

DSIS Studio II: Industrial Design

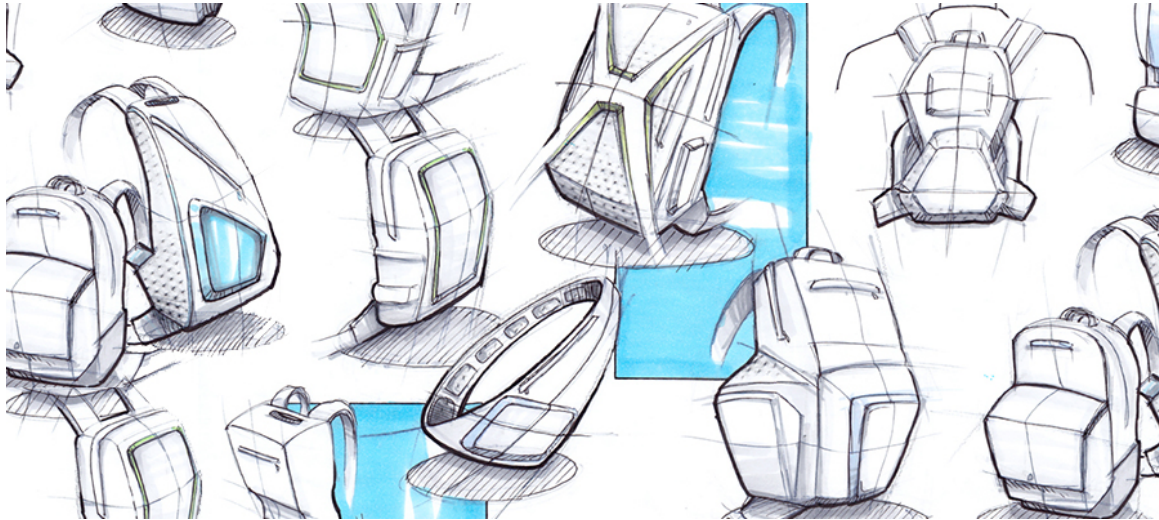
Syllabus, Spring 2021

Studios: Tuesday/Friday 9-12 AM, Sage 2211 and on WebEx

Professor: Dr. Jim Malazita (malazj@rpi.edu)

Office: West 403, Office Hours: Tuesday 1-2 (on WebEx)

Introduction:



This course is the second in the DSIS studio series. It introduces students to general principles of user-experience design and industrial design as a set of approaches for attending broadly to matters of aesthetics and form, usability, and meaning-making. It considers industrial designers as a community of practice. Assignments require students to synthesize social, technical, and formal concerns in the design of innovative objects.

By the end of this course, students will be able to:

- Describe key aspects of the design process, user experience, and aesthetic design decisions
- Apply the user-centered design process in the creation of unique artifacts
- Appraise the quality of their own work and iterate on a design concept over several passes
- Assess user feedback of their designs
- Demonstrate competence in 3D modeling and visualization tools for creative design

Industrial design encompasses the interests and needs of those impacted by designed artifacts. The emphasis of this course will be on product aesthetics and usability from the perspective of users; however, issues of fabrication and manufacturability, and design impacts on groups extending beyond a given product's immediate users will also be considered. According to the Industrial Designers' Society of America,

The industrial designer's unique contribution places emphasis on those aspects of the product or system that relate most directly to human characteristics, needs and interests. This contribution requires specialized understanding of visual, tactile, safety and convenience criteria, with concern for the user. Education and experience in anticipating psychological, physiological and sociological factors that influence and are perceived by the user are essential industrial design resources. (www.idsa.org; accessed 10Aug06)

Thus, industrial design can be understood as a disciplined approach—and accompanying methodologies—used to align product characteristics with human characteristics. In addition, industrial design is a community of practice. It has its own professional associations, codes of responsible practice, membership rules, priorities, and ways of understanding what “design” entails. As DSIS students, you are not expected to become industrial designers (though some of you may well do so). However, you are expected to understand industrial design’s basic approach to design as well as how this community defines itself and how it is defined by others. In other words, you must become competent in industrial design practice and conversant in its discourse.

As a studio course, class time is used for self-guided design investigations as well as structured group activities. Students will participate in individual and group research; discussions with potential users, researchers, and practitioners; project reviews; and formal presentations. The course includes time for hands-on exploration of design ideas. Overall, this is a labor-intensive course that requires a sustained effort throughout the semester. Students will need to start on their projects early, reach out to testers and their group members efficiently and empathetically, and dedicate adequate time to polish, iterate, and hone their design concepts throughout the course. In general, it is expected that you will spend between 10 to 12 hours every week outside of class time on your reading, prototyping, testing, and writing. Always be thinking about your portfolio.

Daily class times are generally broken into two 1.5 hour sections: a lecture/discussion, tutorial, or design activity for the first section of class, and open studio/table critique for the second section. In general, Tuesday classes will feature discussions/criticisms of assigned readings about User Experience design, the sociology/anthropology of consumer objects, and tutorials and discussions about user experience testing/general UX principles. Friday classes will feature tutorials and exercises about CAD modeling, rapid prototyping, and lighting-rendering-presenting product concepts.

The key component to this course is **attention to detail** across the social, aesthetic, and experience dimensions of the design of objects. This means that students will be held to a high standard of product conceiving, user testing, and object prototyping/building. **A good concept that is executed poorly will result in a poor grade.**

Required Texts:

Victor Papanek, *Design for the Real World, 2nd Edition* (Chicago, 2000).

Donald Norman, *The Design of Everyday Things, Revised Edition* (BasicBooks, 2013).

Additional texts will be posted on LMS.

Required Software (Windows Version Highly Recommended):

Rhinoceros 3D (Version 5 and up) <https://www.rhino3d.com/download/rhino/5/latest>

Epic Software’s *Unreal Engine* (Version 4.2 and up) <https://www.unrealengine.com/en-US/download>

Required Materials:

Strathmore 300 Series Bristol Smooth Pad, 14"x17" Tape Bound, 20 Sheets
<https://www.amazon.com/Strathmore-Bristol-Smooth-Bound-Sheets/dp/B0027AAYLG>

Sakura Pigma 30062 Micron Blister Card Ink Pen Set, Black, Ass't Point Sizes 6CT Set
<https://www.amazon.com/Sakura-Pigma-30062-Micron-Blister/dp/B0008G8G8Y>

Prismacolor 3620 Premier Double-Ended Art Markers: Fine and Chisel Tip
<https://www.amazon.com/Prismacolor-3620-Premier-Double-Ended-Markers/dp/B00006IFGK>

Unlined sketchbook of your choice

Pencils, Colored Pencils, and other Prototyping/Sketching Materials as Needed

Strongly Recommended Materials:

Three-button USB mouse
USB Stick, min. 25 GB

Assignments and Grade Breakdown:

Design Briefs: (65 Points)

Studio Object Design – 15 points

- Pinup – 3 points
- Rough Prototype – 5 points
- Final Concept – 2 Points
- Report – 5 Points

Design History Redesign – 23 Points

- Moodboard and Pinup – 3 points
- Rough Prototype – 5 Points
- Detailed Prototype – 5 Points
- Final Concept – 2 Points
- Report – 5 Points
- Final Presentation – 3 Points

Open Design – 27 Points

- Pinup – 3 points
- Rough Prototype – 5 points
- Detailed Prototype – 5 Points
- Final Concept – 5 Points
- Report – 5 Points
- Final Presentation – 4 Points

Modeling Challenges: (35 Points)

Complex Curvature – 10 Points

Complex Texturing – 10 Points

Photorealistic Lighting and Texturing – 15 Points

Total: 100 points

All text portions of projects (papers, write-ups, design documents) must be submitted to the course's Blackboard page before the start of class on the due date. Papers submitted must be in **.doc, .docx, or .rtf format.**

All projects will include:

- 1) A series of 3-D/material mockups and rough prototypes of your proposed design in suitable materials
- 2) A concept presentation (except for Project 1). Your presentation should be from a User Experience point of view, and should include information about your design and research process, persuasive evidence for specific design decisions based on user feedback, and some key features of your object.
- 3) A design report accompanied by detailed mockups/build of the design, including appropriate 2-dimensional representations of 3-D models.

Thumbnails and Pinups:

For every Design Challenge Assignment, the student or group will be responsible for initial iterated thumbnail pages and polished pinup pages. The number of each of these pages will depend upon the project. Each iterated thumbnail page should have 10, relatively polished, 2 x 2" thumbnail sketches, showing multiple pivots and plusses of varying degrees of your potential concepts. Each polished pinup page should showcase a polished version of your concept, including 7 to 9 renderings that show the imagined product, communicate use case, highlight both broad strokes and details of the design, and demonstrate minor pivots. There should be minimal to NO text on each of these pages, and any text should be limited to design specifications that are difficult to capture on paper (for example, if a part of your product must be a specific kind of metal or plastic). Color and form should be used strategically to both communicate the goals of the product and to make it visually and rhetorically inviting (see the header image for one example of this).

The craft expectations for each page are very high. Students **must** use the assigned Bristol paper for their pinups, as well as the assigned markers to ink (and, if necessary, color), their design concept. Pencil sketches, tears in the paper, coffee stains, and/or generally undercrafted or sloppy work is unacceptable, and will result in a "0" for the thumbnail/pinup. Success on the thumbnails does not require that the student be an excellent artist. Rather, success will be judged through the time and craft put into the pinup, and the thoughtfulness of communication that the student has placed into the pinup. Doing rough sketches in your personal design notebook before preparing your thumbnails and concepts is highly recommended.

Design Reports:

For every Design Challenge Assignment, the student or group will turn in their final build and a Design Report that contains each of the following:

1. A title page that gives the name of the product, the names of each group member (or individual), and an "abstract" that describes the product in three or four sentences
2. A PDF of photos of the prototyping process, with image captions and descriptions under each image
3. A PDF of "beauty shots" of the final product, as well as the product being used, with image captions and descriptions under each image. **For the final two assignments, the beauty shots must be CAD renders using Rhino and Unreal. The expected craft of these renders will increase as students become more familiar with CAD and the rendering process.**
4. A design process statement: a 1000 word statement that describes the group's design process, the feedback from user testing sessions, and design iterations. The Design Process includes Problem Definition, Ideation, Prototyping, Building, and Testing. **The process section should demonstrate both what and why, materially and experientially, and the included user test feedback must be clear and specific.**

5. A user statement (1000 words):
 - a. You are to identify the user group(s) targeted in your project. **You should be as specific as possible in describing shared attributes of the targeted users**, focusing particularly on those dimensions that make this target user group distinct not only from dissimilar groups but also from apparently similar groups. Obvious but generalized attributes include demographic characteristics (e.g., age, gender, income), socioeconomic class, education level, geographic context, and physical and mental status as relevant. Less obvious generalized attributes may include orientation toward consumer product innovation, high tech, (formal) design, environmental sensibility, etc. Specific attributes may include stylistic preferences, popular (media, culture) reference points, work pattern preferences, etc.
 - b. **This is a “social analysis,” not analysis of a random group of people, so be sure to talk in terms of social groups and their needs, wants, desires, and expectations.** Remember that designing for “everybody” is not really possible and is rarely desirable. The instinct to broaden or rearrange priorities when targeting user groups is a good one, but if you don’t understand the boundaries of your audience, you won’t be effective in reaching new user groups. Design for “everybody” is usually a euphemism for designing for “people like me” or for “middle-class American consumers.” What are the strengths and benefits of attending to the chosen group? What trade-offs do you face as a designer having selected this target user group?
 - c. To be analytically robust, you must be mindful of stereotypes as you characterize user groups. Critical reflection on your initial assumptions about the user group you have selected early in your thinking and writing process will result in stronger and more insightful analysis.
 - d. As always, you must submit a *refined* paper for this assignment. **It should include a short introduction laying out the terrain to be covered, a logically organized body that develops a clear line of argument, and a brief conclusion statement summarizing your argument.** Papers should use gender-fair language and be free of typos and writing errors.
6. A 500 word section that should be technical in nature, which would allow a manufacturing team to build your design accurately. This should include both detailed descriptions of the product, as well as material and measurement diagrams, and low-fidelity exploded views where appropriate.

The report will be graded on both the strength of the analysis and also on the strength of concept. These elements are tightly wound together.

The report will be compiled as a single PDF, and submitted to the LMS site. For group assignments, each group need only submit one collective PDF.

Design Challenge 1: Workspace Experience Object Design/Redesign

Total Grade: 15 Points

Group Size: Individual

Concepting Requirements: 1 thumbnail page and 1 polished pinup page

This project entails the design (or redesign) of an object for use in your design educational experience. There is some flexibility in the type of object you choose to design, but it must be

something that users *physically* interact with and it must be directly relevant to your design education—by instructors, students, visitors, maintenance staff, etc. No electronics are allowed.

One of the most important parts of this project will be your choosing of the design problem and interpretation of experience. What has your experience of design education been this year? For some students, this object may directly relate to the DSIS studio—things that make whiteboard collaboration easier, movement more fluid, space management more streamlined, etc. For other students, it may relate to you home space or work space—something that provides for more privacy, better collaboration with online students or in person students, better desk/workspace organizational experiences, etc.

This is an *individual* project, so the objects you design should be simple enough that you have sufficient time for each of the following steps (informed by the design process reviewed in DSIS Studio 1):

- detailed design decision making, including appropriate iteration;
- background and mid-stream research;
- object representation including detailed sketches and modeling using 3-D software; and
- a series of progressively detailed mock-ups/prototypes representing innovative components/features of your concept.

With that being said, your concept will still be judged partially by viability and interest—if you design an object that “works” but no one would actually want to use or find enhances the design education experience, your object does not actually “work” for the purposes of this assignment.

You may collaborate with your classmates in the framing of problems and you may share your research and your design progress, but what you submit for grading at the end of the project must be the results of your own labor. All sketching/modeling, all reported research findings, all prototyping, etc. must be your own unless you note otherwise. (If you want to use someone else’s research findings because they are relevant to your project, that’s fine as long as the work in question is clearly attributed to its source.)

You should attend carefully and systematically to usability and the emotional experience created by both your proposed design and all its supporting components, including the prototype/mock-ups and within the presentation.

This project is intended to be narrow and deep. Keep in mind, the simpler the object being (re)designed, the more attention you can pay to all the required supporting work. Thus, you are strongly encouraged to select a simple object and pay careful attention to all the details rather than over-reaching by selecting a more complex object and paying insufficient attention to detail. (Project 3 will be a more complex project, developed in teams, to provide a broader experience.)

Your designed objects may employ any materials in any configuration as long as you can justify your decisions appropriately. Material choices in particular affect cost, environmental impact, and aesthetics in addition to functional performance.

Design Challenge 2: Design History Redesign Series

Total Grade: 23 Points

Group Size: 2 Members

Concepting Requirements: 1 Moodboard, 1 thumbnail page, and 2 polished pinup pages

This project entails the redesign of a product series through the lens of a notable designer, design group, or design company. Student Groups will be assigned a problem statement and designer, and will have to find solutions to that problem statement using the aesthetic, philosophical, social,

and manufacturing priorities of their designer. For designers that have had a long and varied career, student groups must select a particular period of that designer's work to emulate.

The problem statement is both broad and specific. It will identify a particular user experience problem (e.g., "I am cold at night"), but will not identify the user themselves. The student groups must decide on an imagined user group for that problem statement. This decision is important, as it will direct their design decisions and user testing protocols (i.e., you must test your product with the chosen user demographic). However, students have wide latitude in interpreting the UX problem (there are many reasons why an individual may be cold at night, and there are infinitely more potential solutions to that problem).

A constraint of the project is that student groups must design a product series (of three objects) as the solution to the UX problem, and that series must be recognizable as products that are intended for home consumer use (think, "what would I find in an IKEA, or in the home goods section of a Target?"). Students are allowed a wide gamut of the variability of the individual objects in a product series. The three objects may be similarly-themed pivots off of a single concept (e.g., three kinds of forks); a continuum of related objects (e.g., a fork, a spoon, and a knife), or a set of three interrelated objects (e.g., a sugar spoon, a teapot, and a breakfast tray). Importantly, the objects must be recognizable as a set to users.

Often, that recognition will manifest through the interpretation of the assigned designer's style and philosophy upon the object series (for example, what might a set of spoons designed by late-career Frank Lloyd Wright look like and operate like?). Though the assigned designers will have a wide array of product and architectural examples, they will not have developed many (if any) of the user problems assigned to the student. The student must be able to identify how the priorities of their designer have translated into a new medium. **The student should also take into account the designer's audience when constructing the "who" of their project.** For example, if the students' assigned designer is explicitly working in a decolonial way, the user prompt should reflect that, as should the design research.

Student groups must balance their designer values with their growing knowledge of user testing and experience—not all of the designer's choices or styles will be good ones for the users of your product series. Through a combination of user testing, multiple iterations of design, and application of the principles covered in class, student groups must also continue to make the product useable for a target audience.

This project will entail:

- A mood board/historical research of your designer and their design philosophies and practices
- A **critical interpretation** of those practices
- Multiple physical prototypes
- A design report that includes a description of their assigned designer
- A formal presentation with prototypes and beauty shots

Design Challenge 3: Open Design

Total Grade: 27 Points

Group Size: 4 Members

Concepting Requirements: 1 thumbnail page and 2 polished pinup pages

This project entails the design (or redesign) of a *real-world* object of your choice. As with Project 1 and 2, you should pay particular attention to questions of user experience, usability, and formal/aesthetic dimensions of the design: How does the user interact with and psychologically/emotionally experience your designed object? How do the product's form, surface, and details provide the user cues as to how it should be engaged? How have you improved user experience compared to existing products?

There is considerable flexibility in objects to be designed for this project, but the objects should be something you can prototype and actually *put in the world for detailed user interaction and testing* (for complex objects, you may prototype salient components of the larger object). Your designed objects may employ any materials in any configuration as long as you can systematically justify your decisions, though they must still fit under the broad category of "things you could find in a home goods store." Material choices in particular effect cost, environmental impact, and aesthetics in addition to functional performance. Mechanical contraptions are allowed, but strongly discouraged. I cannot stress enough: the more complicated the object is mechanically, the more complicated will be design and prototyping, the more difficult it will be to keep the form simple and elegant, and the less time you will have for user experience design.

This assignment entails:

1. A professional **design report** highlighting research findings and delineating relevant design specifications, including generous use of appropriate 3D visualizations of your design);
2. A series of **mockups and prototypes** of your proposed design in suitable materials and appropriate resolution for each stage of design, with a *high-res* prototype;
3. A **formal presentation** with prototypes.

Attention to user experience, usability, and formal/aesthetic characteristics should be given to all components of this project, including supporting documentation. This project is intended to provide a broader design experience than Project 1 and 2, but you must also achieve considerable *depth* in your project's design. *User experience should be addressed explicitly and systematically across all facets of your project.*

Design Report Grading Rubric:

Concept:

Judges the quality of the concept, based upon the student's ability to define a user experience problem (as defined by the class discussions), and frame a creative, innovative, or otherwise unique object-oriented product that responds to that problem.

- 2/2: Student has clearly articulated a "problem" that spans material and social dimensions of the Studio or PDI culture, and has developed a product that responds to that problem both materially and socially in a way that shows effort and thoughtfulness.
- 1/2: Problem definition is only social or material, or solution space is either social or material, or product does not show much thoughtfulness or care.
- 0/2: Multiple combinations of the above, or a product concept that is tangential to the described problem space.

Report:

Judges the quality of the user experience testing, design process experience, attentiveness to and synthesis of material from class discussions, use of class vocabulary, ability to navigate material and social dimensions of user experience, and adequate completion of the required parts of the report.

- 5/5: Report has all required sections, and the student has written coherently about the synthesis of their concept, design process, user testing, and product development. Student has paid close attention to the material and social dimensions of their project and has demonstrated that through user testing reporting. Student has discussed their reasoning for design decisions, and has justified (or, at least, framed) those decisions in the context of user experience testing.
- 4/5: Report has all sections, but student has not written coherently and/or synthetically, or has paid attention only to material or social dimensions, or has not used or reflected on vocabulary and class discussions, or has not discussed their reasoning behind their design decisions in user experience terms.
- 3/5: A light combination of the issues above.

- 2/5: Report is missing sections or substantial combination of the issues above.
- 1/5: Report is missing sections and substantial combination of the issues above.
- 0/5: Student has submitted a ranting manifesto.

Modeling Challenges

Group Size: Individual

Students will be presented with three Modeling Challenges throughout the semester—2-week, highly constrained modeling sprints that are designed to both students to push their modeling and texturing work beyond the foundational lectures covered in class, as well as to demonstrate their growing competence with Rhino and Unreal. Students will be assigned a particular object or scene to model, texture, and light, and must submit both renders of their assignments, as well as the Rhino or Unreal files used to construct the scene.

Grading will be based upon demonstration of the understanding of Rhino and Unreal toolsets, as well as on the aesthetic qualities of the final renders and attention to detail in modeling, texturing, and lighting. There are many ways to model and texture the same object or scene, so students should feel free to take a modeling or texturing approach that they feel will yield the best end results. For each assignment, students should be paying special attention to:

Challenge 1: Complex Curvature: Form and curvature, detail modeling, manufacturing seams, physically-real edges, internal form (where appropriate).

Challenge 1 Grading Rubric:

- A-B: Student has more-or-less accurately modeled all of the manufacturing features of the object. Few to no noticeable geometry or surface flaws on the object. Demonstrates a thoughtful and efficient use of Rhino to achieve the desired model form.
- C: Parts of the model are missing, incomplete, or noticeably aesthetically inaccurate. Noticeably broken or "hole-y" geometry. Shows an adequate understanding of Rhino and its workflows.
- D: Model does not resemble the iron object. Broken model or radically malformed geometry. Student shows insufficient understanding of Rhino and basic commands and operations.
- F: Student has submitted a box or a sphere.

Challenge 2: Complex Textures: Displacement, alpha, material properties, physically-real wear, fidelity in close-ups and distance shots.

Challenge 2 Grading Rubric:

- A: Student has included all requested images, has successfully and accurately, completed the displacement map, has developed semi-realistic looking materials on all surfaces, and has paid attention to detail, including scuffy roughness on metal, dirt, bump and normal maps where appropriate, etc.
- B: Student is missing some requested images, or the displacement maps are missing or inaccurate, or materials are non-appropriate, or lack of attention to detail.
- C: A combination of flaws from B.
- D: Unshaded parts of the model, incomplete assignment, has used geometry to model the bumps on seat/back, or has not modeled bumps at all.
- F: Model is essentially unchanged from sample model, or has substantial issues.

Challenge 3: Photorealistic Lighting: Shadow maps, appropriate lighting for chosen time of day, physically-real wear, non-duplicated appearing objects, volumetric effects, realistic lighting, shading, reflection, fidelity in close-ups and distance shots.

NOTE: Using software other than Rhino or Unreal to complete the modeling challenges is considered cheating and will result in a “0” for the project. The use of software like Photoshop is permitted for the design of textures, orthogonal sketches, displacement maps, etc.

For **each assignment**, students will submit a single PDF to LMS that contains:

- 3 - 5 “Beauty shots” of your result
- 5 – 15 “In progress” screencaptures of your modeling process, detailing the major steps you took to create the model.

Schedule:

| Week | Assignments Due | Tuesday Class (Discussions & Studio) | Friday Class (Lab & Studio) |
|---|--|--|--|
| Week 1, January 26th and 29th | | Welcome & course overview Discuss: <i>What is good user experience?</i> | 3D Modeling Basics Introduction to Rhino (Box, Hole, Glass) Lofting simple surfaces, working off of reference images |
| Week 2, February 2nd and 5th | | Read: “On Placing Design,” by Robinson | |
| Week 3, February 9th and 12th | Project 1 Pinups Due in Tuesday Class | Read: <i>DOET</i> Ch 1 & 2 | Complex surfacing Rhino Challenge 1 Assigned |
| Week 4, February 16th and 19th | Project 1 Rough Prototype Due in Tuesday Class | Read: <i>DOET</i> Ch 3 | Roughing out concepts in CAD, Subsurface modeling |
| Week 5, February 23rd and 26th | Project 1 Final Report Due Monday Night | Read: <i>DOET</i> Ch 4 & 5 Project 2 Assigned | Read: <i>DOET</i> Ch 6 Advanced modeling techniques (blocks, displacement, rendermesh) |
| Week 6, March 2nd and 5th | Complex Curvature Rhino Challenge 1 Due Monday Night | Read: “Re-Enchanting the Commodity: Nazi Modernism Reconsidered,” by Betts | Texturing 1: Prepping UVs in Rhino, Importing to Unreal Rhino Challenge 2 Assigned |

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|--|--|--|--|
| Week 7, March 9th and 12th | Project 2 Moodboard and Pinups Due in Tuesday Class | Read: "The Nierentisch Nemesis: The Promise and Peril of Organic Design," by Betts | Texturing 2: PBR Basics |
| Week 8, March 16th and 19th | Project 2 Rough Prototype Due in Tuesday Class | Read: "Why Can't the US Decolonize its Design Education?," by Anderson | Texturing 3: Complex materials, animated/procedural materials |
| Week 9, March 23rd and 26th | Project 2 Detailed Prototype Due in Tuesday Class | Read: "Probes, Toolkits, and Prototypes" by Sanders and Sappers | Lighting 1: Basic Lighting Project 3 Assigned |
| Week 10, March 30th and April 2nd | Pseudo Spring Break Project 2 Final Report Due Monday Night | No Class | No Class |
| Week 11, April 6th and 9th | Complex Textures Rhino Challenge 2 Due Monday Night | Project 2 Presentations | Lighting 2: HDR, environmental lighting Final CAD Challenge Assigned |
| Week 12, April 13th and 16th | Project 3 Pinups Due in Tuesday Class | Read: <i>DfRW</i> TBA | Read: <i>DfRW</i> TBA |
| Week 13, April 20th and 23rd | Project 3 Rough Prototype Due in Tuesday Class | Read: <i>DfRW</i> TBA | Read: <i>DfRW</i> TBA |
| Week 14, April 27th and 30th | Project 3 Detailed Prototype Due in Tuesday Class Presentations in Friday's Class | Read: <i>DfRW</i> TBA | Project 3 Presentations |
| Study Days and Finals, May 4th through May 12th | Project 3 Final Report Due Monday Night, May 4th Photorealistic Lighting Final Challenge Due May 12th | | |



Late Assignment Policy:

Pinups and Prototypes are due at the beginning of class. Writeups and Project Reports are due to LMS at the end of the day of their due date. Late assignments will suffer a penalty of one letter grade for each day late.

Attendance:

Students are expected always to be present during class and recitations. Attendance will be taken at the beginning of each class. Excellence in submitted work will not make up for delinquency in attendance. **More than three unexcused absences will result in a lowering of your final course grade by one mark for each unexcused absence after 3. More than seven absences will result in the failure of the course. Three late arrivals will equal one missed class.** If you must miss a class, assignments are due before the class period begins. Excusable absences include illness, family emergencies, and scheduled Rensselaer athletic events. All excused absences must be delivered to the professor via the Office of Student Life.

Academic Integrity:

Student-teacher relationships should be built on trust. Students should be able to trust that teachers have made responsible decisions about the structure and content of the courses they teach, and teachers must trust that the assignments students turn in are their own. Acts that violate this trust undermine the educational enterprise and contradict the very reason for your being at Rensselaer. *The Rensselaer Handbook of Student Rights and Responsibilities* defines various forms of academic dishonesty and procedures for responding to them. The policies laid out in the *Handbook* are intended to maintain a community of trust and will be strictly enforced. Please review these policies.

First time offenders will receive a 0 for the assignment (the entire assignment, not just the sub-assignment subjected to the integrity violation)

Second time offenders will receive an F for the course and will be reported to the Dean of Students.

For this course, the following penalties will apply:

- Significant acts of plagiarism (e.g., text copied verbatim from an unidentified source): Failure of the course and a written judgment in the student's official record
- Minor acts of plagiarism (e.g., referencing the findings of others without appropriate citations): Failure of the assignment, plus reduction of final course grade by one letter grade

Other acts of academic dishonesty: Penalties range from a warning to reduction of final grade by one letter grade to failure of the course, depending on the severity of the violation as determined by the instructor. As is evident above, penalties for plagiarism are significant. All direct use of another person's words must be placed inside quotation marks. You must also indicate where you paraphrase another's work and where you borrow another's specific ideas or interpretations. If you have questions regarding proper citation practices, see the instructor for clarification *before* the assignment is submitted. While collaboration is encouraged throughout

the course, others cannot do work for you. All assignment activities must be carried out by the individual or team members submitting the assignment for a grade. Other people may show you *how* to do something (say, when using computer software), but you must follow up by doing the work yourself. ^[1]_[SEP] *The Rensselaer Handbook* provides specific procedures by which a student may appeal a grade. You should speak to the professor before initiating an appeal. If this does not lead to satisfactory resolution, you have the option of appealing your grade by writing to the head of the STS Department no later than 10 days after your grade has been posted. ^[1]_[SEP]