semester 1	Credit	Semester 2	Credit
		Hours		Hours
	<u>HUM 400</u>	3	<u>HUM 401</u>	3
	TECHNICAL ELECTIVE	3	TECHNICAL ELECTIVE	3
	HUM/SS	3	HUM/SS	3
	<u>ID 410</u>	3	HUM/SS	3
	FREE ELECTIVE	3	FREE ELECTIVE	3
		15		15
	Total Credit Hours: 123			

Report to Faculty Council

Reviewer Comments Patty Johnson Winston (winston) (01/24/23 1:04 pm): 1/23/2023, PJW: Change the Program Code, from "BS-GEM" to "BS-GDEM," due to the revised CIP Code. A change of the CIP Code requires a new Program, in order to maintain the program's historical record in Banner.

Key: 561