

# COMPUTER AIDED DESIGN (C.A.D.) for Fashion Applications



**Computer Aided Design (C.A.D.) for  
Fashion Applications**  
Spring 2012

**FDM 30123-001**

328 :: Rockwell

W/F :: 11:00pm - 12:15pm

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**office hours**

by appointment

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[margaritabenitez.com](http://margaritabenitez.com)

## Course Description

*The use of Computer Integrated Design to produce textile prints, wovens and knits for design and merchandising presentations.*

## Course Objectives

*Through successful completion of classroom and independent lab activities it is expected that you will become proficient using Computer Integrated Design Software, such as Lectra's Kaledo Print, Weave and Knit. Through use of this software tool you will also:*

- vocabulary associated with digital imaging and software packages
- be familiar with the development and use of CAD in fashion and related industries
- be able to create color palettes and match to printer
- be able to create repeated textile designs
- be able to apply color or prints to flats, fashion drawings, or photos
- be able to transfer knowledge of technologies to specific applications and other software
- develop and present a professional portfolio of course requirements and original work

## Course Web Site

The syllabus and course documents will be made available on Flashline and at:

[margaritabenitez.com](http://margaritabenitez.com)

## Reference Sources

- [www.lectra.com](http://www.lectra.com) - Lectra Systems website
- Fashion trade publications
- Forecasting services
- WWD
- Design/Textile books in the FDM library
  - **Digital Textile Design: Portfolio Skills** :: ISBN: 1856695867
  - **Flats: Technical Drawing for Fashion** :: ISBN: 1856696180

## Course Fee

\$50 Student fee

*This fee covers a jump drive, computer maintenance, printer inks, and digitally printed fabric for project 1.*

## Required Supply List

- Additional USB drives (as personal storage needs demand)
- Presentation supplies as needed
- notebook, pens and other classroom supplies.

## Required Reading

*We do not require any books for this course.*

**Last Day to Add/Drop:** January 22

**Last Day to Withdraw:** March 18

LOGIN: fashlab5

PASSWORD: fashlab5

## Online Resources

### IMAGERY

Morgue File :: <http://www.morguefile.com/>  
Creative Commons :: <http://creativecommons.org/> and <http://search.creativecommons.org/>  
Google Images :: <http://images.google.com/>  
Flickr :: <http://www.flickr.com/groups/freeuse>  
Smithsonian Photography Initiative :: <http://photography.si.edu/default.aspx>  
Pics4Learning :: <http://www.pics4learning.com/>  
Open Photo :: <http://openphoto.net/>  
Wikispecies :: [http://species.wikimedia.org/wiki/Main\\_Page](http://species.wikimedia.org/wiki/Main_Page)  
The Creative Element :: <http://creativity103.com/index.htm>  
BurningWell :: <http://www.burningwell.org/>  
Open Clip Art Library :: <http://www.openclipart.org/>

### Copyright

Always try to use your own graphics or from resources which explicitly give you permission to use their materials freely. If no clear “fair use”, “public domain”, or “creative commons” statement is available you should get permission if you use their materials in your project. At the very least you *MUST* give credit for where and from whom you have borrowed the material.

Give credit in the text of your document, on your Works Cited Page, or on a Credits page for everything that you use. Include copyright information beside or under images (photographs, charts, maps, pictures, graphics). Include the following information next to the image: “c” or the word “copyright”, the name of the creator of the image, then the copyright date. If this information is not available in or on your source, you can list the bibliographic information or web address of the source.

### Final Grade Distribution

The final grade is based on the following:

assignments 1-6	=	25%
project 1	=	15%
project 2	=	40%
midterm	=	10%
final	=	10%
<b>TOTAL</b>	<b>=</b>	<b>100%</b>

## class policies

### Attendance Policy

- Attendance will be taken every class with a sign in sheet.
- It is your responsibility to make sure to sign in if you are late.
- There is so much technical, conceptual and design information to absorb, regular attendance is essential.
- Contact the professor **IN ADVANCE** if you will not be in class (*by email is preferred*).
- It is the student's responsibility to inquire about content that has been missed, to obtain any material that has been missed due to absence, and to turn in any assignments that are due.

### Assignment Policy

- All assignments and projects are due immediately when class begins on the date specified on the syllabus :: any date changes will be emailed.
- **Incomplete work will not be accepted for grade.**
- Participants are encouraged to work with their peers and share their work in order to receive feedback prior to due dates.

### Late Work Policy

- Late work is not accepted unless there is a medical, legal (court) or university documented excuse.
- If an assignment or project is turned in after or during the critique, it will be considered a **whole day late**.
- If work is not turned in on the proper due date the grade will be lowered a whole grade for every calendar day the work is late. It is the student's responsibility to inform the instructor if the work is late.
- If an assignment is later than one week from when it is due, and prior arrangements have not been made, the assignment will not be accepted.
- **NOTE:** If you are overwhelmed or feeling behind, please contact me **before (i.e. not the same day)** the assignment is due to discuss options.

### Lab

- open class time/lab time is to be used for current assignments only
- the lab is open during building hours
- you may use it any time classes or special events are not in session
- Food, beverages and smoking are not permitted in the lab at any time.
- Phones and other devices are required to be turned on vibrate during class time.
- If you receive a call during class that you have to take, please step outside of the classroom.
- The Instructor reserves the right to have the student repeat any and all procedures under supervision.

### Email policy

- Email communication with the instructor must be done via: **mbenitez@kent.edu**
- Emails sent after 5:00PM on weekdays will be replied within 24 hours.
- Emails sent during the weekend will be replied within 48 hours.

### Data Loss

Students are responsible to back up their files. Save your files in two places every time you are finished working on a file. At the end of class, for example, save on the hard drive and on your USB drive as well. Students are responsible for the re-creation of any lost or damaged files.

## university policies

### Registration Requirement

**The official registration deadline for this course is September 4, 2010** (*Late Registration :: with fee :: September 11*). University policy requires all students to be registered in each class they are attending. Students who are not officially registered for a course by published University deadlines should not be attending classes and will not receive credit or a grade for the course. Each student must confirm enrollment by checking their official class schedule (using Student Tools in FlashFAST) prior to the deadline indicated. **Registration errors must be correct prior to the deadline.**

### Cheating & Plagiarism

Cheating and plagiarism constitute fraudulent misrepresentation for which no credit can be given and for which appropriate sanctions are warranted and will be applied.

*“Plagiarism is the use or close imitation of the language and thoughts of another and the representation of them as one’s own work.” - Wikipedia.com*

Students enrolled in the university, at all its campuses, are to perform their academic work according to standards set by faculty members, departments, schools and colleges of the university; and cheating and plagiarism constitute fraudulent misrepresentation for which no credit can be given and for which appropriate sanctions are warranted and will be applied.

“Plagiarize” means to take and present as one’s own a material portion of the ideas or words of another or to present as one’s own an idea or work derived from an existing source without full and proper credit to the source of the ideas, words, or works. As defined, plagiarize includes, but is not limited to:

- (a) The copying of words, sentences and paragraphs directly from the work of another without proper credit;
- (b) The copying of illustrations, figures, photographs, drawings, models, or other visual and nonverbal materials, including recordings, of another without proper credit; and
- (c) The presentation of work prepared by another in final or draft form as one’s own without citing the source, such as the use of purchased research papers..

*(References: Administrative Policy and Procedures Regarding Student Cheating and Plagiarism; University Policy Register, 3342-07 [Chapter 3 pgs 15-24]; University Digest of Rules and Regulations [pg 9])*

### Students with Disabilities

University policy 3342-3-01.3 requires that students with disabilities be provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact the instructor at the beginning of the semester to make arrangements for necessary classroom adjustments. Please note, you must first verify your eligibility for these through Student Accessibility Services (contact 330-672-3391 or visit [www.kent.edu/sas](http://www.kent.edu/sas) for more information on registration procedures.)

### Students Academic Complaint Policy + Procedures

In accordance with University Policy, problems should be discussed with the instructor first. If the issue remains unresolved then you may address your concerns with the department director.

*(References: Faculty Handbook [pg 3-9]; Administrative Policy Regarding Student Academic Complaint; University Policy Register, 3342-4-16 [Chapter 4 pgs 43-48]; University Life Digest of Rules and Regulations [pg 13])*

## grading policy

### Grades

#### **A**

The student presents the highest level of performance and attendance. The student's work reflects exceptional achievement both in quantity and quality, differentiating itself from other work, and surpassing all of the criteria set in the coursework descriptions. Ability to communicate and execute ideas exhibiting outstanding achievement. Demonstrates a mastery of the course concepts and shows the work ethic of a highly self-motivated student.

#### **B**

The student presents a good level of performance and attendance. The student's work is good/very good and reflects above-average achievement both in quantity and quality. Shows evidence of understanding the relationship between multiple course concepts. The student's ability to communicate and execute ideas exhibits above-average achievement.

#### **C**

The student presents an adequate level of performance and attendance. The student's must reflects an acceptable achievement both in quantity and quality, and all work is completed as assigned. Meets all expectations of the assignment and demonstrates clear student effort and improvement.

#### **D**

The student presents a less than adequate level of performance and attendance. The student's achievement is below average in quality and/or quantity. The student's work reflects an inability to satisfactorily communicate and execute ideas.

#### **F**

The student presents a level of performance and attendance such that the course requirements have not been met. The student's work and attitude reflect an unsatisfactory level of achievement both in quantity and quality. The student exhibits an unsatisfactory ability to, communicate and execute ideas and a pattern of low productivity.

### Grading Scale

<b>A</b>	<b>93-100</b>	—	<b>Excellent</b>
<b>A-</b>	<b>90-92</b>		
<b>B+</b>	<b>87-89</b>		
<b>B</b>	<b>83-86</b>	—	<b>Above Average / Good</b>
<b>B-</b>	<b>80-82</b>		
<b>C+</b>	<b>77-79</b>		
<b>C</b>	<b>73-76</b>	—	<b>Average / Satisfactory</b>
<b>C-</b>	<b>70-72</b>		
<b>D+</b>	<b>67-69</b>		
<b>D</b>	<b>65-66</b>	—	<b>Below Average / Poor</b>
<b>F</b>	<b>00-64</b>	—	<b>Unacceptable / Failure</b>

Each assignment, test and final project will equal 100%

## course expectations

### Student Responsibilities

*All work turned in should be computer generated and typewritten. If a printed assignment, please plan and print out your work IN ADVANCE because last minute "computer-related" excuses will not release you from and deadlines.*

**ALWAYS make and keep backup copies of your work!!!**

***NEVER, and I mean NEVER work directly off your jump drive. Transfer your files locally and save back to the jump drive when finished. Make sure to eject them properly. Jump drives fail...often.***

- attend all class sessions
- be punctual for class and participate and leave only at the conclusion of the class.
- bring appropriate materials + equipment to class
- read all assigned materials and do assigned tutorials
- prepare and submit all assignments by the appropriate due dates
- devote at a minimum 6 hours per week, fulfilling assignments, readings and understanding class concepts
- present all work in a professional manner
- be prepared to discuss readings and assignments in class
- consult class website at least once a week for updates: files, class resources
- inquire about + obtain any missed content due to absence
- have patience, persistence and discipline
- pay attention to detail
- be creative
- be self-confident and have pride in your work
- be fearless

### Student Responsibility Guidelines: - Expectations for Students (from University Life: Digest of Rules and Regulations)

- Be attentive and alert to learning.
- Demonstrate honesty and intellectual integrity in academic pursuits.
- Be courteous to fellow students.
- Contribute to classroom discussion.
- Take levels of classes appropriate to skills.
- Maintain basic skills at the college level.
- Do not come to class under the influence of a substance.
- Take advantage to office hours and keep appointments when you make them.
- Think critically and creatively.
- Alert the instructor to physical disabilities which might affect class work or performance.
- Take responsibility for self-discipline and motivation.
- Make up all missed work.
- Act responsibly.
- Develop effective oral and written communication skills.
- Familiarize yourself with the syllabus.
- Keep questions or comments pertinent to class discussion.
- Do not come to class if your illness will affect others.
- Seek help as needed.
- Do not disrupt class or harass the teacher.
- Tolerate diversity.
- Seek your advisor at appropriate times.
- Familiarize yourself with the catalog.
- Be civil to faculty and address them appropriately.

## assignments + projects

The 15 week course will be structured around 7 assignments and 2 main projects. Tutorials and exercises will create specific learning objectives to be applied directly to the current project. Most exercises or tutorials will build on knowledge learned in previous exercises and/or tutorials, culminating in the final project.

### **Assignment 1 :: Color Story :: Developing a Color Story for your Print Collection**

*Utilize techniques of Color Theory and Color Trending develop a Color Story for your Print Collection.*

### **Assignment 2 :: Kaledo Print :: Color Reduction and Cleaning Motifs**

*Develop effective techniques of color reduction and cleaning stray pixels to produce effective crisp motifs for use in later print designs.*

### **Assignment 3 :: Kaledo Print :: Coordinated Repeats**

*Utilize techniques of scanning, reducing color, cleaning, and creating, design motifs for use in repeat print development. Become familiar with print terms such as: slide, 1/2 drop, border, scarf, engineered, foulard.*

### **Assignment 4 :: Kaledo Print :: Tonals**

*Utilize techniques of scanning, reducing color, cleaning, and creating design a tonal motif for use in repeat print development.*

### **Assignment 5 :: Kaledo Print :: Applying Prints into Flat Drawings**

*Practice scanning, color reduction, cleaning images, and various fills techniques for use in fashion flat drawings as well as use in professional presentations.*

### **Assignment 6 :: Kaledo Weave :: Wovens**

*Utilize woven techniques in Kaledo Weave for visualizing a standard woven repeated plaid and stripe.*

### **Assignment 7 :: Kaledo Knit :: Knits**

*Utilize knit techniques to create a Fair Isle or Jacquard pattern and Motif Intarsia and have a basic understanding of knit terminology.*

### **Project 1 :: Kaledo Print :: Digitally Printed Scarf**

**We will present projects on screen for review and critique.**

*Design a scarf using cleaned motifs and repeated prints. This can be a true color print as it will be digitally printed on silk and you have no color limitations. You have a choice of designing either a rectangular or a square scarf.*

### **Project 2 :: Kaledo Print, Weave, and Knit :: Computer Aided Design Portfolio**

**We will present projects on screen for review and critique.**

*The CAD portfolio will showcase your knowledge of Computer Aided Design in Lectra's Kaledo Print, Weave and Knit. Creative thinking as well as realistic applications for the production of corresponding prints, plaids, stripes and knit fabrics for the fashion industry will be featured in this portfolio.*

WEDNESDAYS	FRIDAYS
<p><b>JAN 11</b> Introduction to Course/Review Requirements/Supplies</p> <ol style="list-style-type: none"> <li>1. Kaledo Print Environment</li> <li>2. File Management and Navigation</li> <li>3. Standard Toolbars</li> <li>4. Working with Color</li> <li>5. Basic Paint and Draw Tools</li> <li>6. Paint Practice Assignment</li> </ol>	<p><b>JAN 13</b> <b>DUE: Paint Practice Assignment</b></p> <p><b>DEMO:</b> <i>How to Get Colors: Color Stories and Color Trend Reports</i> WGSN - Fashionsnoops - Pantone - Colorlovers.com</p> <p>Mood/color board examples + finding imagery</p> <p><b>PHOTOSHOP DEMOS</b> Move tools, Image (moving/masking), shapes (for swatches), working with colors, pantone colors, text tools <i>(Digital Textiles Book Tutorial 7 on Masking)</i></p> <p><b>Assignment 1: Color Story</b></p>
<p><b>JAN 18</b> <b>WORK DAY:</b> <i>Assignment #1 (finish creating color stories)</i></p> <p><b>DEMO:</b> <i>Scanner</i></p>	<p><b>JAN 20</b> <b>DUE: Assignment #1</b></p> <p><b>DEMO:</b> <i>Prints Presentation: Types of Repeated Prints, Print Development, Motifs and Collections, Tips for Creating and Choosing Motifs</i></p> <p><b>KALEDO PRINT</b> 7. Adding Colors to Palette 8. Setting Preferences</p> <p><b>Assignment #2: Color Reduction &amp; Cleaning Prints</b></p>
<p><b>JAN 25</b> <b>DEMO:</b> <i>Reducing True Color to Index Color</i> 9. Reducing True Color to Index Color 10. Cleaning the Motifs and Masking Tools</p>	<p><b>JAN 27</b> <b>WORK DAY:</b> <i>Assignment #2 (finish cleaning the motifs)</i></p>
<p><b>FEB 1</b> <b>WORK DAY:</b> <i>Assignment #2 (finish cleaning the motifs)</i></p>	<p><b>FEB 3</b> <b>DUE: Assignment #2</b></p> <ol style="list-style-type: none"> <li>11. Motif Clipboard</li> <li>12. Edit Motif Commands</li> <li>13. Motif Manipulation</li> <li>14. Repeat Prints Development</li> </ol> <p><b>Assignment #3: Coordinated Print Repeats</b></p>
<p><b>FEB 8</b> <b>WORK DAY:</b> Assignment #3 <b>DEMO:</b> Review Print Development</p> <p><b>YOU MUST CLEAN UP ANY MOTIFS FROM COMMENTS on ASSIGNMENT #2!!!</b></p>	<p><b>FEB 10</b> <b>Work Day:</b> Assignment #3</p> <ol style="list-style-type: none"> <li>18. Print Layout</li> <li>19. Creating Colorways (<i>coloring/recoloring</i>)</li> <li>20. Creating Palette Data</li> <li>21. Printing &amp; Color Matching</li> </ol>
<p><b>FEB 15</b> <b>Work Day:</b> Assignment #3 <b>DEMO:</b> Color Separation How to</p> <ol style="list-style-type: none"> <li>15. Color Separation</li> <li>16. Text</li> <li>17. Vector Tools</li> </ol> <p><b>DUE: Assignment #3 (part 1 - at end of class)</b></p>	<p><b>FEB 17</b> <b>MIDTERM :: TEST #1</b></p> <p><b>PROJECT 1: Digitally Printed Scarf</b></p>
<p><b>FEB 22 (@ College Art Association/New Media Caucus in LA)</b></p> <p><b>OPEN LAB DAY</b></p> <p><b>DUE: Assignment #3 (part 2 - at end of class)</b></p>	<p><b>FEB 24 (@ College Art Association/New Media Caucus in LA)</b></p> <p><b>WORK DAY:</b> PROJECT 1: Digitally Printed Scarf <b>ONLINE DEMO:</b> <i>Digitally Printed Scarf</i></p>



WEDNESDAYS	FRIDAYS
<b>FEB 29</b> <b>DEMO:</b> <i>Tonal Prints</i> 22. Reducing for Tonal Prints <b>Assignment #4: Tonal Prints</b>	<b>MAR 2</b> <b>WORK DAY:</b> Assignment #4 and Project 1: Scarf <b>DUE: Assignment #4 (at the end of class)</b>
<b>MAR 7</b> <b>DEMO:</b> <i>FLATS :: Creation, Presentation and Examples</i> <b>Assignment #5: Applying Prints into Flat Drawings</b>	<b>MAR 9</b> <b>PROJECT 2: Portfolio</b> <b>WORK DAY:</b> Assignment #5 and Project 1: Scarf <b>DUE: Assignment #5 (at the end of class)</b>
<b>MAR 14</b> <b>DEMO:</b> <i>Woven Textiles: Design Types and Examples</i> 23. Kaledo Weave: <i>environment, palettes &amp; tools, layer manager, docking windows, preferences</i> 24. Creating Woven Fabrics: Yarns 25. Recreating an Existing Woven Plaid + Stripe Assignment <b>Assignment #6: Wovens</b> <b>DUE: PROJECT 1: DIGITALLY PRINTED SCARF</b>	<b>MAR 16</b> <b>SEE ONLINE TUTORIALS FOR:</b> 26. Creating Woven Fabrics: Weaves 27. Creating Stripes 28. Colorways for Wovens <b>WORK DAY:</b> Assignment #6 ( <i>DUE MAR 28</i> )
<b>MAR 19 -23</b> <b>SPRING BREAK :: NO CLASSES</b>	
<b>MAR 28 (@ BIFT ITAA Beijing)</b> <b>SEE ONLINE TUTORIALS FOR:</b> <b>DEMO:</b> <i>Knit Textiles: Design Types and Examples</i> 29. Kaledo Knit: <i>environment, palettes &amp; tools, layer manager, docking windows and preferences</i> 30. <i>Creating Knit Fabrics: Yarns</i> 31. <i>Creating an Argyle</i>	<b>MAR 30 (@ BIFT ITAA Beijing)</b> <b>DUE: In-class Argyle Assignment</b> 32. Creating Jacquard Knits 33. Creating Intarsia Knits 34. Kaledo Knits: Colorways <b>Assignment #7: Knits</b>
<b>APR 4</b> <b>REVIEW KNITS + WORK DAY: Assignment #7</b>	<b>APR 6</b> <b>WORK DAY:</b> Assignment #7 & PROJECT 2 / Portfolio <b>Due End of Class: Assignment #7</b>
<b>APR 11</b> <b>WORK DAY:</b> PROJECT 2 / Portfolio	<b>APR 13</b> <b>WORK DAY:</b> PROJECT 2 / Portfolio
<b>APR 18 (@ Smart Fabrics Miami)</b> <b>OPEN LAB/WORK DAY:</b> PROJECT 2 / Portfolio	<b>APR 20 (@ Smart Fabrics Miami)</b> <b>OPEN LAB/WORK DAY:</b> PROJECT 2 / Portfolio
<b>APR 25</b> <b>WORK DAY:</b> PROJECT 2 / Portfolio	<b>APR 27</b> <b>DUE: PROJECT 2</b>
<b>FINAL EXAM: MONDAY APRIL 30 - 10:15 am - 12:30 pm</b>	