

**Wheeling Jesuit University**  
**Digital Media & Technology Department**  
**STGD 122, section 01 – 3D Modeling Fundamentals (3 cr)**  
**Spring 2019**

**Professor: Hans Westman**

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01/07/2019 - 05/02/2019

Days: Monday and Wednesday 2:00PM - 3:15AM

Room: CET 210

Office hours: Mondays and Wednesdays, 12:00pm – 2:00pm

**Catalog Course Description:**

Using industry standard software, students are introduced to the basic principles for creating efficient game engine-ready 3D models.

**Textbooks:**

Professor assigned reading as needed.

**Materials (required): access to computer with software and Internet access**

**Student Learning Objectives:**

Students will understand elements modeling 3D digital models that will be used in a game engine.

Students will apply these elements to produce 3D digital models that are game engine ready appropriate.

Students will create and evaluate 3D models for an environment that are game engine ready.

**Evaluation Methods:**

Homework and in-class assignments = 100 (each)

Advisory and Final = 100 (each)

Reflective Papers = 100 (each)

**Assignment, Midterm and Final Grade Scale**

A	=	100	-	93
A-	=	92	-	90
B+	=	89	-	87
B	=	86	-	83
B-	=	82	-	80

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*Syllabus subject to change at the discretion of the Professor*

C+	=	79	-	77
C	=	76	-	73
C-	=	72	-	70
D+	=	69	-	67
D	=	66	-	60
F	=	59	and	below

### *Grading Rubric*

*A to A-* The student's course work demonstrates superior quality, incorporating all of the assignment criteria, is properly executed and displays a superior quality in skills appropriate and necessary for the course level. The student's course work is visually professional in quality, requiring little or no improvement.

*B+ to B-* The student's course work demonstrates a solid understanding and application, incorporating all of the assignment criteria, is properly executed and displays solid skills appropriate and necessary for the course level. The student's course work is visually solid in quality though it may require additional improvement.

*C+ to C-* The student's course work demonstrates an acceptable level of understanding and an adequate level and application, incorporating all of the assignment criteria, is properly executed and displays adequate skills appropriate and necessary for the course level. The student's course work is visually acceptable in quality, though requiring additional improvement.

*D+ to D* The student's course work does not demonstrate an adequate level of understanding and/or level and application, does not incorporate all of the assignment criteria, is not properly executed and/or does not display adequate skills appropriate and necessary for the course level. The student's course work is visually inadequate in quality, requiring additional improvement.

*F\** The student's course work does not demonstrate an acceptable level of understanding and/or level and application, does not incorporate all of the assignment criteria, is not properly executed and does not display an acceptable execution of skills appropriate and necessary for the course level. The student's course work is visually unacceptable in quality, requiring improvement.

*\*Assignments with no student course work submitted will receive an evaluation equal to a failing grade.*

### **Advisory grade**

Due: Monday, February 11 – Average of cumulative submitted

## ***Final Team Presentation and Team Member Presentation and reflection paper***

Due: Week 17 (day to be determined)

### ***In-class/On-line Activities and Reading***

This class requires active engagement in the course and preparation for every class period. Students will come to class prepared, having completed materials assigned for that day and ready to discuss the material with classmates and the professor. Class activities and assigned materials are intended to assist in the understanding and completion of course expectations successfully.

Over the course of the semester, there may be additional extracurricular activities announced that students can attend and can provide the opportunity to earn extra credit.

### **Attendance Policy:**

Attendance is required in this class. Students may miss up to three (3) classes without any grade penalty. After the 3<sup>rd</sup> absence, the overall course grade will be reduced by **15 points** from the final grade for each additional absence on a regular class period. If six (6) classes or more are missed, the student will receive an "FA" and fail the course.

WJU does not differentiate between "excused" and "unexcused" absences. If you are not in class, you are considered absent. **THIS INCLUDES MISSING CLASS FOR SCHOOL EVENTS (Athletics, Club events, etc.)**. If class is missed because of a school approved event, the professor must receive written documentation of the impending absence at least one (1) class period before the event and the student will be allowed to make up the work missed; however, it still counts as one of the allowed absences. In the event of extreme extenuating circumstances (such as hospitalization, death of an immediate family member, etc.), this policy may be amended on a case-by-case basis. However, written documentation must accompany all requests.

Presentations CANNOT be made up unless there is an extreme circumstance that occurs. The day you are scheduled to present is the day you need to present.

If an extenuating circumstance happens (hospitalization, death of an immediate family member), the following procedure must be followed. **Failure to follow this procedure will result in a score of zero for the missed exam or presentation.**

1. Contact the professor within 24 hours prior to potentially missing a scheduled exam or making a scheduled presentation. If the reason is due to a University scheduled event or religious holiday, the professor MUST be notified in advance for approval of a rescheduling.
2. If an absence is due to an emergency or extenuating circumstance, official documentation must be provided by the next class session attended (see below for criteria for acceptable documentation).
3. The professor will make the final decision as to whether or not the student is permitted to make up a presentation or exam. The professor's decision is final.
4. The only absences from exams and/or presentations that will be considered as extreme circumstances are death in the family, severe documentable illness, religious holidays,

and participation in a university sponsored event such as intercollegiate athletics. In any case, the student must provide documentation of their absence in order for a make up to be considered.

**Students must be present at the final exam time and present their final project to receive credit in the course.**

**Last Date to Drop the Course:** The last day of the Add/Drop Period for this semester is Friday, January 11, 2019. The last day to withdraw from this course with a grade of a W is Tuesday, February 1, 2019.

**Disability Statement:**

Wheeling Jesuit University offers students with documented disabilities individual accommodations on a case-by case basis with confidentiality in compliance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973.

In order to receive academic or physical accommodations, students with disabilities must provide current (within three years) and comprehensive documentation concerning the nature and extent of the disability and communicate their needs to the Disability Services Director, locate in Ignatius Hall Room G 24 or call 304-243-4484. Students are required to meet with director to develop accommodation plans that they will present to their course instructors at the beginning of each semester. Students with disabilities that require specific housing accommodations must contact both the Director of Residence Life and the Disability Services Director.

Ultimately, all students with disabilities are responsible for their own academic achievement. They must attend classes, complete course assignments, and fulfill all university requirements for their chosen field of study. It is up to students with disabilities to seek out available assistance campus and to utilize individualized accommodations that promote academic success.

**Academic Integrity Statement:**

Students are advised that WJU's Academic Integrity Policy will strictly be enforced in this course (see [www.wju.edu/studenthandbook](http://www.wju.edu/studenthandbook)). Questions regarding the policy may be directed to the Office of the Academic Vice-President

Official E-mail: An official WJU e-mail is established for each registered student, each faculty member, and each staff member. All university communications sent via e-mail will be sent to this WJU e-mail address.

**The Academic Resource Center:**

The Academic Resource Center (ARC) is a totally free academic-support service available to all enrolled Wheeling Jesuit University students and staffed almost exclusively by WJU student recommended for employment by WJU faculty. The ARC is located in Bishop Hodges Library and is open five days a week:

Sundays 6:00-8:00p.m.  
Mondays-Thursdays 1:00-9:00 p.m.

Please visit the ARC's website (readily accessible on the Cardinal homepage under "Quick Links" or as the first listing under "Student Services") to learn about the ARC's services (emphasizing writing, math, and the sciences) and to schedule appointments.

**Title IX Statement:**

Wheeling Jesuit University seeks to provide an environment that is free of bias, discrimination, and harassment. If you have been the victim of sexual harassment, misconduct, or assault we encourage you to report this. If you report this to a faculty member, she or he must notify our college's Title IX coordinator about the basic facts of the incident (you may choose whether you or anyone involved is identified by name). For more information about your options at WJU, please go to <http://wju.edu/titleix/>.

**Course Outline:**

Week 1 – January 7 and 9

- Course requirements and policies, User Interface, tool and techniques: Polygonal (Box) Modeling, sub-division. Midterm/Final Project planning. Instructor assigned practical exercises.
- Final Project Review

Week 2 – January 14 and 16

- Review prior week's polygonal modeling tools
- Splines, NURBS, Loft and Revolve. Instructor assigned practical exercises.

Week 3 – January 21 and 23

- Lab exercises – polygonal, NURBS and splinebased modeling techniques – instructor assigned objects.
- Review and class discussion

Week 4 – January 28 - 30

- Booleans
- UV coordinates, texture editor and unwrapping techniques

Week 5 – February 4 and 6

- Lab exercises - UV coordinates, texture editor and unwrapping techniques – instructor assigned models
- Review and class discussion

Week 6 – February 11 and 13

- Advisory grade due, Monday February 11
- Creating procedural and image textures for game engine ready 3D models
- 2D digital image manipulation software

Week 7 – February 18 and 20

- Lab exercises – Creating procedural and image textures for game engine ready 3D models – instructor assigned models
- Review and class discussion

Week 8 – February 25 and 27

- Basic and HDRI lighting basics and rendering

Week 9 – March 4 and 6

- Spring break: March 4 – 8

Week 10 – March 11 and 13

- Collaborative project(s): Environment
- Regular class reviews and discussions

Weeks 11 – March 18 and 20

- Collaborative project(s): Environment
- Regular class reviews and discussions

Week 12 – March 25 and 27

- Collaborative project(s): Environment
- Regular class reviews and discussions

Week 13 – April 1 and 3

- Collaborative project(s): Environment
- Regular class reviews and discussions

Week 14 – April 8 and 10

- Collaborative project(s): Environment
- Regular class reviews and discussions

Week 15 – April 15 and 17

- Collaborative project(s): Environment
- Regular class reviews and discussions

Week 16 – April 22 and 25

- April 22 – Easter Break
- Collaborative project(s): Environment
- Regular class reviews and discussions

Week 17 – Final's week April 29 – May 3

- Final Team and Team member presentations
- Reflective paper