

Spring Quarter 2010 Syllabus

Course # Course Name:	CA3469 Advanced 3-D Modeling
Meeting Times and Location:	Tuesdays and Thursdays 2:00—5:00PM (with appropriate breaks), Room 231 in LaSalle Building
Instructor Name & Contact Information:	Steve Paul 612-965-1816 sdpaul@aii.edu www.stevepaul.com My mailbox is in room 341, in the cubby under my last name.
Office Hours:	Mondays, 2:00 – 4:00 PM (or by appointment), Room 303 in LaSalle Building
Course Description:	Using a 3D environment, advanced modeling techniques and concepts are applied. Modeling as character design and development is emphasized while students analyze real world observations and their application to modeling. Prerequisites: CA3449 Intermediate 3-D Modeling
Course Length:	11 Weeks
Instructional Contact Hours:	60 (20-lecture, 40-lab)
Credit Value:	4 Quarter Credits
Course Competencies:	The student will: <i>Design 3D coordinate systems, construct 3D models and perform mathematical computations</i> <ul style="list-style-type: none">• Develop multiple axes geometric representation of a three dimensional image• Construct simple geometric shape in X, Y and Z axes using computer animation software• Construct complex models using various modeling techniques• Quantify grid size to establish perspective views• Apply appropriate pre-planning techniques <i>Evaluate critical ideas for surface treatment, lighting and motion of 3D models</i> <ul style="list-style-type: none">• Apply natural conditions in developing surface treatment• Optimize the effect of light in various surface treatments• Apply various lighting techniques to create a desired mood in computer animation• Create a 3D model• Integrate the basic visual elements of design (light, shape, texture, composition and color) into the complexity of three-dimensional space• Apply advanced knowledge of unity, variety, contrast, dominance, appropriateness, balance and harmony to three-dimensional space
Required Materials:	Drawing supplies

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- Recommended Materials:** Stop Staring: Facial Modeling and Animation Done Right (2nd Edition), by Jason Osipa, Cybex, 2007, 978-0471789208
- Technology Needed:** Maya Complete 2010
Data backup
- Instructional Methods & Resources:** This course will challenge you to develop professionally-relevant knowledge and skills. Course information will be presented in many forms, including lecture, class discussion, demonstration, case studies, simulations, field projects, and studio or lab projects. Students will use library and community resources, including research and reference materials, gallery exhibitions, industry events, and guest speakers. Materials can be obtained from other libraries using the interlibrary loan program.
- Estimated Homework Hours:** At least 6 hours per week outside of class

STUDENT EVALUATION AND GRADING

Successful professionals require a supportive environment. In-class discussions and/or critiques of other students' work and ideas is a chance to help each other grow as conceptual and critical thinkers.

Student Evaluation:	Course Activities	Points and Percentage Distribution	GRADING SCALE	
	<ul style="list-style-type: none"> Modeling example presentation, (“Thinking Critically About 3D Modeling”) 	40 points or 10% of final grade.	A	100 – 93%
	<ul style="list-style-type: none"> Master & Servant 	80 points or 20% of final grade.	A-	92 – 90%
	<ul style="list-style-type: none"> Digital Sculpting (Mudbox/Z-brush) assignment 	20 points or 5% of final grade.	B+	89 – 87%
	<ul style="list-style-type: none"> Mechanical (INORGANIC) Model 	<ul style="list-style-type: none"> Pre-production = 20 points, Rough Draft 01 = 25 points, Rough Draft 02 = 25 points, Final Draft = 30 points, Project total = 100 points, or 25% of final grade	B	86 – 83%
			B-	82 – 80%
	<ul style="list-style-type: none"> Modeling section of Professional Portfolio Website 	60 points, 15%	C+	79 – 77%
	<ul style="list-style-type: none"> Organic Model 	<ul style="list-style-type: none"> Pre-production = 20 points, Rough Draft 01 = 25 points, Rough Draft 02 = 25 points, Final Draft = 30 points, Project total = 100 points, or 25% of final grade	C	76 – 73%
			C-	72 – 70%
	Course TOTAL	Course TOTAL = 400 points, 100%	D+	69 – 67%
			D	66 – 60%
			F	Below 60%

ACADEMIC POLICIES
Discrimination Policy

It is AI Minnesota policy not to discriminate against qualified students with documented disabilities in its educational programs, activities, or services. If you have a disability-related need for adjustments or other accommodations in this class, please contact Becky Lothe, 612-656-6866, rlothe@aii.edu, or visit Becky in Pence room 209. Any accommodations will be authorized by Becky—no exceptions.

Attendance

Regular, on-time attendance is both courteous and professional. The Art Institutes International Minnesota expects students to demonstrate professionalism by attending all classes as scheduled, arriving on time, and remaining for the full duration of the class. Outside employment should not be scheduled during class hours.

Students should be aware that even if there is no “attendance” grade per se for a class, it is difficult to succeed in class without regular, on-time attendance. Individual faculty may determine the impact, if any, of absences on grades. The Art Institutes International Minnesota supports the attendance policy for each class as it is described in the syllabus. The full AiM attendance policy is found in the Student Handbook.

Academic Dishonesty

At the Art Institutes International Minnesota, plagiarism is a cumulative offense; each act of plagiarism is documented in the student’s academic record until degree completion. Violations of this policy will be handled in accordance with the disciplinary procedures outlines in the Student Code of Conduct Policy.

Examples of plagiarism include paraphrasing an original document or piece(s) of an original document and not citing the original author’s name and publishing year, using direct quotes from an original document and not citing the original author’s name and year, and using written documents, still or moving images, original ideas, research information, audio samples and music clips, and failing to cite the original author’s name and publishing year.

Cheating is the action to deceive or alter the perception regarding the author or originator of student work and is a violation of the Student Code of Conduct. Cheating includes the duplication of written or electronic assignments, exams or documents either in whole or in part and submitted as an original piece of work; the exchange of answers with others either giving answers or receiving answers during an in-class assignment, test or exam, or take-home assignment or exam.

Typical disciplinary sanctions for a first offense of plagiarism or cheating includes automatic failure of the assignment/exam with no opportunity to re-do or make up the plagiarized/cheating work. Sanctions for the second offense include automatic failure of the course. Subsequent incidents will result in dismissal from the school. [From the 2008/09 AiM Student Handbook section on Academic Integrity, beginning on page 35.]

CLASSROOM COURTESIES AND PROFESSIONAL EXPECTATIONS**Collaboration and Communication**

The learning environment should provide a business-like approach to getting the job done, so any behavior that would be deemed as inappropriate for the typical work environment will put the student at risk. Examples include disrespectful language, passive-aggressive behavior, lack of commitment to personal or team success, and any other behaviors that disrupt the learning environment for other students. Additionally each team member is responsible for the academic integrity of the group.

YOU MUST USE YOUR SCHOOL EMAIL ACCOUNT, or forward your school email to another personal account. You must be able to accept and respond to email on a daily basis.

Academic Resources **YOU ARE ACCOUNTABLE FOR REQUIRED ACADEMIC SKILLS.** Successful students possess course-appropriate reading comprehension, critical thinking, research, writing, presentation, and communication skills. If you or your instructor determine that you have a need for additional resources beyond those offered in class, there are several options available to you.

- **The Academic Achievement Center** is located in room 320 (across from the Academic Advising office). The Academic Achievement Center houses peer tutors in program areas and general education.
- **The Interior Design Skills Center** houses Interior Design peer tutors and general education. The Skills Center is located in room 011, in the basement of the LaSalle building.

Peer tutors assist students with subject/content area academic support, as well as, study skills and organizational tips. Peer tutors are current AIM students in good academic standing-(a CGPA of 3.5) with a desire to assist others in their academic progress. All peer tutors receive mandatory tutor training.

Students (tutees) who seek academic support may visit each of the centers to receive tutoring assistance in a wide variety of subject areas. Each tutor schedule (located outside of the center door) identifies the tutor and their specific areas of expertise. Some Peer tutors also serve as Teaching Assistants, where their role is to work alongside an instructor during lab/group hours of a class.

- **Academic Advising** is located in room 316 in the LaSalle building. Academic Advisors are available to assist you in identifying areas or patterns of academic weaknesses, and to put into place any support resources a student may need.

You are also responsible for executing tutorial recommendations made by your instructors. Remember, your instructors and Academic staff are here to help you find the resources you need.

- **The Library** is located on the second floor in the LaSalle building. The library is open 79 hours per week and is currently processing an average of 5,000 circulation transactions per month. The collection is comprised of books, newspapers, journals and magazines, videos, DVDs, and CDs that support the curricula. The collection currently numbers over 23,000 volumes with and an additional 189 periodical subscriptions. Materials also include royalty-free music/sound effect CDs, art history and interior design slides, and copies of computer software manuals utilized within the College. Textbooks and reserve materials are available for in-house use, and many academic and industry databases are available, including WilsonWeb, Proquest, AccuNet / AP, Gettyimages, Electronic Library for Minnesota, Grove Art Online, Hoover's Online and Oxford Reference Online.

Student Life

The Student Affairs Office is located in room 209 in the Pence building. There you can find information, services and program that can help you to extend and integrate academic content and life experiences.

Community Resources	This course will engage community resources, including local libraries, galleries, exhibitions, guest speakers and industry tours. Your active participation is important and expected.
Late Assignments	<p>Due dates are listed in the weekly outline and project descriptions. If you are unpredictably absent on the day a project is due, e-mail the project to your instructor before the time it is due.</p> <p>Late assignments will be accepted with point deductions as follows:</p> <ul style="list-style-type: none">• Handed in after the due time, but no later than the start of the first class after the project is due: One full letter grade deduction (e.g. a B+ becomes a C+).• Handed in more than one class late, but no later than the start of the final class of the quarter: Two full letter grade deduction.• Not handed in by the start of the final class of the quarter: Score is zero.
Resubmitting Assignments	There are no provisions for resubmitting assignments.
Make-Up Policy	In-class lab exercises and quizzes cannot be made up. If you arrive late on a quiz day, you will not be given a time extension.
Technical Difficulties	Any technology-related difficulties, including lost data, will not be considered when assessing projects. Save incrementally and often, and back up your data on a regular basis in multiple locations.
Classroom Environment	Disruptions to the learning environment will not be tolerated. When the instructor is talking, students are paying attention (this includes not working on projects while the instructor is addressing the class). Cell phones will be turned off or silent. If an emergency call must be taken, the student must do so outside the classroom. Social networking such as Facebook, IM, or Twitter is not allowed during class activities. Students not following any part of this policy may be removed from the class. Repeated disruptions may result in the student being removed from the class for the remainder of the quarter.
Timing Out of Class	Students are expected to show up to each class, on time, and ready to work. Students who miss four consecutive classes will be timed out and will not be let back in to the class. Exceptions may be made for family/medical emergencies but the student must contact the instructor before he/she misses four consecutive classes (this will be reviewed on a case-by-case basis and is not guaranteed). If an absence is excused, a success plan must be drawn up between the student and the instructor.
Recommended Actions for Success	<ol style="list-style-type: none">1. Make a class buddy on the first day who can provide notes if you are absent on a particular day.2. Be detail-oriented. Sloppiness and mistakes will sink you quickly.3. Have a positive attitude. How your instructor and your peers perceive you has an impact on your chances at success. A bad reputation will get around.4. You have to talk like a computer animator if you're going to be one, so learn the language. You won't even make it through the job interview if you can't speak intelligently about your work and process. Know the proper singular form of the word <i>vertices</i> and know the difference between <i>NURBS</i> and <i>NURMS</i>.

5. Arguably the most important skill in 3D work is troubleshooting. In order to survive in this industry, you have to detect when something is not working right, determine the cause, and find a solution. The instructor is here to help, but you need to be self-directed in troubleshooting. Run through the following when you encounter a problem:
 - a. How can I describe the problem using industry-standard language?
 - b. What was I doing when I first noticed the problem? Does undoing that thing also undo the problem?
 - c. What do I think are the most likely causes for this problem? This is one of the tougher questions to answer. Check your course notes. Google a short phrase that describes the problem (this is one of the reasons the first bullet point above is important). Navigate the help docs. Ask classmates if they have ideas.
 - d. Once you find the answer, add it to your notes so you can refer back to it later. The next time you get stuck on the same problem, you'll know how to get around it quickly.
6. Find some way to improve with every project. Even if the overall idea of a particular project doesn't jazz you, there should be some way you can grow in some way useful to your career goal. Identify it and run with it. Keep in mind, on the job, you will usually be doing work handed to you by others and you won't always enjoy the work.
7. Learn how to break your tasks down into pieces, create a schedule (try making a Gantt chart in Microsoft Visio), manage your time, and meet deadlines. It will lead to greater success and less stress.
8. Check your school e-mail daily (or forward it to an account that you do check daily). If I need to give or get important information outside of class, I will e-mail you at your school account.
9. Assemble your work into a demo reel, online portfolio, and print portfolio NOW! There are lots of good reasons for this. First, it takes practice to get good at putting reels and portfolios together, so it's stupid to wait until late in the game. Second, you never know when a job opportunity will come along, and you need to be ready at a moment's notice to compete against other artists for the spot. The reel and portfolios are living documents, constantly being updated as you produce new and better work – next quarter, the old and mediocre stuff goes out, and the new and awesome stuff goes in. Rinse and repeat.
10. Start networking NOW! Many jobs in this industry are filled by word-of-mouth. Here are some ways to get recommended, besides just having talent, working hard, and having a good attitude:
 - a. Join industry-related groups, such as the Minnesota Maya User Group, the After Effects User Group, and Independent Game Developers Association, and attend their meetings.
 - b. Attend industry-related events such as the Minnesota Electronic Theater
 - c. Post your work on industry forums so people can see it and give you feedback (some people have gotten job offers just from others viewing their posted work)
 - d. Attend software training sessions (some are free)
 - e. Call local companies for informational interviews and to get feedback on your work
 - f. Start introducing yourself to people who love 3D modeling, or animation, or visual effects, just like you do (use social networking sites on the Internet as well as face-to-face social occasions)

By the way, don't expect Career Services to do your job search for you – they are there to assist, but you still carry the primary responsibility for finding work. Networking is key, and you can't wait until you graduate to start – do it now!

Weekly Outline: (subject to change)

Week	Day 01	Day 02	Assignment Due – AT THE BEGINNING OF DAY 02
01	Hour 1: Intro to the class; expectations; Master & Servant and Inorganic (Mechanical) Modeling assignment given; Critical Thinking about Modeling assignment given. Hours 2 & 3: Research into M&S and Critical Thinking projects	Hour 1: Time and Project management. Hour 2: Critical Thinking About Modeling presentations. Hour 3: Work on Master & Servant	
02	Hour 1: Working as a Freelancer – Self- management and setting your fees. Hour 2: Critical Thinking About Modeling presentations Hour 3: Work on Master & Servant.	Hour 1: <i>Inorganic pre-production materials due.</i> Critical Thinking About Modeling presentations Hour 2 & 3: Individual conferences and work on Master & Servant, Mechanical (Inorganic).	Assignment Due – AT THE BEGINNING OF DAY 02 <i>Inorganic pre- production materials due.</i>
03	Hour 1: Career Services – Feedback from the industry on modeling. Critical Thinking About Modeling presentations Hours 2 & 3: Work on Master & Servant, Mechanical (Inorganic) projects.	Hour 1: <i>Inorganic Rough Draft 01 due.</i> Critical Thinking About Modeling presentations. Hours 2 & 3: Individual conferences. Work on Master & Servant.	Assignment Due – AT THE BEGINNING OF DAY 02 <i>Inorganic Rough Draft 01 due</i>
04	Hour 1: Critical Thinking About 3D Modeling presentations. Hours 2 & 3:	Hour 1: <i>Inorganic Rough Draft 02 due. Master & Servant Finals due.</i> Critical Thinking About	Assignment Due – AT THE BEGINNING OF DAY 02

	Individual conferences. Work on Master & Servant.	Modeling presentations. Master & Servant Show & Tell. Hours 2 & 3: Individual conferences. Work on Inorganic (Mechanical) assignment.	Master & Servant finals due; Inorganic Rough Draft 02 due.
05	Hour 1: Critical Thinking About Modeling presentations. Hours 2 & 3: Work on Finals for Inorganic (Mechanical) project.	Hour 1: Inorganic (Mechanical) final project due. Critical Thinking About Modeling presentations. Organic Project assignment given. Hour 2: Inorganic (Mechanical) Final Presentations. Hour 3: Individual conferences Work on Organic Project.	Assignment Due – AT THE BEGINNING OF DAY 02 Inorganic (Mechanical) Project Finals due.
06	Hour 1: Critical Thinking About Modeling presentations. Hours 2 & 3: Individual conferences to review Organic pre-production work.	Hours 1-3: Organic pre-production materials due. Individual conferences for approval of Organic Projects. Work on Organic projects	Assignment Due – AT THE BEGINNING OF DAY 02 Organic Pre-production materials due.
07	Hour 1: Digital Sculpting assignment given. Hours 2-3: Individual conferences and work on Organic Project, Digital Sculpting, and Modeling Web site projects.	Hour 1: Organic Rough Draft 01 due. Lecture/demonstration on using digital sculpting tools – Mudbox.	Assignment Due – AT THE BEGINNING OF DAY 02 Organic Rough Draft 01 due.

		Hours 2-3: Individual conferences and work on Organic Project, Digital Sculpting, and Modeling Web site projects.	
08	Hour 1: Lecture/demonstration on using digital sculpting tools – Mudbox. Hours 2-3: Individual conferences and work on Organic Project, Digital Sculpting, and Modeling Web site projects.	Hour 1: Digital Sculpting (Mudbox/Z-brush) assignment due. Presentation of Digital Sculpting assignment. Hours 2-3: Working on Organic Project, Modeling Web site assignment.	Assignment Due – AT THE BEGINNING OF DAY 02 Digital Sculpting (Mudbox/Z-Brush) assignment due.
09	Hour 1: Web site development and authoring. Hours 2-3: Working on Organic Project, Modeling Web site assignment.	Hour 1: Organic Project Rough Draft 02 due. Presentations and critique of progress on Organic project. Hours 2-3: Working on Organic Project, Modeling Web site assignment.	Assignment Due – AT THE BEGINNING OF DAY 02 Organic Rough Draft 02 due
10	Hour 1: Web site development and authoring. Hours 2-3: Working on Organic Project, Modeling Web site assignment.	Hour 1: Modeling Website assignment due. Wrap up on perspectives on professional 3D modeling. Hours 2-3: Work on finals for Organic project.	Assignment Due – AT THE BEGINNING OF DAY 02 Modeling Website assignment due.
11	Hours 1-3: Work on finals for Organic project.	Hours 1-3: Organic Final presentations due.	Assignment Due – AT THE BEGINNING OF DAY 02 Organic Final due.