Syllabus – Spring 2019

Syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT.

Program Information

This is a three-credit undergraduate level course. It is a required course in the Department of Allied Health Science’s Occupational and Environmental Health and Safety (OEHS) concentration. It also is an elective course in the Post-baccalaureate Occupational Safety and Health (OSH) Certificate Program. This course was developed by Paul Bureau.

If you would like more information about the OEHS undergraduate concentration or the Post-baccalaureate OSH Certificate Program, please contact Paul Bureau (contact information below).

Course and Instructor Information

Course Title: Ergonomics
Credits: 3
Format: Online utilizing HuskyCT
Prerequisites: Open only to BGS students and Allied Health Sciences juniors or higher, and OSH Post-baccalaureate Certificate students; others with consent
Professor: Paul Bureau
Email: paul.bureau@uconn.edu On and after the first day of classes, students registered in the course should send messages to the instructor via the Messages tab in HuskyCT.
Telephone: 860-486-0040
Availability: I will check into the course frequently, once a day at the beginning of the course and on average once every two days after that. If I expect to be away due to illness, travel or family obligations, I will make every attempt to notify you in advance. If you need to discuss an issue with me individually, please use the Messages tool within HuskyCT.

Permission Requests: Students requesting permission for registration should contact paul.bureau@uconn.edu. Include your PeopleSoft ID number and reason for interest in the course.

Course Materials

A text book is not required; required readings will be identified in the course and they are available via the Internet or linked within HuskyCT.

Course Description

The course is concerned with the achievement of optimal relationships between humans and their work environment. Topics include the capabilities and limitations of humans and machines, simulation of design and training, principles of symbolic and pictorial displays, static and dynamic forces on the human body, responses to environmental stress, injuries from poorly designed workplaces, and repetitive motion with emphasis on prevention.

Course Objectives

Upon successful completion of this course, the student will be able to:
1. Describe an expanded view of ergonomics which encompasses prevention of soft tissue-related injuries, and maximizing work efficiency.
2. Describe ergonomic risk factors and ergonomic risk factor modifiers, and assess the impact they have on the development of cumulative trauma disorders.
3. Conduct an ergonomic assessment and recommend the implementation of successful interventions.
4. Differentiate between engineering and management interventions, and recommend such interventions to reduce the presence and magnitude of ergonomic risk factors.
5. Apply the NIOSH Lifting Equation to a manual materials handling lift, and interpret the results.
6. Recognize the presence and types of psychosocial ergonomic risk factors, and recommend actions that can be taken to reduce their negative impact on employee safety and work efficiency.
7. Evaluate and articulate the importance of optimizing the interface between employees and equipment/machinery, and how to optimize the interface.
8. Evaluate and articulate the value in providing clear written communications, and how to apply various methods to maximize the accurate transfer of information.
9. Recognize the importance of written medical management and ergonomic programs, and how to successfully develop and implement such programs.

**Course Outline**

Module 1: Course Overview and Introduction to Ergonomics

Module 2: Review of Musculoskeletal, Respiratory, Circulatory and Nervous Systems

Module 3: Ergonomic Risk Factors and Modifiers

Module 4: Cumulative Trauma Disorders

Module 5: Ergonomic Assessments

Module 6: Designing for Neutral Posture

Module 7: Materials Handling

Module 8: Manual Materials Handling

Module 9: Hand Tools

Module 10: Psychosocial Risk Factors

Module 11: Human/Machine Relationship

Module 12: Information Transfer

Module 13: Medical Management

Module 14: Ergonomic Programs
Learning Activities

The learning activities in this course include:

- Reading assignments
- Topic-specific exercises including interactive discussions and written assignments
- Videos

Summary of Course Grading

<table>
<thead>
<tr>
<th>Course Components</th>
<th>Points</th>
<th>% Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Discussions and Assignments (9 @ 50 points each)</td>
<td>450</td>
<td>56.5</td>
</tr>
<tr>
<td>Module Self-Assessments (14 @ 10 points each)</td>
<td>140</td>
<td>17.5</td>
</tr>
<tr>
<td>Final Project</td>
<td>210</td>
<td>26</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>800</td>
<td>100</td>
</tr>
</tbody>
</table>

Module Exercises

Each module consists of a combination of discussion and/or assignment activities that account for 50 points towards the final course grade. For each module therefore, you have an opportunity to earn up to 50 points by providing meaningful participation in discussions, and by submitting quality assignments.

Module Discussions

Module discussions require both an initial posting and a minimum number of comments on fellow student initial postings and comments for consideration of all available module discussion points. The specific number of comments required will be identified in the modules. The postings and comments must be substantive (reflect an understanding of the required readings), complete, and further learning to receive full credit, and all postings and comments offered by the class are required to be reviewed to be eligible for full credit. Postings and comments such as "I agree", or "Good post" will not receive credit.

Deadlines for submitting initial postings and comments on fellow student postings are listed in the Course Schedule. The late policy applies to discussion postings and comments deadlines.

Module Assignments

Module assignments are individual exercises. They are to be submitted as attachments and in a format compatible with assignment requirements. Each assignment has a discrete point value that contributes to the overall final course grade. Point values for each assignment are identified in the modules.

Deadlines for submitting assignments are listed in the Course Schedule. The late policy applies to assignment deadlines.
Module Self-Assessments

Module self-assessments (quizzes) are individual exercises. Each module contains a self-assessment and each self-assessment consists of five (5) to ten (10) questions. Each module self-assessment can contribute ten (10) points towards the final course grade. You are allowed two (2) attempts at each self-assessment. If you are not satisfied with your score on the first attempt, you may take it one additional time. **The score of your last attempt is your final score.**

Deadlines for completing self-assessments are listed in the *Course Schedule*. The late policy applies to self-assessment deadlines.

Final Project

The final project is a cumulative applied project. You will be presented with information and data and asked to evaluate and recommend solutions to improve the ergonomics of a working environment. Module learning activities will help prepare you for successful completion of the final project.

It is expected that you proofread all your written communication in the course, including discussion posts, assignment submissions, and messages. Incorrect spelling and grammar will be considered when course work is graded.

Grading Scale

The final course grading scale is as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Letter Grade</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>93-100</td>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>90-92</td>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>87-89</td>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>83-86</td>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>80-82</td>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>77-79</td>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>73-76</td>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>70-72</td>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>67-69</td>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>63-66</td>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>60-62</td>
<td>D-</td>
<td>0.7</td>
</tr>
<tr>
<td>&lt;60</td>
<td>F</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Due Dates and Late Policy

The *Course Schedule* in HuskyCT lists important due dates and it details the course schedule. Deadlines are based on Eastern Standard Time; if you are in a different time zone, please adjust your submittal times accordingly. **The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.**

You are expected to meet course due dates. I will accept late submissions without penalty if requests for extensions are received in advance of calendar due dates, and stated reasons for the requests are deemed
acceptable. Partial credit will be given for late submissions not previously approved. Late submissions will be graded as followed:

<table>
<thead>
<tr>
<th>Within 24 hours after due date</th>
<th>10% penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within 1-2 days after due date</td>
<td>25% penalty</td>
</tr>
<tr>
<td>Within 3-5 days after due date</td>
<td>50% penalty</td>
</tr>
<tr>
<td>&gt; 5 days after due date</td>
<td>Zero credit</td>
</tr>
</tbody>
</table>

**Feedback and Grades**

I will make every effort to provide feedback and grades within two calendar weeks of assigned due dates. To keep track of your performance in the course, refer to *MyGrades* in HuskyCT.

---

**Student Responsibilities and Resources**

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important standards, policies and resources, which include:

- The Student Code
- Academic Integrity
- Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

**Students with Disabilities**

Students needing special accommodations should work with the University's [Center for Students with Disabilities (CSD)](mailto:csd@uconn.edu). You may contact CSD by calling (860) 486-2020 or by emailing csd@uconn.edu. If your request for accommodation is approved, CSD will send an accommodation letter directly to your instructor(s) so that special arrangements can be made. (Note: Student requests for accommodation must be filed each semester.)

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government.” (Retrieved March 24, 2013 from [Blackboard's website](https://blackboard.com) )

**Software Requirements**

The technical requirements for this course include:

- Word processing software
- [Adobe Acrobat Reader](https://www.adobe.com/acrobat/readstep.html)
- Reliable internet access
- PowerPoint or PowerPoint Viewer
- Video player such as Microsoft Media Player, RealMedia Player, etc.
Technical and Academic Help provides a guide to technical and academic assistance.

This course is completely facilitated online using the learning management platform, HuskyCT. If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the Help Center. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

University students are expected to demonstrate competency in Computer Technology. Explore the Computer Technology Competencies page for more information.

Evaluation of the Course

Students will be provided an opportunity to evaluate instruction in this course using the University’s standard procedures, which are administered by the Office of Institutional Research and Effectiveness (OIRE).

Additional informal formative surveys may also be administered within the course as an optional evaluation tool.