School of Industrial Design

2011 Summer Courses Catalog

# Registration Starts April 4 2011 www.oscar.gatech.edu

# Summer sessions Eleven-Week - Full

11 Weeks plus final exam period Classes start May 16

# Five-Week - Short

5 weeks plus final exam period Early session starts on May 16 Late session starts on June 27

Tuition and fee information bursar.gatech.edu/tuiandfee.php

# **School of Industrial Design**

Summer courses 2011

#### ID4104 Alias Studio II

Instructor: Tim Purdy Early session - 3 credits MWF: 10:40-1:15PM 25 students - No requisites Description: Introduction to product animation using Alias Studio software.

#### ID 4823 Adv Modeling Concepts

Instructor: Tim Purdy Early session - 3 credits MWF: 1:20-3:55PM 25 students - Knowledge in 3D requiste Description: The Advance Modeling Concepts Course explores concepts, tools and theories used to model and validate complex forms encountered in product design process.

#### COA 2242 Art History

Instructor: Dr. Joyce Medina Late session - 3 credits M-Th: 4:00 - 6:00PM 200 students - No Requisites Description: This course surveys the major artistic movements and aesthetics of the 17th, 18th, 19th and 20th centuries in painting, sculpture and architecture. complex forms encountered in product design process.

#### ID 4843 Design & Community

Instructor: Raja Schaar Early session - 3 credits M-Th: 1:20-3:20PM 25 students - Junior standing requisite Description: Students will explore socially and environmentally responsible design practices at home and abroad, and partner with local organizations to develop community-based design projects.

#### ID 4201 Design Research Methods

Instructor: Dr. Claudia Rebola Late session - 3 credits MWF: 9:20-11:55 AM 20 students - No requisites Description: This summer course will concentrate specifically on learning how to conduct ethnographic studies including conducting observations, developing field notes, coding recorded observational (using Observer Pro), performing informal interviews, and writing the research study.

#### ID 4418 Design Sketching

Instructor: John Lau Early session - 3 credits MWF: 9:20-11:55AM 20 students - No requisites Description: This course addresses drawing and visualization techniques necessary for design thinking and development and introduces methods and processes to formulate and present visual information.

#### ID 2202 Industrial Design History

Instructor: Dr. Joyce Medina Late session - 3 credits M-F: 1:20 - 2:55PM 200 students - No requisites Description: This course surveys the history of design from the Industrial Revolution to our contemporary times.

#### ID 3011 Intermediate Design I Studio

Instructor: Sam Harris Full session - 5 credits MWF: 8:30 - 12:30PM 20 students - Rising Junior Description: The systematic design process as applied to industrial design and packaging problems. Summercourse theme:designing Fender guitars.

#### ID 4823 Parametric Product Modeling

Instructor: Prof. Kevin Shankwiler Full session - 3 credits TTh: 10:00-12:35PM 20 students -ID Comp I & II or similar Description: This course focuses on advanced digital methods in product modeling for visual analysis, flexible design approaches and digital fabrication methods.

# ID 4900 Portfolio Development

Instructor: Sam Harris Early session - 3 credits MWF: 1:20 -3:55PM 25 students - No requisites Description: The portfolio development course provides students with a structured approach to preparing a professional visual record of their work in print and digital formats.

#### ID 3813 Tangible Interaction

Instructor: Raja Schaar Early session - No requisites M-Th: 10:40-12:40PM 20 students - No requisites Description: This course addresses the design process related to interactive environments. Projects will emphasize the inclusion of ubiquitous and emerging interactive technologies.

#### ID 4833 Wearable Product Design

Instructor: Clint Zeagler Late session - 3 credits M-Th: 9:20-11:20AM 20 students - No requisites Description: Wearable Product Design explores techniques in producing designs and prototypes for on-body interactions, and general textile knowledge for making effective wearable products.



## **ID 4104 ALIAS STUDIO II – PRODUCT ANIMATION**

Tim Purdy, tim.purdy@coa.gatech.edu http://purdy.gatech.edu/ Early Summer Session 2011 – MWF 10:40-1:15PM 3 credit hours

## **Course Objectives**

This course will explore the concepts, tools and principles in the animation field and how these can be used to enhance or tell the story of a new product design. The twelve animation principles originally developed by Walt Disney will be explored first. These help lay a foundation of what works in animation. Secondly, several animation techniques will be surveyed to provide a "tool set" of how things can be done. Finally, animation is not simply working in 3D but requires using tools to composite animation sequences with titles, text and sound.

#### **Course Procedure and Organization**

The course will include lectures, discussions and in-class demonstration. Some of the topics covered will include: keyframing, hierarchical animation, motion path animation, cluster and inverse kinematics, visual effects and compositing. The software used in course will include Alias Studio, Showcase, Maya, and After Effects. Introduction material will be provided on each software program used in the, so no prior knowledge of these programs is required.

## **Required Texts**

None. Material will be available through t-square to read and discuss during class. Students must have access to t-square to participate actively in this class.

#### **Course Requirements**

<b>Basic Animation Project</b>	30%
Freeform Animation Project	30%
"Telling a Story" Project	40%

**Total** 100%

#### ID 4823 ADVANCE MODELING CONCEPTS

Tim Purdy, tim.purdy@coa.gatech.edu http://purdy.gatech.edu/ Early Summer Session 2011 – MWF 1:20-3:55PM 3 credit hours

#### **Course Objectives**

The Advance Modeling Concepts course will explore the concepts, tools and theories used to model and validate complex forms encountered in product design process. Tools such as 3D sketches, curves and reference geometry are the starting blocks to modeling. When combined with concepts such as surfaces, hybrid modeling or parametric modeling, more advance forms can start to emerge.

#### **Course Procedure and Organization**

The course will include lectures, discussions and in-class demonstration. Some of the topics covered will include: solid, surface & hybrid modeling, continuity theory, curves, spines, 3D sketching, advance fillets, shelling, bodies and assemblies. The software used in this course will be SolidWorks 2010-2011 which is available through the OIT website for student use. ID 3104 or equivalent introduction to CAD or 3D modeling course is required as a prerequisite.

#### **Required Texts**

Required book: Solidworks – Surfacing and Complex Shape Modeling by Matt Lombard. ISBN: 978-0-470-25823-1. Other material will be available through t-square to read and discuss during class. Students must have access to t-square to participate actively in this class.

#### **Course Requirements**

Shelling & RP Project	20%
Surface Project	20%
Detail Form & Assembly Project	40%
Final Exam	20%

**Total** 100%

#### COA 2242 ART HISTORY II

Joyce Medina, PhD, COA Room 156, joyce.medina@coa.gatech.edu Late Summer Session, Monday through Thursday 4:00-6:00PM 3 credit hours

This course surveys the major artistic movements and aesthetics of the  $17^{\text{th}}$ ,  $18^{\text{th}}$ ,  $19^{\text{th}}$  and  $20^{\text{th}}$  centuries in painting, sculpture and architecture.

#### **Course Objectives**

Emphasis will be placed on being able to define and discuss the major period designations (the "isms") that form the movements and trends of our modern age; on being able to discuss the theories of the major artists and "schools" of these periods; and on being able to analyze the descriptive and didactic terminology that has emerged in modern art criticism and in the field of comparative cultural studies.

#### **Course Procedure and Organization**

The material presented in class will be mostly slides. Please focus on the letting the slides familiarize you with the individual artists' styles, and with the characteristics of the style category (e.g., "Abstract Expressionism," "Surrealism") under which they fall. Notes taken in class should focus on terminology and definitions, historical facts and memory aids. Slide sheets will be distributed for each lecture and will include identification data for the art works and "important terms" discussed in the context of that day's lecture topic.

#### **Research Relationship**

This instructor is an art historian who specializes in 20<sup>th</sup> century European art and has published on Paul Cezanne, Henri Matisse and semiotic theory.

#### **Required Text**

Gardner's Art Through the Ages (12<sup>th</sup> or 13<sup>th</sup> editions only)

#### **Course Requirements**

There will be five tests; these tests will examine comprehension of the materials presented in class, the readings in the text and hand-outs. The tests will consist of slide identification, terminology definition, multiple choice and matching questions. Each test examines the material studies since the last test; there will be no comprehensive final exam. Each test is worth 20% of your final grade. You are required to attend all lectures. There will be a seating chart and attendance will be recorded. Five and more absences will seriously affect your grade.

## ID 4843 DESIGN + COMMUNITY

Raja Schaar, raja@gatech.edu Early Summer 2011, Monday – Thursday 1:20-3:20PM 3 credit hours

#### **Course Objectives**

This Course is designed to provide students with a deeper understanding of the social and environmental impact of design through exposure to current practices. In this course students will explore and discuss how designers can effect positive social and environmental change in local, national, and international communities. Students will also look for opportunities to partner with local organizations in the metro-Atlanta area to develop a design-based solution to community-based problem.

Students will have the opportunity:

- To gain exposure to issues that local, national, and global societies
- To examine current scholarship that addresses design involvement in social and environmental issues
- To identify and understand the impact of current global design initiatives and organizations
- To identify and evaluate products designed with a social conscience
- To practice the theory of designing for good by developing a community-based design project

#### **Course Procedure and Organization**

Although much course information will be delivered through traditional multimedia lectures and presentations, active discussion and participation is crucial to the success of the course. We will also be going on regular field trips to local organizations that will build on our knowledge of the Metro-Atlanta community and guide us on how designers can get involved at the local, national, and global levels.

The topics covered will examine the issues that impact design and community at expanding scales—local, national, and global). Students will conduct research on organizations or initiatives that have the potential for designer involvement. We'll look at designs influence on ethics, social justice poverty, health and well-being, transportation, architecture, communication design, collaboration, democracy, education. We'll critique products designed with a social conscience, and try to glean ideas from architects, artists, and designers. Overall we're trying to evaluate the best way for industrial designers to get involved at a community level.

#### **Required/Suggested Readings**

*Design for the Real World*, Victor Papanek *Expanding Architecture: Design As Activism,* edited by Bell and Wakeford

#### **Course Requirements**

Total	100%
Final Exam Presentation	25%
Class Project	25%
Mid-Term Paper + Presentation	25%
Blog, Sketchbooks Assignments	25%

## **ID4201 DESIGN RESEARCH METHODS**

Dr. Claudia Rebola, COA Room 108, crw@gatech.edu Late Summer Session 2011 | MWF 9:20-11:55AM 3 credit hours

#### **Course Objectives**

This course focuses on research methods applicable to industrial design including task definition, information gathering, and analysis. The objectives of this course are:

- Gain understanding on the different research methods applicable to industrial design
- Conduct design research exercising varied methods
- Learn to analyze gathered data
- Apply the new knowledge on a personal research project

This summer course will concentrate specifically on learning how to conduct ethnographic studies including conducting observations, developing field notes, coding recorded observational using Observer Pro, performing informal interviews, and writing the research study. Students will be expected to attend all classes/lectures, participate in interactive group discussions and in-class exercises, complete all class assignments and submit a final project at the end of the semester. Assignments will be both individual and in teams.

#### **Course Procedure and Organization**

This class will operate theory and project-based supported by instructor presentations and guidance. Instructional methods for teaching the course include:

- Readings, lectures and in-class discussions
- In-class demonstrations and workshop sessions
- Individual and group projects

#### **Required/Suggested Readings**

- Berg, B. L. (2007). *Qualitative Research Methods for the Social Sciences* (6th ed.): Pearson Education Inc.
- Cresswell, J. W. (2008). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications, Inc; 3rd edition.
- Emerson, R. M., Fretz, R. I., & Shaw, L. L. (1995). *Writing Ethnographic Fieldnotes*: The University of Chicago Press.
- Hammersley, M., & Atkinson, P. (1995). What is Ethnography?, *Ethnography: Principles in Practice* (2nd ed., pp. 323 p.). London; New York: Routledge.
- Moore, D. S. (2000). The Basic Practice of Statistics (2nd ed.). New York: W.H. Freeman and Co.
- Weiss, R. S. (1995). *Learning from Strangers: The Art and Method of Qualitative Interview Studies* (1st Free Press pbk. ed.). New York: Free Press.
- Weissberg, R., & Buker, S. (1990). Writing Up Research: Experimental Research Report Writing for Students of English. New Jersey: Prentice Hall Inc.

#### **Course Requirements**

The course requires students to complete one final project. Student will be required to submit progress on the project (milestones). Grades will be based on projects and exams according to the following grading distribution:

Discussion	10%	In-class Weekly Summaries of Readings and Discussions
Project	30%	Submission of project milestones
Final project Total	60% <b>100%</b>	Final Project Presentation and Final Document Submission

## **ID 4418 DESIGN SKETCHING**

John Lau, owldesigninc@gmail.com Early Summer Session 2011 | MWF 9:20 -11:55AM 3 credit hours

#### **Course Objectives**

This course addresses the fundamental drawing and visualization techniques commonly used by industrial designers for design thinking and development. It introduces the basic methods, elements, and processes of effective sketching that are necessary to make informed choices about formulating, developing, and presenting visual information and design ideas in an accurate and convincing manner. Upon completion of the course, students will gain knowledge, skill, and abilities in the following areas:

- Effective use of a range of fundamental industrial design sketching & visual communication techniques
- Ability to identify and employ drawing and visualization techniques that best communicate design ideas
- Develop the technical and creative skills necessary for making informed judgments about the effectiveness of visual communication and work quality

## **Course Procedure and Organization**

This course introduces students to the fundamentals of traditional analog sketching skills and techniques used throughout the design process. Instructional methods for teaching the course include lectures, in-class discussions & critiques, in-class demonstrations, and workshop sessions. Some of the topics covered will include: line, shape, surface, volume, perspective, light & shadow, form, texture & detail, orthographics, sketch ideation & exploration, basic marker rendering, and observational drawing. The course is structured to be taught by example in a "demo-then-practice" style. The materials are organized and presented in a step-by-step context consistent with an industrial designer's approach to visual communication to provide students with an understanding of how to better leverage, develop, and improve their own design sketching skills.

#### **Recommended Texts**

Eissen, Koos & Steur, Roselien. Sketching: Drawing Techniques for Product Designers. BIS Publishers, 2007.

NOTE: This book is highly recommended for this course, but it is <u>not</u> required.

#### **Course Requirements**

Class Participation	10 points
Assignments	60 points
Final Project	30 points
Total	100 points

NOTE: The exact breakdown may change.

#### **ID 2202 HISTORY OF INDUSTRIAL DESIGN**

Joyce Medina, PhD, COA Room 156, joyce.medina@coa.gatech.edu Late Summer Session 2011 | Monday through Friday 1:20-2:55 PM 3 hours credit

This course surveys the history of design from the Industrial Revolution to our contemporary times. It focuses on general design principles (formal, functional, historical, stylistic and ideological), historical data (influences, *zeitgeist*, "progress," the avant-garde), the rise of industrial design as a profession (engineering vs. aesthetic concerns, studio vs. manufacturing plant), principles of mass production (new materials, product testing, consumer politics), the role of design programs and schools (multicultural perspectives, political correctness, gender/racial issues), and contemporary issues in design (human factors approaches, "universal design").

## **Course Objectives**

Students will be able to define and discuss the major stylistic periods in the history of design; recognize the work of the major designers; understand the influence of art, politics, history, philosophy and technology on the evolution of these design movements; and utilize terminology and interpretive approaches to synthesize all of this material.

## **Research Relationship**

The instructor teaches other courses on the relationship between designed objects and art works within culture.

## **Course Procedure and Organization**

Class meetings will consist of lectures with slides which are organized by "topics" (see "Schedule of Lectures" for the listing of topics). These lectures will be accompanied by "slide sheets" which will be distributed for each class meeting; they will list all of the images discussed along with "important terms" used in that lecture to explain that topic.

# **Required Texts**

Chapters, "texts," will be uploaded to T-Square in support of each topic. These "texts" will present more in-depth explanations and factual information and will constitute the textbook for the course.

#### **Course Requirements**

There will be five tests; these tests are not cumulative and will cover only the material since the last test. They will test students on individual works (using timed slide questions), terminology, and stylistic characteristics (objective questions). The final test is during final exam week, but it is not comprehensive. Each test is worth 20%. You are required to attend all lectures. There will be a seating chart and attendance will be recorded. Five and more absences will seriously affect your grade.

# **ID3011 INTERMEDIATE DESIGN I STUDIO**

Sam Harris, mobile 678-471-5406, samh@f-square.com Late Summer Session 2011 | MWF 8:30-12:30PM 5 credit hours

# **Course Objectives**

The evolution of branded products represents an important contribution that designers make to client companies and their competitive health. Designers must understand how evolving brands, materials, sales channels, technology, and other key constraints affect their designs, as well as how to analyze, explore, and communicate design ideas.

For our brand evolution this term we will be analyzing and developing new electric guitar designs for Fender Musical Instruments Corporation, an internationally recognized American icon and industry leader. The studio assignments will help students develop an understanding of how companies evolve products to grow their market share, and to support and build brand loyalty. Working within the constraints of a company's history, channel, market segment, customer expectations, value perception, and quality gives us a chance to design for the future needs of those people who rely on the brand for the benefit the product provides, as well as the resellers, the workers, and those in support organizations such as advertising, packaging, and parts and materials suppliers.

# **Course Procedure and Organization**

Instructional methods for teaching the course include:

- Lectures and in-class discussions
- In-class demonstrations and workshop sessions

# **Course Requirements**

Final letter grades will be a cumulative total of average of individual project plus your attendance record, studio participation and presentations:

٠	Module 1 Brand analysis and research	10 %
•	Module 2 Evolved branded Product Concepts	20 %
٠	Module 3 Design Development	25 %
•	Module 4 Details, hardware, and finishes	25 %
•	Attendance and studio participation	10 %
٠	Improvement in visual + presentation skills	10 %
•	Total	100%

Total

## **ID 4823 PARAMETRIC PRODUCT MODELING**

Kevin Shankwiler, IDSA, COA Office 112, kshankwiler@gatech.edu Full Summer Session 2011 | Tuesday/Thursday 3:05-4:25PM 3 credit hours

#### **Course Objectives**

Flexible product representation allows for tailored, or customized product offerings, often referred to as "mass customization." Products can be customized based on consumer preferences, regional constraints, specific population attributes, modular system requirements, and other influences. Meeting these needs involves moving beyond mass-customizable "configurators" with discreet numbers of options, such as Nikei**D** and "build your own" automobile websites, towards fully flexible systems enabling nearly infinite user control within design-specified constraints. This type of system requires integration of flexible design, modeling and fabrication. How is the designers' approach to product architecture informed by this new mindset? How will manufacturing technology enable and/or impact this process? Students will design, model and fabricate products to validate this thinking.

#### **Course Procedure and Organization**

Instructional methods for the course include: Lectures and in-class discussions; presentations and project reviews; readings; hands-on fabrication. Some of the topics covered will include: Creating digital representations of products with embedded geometric flexibility; bottom-up design modeling; top-down design modeling; relation and constraint modeling; parametric planning; computer-aided-manufacturing (CAM) and fabrication techniques.

#### **Required/Suggested Readings**

- Shaping Things, Bruce Sterling (2005, The MIT Press)
- SolidWorks Surfacing and Complex Shape Modeling, Matt Lombard (2008, Wiley Publishing Inc.)
- SolidWorks for Dummies, Greg Jankowski (2005, Wiley Publishing Inc.)

#### **Course Requirements**

Project 1 + Assignments	25%
Project 2 + Assignments	25%
Final Project	50%

Total

100%

## **ID4900 PORTFOLIO DEVELOPMENT**

Sam Harris, samh@f-square.com Early and Late Summer Sessions 2011 | MWF 1:20-3:55PM 3 credit hours

## **Course Objectives**

The designer's portfolio is one of the most important and influential factors in the hiring process. The portfolio development course provides students with a structured approach to preparing a professional visual record of their work in print and digital formats to help ensure their success in career placement.

## Relationship of Course to your own Research and Practice/Creative work

A graduate of Tech's ID program, Sam Harris has been in professional design practice since 1978. Mr. Harris has worked nationally in new product development, packaging, advertising and promotion, art direction, training, and exhibit design. Mr. Harris has been on our adjunct faculty in ID studio since 2007. He maintains his professional practice in the Atlanta area.

#### **Course Procedure and Organization**

The course will include lectures, workshops, in-class discussions, analysis based on readings and research, peer review and demonstrations. Students will have out of class assignments to prepare and bring back for review and discussion. Topics will include how to relate elements of a professional document including page layout and dynamics, typography, color, statistical graphics, managing images, and editing copy for content and clarity. Paper types will be studied. Students will develop their own print and web-based portfolios, as well as a business card to present a consistent image to promote themselves and their work.

#### **Required / Suggested Readings**

- Josef Müller-Brockmann, Grid Systems in Graphic Design
- Edward Tufte: The Visual Display of Quantitative Information
- Emil Ruder: <u>Typographie</u>
- H.L. Cooke: Painting Techniques of the Masters
- Johannes Itten: <u>The Art of Color</u>
- Theodore Bernstein: <u>Watch Your Language</u>
- L. Sabin-Wilson: Wordpress for Dummies

#### **Course Requirements**

Students are expected to prepare samples for in-class discussion and review.

You will develop your portfolio in four stages:

Grading Distribution:

Project 1	20%	Publication Design
Project 2	20%	Print Portfolio
Project 3	20%	Web Site
Project 4	20%	Final Presentation
Participation	20%	Participation in discussions, presentations, etc.
-		

**Total** 100%

## ID 3813 TANGIBLE INTERACTION

Raja Schaar, raja@gatech.edu Early Summer 2011, Monday – Thursday 10:40-12:40PM 3 credit hours

#### **Course Objectives**

This course addresses the design process related to interactive installations and environments for Museums and Institutions. Projects will emphasize the inclusion of ubiquitous and emerging interactive technologies. Student will have the opportunity to work in teams to design and prototype concepts for interactive installations for proposed Museum contexts.

- To provide Industrial Design students with an understanding of practices and implications for designing interactive products/furniture/installations at the public and multi-user scale.
- To provide students opportunity to research and develop content for interactive products.
- To provide prototyping basics for tangible and multimedia interactions

#### **Course Instructor**

Raja Schaar has worked primarily in the museum industry since 2000, holding positions at SciTrek, Atlanta's former interactive Science and Technology museum; the High Museum of Art; Malone Design/Fabrication; and MODA (Museum of Design Atlanta). Schaar continues to work as an interaction and exhibition designer, specializing in visitor centers, history museums, and science center exhibitions.

#### **Course Procedure and Organization**

Lectures and demonstrations will cover history, concept development, design development, and emerging trends in the field. Student will have reading assignments and site visits related to each topic. Students will have the opportunity to go to exhibitions, visit exhibit design firms, and research inspiring environmental storytelling.

Student teams will research an assigned content area to develop an interactive exhibition. Student will present a Mid-Term Presentation the content outline and concepts for an interactive educational exhibition. Students will complete an exhibition design project in which they produce a set of exhibition drawings, sample text, typical graphics, and a proof of concept prototype/working interactive model of an installation concept.

#### **Required/Suggested Readings**

Designing Interactions, Bill Moggridge What is Exhibit Design, Lee Skolnick, Jan Lorenc, Craig Berger Critical Issues in Interactive Media, Simon Penny

#### **Course Requirements**

Total	100%
Prototype	30%
Design Development	25%
Mid-Term Presentation/Concept Development	25%
Quizzes and Assignments	20%

# ID4833 WEARABLE PRODUCT DESIGN

Clint Zeagler, czeagler3@mail.gatech.edu Late Summer Session 2011 | M-Th 9:20-11:20AM 3 credit hours

# **Course Objectives**

Wearable designs could take the form of clothing, shoes, accessories, or bags, but are not limited to such items This course explores the techniques required to produce designs and prototypes that are worn on the body, and will also impart general textile knowledge for making correct fabric choices for different use scenarios. In addition, Wearable Product Design will also look at on body interaction with devices and products and incorporating body worn sensors.

# Relationship of Course to Clint Zeagler's Research and Practice/Creative work

Clint Zeagler works on projects at the intersection of desire and technology. His research on electronic textiles with the Contextual Computing Group of the GVU center and his course instruction on mobile and ubiquitous computing along with directed electives push the boundaries of how we interact with electronics on the body.

# **Course Procedure and Organization**

This is a lecture course, but also includes many demos, guest lectures, and off campus trips to manufacturing facilities. There are no prerequisites for this course. The final project does not have incorporate electronics, but must be worn on the body or interact with the body.

# **Required/Suggested Readings**

- Textiles: Concepts and Principles 3rd Edition by Virginia Hencken Elsasser List Price: ©2011, 336 pp., softcover | perforated | 7.375 x 9.25 (978-1-56367-844-8)
- J.J. Pizzuto's Fabric Science Swatch Kit, 9th Edition by Allen C. Cohen, Ingrid Johnson List Price: ©2010, 119 pp., three-ring binder, 8.5 x 11 (978-1-56367-857-8)

# **Course Requirements**

Test 1	10%	Textiles Knowledge
Test 2	10%	Textiles Knowledge
Test 3	10%	Textiles Knowledge
Test 4	10%	Textiles Knowledge
Test 5	10%	Sewing and Garment Knowledge Test
Project 1	5%	Swatch Book Completion
Design Proposal	15%	Design Development / Ideation / Tech Drawings (Flats) / Concept Rendering
Final Project	25%	Exhibit Presentation / Boards / Design Prototype / Video
Participation	5%	Participation & Professionalism
Total	100%	

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