Syllabus Overview: Apparel Design Studio IV

<table>
<thead>
<tr>
<th>Course Designator</th>
<th>ADES</th>
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<tbody>
<tr>
<td>Course Number</td>
<td>3224W/5224</td>
</tr>
<tr>
<td>Section Number</td>
<td>01</td>
</tr>
<tr>
<td>Semester and Year</td>
<td>Spring 2020</td>
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**Class Meeting Days & Time**: Mon/Weds 9:35-12:35

**Classroom**: McNeal 205-216

**Number of Credits**: 4

**Final Exam Date & Time**: 10:30 a.m. - 12:30 p.m., Monday, May 13. Exam time will be used for final project presentation/submission only if needed.

**Instructor’s Information**

<table>
<thead>
<tr>
<th>Name</th>
<th>Dr. Lucy Dunne</th>
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<tbody>
<tr>
<td>Office Location</td>
<td>356 McNeal Hall</td>
</tr>
<tr>
<td>Office Phone</td>
<td>612-626-5901</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:LDunne@umn.edu">LDunne@umn.edu</a></td>
</tr>
<tr>
<td>Office Hours</td>
<td>By appointment</td>
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**Course Information and Instructor’s Expectations**

**Course Description:**

This class uses an engineering design process to analyze and meet the functional needs of specific user groups. We will be designing clothing that protects users from environmental conditions, and that facilitates and/or expands body function and movement. A theoretical understanding of human anatomy and movement is applied through advanced patterning techniques for a variety of body types, work environments, and activities. Class projects are often conducted with an outside partner. Project work focuses on developing skills in finding, synthesizing (in written and visual form) and using evidence to inform the design of a solution to a user-centered problem. Written documentation, developmental prototypes, and final design solutions are produced and evaluated.

**Required and Recommended Materials:**

**Required text**

Other readings and supplemental materials will be distributed in class or on the Canvas course website.

**Student Learning Outcomes following course completion:**

1. **Students in this course will be able to identify, define, and solve problems using an engineering design process.** Learning will be assessed through structured deliverables in two design projects, with emphasis on identifying criteria and methods for evaluating design solutions.

2. **Students in this course will have mastered a body of knowledge and a mode of inquiry through readings and research.** Knowledge will be applied through the engineering design process (mode of inquiry) in two design projects. Learning will be developed and assessed through evaluation of these design projects and through reading quizzes.

As a WI course (3224), emphasis is placed on developing information synthesis skills for design through writing in the form of a research paper, original research investigation, and summative design presentation.

**Release of Work Statement:**

Students understand that enrollment in this course grants consent for their work to be selected for inclusion in college or departmental publications (online or in print). Your instructor may select to use your work to represent her/his skills as an instructor in a teaching portfolio (online or in print).
Attendance:
Attendance is mandatory for all class sessions, and punctuality is essential. Unless given specific permission, you must stay for the entire class period. Peer and instructor interaction are one of your most valuable resources in a studio course. You are encouraged to take advantage of the scheduled class time to seek my feedback and that of your peers, and to share your experiences so that others might benefit as well. You are expected to participate and be respectful and polite in class discussions and critiques. 3 or more absences will result in a grade reduction of two letter grades from the final course grade (e.g., an A in the course would become a C). 5 absences will result in an F for the course.
The following reasons justify absences and makeup requests and must be documented: (a) illness certified by the Boynton Health Service or another physician (b) death parent, sibling, or grandparent (proof of funeral attendance must be supplied), (c) participation in religious observances with advance instructor notification (d) participation, certified by the Office for Student Affairs (Office of the Registrar-St. Paul, 190 Coffey Hall), in University approved co-curricular activities.

Workload:
Reading
This course requires more reading than most studio courses. It is essential that you complete all of the reading, and allow yourself time to process and understand the reading. I am always available to clear up confusion or questions. Reading assignments accompany each of your foundation modules, assigned in the order that makes the most sense for your group. For each module, you will complete three “question cards” which will be submitted via Moodle. These can be points of confusion, examples that illustrate concepts in the text, or questions that extend concepts discussed in the text.

Quizzes
Quizzes accompany each foundation module, and will be used to evaluate your comprehension of topics covered in the module with an emphasis on the module’s reading. Quizzes are open-book (but not collaborative) and cover reading and course material covered since the previous quiz. They should be completed on Moodle at the end of each module. All modules (including reading and quizzes) must be completed by the due date as indicated in the course schedule.

Projects
There is one major project for the course, which is broken into two individual sections and one group section. Each section of the project includes written deliverables, focusing on different types of written communication. Drafts will be submitted for two of these sections, and revised before final submission. Details for project sections will be given in assignment sheets.

Grading Structure:
http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html
A grading rubric will be provided for each assignment, and will outline the criteria for evaluation for the specific assignment. If these criteria are not clear, it is your responsibility to ask for clarification. Your course grade will be calculated from your weighted project grades, as follows:

<table>
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<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Quizzes, exercises, and question cards</td>
<td>20%</td>
</tr>
<tr>
<td>Class participation and professionalism</td>
<td>5%</td>
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<tr>
<td>Course project:</td>
<td>75%</td>
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<tr>
<td>-Research report</td>
<td>25%</td>
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<tr>
<td>-Preliminary prototypes and testing</td>
<td>25%</td>
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<tr>
<td>-Final prototypes, testing, and NASA presentation</td>
<td>25%</td>
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Letter grades are determined as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>93%</td>
</tr>
<tr>
<td>A-</td>
<td>90%</td>
</tr>
<tr>
<td>B</td>
<td>83%</td>
</tr>
<tr>
<td>B-</td>
<td>80%</td>
</tr>
<tr>
<td>C</td>
<td>77%</td>
</tr>
<tr>
<td>C-</td>
<td>70%</td>
</tr>
<tr>
<td>D</td>
<td>67%</td>
</tr>
<tr>
<td>D-</td>
<td>60%</td>
</tr>
<tr>
<td>F</td>
<td>below 60%</td>
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Accepting and Returning Assignments:
Most work (except for physical components such as prototypes) will be submitted digitally, through Canvas. Assignment comments and grades are in general posted on the course Canvas site.
Grading Late Work:
Assigned project work and exercises are due at the beginning of each class, and will otherwise be considered late. Late work will be accepted at the beginning of the next class period, with a penalty of one letter grade. No work will be accepted more than one class period late.

Policy for Missed Exams:
Quizzes must be completed by the beginning of class on the due date, and no late submissions will be accepted, except in the case of a university-excused absence.

Make Up Work for Legitimate Absences:
http://www.policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html

Extra Credit Options:
Extra credit options are rare, and will be announced in class if and when they arise.

University Policies

Personal Electronic Devices in Classroom:
http://policy.umn.edu/Policies/Education/Education/CLASSROOMPED.html

Use of Class Notes and Materials:
http://policy.umn.edu/Policies/Education/Education/CLASSNOTESSTUDENTS.html

Scholastic Dishonesty and Student Conduct Code:
http://www1.umn.edu/regents/policies/academic/Student_Conduct_Code.pdf

Sexual Harassment:
http://www1.umn.edu/regents/policies/humanresources/SexHarassment.pdf

Statement on Climate of Inclusivity:
You are expected to be attentive during class, ask questions if you do not understand something, and to offer your opinion. You are also expected to listen respectfully to other students and to me when speaking. The University of Minnesota is committed to providing a safe climate for all students, faculty, and staff. All persons shall have equal access to its programs and facilities without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. Racism, sexism, homophobia, classism, ageism and other forms of bigotry are inappropriate to express in this class. Reports of harassment are taken seriously, and there are individuals and offices available for help. I will happily honor your request at any point to address you by your correct name, gender pronoun, or any other manner you would like to be referred. If you like, I will also instruct class members to do the same. Please advise me of how you would like to be referred to in class. (or refer to http://www1.umn.edu/regents/policies/administrative/Equity_Diversity_EO_AA.pdf)

Academic Freedom and Responsibility:
http://www1.umn.edu/regents/policies/academic/Academic_Freedom.pdf

Availability of Disability and Mental Health Services:
The University of Minnesota is committed to providing all students equal access to learning opportunities. Disability Services (DS) is the campus office that works with students who have disabilities to provide and/or arrange reasonable accommodations.

- Students who have, or think they may have, a disability (e.g. mental health, attentional, learning, vision, hearing, physical or systemic), are invited to contact DS to arrange a confidential discussion at 612-626-1333 (V/TTY) or ds@umn.edu.
- Students registered with DS, who have a letter requesting accommodations, are encouraged to contact the instructor early in the semester to discuss accommodations outlined in their letter.

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via www.mentalhealth.umn.edu or contact Counseling/Consulting Services at 612-624-3323.

Academic Services:
If you would like additional help, please contact one of the offices listed below.
Center for Writing 10 Nicholson Hall, Mpls 612-626-7579
Student Academic Success Service 340 Appleby Hall, Mpls 612-624-3323
199 Coffey Hall, St. Paul
# Course Schedule (*Subject to change!*)

<table>
<thead>
<tr>
<th>Week</th>
<th>Mon</th>
<th>Weds</th>
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| 1/20 |     | Course intro/history of the Space suit  
                  Project overview and bidding |
| 1/27 | Synthesizing evidence: Frameworks and requirements  
                  Mobility  
                  *Reading due: FCD introduction* | Project research begins: team meetings and contracts  
                  Introduction: literature review and finding evidence, summarizing resources  
                  Problem variable brainstorm, begin research  
                  Mobility  
                  *Reading due: FCD Ch 2* |
| 2/3  | Foundation modules  
                  Frameworking exercise  
                  *Due: Speculative framework/outline draft* | Foundation modules  
                  Writing a problem definition |
| 2/10 | Foundation modules  
                  Team meetings: project research  
                  *Due: individual research presentations to your group* | Foundation modules  
                  Using sources: avoiding plagiarism and extracting/synthesizing evidence  
                  *Due: revised problem definition* |
| 2/17 | Foundation modules due  
                  Sr. show debrief  
                  *Due: (group) revised outline and framework* | Translating evidence into design requirements  
                  Research report draft consultations |
| 2/24 | Preliminary research phase begins: identifying and testing variables, reproducibility, presenting data  
                  *Research report drafts due* | Individual meetings: research reports |
| 3/2  | Writing a research plan  
                  Research report revision | Prototyping, testing and evaluation  
                  *Research plan due*  
                  *Final research report due* |
| 3/9  | SPRING BREAK | SPRING BREAK |
| 3/16 | Prototype development/evaluation | Benchmark: First prototypes/experiments complete |
| 3/23 | Prototype/process capture: Imaging lab  
                  *Benchmark: Testing complete* | Prototype and testing presentations  
                  Investigation reports due |
| 3/30 | Prototype and testing presentations (if needed)  
                  Feedback synthesis and revision  
                  *Final prototype designs due* | Final prototype patterning and construction |
| 4/6  | Final prototype patterning and construction | Final prototype patterning and construction |
| 4/13 | **Maternity leave likely begins**  
                  Final presentation planning: posters and presentations | Final prototypes/presentations |
| 4/20 | Final prototypes: testing  
                  Presentation prep: imaging lab | Demo presentations: Poster/PowerPoint drafts due  
                  FIELD TRIP PREP – TRIP TO JSC 4/26 |
| 4/27 | TRIP TO HOUSTON  
                  *Final prototypes and presentations due* | Trip debrief and project wrap-up  
                  Final foundation modules |
| 5/4  | Final foundation modules | |