

CIS 487 Sections 001/002
Game Design 1
3 Credit Hours, Fall 2020
6:00-8:45 W, Lecture, On-line

Contact Information:

- Professor Bruce R. Maxim
 - Office Hours: 4-5 T W Th by appt.
 - Email: bmaxim@umich.edu
 - Office Location: 233 CIS
 - Phone Number: 313-536-9155
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Learning Goals:

Dearborn Discovery Core Category and Goals: None

Program Learning Goals:

- Our graduates will be successfully employed in a computer and information science-related field or another career path, in an industrial, commercial, academic, governmental, or non-governmental organization, or will be a successful graduate student in a program preparing them for such employment
- Our graduates will lead and participate in culturally diverse teams, becoming global collaborators and adapting to an ever changing field.
- Our graduates will continue their professional development by obtaining continuing education credits, professional registration or certifications, or post-graduate study credits or degrees

Course Objectives:

a. Outcomes of instruction

- The student will be able to apply techniques for play-testing computer games
- The student will be able to assess the quality of game products
- The student will be able to create analysis models for a game software product
- The student will be able to participate in the peer review of software engineering documents and software products

b. Student outcomes addressed in this course

- Outcome 1 – Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.

- Outcome 2 – Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program’s discipline.
- Outcome 3 – Communicate effectively in a variety of professional contexts.
- Outcome 5 – Function effectively as a member or leader of a team engaged in activities appropriate to the program’s discipline.

Required Materials and/or Technology:

- **REQUIRED:** Introduction to Game Design, Prototyping, and Development by Bond, Addison-Wesley, 2017.
- **RECOMMENDED:** Game Design Workshop by Fullerton, CRC Press, 2018. (CIS 487)
- **TECHNOLOGY:** Unity 2017.X or Unity 2018.X and multimedia editing tools.
- **URL:** <http://www-personal.umd.umich.edu/~bmaxim/>
<http://groups.engin.umd.umich.edu/CIS/course.des/cis487.html>

Assignments and Grading Distributions:

6 Project Assignments (Written and Oral)	30%
2 Final Reports	20%
2 Working Games	30%
8 Activity Modules	20%

97-100%	A+	84-86%	B	70-73%	C-
94-96%	A	80-83%	B-	67-69%	D+
90-93%	A-	77-79%	C+	64-66%	D
87-89%	B+	74-76%	C	60-63%	D-

Tentative Course Outline and Schedule:

Date	Activity, Content, Assignments
Module 1 Sept 02	Video Game Evaluation Criteria, Intellectual Property B1-B6
Module 2 Sept 09	Game Design, Story Telling, Puzzle Design, Unity Basic F1-F5, B8, B12, B13, B17
Sept 16	Game Evaluation Presentations Peer reviews done at home
Module 3 Sept 23	Game Play, Balance, Prototyping F6-F8, B9, B11
Module 4 Sept 30	Design Documents, 2D Physics B7, B18-B27, Notes
Module 5 Oct 07	User Experience Design, Agile, SCRUM B12, B14
Oct 14	2D Design Document and Prototype Reviews (reviews assigned) Peer reviews done at home
Module 6 Oct 21	Sound Design, Level Design, Sprite Animation, and Movement B16, Notes
Module 7 Oct 28	Terrain Construction, Physics, Game AI B28, B29, B35
Nov 04	2D Game Festival (reviews assigned) Peer reviews done at home
Module 8 Nov 11	Team Organization, Game Production, and Playtesting F9-F16, B10, B15
Nov 18	3D Game Concept Presentations (reviews assigned) Peer reviews done at home
Nov 23 to Nov 29	Thanksgiving Vacation – no class
Dec 02	Team Meetings On-line
Dec 09	Alpha Prototype Demos (reviews assigned) Peer reviews done at home
Dec 20	CIS 3D Game Festival 6:30-9:30 Peer reviews done at home

Course and University Policies:

Instructor or Course Specific Policies:

A student enrolled in a course (lecture, laboratory, recitation, colloquium, seminar, or other university approved format) is expected to attend every scheduled session of the course. The instructor of each course will make known to the students the course attendance policy with respect to student absences. It is the student's responsibility to be aware of this policy. The instructor makes the final decision to excuse or not to excuse an absence.

Presence or participation is also expected in online courses. Participation in online courses can take various forms; it is the instructor who determines what form of presence or participation is expected. Students enrolled in online courses are responsible for being aware of that policy/expectation. An instructor is entitled to give a failing grade for excessive absences or for a student who stops participating in class at some point during the semester.

The University of Michigan-Dearborn values academic honesty and integrity. Each student has a responsibility to understand, accept, and comply with the University's standards of academic conduct as set forth by the Code of Academic Conduct, as well as policies established by each college. Cheating, collusion, misconduct, fabrication, and plagiarism are considered serious offenses and violations can result in penalties up to and including expulsion from the University.

Course lectures may be audio/video recorded and made available to other students in this course. As part of your participation in this course, you may be recorded. If you do not wish to be recorded, please contact bmaxim@umihc.edu the first week of class (or as soon as you enroll in the course, whichever is latest) to discuss alternative arrangements.

Food Pantry

The pantry exists to support individuals on their journey as they work toward achieving their goals. We are committed to increasing access to food as a key to success, by assisting any student in need! If you need access or have questions, please contact the Office of Student Life by phone at 313-593-5390, by email at umdearbornpantry@umich.edu.

University-wide Policies or Statements Relevant to Courses:

Please see the 'Course Policies' Menu on Canvas for information on the following:

- University Attendance Policy
- Academic Integrity Policy
- Counseling
- Disabilities Services
- Safety Statement
- Harassment, Sexual Violence, Bias, and Discrimination