

# 3D Graphics in Maya

Spring 2016  
SABIN 102

*Note: Using ITT 134 for first 3 classes*

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**Office hours: To be announced by January 18<sup>th</sup>**  
*and by appointment almost anytime*

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URL: **<http://www.cs.uni.edu/~jacobson>**

**VIP: Please notify in advance by email or after class whenever possible!** Appointments are best and can also be arranged almost anytime outside of office hours and on weekends too. *Note that I have two offices (ITTC 307 and WRT 338A).*

Spring 2016 class schedule: 12:00 MWF; 11:00 TTh; 2:00 TTh

No Textbook: *We will use [lynda.uni.edu](http://lynda.uni.edu), lots of handouts and web resources.*

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## Grading on exams, homework and quizzes.

1. **Eight quizzes will count for 24 %.** There will be a 10 to 15 minute quiz every Thursday, starting during week #5. On Thursday February 11<sup>th</sup> we will have quiz one at the end of the 10<sup>th</sup> class. There will be no quiz during week #15, which is the last week of class. Most or all of these 10 Wednesday quizzes will be at the end of class. Some of the quizzes will be hands-on and let you use Maya and/or your web browser.
2. **The final exam will be held on Wednesday, May 4<sup>th</sup>.** It constitutes 20 % of your grade in the course. It will be from 1:00-2:50 p.m.
3. **The laboratory and lecture sessions and class participation/citizenship/attendance will count for 10 % of your grade.** Taking notes and having your notebook out is part of class participation. Being an active, helpful part of group exercises and a good model of a UNI Panther student citizen is part of class participation.
4. **The homework assignments and projects will be worth 46 % of the total grade.** Some of the homework assignments will be completed and checked off in the lab classes.

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## Where to use Maya at UNI:

- Labs that will have MAYA on campus: The **Lang 213 lab** has it. All of the SCC (Student Computer Center) labs have Maya. Besides the well-known SCC labs like the Library and Maucker Union, check out Campbell 2033, Lang 113, Redeker Center, Roth 120, Schindler 123, Towers Center and the Wellness Center. The Production House here in ITTC has it. The Wright Hall labs and most of the CHAS labs have it.
- We will use Adobe After Effects so you can publish your Maya animation as Flash video. You will learn enough After Effects and Flash so you can publish your Maya animation or Maya image to the web.
- Autodesk Maya is available for FREE to students for 36 months. It is available for FREE to anyone for a 30 day free trial. Go to <http://students.autodesk.com> to register as a student and get the free Autodesk Maya 2015 download to install on your computer. Maya link: <http://www.autodesk.com/education/free-software/maya> It does NOT matter whether you use Maya 2013 or Maya 2014 or Maya 2015.
- This class does NOT have any prerequisites.

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### Miscellaneous topics:

- Any student who requires some modification of seating, testing, or other class requirements should speak with the instructor at the beginning of the semester.
- **CS 1010** (Microcomputer Applications and Systems Integration) is offered this fall. It focuses on Adobe Dreamweaver, Adobe Flash and Adobe Fireworks and will emphasize web publishing, motion graphics and computer graphics. It will introduce students to Excel VBA macros and will also introduce students to Adobe After Effects. We will do some Flash and ActionScript 3.0 and Scratch game programming.
- When sending email, sign with your first name at the end of the note.
- Feel free to leave early for an appointment or whatever as that is never a problem but it is always nice to be told before class starts.
- The four classes **CS 1000**, **CS 1010**, **CS 1020** and **CS 1130** give you **microcomputer certification** from the computer science department. 12 hours of credits is required.
- CS 2880 (Topics in Computing: ???) also counts for certification. It may be offered again in spring of 2015. It can be substituted for CS 1000 or CS 1010 or taken as an extra class in addition to the other certification classes. It can be repeated as a different topic.
- CS 2880 12 Topics in Computing: Visual Effects, Animation, and Motion Graphics will be offered again next semester, i.e. in the spring of 2015. The class was offered for the first time during the summer of 2009.



Reading assignment #1: Look at the following two web pages BEFORE Wednesday's class and again AFTER Wednesday's class:

[www.cs.uni.edu/~jacobson/m/classDay1.html](http://www.cs.uni.edu/~jacobson/m/classDay1.html)

[www.cs.uni.edu/~jacobson/m/class2.html](http://www.cs.uni.edu/~jacobson/m/class2.html)

1. What are the names of the 3 view tools? How do you use each tool (mouse buttons and key combination)?
2. What is the key used to switch from Wireframe view to Smooth Shading view? What key is used to switch back to wireframe view from shaded?
3. What are Transformations? What transformation does the W key prepare you to do? The E key? The R key?
4. What is APSDR an acronym for? What are the 5 menu sets in Maya?
5. Where are the Quick Layout buttons located at? How is the spacebar used instead of using the top two Quick Layout buttons?
6. Where is the Channel Box? How can you show or hide the Channel Box by using the Status Bar?
7. What is a Pivot Point?
8. What axis is RED associated with?
9. What axis is GREEN associated with?
10. What axis is BLUE associated with?
11. What does the Option Box look like and why do most commands have an Option Box that you can click instead of the command name?
12. What does it mean to SCRUB the time slider?

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To get to Lynda use the following URL: <http://lynda.uni.edu> and login using your UNI User ID and password/passphrase credentials.



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▶ Introduction	2m 18s
▼ 1. Getting Started in Maya 2015	1h 2m
🔖 Overview of the Maya interface	7m 16s
🔖 Working with files and Maya projects	3m 20s
🔖 Configuring viewports	7m 0s
🔖 Customizing the interface	5m 1s
🔖 Navigation	3m 20s
🔖 Using the hotbox and marking menus	3m 52s
🔖 Selecting objects	4m 59s
🔖 Using the Move tool	5m 14s
🔖 Rotating and scaling	4m 54s
🔖 Manipulating pivots	2m 56s
🔖 Understanding the Channel Box	5m 42s
🔖 Working with the Attribute Editor	5m 13s
🔖 Using the Grease Pencil tool	3m 43s
▼ 2. Organizing Maya Scenes	38m 32s

## Maya 2015 Essential Training

7h 45m ■■■ Beginner Jun 26, 2014

Viewers: 19,833

Need to get a strong foundation in Maya? Start here. This *Essential Training* course covers all the latest features in Maya 2015, while giving you a background in the basics of 3D modeling, texturing, animating, and rendering. Need a quick overview? Check out the first chapter of the course, which covers the interface and basic object manipulation tools. Author George Maestri then takes you deeper into polygonal modeling, editing and refining meshes, and NURBS modeling—for sculpting curves and organic surfaces in Maya. After that, learn how to create and apply materials to give the surface of your models color, texture, reflectivity, and more. Next, create realistic images (with lighting and depth-of-field effects) in the final rendering process, and finally, add movement and life to your characters with Maya's animation tools.

Topics include:

- Getting familiar with the Maya interface
- Creating hierarchies and layers
- Creating polygonal objects
- Working with subdivision surfaces
- Extruding a mesh
- Smoothing geometry
- Lofting and extruding with the NURBS curves tools
- Converting NURBS to polygons
- Creating and applying texture maps



## Maya 2015 Essential Training with George Maestri



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