I. CATALOG INFORMATION

A. Discipline: GAME DESIGN

B. Subject Code and Number: GAME M102

C. Course Title: Game Design Technologies I

D. Credit Course units:

Units: 3

Lecture Hours per week: 2

Lab Hours per week : 3

Variable Units : No

E. Student Learning Hours:

Lecture Hours:

Classroom hours: 35 - 35

Laboratory/Activity Hours:

Laboratory/Activity Hours 52.5 - 52.5

Total Combined Hours in a 17.5 week term: 87.5 - 87.5

F. Non-Credit Course hours per week

G. May be taken a total of: [X] 1 [ ] 2 [ ] 3 [ ] 4 time(s) for credit

H. Is the course co-designated (same as) another course: No [X] Yes [ ]
If YES, designate course Subject Code & Number:

I. Course Description:

Introduces the fundamentals, concepts, and vocabulary of computer game tools and techniques. Covers a variety of digital tools and game engines to create playable environments. Includes topics such as game design technologies, virtual world building, game flow, pacing, schooling and planning, and deployment strategies such as desktop, console, and web.

J. Entrance Skills

*Prerequisite: No [ ] Yes [X] Course(s)
GAME M101

*Corequisite: No [X] Yes [ ] Course(s)

Limitation on Enrollment: No [X] Yes [ ]

Recommended Preparation: No [ ] Yes [X] Course(s)
MM M10

Other: No [X] Yes [ ]

K. Other Catalog Information:

Previous computer programming experience is not required.

II. COURSE OBJECTIVES

Upon successful completion of the course, a student will be able to:

		Methods of evaluation will be consistent with, but not limited by, the following types or examples.
1	identify and critically discuss the basics of game level design.	Essays Quizzes Presentations Critique using program rubric
2	examine and illustrate various aspects that make a game fun and compelling.	Essays Quizzes Presentations Critique using program rubric
3	demonstrate the concept of game "flow" and how to design levels to keep the user in a game flow state.	Essays Quizzes Presentations Critique using program rubric
4	apply terrain, environment and lighting effects to add interest and challenges to level design.	Essays Quizzes Presentations Critique using program rubric
5	analyze and apply the principles of theoretically sound game level design including placing challenges, moving objects, game balancing.	Essays Quizzes Presentations Critique using program rubric
6	examine, discuss and apply genre specific strategies to level design.	Essays Quizzes Presentations Critique using program rubric
		Essays Quizzes

7	apply scripting tools to level design.	Presentations Critique using program rubric
8	develop analytical skills which can be applied to the multiple uses of both computer hardware and software products for simulation gaming.	Essays Quizzes Presentations Critique using program rubric

III. COURSE CONTENT

Estimated %	Topic	Learning Outcomes
Lecture (must total 100%)		
5.00%	Game testing and polishing	1, 2, 3, 5, 8
10.00%	Scripting	1, 2, 3, 7
5.00%	Materials and texturing	1, 2, 4, 6
5.00%	Game physics	1, 2, 3, 5, 6, 7
5.00%	Building architecture and spaces	1, 4, 6
15.00%	Designing playable environments	1, 2, 3, 4, 5, 6, 7, 8
10.00%	Genre specific level design issues	1, 2, 3, 5, 6
5.00%	Game design basics	1, 2, 5, 6, 8
5.00%	Game design scheduling and planning	8
25.00%	Integrated development environments and game engines	1, 2, 3, 4, 5, 6, 7, 8
5.00%	Lighting and atmospheric effects	2, 3, 4, 6, 7
5.00%	Modeling and texturing objects for use in 3D environments	1, 2, 4, 5, 8
Lab (must total 100%)		
20.00%	Discussion of game industry tools and techniques	1, 2, 3, 4, 5, 6, 7, 8
50.00%	Hands-on use of video game production software	1, 2, 3, 4, 5, 6, 7, 8
20.00%	Exercises related to course content	1, 2, 3, 4, 5, 6, 7, 8
10.00%	Critiques related to projects	1, 2, 3, 4, 5, 6, 7, 8

IV. TYPICAL ASSIGNMENTS

A. Writing assignments

Writing assignments are required. Possible assignments may include, but are not limited to:	
1	writing critiques of existing games.
2	playing games and then evaluating why the given theme, genre, and point-of-view (POV) were chosen.
3	creating a game design brief which incorporates definitions and examples from lecture and textbook.
4	writing critiques and post-mortems on games created in class.

B. Appropriate outside assignments

Appropriate outside assignments are required. Possible assignments may include, but are not limited to:	
1	creating game levels using a variety of specified game engines.
2	researching commercial games in regard to genres, game design techniques, flow, etc.
3	participating in optional field trips.

C. Critical thinking assignments

Critical thinking assignments are required. Possible assignments may include, but are not limited to:	
1	composing gameplay critiques.
2	comparing and contrasting students' work.
3	analyzing students' work in the context of game theory and industry best practices.
4	scheduling and planning for game design production.

V. METHODS OF INSTRUCTION

Methods of instruction may include, but are not limited to:

[X] Distance Education – When any portion of class contact hours is replaced by distance education delivery mode (Complete DE Addendum, Section XV)

[X] Lecture/Discussion

[X] Laboratory/Activity

[X] Other (Specify)
Guest speakers/lecturers invited to class to discuss topics in the field of simulation and computer gaming
Presentation
Discussion and detailed examination of successful games - genres, strategies, storytelling, level design, gameplay, and user interface design
View films demonstrating video and online games
Distributing handouts, and/or using electronic or computer-based media in order to reinforce understanding of concepts related to simulation and computer games
Cooperative/Collaborative learning tasks and activities designed to assist students in activating, stimulating, and acting upon theoretical and applied concepts in game level design
Individual conferences in order to evaluate and advise students on original game

projects
Computer-assisted and/or web-enhanced instruction which reinforces the course content

[X] Optional Field Trips

[ ] Required Field Trips

VI. METHODS OF EVALUATION

Methods of evaluation may include, but are not limited to:

[X] Essay Exam	[X] Classroom Discussion	[X] Skill Demonstration
[X] Problem Solving Exam	[X] Reports/Papers/ Journals	[X] Participation
[X] Objective Exams	[X] Projects	[X] Other (specify)

Critical analysis of various simulations and computer games in the form of "game reviews"
Student teams working on the design and development of computer games, focusing on level design and implementation of the design using various software tools
Participation and regular attendance as required by instructor to ensure progress in mastering the course content and participation in collaborative learning projects
Final project designed to assess students' mastery of the essential concepts explored in the course

VII. REPRESENTATIVE TEXTS AND OTHER COURSE MATERIALS

Gibson, Jeremy. Introduction to Game Design, Prototyping, and Development: From Concept to Playable Game with Unity and C#. 2nd ed. Addison-Wesley Professional, 2017.

Habgood, Jacob, and Mark Overmars. The Game Maker's Apprentice: Game Development for Beginners. Apress, 2007.

Fell, John Harold, and Marc Scattergood. Beginning Game Level Design. Cengage Learning PTR, 2005.

Co, Phil. Level Design for Games: Creating Compelling Game Experiences. New Riders, 2006.

Finch, Andrew. The Unreal Game Engine: A Comprehensive Guide to Creating Playable Levels. COM ed. 3D Total Publishing, 2014.

Murray, Jeff W. C# Game Programming Cookbook for Unity 3D. CRC, 2014.

Unreal. Epic Games, 4.x ed.

Unity. Unity3d, 4.x ed.

GameMaker: Studio. YoYo Games, 8.x ed.

Construct. Scirra, 2.x ed.

VIII. STUDENT MATERIALS FEES

[X] No [ ] Yes

IX. PARALLEL COURSES

College	*Course Number*	*Course Title*	*Units*
Sacramento City College	GCOM 420	Video Game Design	3
CSU San Bernardino	CSE 141	Introduction to Game Level Editing	2
UC Irvine	I&C SCI 62	Game Technologies and Interactive Media	4

X. MINIMUM QUALIFICATIONS

Courses in Disciplines in which Masters Degrees are not expected:
Any bachelor's degree and two years of experience, or an associate degree and six years of experience in Game Design

XI. ARTICULATION INFORMATION

A. Title V Course Classification:

1. This course is designed to be taken either:

   [ ] Pass/No Pass only (no letter grade possible); or
   [X] Letter grade (P/NP possible at student option)

2. Degree status:
   Either [X] Associate Degree Applicable; or [ ] Non-associate Degree Applicable

B. Moorpark College General Education:

1. Do you recommend this course for inclusion on the Associate Degree General Education list?
   Yes: [ ] No: [X] If YES, what section(s)?

   [ ] A1 - Natural Sciences - Biological Science
   [ ] A2 - Natural Sciences - Physical Science
   [ ] B1 - Social and Behavioral Sciences - American History/Institutions
   [ ] B2 - Social and Behavioral Sciences - Other Social Behavioral Science
   [ ] C1 - Humanities - Fine or Performing Arts
   [ ] C2 - Humanities - Other Humanities
   [ ] D1 - Language and Rationality - English Composition
   [ ] D2 - Language and Rationality - Communication and Analytical Thinking
   [ ] E1 - Health/Physical Education
   [ ] E2 - PE or Dance
   [ ] F - Ethnic/Gender Studies

C. California State University(CSU) Articulation:

1. Do you recommend this course for transfer credit to CSU? Yes: [X] No: [ ]

☐

2. If YES do you recommend this course for inclusion on the CSU General Education list?
   Yes: ☐ No: ☒ If YES, which area(s)?

   A1 ☐ A2 ☐ A3 ☐ B1 ☐ B2 ☐ B3 ☐ B4 ☐

   C1 ☐ C2 ☐ D1 ☐ D2 ☐ D3 ☐ D4 ☐ D5 ☐

   D6 ☐ D7 ☐ D8 ☐ D9 ☐ D10 ☐ E ☐

D. University of California (UC) Articulation:

1. Do you recommend this course for transfer to the UC? Yes: ☐ No: ☒
2. If YES do you recommend this course for the Intersegmental General Education Transfer Curriculum (IGETC)? Yes: ☐ No: ☒

IGETC Area 1: English Communication

- ☐ English Composition
- ☐ Critical Thinking-English Composition
- ☐ Oral Communication

IGETC Area 2: Mathematical Concepts and Quantitative Reasoning

- ☐ Mathematical Concepts

IGETC Area 3: Arts and Humanities

- ☐ Arts
- ☐ Humanities

IGETC Area 4: Social and Behavioral Sciences

- ☐ Anthropology and Archaeology
- ☐ Economics
- ☐ Ethnic Studies
- ☐ Gender Studies
- ☐ Geography
- ☐ History
- ☐ Interdisciplinary, Social & Behavioral Sciences
- ☐ Political Science, Government & Legal Institutions
- ☐ Psychology
- ☐ Sociology & Criminology

IGETC Area 5: Physical and Biological Sciences (mark all that apply)

- ☐ Physical Science Lab or Physical Science Lab only (none-sequence)
- ☐ Physical Science Lecture only (non-sequence)

☐ Biological Science
☐ Physical Science Courses
☐ Physical Science Lab or Biological Science Lab Only (non-sequence)
☐ Biological Science Courses
☐ Biological Science Lab course
☐ First Science course in a Special sequence
☐ Second Science course in a Special Sequence
☐ Laboratory Activity
☐ Physical Sciences

IGETC Area 6: Language other than English

☐ Languages other than English (UC Requirement Only)
☐ U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)
☐ U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)

XII. REVIEW OF LIBRARY RESOURCES

A. What planned assignment(s) will require library resources and use?

The following assignments require library resources:
Research, using the Library's print and online resources, on such topics as current video games industry trends, techniques, and best practices.

B. Are the currently held library resources sufficient to support the course assignment?

YES: ☒ NO: ☐

If NO, please list additional library resources needed to support this course.

XIII. PREREQUISITE AND/OR COREQUISITE JUSTIFICATION

Requisite Justification for GAME M101

☒ A. Sequential course within a discipline.

1. discuss and define game design and development terms and principles.

2. relate key developments in the history and theory of game design.

3. explore and describe various game genres and game development tools.

4. participate in game-oriented user groups and communities that discuss game design and development issues.

5. draft design plans, character sketches, documentation, and storyboards for proposed games.

6. discuss business standards, market research and outlook, legal principles, ethical concerns, and development processes in the game

design and development industry.

7. test and analyze games to determine the quality of rules, interfaces, navigation, performance, play, artistry, and longevity in design and structure.

8. create a specification document that analyzes the audience and sets minimum hardware and software requirements.

9. create basic prototypes of game ideas.

10. evaluate selected commercial game designs, addressing game design and theory, social content, historical significance, and artistic technique.

11. create basic prototypes of game ideas.

12. evaluate selected commercial game designs, addressing game design and theory, social content, historical significance, and artistic technique.

☐ B. Standard Prerequisite or Corequisite required by universities.

☐ C. Corequisite is linked to companion lecture course.

☐ D. Prerequisite or Corequisite is authorized by legal statute or regulation.
Code Section: _____

☐ E. Prerequisite or Corequisite is necessary to protect the students' health and safety.

☐ F. Computation or communication skill is needed.

☐ G. Performance courses: Audition, portfolio, tryouts, etc. needed.

XIV. WORKPLACE PREPARATION

Required for career technical courses only. A career technical course/program is one with the primary goal to prepare students for employment immediately upon course/program completion, and/or upgrading employment skills.

Detail how the course meets the Secretary of Labors Commission on the Achievement of Necessary Skills (SCANS) areas. (For a description of the competencies and skills with a listing of what students should be able to do, go to: http://www.ncrel.org/sdrs/areas/issues/methods/assment/as7scans.htm)

The course will address the SCANS competency areas:

1. Resources: the students will learn to set goals and time manage those goals to

completion; learn what is required in a game design production so that they can plan to allocate resources.

2. Interpersonal: the students will instruct each other about those areas in which they are proficient and assess each other's skills in order to collaborate.

3. Information: the students will organize, interpret and communicate information acquired about game design technologies.

4. Systems: the students will understand the systems, and monitor and correct performance.

5. Technology: the students will choose visual technologies and perform proper procedures in the design production process.

The course also addresses the SCANS skills and personal qualities:

1. Basic Skills: the students will read and write documents, read textbooks, and listen and speak clearly.

2. Thinking Skills: the students will generate creative ideas, make decisions, and reason through and solve problems.

3. Personal Qualities: the students will be responsible, sociable, self-disciplined, honest, and will maintain integrity.

XV. DISTANCE LEARNING COURSE OUTLINE ADDENDUM

1. Mode of Delivery

   [X] Online (course will be delivered 100% online)

   [X] Online with onsite examinations (100% of the instruction will occur online, but examinations and an orientation will be scheduled onsite)

   [X] Online/Hybrid (a percentage of instruction will be held online and the remaining percentage of instruction will be held onsite)

      [X] Lab activities will be conducted onsite

   [ ] Televideo (Examinations and an orientation will be held onsite)

   [ ] Teleconference

   [ ] Other

2. Need/Justification

   Improve general student access.

3. Describe how instructors teaching this course will ensure regular, effective contact with and among students.

   Posted lecture and video support; group and individual emails and announcements.

4. Describe how instructors teaching this course will involve students in active learning.

   Open discussion boards, chapter topic synchronous and asynchronous discussion forums and group research postings, exercises, assignments and

projects.

5. Explain how instructors teaching this course will provide multiple methods of content representation.

   Posted lecture and video support; group and individual emails and announcements, links to the online texts, lectures and demos.

6. Describe how instructors teaching this course will evaluate student performance.

   Critique of the exercises, assignments and projects, chapter essay questions, multiple choice exit exam and asynchronous assigned topic postings.

XVI. GENERAL EDUCATION COURSE OUTLINE ADDENDUM

GAME M102: Not Applicable

XVII. STUDENT MATERIALS FEE ADDENDUM

GAME M102: Not Applicable

XVIII. REPEATABILITY JUSTIFICATION TITLE 5, SECTION 55041

GAME M102: Not Applicable

XIX. CURRICULUM APPROVAL

Course Information:

Discipline: GAME DESIGN

Discipline Code and Number: GAME M102

Course Revision Category: Technical Course Revision

Course Proposed By:

Originating Faculty Tim Samoff 08/22/2017

Faculty Peer: Candice Larson 08/23/2017

Curriculum Rep: Tim Samoff 09/13/2017

Department Chair: Rolland Petrello 09/05/2017

Division Dean: Jennifer Goetz 09/05/2017

Approved By:

Curriculum Chair: Jerry Mansfield 11/10/2017

Executive Vice President: Julius Sokenu 10/15/2017

Articulation Officer: Letrisha Mai 10/05/2017

Librarian: Mary LaBarge 10/02/2017

Implementation Term and Year: Fall 2018

Approval Dates:

Approved by Moorpark College Curriculum Committee: 10/17/2017

Approved by Board of Trustees (if applicable): _____

Approved by State (if applicable): 01/09/2018