

# **Brazosport College**

## **Syllabus for OSH 2305 - Ergonomics and Human Factors in Safety**

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### **I. COURSE DESCRIPTION**

**OSHT 2305 - Ergonomics and Human Factors in Safety CIP 1507010011**

A study of the relationship of human behavior and ergonomics as applied to workplace safety.

**Credit Hours: 3 (3 lecture, 0 lab)**

January 2022

**A. Prerequisite: OSH 1301 or OSH 1405 or OSH 2309.**

**Required skill level:** College-level reading, writing and math.

**II. COURSE OBJECTIVES**

The following list of course goals will be addressed in the course.

Explain the psychology of human behavior as it relates to workplace safety; identify ergonomic hazards; recommend appropriate controls; and relate the human and workplace factors which contribute to ergonomic hazards. Upon completion, the student will be able to:

1. Describe and understand human sensory and body systems and how they affect performance
2. Describe and understand issues relating to human decision making and information processing
3. Describe the role of circadian rhythm and fatigue as it relates to workplace performance
4. Demonstrate an understanding of how human/machine interfaces are developed to maximize human performance and reduce human error.
5. Describe how principles of human factors can be used to understand human error associated with accidents and incidents.

**Assessments: Class Participation and Discussion, Term Projects, Mid-Term and Final Exam.**

**III. STUDENT LEARNING OUTCOMES**

This course is intended for students who need to refresh or enhance their understanding of how human factors affect the design of work environments.

**IV. TEXTBOOK OR COURSE MATERIAL INFORMATION**

**A. Textbook**

1. Kodak's Ergonomic Design for People at Work, Somadepti Chengalur, 2<sup>nd</sup> Ed., Publisher Suzanne Rodgers and Thomas Bernard, 2004. ISBN: 978-0471418634 (required)
2. Creating the Ergonomically Sound Workplace, Lee T. Ostrom, Publisher Jossey-Bass INC. 1993. ISBN: 978-1555426217 (required)

Required course materials may be available at the Brazosport College bookstore, on campus or online at <http://brazosport.edu/bookstore/home.html>. A student of this institution is not under any obligation to purchase a textbook from the college bookstore. The same textbook is/may also be available from an independent retailer, including an online retailer.

**For Distance Education Courses include the following:** Contact the Brazosport College Bookstore with a credit card for course materials. Phone: 979-230-3651. Fax: 979-230-3653. Email: [bookstore@brazosport.edu](mailto:bookstore@brazosport.edu). Website: <http://brazosport.edu/bookstore/home.html>

## B. Course Outline

**This is a sample outline which may vary with individual instructors. It will also vary based on whether the course is a summer course or a fall/spring course. Students should contact their instructor for the outline of the course they are taking.**

| Date               | Week | Class Activity   | Assignments  | Due  |
|--------------------|------|--|--|--|
| August 29 ,2022    | 1    | Review Syllabus<br>Review D2L<br>Talk about Term Paper | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 1 – Ergonomics Design Philosophy, pages 1-26, 74-89<br><br>Ergonomics and Human Factors<br>Ergonomic Program Characteristics in Other Companies<br><br>An Ergonomics Problem Solving Technique<br>United States and International Standards<br>Related to Ergonomics<br><br>Readings: Creating the Ergonomically Sound Workplace<br>Chapter 1 – What are the Benefits of Ergonomic Workplace Design?<br>Appendix F - Glossary<br>Assignments:<br>Review Syllabus & Complete the Form<br>Write Presentation & Term Paper [Narrative Paper] Topic (1 paragraph proposal). | Paper Due: Week 3                                    |
| September 4, 2022  | 2    | Holiday  |  | Paper Due: Week 3                                    |
| September 12, 2022 | 3    | Discuss Reading  | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 1 – Ergonomics Design Philosophy, pages 27- 73<br>For Whom Do We Design<br>Chapter 2 – Evaluation of Job Demands, pages 99-120, 165-190<br><br>Principles<br>Quantitative Methods<br>Chapter 7 – Manual Handling in Ergonomic Tasks, pages 511-519<br><br>Background: Material Handling & Musculoskeletal Injuries & Illnesses<br>Readings: Creating the Ergonomically Sound Workplace<br>Chapter 3 – Posture: Creating and Maintaining Healthy Body Alignment<br><br>Assignments: Work on Term Paper & Presentation  | Term Paper Due: Week 13<br>Presentation Due: Week 15 |
| September 19, 2022 | 4    | Discuss Reading  | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 5 – Human Reliability and Information Transfer<br><br>Assignments: Work on Term Paper & Presentation  | Term Paper Due: Week 13<br>Presentation Due: Week 15 |

|                    |    |                                    |   |  |
|--------------------|----|------------------------------------|---|--|
| September 26, 2022 | 5  | Discuss Reading                    | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 6 – Work Design, pages 421-434<br>Hours of Work: Shift Work and Overtime<br>Assignments: Work on Term Paper & Presentation   | Term Paper Due: Week 13<br>Presentation Due: Week 15 |
| October 3, 2022    | 6  | Discuss Reading<br>Review Mid Term | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 6 – Work Design, pages 411-421, 435-448<br>Organizational Factors in Work Design<br>Ergonomic Work Design<br>Assignments: Work on Term Paper & Presentation  | Term Paper Due: Week 13<br>Presentation Due: Week 15 |
| October 10, 2022   | 7  | Mid Term                           | Assignments: Work on Term Paper & Presentation  | Term Paper Due: Week 13<br>Presentation Due: Week 15 |
| October 17, 2022   | 8  | Discuss Reading                    | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 8 - Environment<br>Readings: Creating the Ergonomically Sound Workplace<br>Chapter 5 – Environment: Ensuring Proper Lighting and Visibility<br>Assignments: Work on Term Paper & Presentation  | Term Paper Due: Week 13<br>Presentation Due: Week 15 |
| October 24, 2022   | 9  | Discuss Reading                    | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 3 – Work Design, pages 191-230<br>General Workplace Layout and Dimensions<br>Computer Workstations<br>Laboratories<br>Visual Work Dimensions<br>Chapter 6 – Work Design, pages 496-510<br>Work Design in Laboratory and Computer Workplaces<br>Readings: Creating the Ergonomically Sound Workplace<br>Chapter 3 – Assessing Workplace Ergonomics<br>Appendix B – Interview Worksheets<br>Appendix C – Worksheet for Organizing the Ergonomic Assessment<br>Appendix D – Assessment and Evaluation Worksheets<br>Appendix E – Furniture and Equipment Selection Worksheets<br>Assignments: Work on Term Paper & Presentation | Term Paper Due: Week 13<br>Presentation Due: Week 15 |
| October 31, 2022   | 10 | Discuss Reading                    | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 2 – Evaluation of Job Demands, pages 121-165<br>Analysis Methods<br>Chapter 3 – Work Design, pages 237-268<br>Floors, Ramps and Stairs<br>Conveyors<br>Adjustable Workstations<br>Assignments: Work on Term Paper, Presentation, Review NIOSH on ergonomics<br><a href="http://www.cdc.gov/niosh/topics/ergonomics/">http://www.cdc.gov/niosh/topics/ergonomics/</a>   | Term Paper Due: Week 13<br>Presentation Due: Week 15 |

|                   |    |   |  |  |
|-------------------|----|---|--|--|
| November 7, 2022  | 11 | Discuss Reading                                 | Readings: Creating the Ergonomically Sound Workplace<br>Chapter 7 – Restoring Lost Productivity: Case Study of the Springfield Load Office<br>Appendix A – Injury and Illness Statistics<br>Review Worksheet<br>Assignments: Work on Term Paper & Presentation   | Term Paper Due: Week 13<br>Presentation Due: Week 15 |
| November 14, 2022 | 12 | Discuss Reading                                 | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 7 – Manual Handling in Ergonomic Tasks, pages 520-564<br>Guidelines for the Design of Manufacturing Lifting Tasks<br>The Design of Force Exertion Tasks<br>Readings: Creating the Ergonomically Sound Workplace<br>Chapter 4 – Work Activities: Eliminating the Risk of Injury<br>Chapter 6 – Making follow up Adjustments<br>Assignments: Work on Term Paper, Presentation, & Review<br>NIOSH material handling ergonomics:<br><a href="http://www.cdc.gov/niosh/docs/2007-131/">http://www.cdc.gov/niosh/docs/2007-131/</a>   | Term Paper Due: Week 13<br>Presentation Due: Week 15 |
| November 21, 2022 | 13 | <b>TERM PAPER DUE</b><br>Pick Presentation Time | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 4 – Equipment Design, pages 269-280, 342-363<br>Overall Considerations<br>Maintainability<br>Tool Design<br>Chapter 6 – Work Design, pages 449-495<br>The Design of Repetitive Work<br>The Design of Visual Inspection Tasks<br>Ergonomics in the Construction Industry<br>Assignments: Work on Presentation, Review NIOSH and OSHA on hand tools<br><a href="http://www.cdc.gov/niosh/docs/2004-164/pdfs/2004-164.pdf">http://www.cdc.gov/niosh/docs/2004-164/pdfs/2004-164.pdf</a> and<br><a href="http://www.osha.gov/SLTC/handpowertools/index.html">http://www.osha.gov/SLTC/handpowertools/index.html</a> | Presentation Due: Week 15                            |
| November 28, 2022 | 14 | Discuss Reading                                 | Readings: Kodak's Ergonomic Design for People at Work<br>Chapter 4 – Equipment Design, pages 280-341<br>Design of Controls<br>Design of Displays<br>Assignments: Work on Presentation & Review FAA Human Factors Training focusing on Displays and Controls:<br><a href="http://www.hf.faa.gov/Webtraining/index.htm">http://www.hf.faa.gov/Webtraining/index.htm</a>  | Presentation Due: Week 15                            |
| December 5, 2022  | 15 | <b>Presentations/ Final Review</b>              |  |  |
| December 12, 2022 | 16 | <b>Final Exam</b>                               |  |  |

### **Important Semester Dates:**

Last Day to Withdraw from Classes– Check BC Academic Calendar at  
<http://catalog.brazosport.edu/index.php>

### **Office Hours:**

For fulltime faculty, office hours may change from semester to semester. Current faculty office hours are included on the syllabus, see link: <https://brazosport.edu/faculty-and-staff/resources/course-syllabi-instructor-information/>

For an adjunct faculty, no office hours are required, and they are not assigned an office. To set up an appointment with an adjunct, contact the instructor as per the email address on the syllabus, see link: <https://brazosport.edu/faculty-and-staff/resources/course-syllabi-instructor-information/>

## **V. STUDENTS WITH DISABILITIES**

Brazosport College is committed to providing equal education opportunities to every student. BC offers services for individuals with special needs and capabilities including counseling, tutoring, equipment, and software to assist students with special needs. For student to receive any accommodation, documentation must be completed in the Office of Disability Services. Please contact Phil Robertson, Special Populations Counselor at 979-230-3236 for further information.

## **VI. TITLE IX STATEMENT**

Brazosport College faculty and staff are committed to supporting students and upholding the College District's non-discrimination policy. Under Title IX and Brazosport College's policy FFDA (Local), discrimination based on sex, gender, sexual orientation, gender identity, and gender expression is prohibited. If you experience an incident of discrimination, we encourage you to report it. While you may talk to a faculty or staff member at BC, please understand that they are "Responsible Employees" and must report what you tell them to college officials. You can also contact the Title IX Coordinators directly by using the contact information below. Additional information is found on the Sexual Misconduct webpage at [www.brazosport.edu/sexualmisconduct](http://www.brazosport.edu/sexualmisconduct).

Alex Crouse, Director of Student Life and Title IX Coordinator  
979-230-3355; [alex.crouse@brazosport.edu](mailto:alex.crouse@brazosport.edu)

Mareille Rolon, HR Coordinator and Deputy Title IX Coordinator  
979-230-3303; [mareille.rolon@brazosport.edu](mailto:mareille.rolon@brazosport.edu)

## **VII. ACADEMIC HONESTY**

Brazosport College assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct including academic honesty. The principle of academic honesty is that all work presented by you is yours alone. Academic dishonesty including, but not limited to, cheating, plagiarism, and collusion shall be treated appropriately. Academic dishonesty violates both the policies of this course and the Student Code of Conduct. In this class, any occurrence of academic dishonesty will be referred to the Dean of Student Services for prompt adjudication, and may, at a minimum, result in F, in this course. Sanctions may be imposed beyond your grade in this course by the Dean of Student Services.

Plagiarism is using another person's work or ideas without giving credit. Plagiarism is dishonest because it misrepresents the work of another as your own. This includes both copying the work verbatim or re-phrasing the ideas of another without properly acknowledging the source. When preparing work for course requirements, students must be careful to differentiate between their ideas and language and information derived from other sources.

Sources include but are not limited to published and unpublished materials, the Internet and information and opinions gained directly from other people including faculty or other students. Plagiarism is considered a violation of academic integrity and professional honesty. Please refer to the Brazosport College Student Guide for more information. This is available online at <http://brazosport.edu/students/for-students/student-services/>.

## **VIII. ATTENDANCE AND WITHDRAWAL POLICIES**

Class attendance contributes to your final grade, but you must attend class to successfully complete the course. If you are unable to complete this course, you must complete and submit a withdrawal form with the registrar's office. If the student decides to drop out of the class, it is the responsibility of the student to initiate a withdrawal before the withdrawal deadline in order to get a "W" on their transcript. If this is not done the student will receive a grade based on test grades and class grades earned during their attendance and absence (i.e., zeros on all missed materials, exams, skills tests, and final exam).

The Instructor may count tardiness as a partial absence. Since a significant part of the grade is based on class attendance, students are expected to be on time and attend the full class, until dismissed by the Instructor. General Brazosport College Policies and Procedures apply to self-initiated course withdrawal and the time period within which that may occur. Please check with the current published College information for details.

Students who miss 3 or more classes in a Fall or Spring Session will usually be assumed to have abandoned the class and may be dropped. It is the Student's responsibility to contact the Instructor and explain any and all missed class time.

Since attendance is so important a part of the learning experience it has become necessary to modify the grading system. Full Fall and Spring Semesters have typically about 15 weeks of classes depending on holidays and exams schedule. For regular classes that means about 13 weeks of educational activity aside from mid-term and finals. Someone missing 3 classes then has missed almost 25% of course content.

Partial class attendance, arriving late or leaving early can result in a % loss of that day's attendance. For all absences after the 3rd absence each absence will count as 2 classes missed.

## **IX. COURSE REQUIREMENTS AND GRADING POLICY**

### **A. Grading:**

|                              |     |
|------------------------------|-----|
| Mid Term Exam                | 20% |
| Final Exam:                  | 20% |
| Presentation:                | 20% |
| Term Project                 | 20% |
| Attendance and Participation | 20% |

### **B. Scoring:**

- A (90 - 100%) -- Unqualified and unsurpassed mastery of the learning outcomes.
- B (80 - 89.9%) -- Unqualified mastery of the learning outcomes.
- C (70 - 79.9%) -- Qualified mastery of the learning outcomes.

D (60 - 69.9%) -- Mastery of the learning outcomes but with significant qualifications.  
F (0 - 59.9%) -- Has not mastered the learning outcomes.  
I (Incomplete) -- Failed to complete assigned components.

**Honest and serious participation in each of the five course elements is required to pass the course. A failing grade will be assigned regardless of the overall score if the student fails to complete any one of the following items:**

- (1) Complete the mid-term exam**
- (2) Submit a term paper,**
- (3) Complete the final exam.**

**C. Testing:**

A Mid Term and a Final Exam are required. A variety of quizzes or assignments in place of quizzes may be presented at the discretion of the Instructor.

**D. Make-Up Policy:**

A student will normally be given only one week in which to make up missed quizzes or assignments. Students who miss class delay the ability of other students to receive timely feedback on their work. It is the responsibility of each student to contact the Instructor on the day following the absence and to make time to come in before the next class to clear up the missed quiz or assignment. The Instructor is usually expected to give a score of zero to quizzes or assignments that are two weeks or more late.

**X. STUDENT CONDUCT STATEMENT**

Students are expected to be aware of and follow the Brazosport College Student Code of Conduct. Students have violated the Code if they “fail to comply with any lawful directions, verbal or written, of any official at BC.” Lawful directions include precautions and requirements taken to prevent the spread of COVID-19 at Brazosport College. Students who do not follow safety requirements, including the wearing of a mask, may be removed from class by their instructor and referred to the Dean of Student Services.

**XI. CAMPUS CLOSURE STATEMENT**

Brazosport College is committed to the health and safety of all students, staff, and faculty and adheres to all federal and state guidelines. The College intends to stay open for the duration of the semester and provide access to classes and support services on campus in the safest way possible. The College will also comply with lawful orders given by applicable authorities, including the Governor of Texas, up to and including campus closure. It is possible that on campus activities may be moved online and/or postpone if such orders are given.

**XII. STUDENT RESPONSIBILITIES**

Students are expected to fully participate in this course. The following criteria are intended to assist you in being successful in this course:

1. Understand the syllabus requirements
2. Use appropriate time management skills
3. Communicate with the instructor
4. Complete course work on time, and



5. Utilize online components (such as Desire2Learn) as required.

**A. Housekeeping:**

- 1) Keep the room ready for the next class. When you leave each evening, the room is to be returned to the condition it was in when you arrived, or better.
- 2) We do not want to look like we were raised in a barn. Keep it clean and place all trash in the proper containers before you leave.
- 3) Do not alter the computer or audio-visual electronics. Improper use of computer and other equipment in violation of Brazosport College policies may result in penalties according to College rules.

**B. Expectations:**

- 1) You are largely responsible for your own success or failure as a student.
- 2) As a minimum, students are expected to read the assigned chapter(s) each week. Being prepared is a necessary part of your continuing education and a vital part of the construction industry.
- 3) We expect all assignments to be completed on time and to the best of your ability.
- 4) While we encourage cooperation with your fellow students, academic honesty is the standard; you are solely responsible for your own work.
- 5) We expect and will demand adult behavior in the classroom, both physical and on-line. We expect to have fun and hope you do too.
- 6) If there is a problem with the material call upon the instructor first for help.
- 7) There are no bad questions. Always ask if you are unsure.

**C. Student Responsibilities:**

- 1) This is not a self-paced course but requires weekly interaction with the class and the instructor. Like Woody Allen said, "Most of Life is about showing up".
- 2) Assignments such as term papers require a great deal of self-discipline to complete, as much of what is done is at your pace (within the timelines that the instructor has established in the syllabus)
- 3) It is your responsibility to read the syllabus and other information provided by the instructor, and to follow the instructions contained therein.
- 4) If you fail to submit assignment(s) or tests on time, the instructor has the option of not accepting the late work or accepting the late work with a downgrade penalty.
- 5) You should make every effort to stay on track with the assignments, as it is very difficult to "play catch-up."
- 6) If for any reason you should fall behind in their work, (illness, accident, temporary duty, etc.) contact the instructor immediately.
- 7) You must complete exams/papers and assignments prior to the end of the scheduled term, or risk being graded zero for that work and run the risk of failure of the course
- 8) At times, life situations occur where you will need to make hard choices between getting a good grade in a course (or even finishing it) and other priorities in your life, such as a job, family, etc. It is up to each student to make those choices. Occasionally, one will have to make the commendable choice that job or family must take priority and then live with the consequences that has on your studies and GPA. The College has an ethical obligation to ensure that a level playing field is provided for all students, so those who

make the hard choices don't get short changed by students who ask for extra time to get their school work done when they haven't made those hard choices.

- 9) Extensions/Incompletes are **NOT** a right, but a **VERY RARE** exception that are granted only in the most extraordinary of situations. If you feel that you will require an extension/incomplete (again, the exception, not the rule), it is your responsibility to contact the instructor **BEFORE THE END OF THE COURSE** and make this request. In most cases, written third party documentation will be required to support your request. It is at the discretion of the instructor whether an extension/incomplete will be granted and for what length of time it will be granted, with an absolute maximum extension period of 90 days.

#### **D. Student Computer Responsibilities:**

- 1) It is a fact of life that we must use computers to complete class work, access presentations and take some tests. You should have a computer, software, and internet access at hand to do this. If you do not, at best consult with the LAC in E-201. There are numerous campus resources available to you.
- 2) The default software being used is Microsoft Word for text documents and Microsoft PowerPoint for presentations. At a minimum, readers for these programs are downloadable free from the [www.microsoft.com](http://www.microsoft.com) website.
- 3). The computer ate my homework is not an acceptable excuse. It is a fact of life that computers are not perfectly reliable, and those computers using Windows have a certain reputation. Users should learn how to survive and readily recover from crashed programs and the need to reboot. When creating your own work, you should save the document after each page and learn how to recover from computer problems. If worse comes to worse, read the manuals.
- 3) The instructor generally cannot help you solve your computer problems. Exception – problems with our files, in which case the Instructor will help to the best of ability.
- 4) You are responsible for your own SPAM and viruses. No one should use personal computers, email, or the Internet for these courses without possessing their own anti-virus software. If you open a strange email and get your computer infected with a virus, it is your own doing and your own responsibility. You should learn how to block unwanted email.

#### **E. Telecommunication Devices:**

- 1) All cell phones, “Blackberry” e-mail type devices, and PDA’s **MUST** be turned completely off and stowed so that you cannot access them in the classroom.
- 2) Calculators are for sale in the BC Bookstore to support math problems, as long as they do not have stored test information they may be used.
- 3) Cheating via use of telecommunications devices will result in an immediate ZERO for the test involved and may result in further penalties.

**F. BC Computer Accounts:** Each student is expected to go to IT services and obtain a computer account, **BEFORE** the second class of the term. They can be reached at 979-230-3266. You may need to call for an appointment before class for evening classes.

**G. Improper use of computer accounts in violation of Brazosport College policies may result in penalties according to College rules. Be aware that ALL online activity is monitored and logged; you have NO right to privacy.**

**H. College Website:** [www.brazosport.edu](http://www.brazosport.edu) you should learn to use the college website to find most student information. If you need to take computer classes to learn to use the internet or other computer programs, please check with LAC in E-201.

**I. Classroom Copyright:** An implicit copyright of original work not otherwise referenced from others exists for all class materials. Visual or audio recording of class activity is restricted to the College and Instructor. No class material or activity may be recorded or posted on the Internet except by approval of the Instructor.

**J. Notes on Schedule:** A general sixteen-week recommended schedule follows in this document. The instructor will adjust it to meet the details of the specific semester schedule, recognizing variances due to Brazosport College exam schedules, State and Federal Holidays and the availability of such items as a guest speaker.

### **XIII. PROJECTS, ASSIGNMENTS, PORTFOLIOS, SERVICE LEARNING, INTERNSHIPS, ETC.**

#1-Write a minimum length of three-page paper (STRONGLY ADVISED that you might want to go slightly over but not more than 3.5 pages), utilizing syllabus term paper formatting. (20 points per page is deducted for not meeting the minimum 3 pages)

Subject of the term paper and the presentation must be the same. The subject can only be picked from Kodak's Ergonomic Design Text book.

#### **The general rules for all narrative papers are**

- MS Word Document format submitted both electronically and in hardcopy; if not in MS Word will be rejected; if you need to convert from MS Works, WordPerfect or other obtain help from Learning Center before due date.
- All such reports are scanned via Turnitin.com for plagiarism
- Format must be 1" margins all around, Times Roman 12 point font, 1.5 lines spacing; use Page Setup
- Do not use "quotes" for emphasis (as shown here). Quoted material is to be a single spaced block, additionally indented one inch, quote marks at start and end of block.
- No more than ½ page of illustration counts to the narrative page count. Excess will not be included in page count. (Only 1 illustration allowed)
- No more than ½ page of quoted material counts toward the narrative page count. Excess will not be included in page count.
- Cover and reference citation pages are required but do not count toward the narrative page count
- Pages short will affect score to the nearest half page: e.g., -10 points for ½ page short, etc.
- Improper use may also reduce page count and or score
- Improper use may also reduce page count and or score

## Due Dates for Term Paper Projects

**These due dates are for your safety so that if you have problems the Professor or Instructor can help you recover before end of term. If you wait until the last moment, you can fail the course.**

**For all Fall and Spring Term Sixteen Week Classes: Due on or before Lesson 11 end of class:**

Late penalties apply:

- 10 points if received between end of class 11 and midnight before the start of class 12;
- 20 points if received between end of class 12 and midnight before the start of class 13;
- 40 points if received between end of class 13 and midnight before the start of class 14;
- 80 points if received between end of class 14 and midnight before the start of class 15; no paper accepted thereafter,

1. Turn in the complete paper by (**\*see class schedule**) Class Session in MS Word ® format. The paper must be in APA format. See the APA example provided and their stylebook. **MAJOR ITEMS IN FORMAT INCLUDE BUT ARE NOT LIMITED TO**
  - Cover Page
  - Abstract
  - Style of layout
  - Style of Reference List
2. Minimum Requirements
  - Length – minimum of 3 pages of narrative text not counting cover pages, reference pages
  - Format 1” margins all edges
  - Font: Times-Roman 12 point
  - Line Spacing of text 1.5
  - References – minimum of 10 refereed articles or published textbooks.
  - No more than ½ page of illustrations in count of 10 pages, more are OK
  - No more than ½ page of quoted, inset material
  - No unreasonable use or plagiarism. All papers will be checked on Turnitin.com for copying of material
3. Source Restrictions: The purpose of this is to ensure for the academic purpose of the term paper that you use refereed and/or reviewed documents from authorized government sources or reputable research journals.
  - a. Your first and best source is via the Library. You will find more documents than you can use.
  - b. Second, one can use government documents and data under certain conditions. If the government database is straight from their sources, such as the Bureau of Labor statistics, it is OK to use.
  - c. Third, if there is a government document that has its own existence, such as a NASA, DOD, or OSHA technical publication, and the fact that one can download said document from a government website is merely a convenience, it is OK.

- d. Newspaper articles are not reviewed, or even necessarily factual, they may be rank fiction or half-baked assumptions, e.g., anything from the New York Times USA Today or tabloids. The same goes for broadcast news.
- e. Websites not backed by formal approved documents, such as "Melvin's Fish Bait Tackle Shop and Aviation Museum" (made up name) cannot be used at all.
- f. Academic research requires a trail of audited and reviewed information that can withstand hard investigation and challenge.
- g. One of the best websites to search for papers in scientific authoritative reviewed journals is the National Library of Medicine. <http://www.nlm.nih.gov>

### **Presentation:**

#### **#2-Develop Power Point slides that best describe your paper**

1. Purpose:
  - a. This is 20% of your grade.
  - b. It is part of you teaching yourself.
  - c. The business purpose is to help you learn to develop a report and present it in formal fashion.
  - d. The academic purpose is to help you prepare for the master's project, and to learn to do acceptable research that is based on fact, not speculation and to learn how to explain an accident investigation from a system safety perspective.
2. Find a topic on human factors that is better done in visual and presentation mode.
3. Recommended Progress Schedule

#### **Week Activity**

- a. Begin topic selection, and read all of the overhead presentation attachments
- b. Bring primary and secondary topic selections to class where we will settle who does what topic on which date
- c. Begin library research for the overhead presentation – use the Library
- d. Begin slides
- e. Presentations
4. Turn in the complete presentation by the date due in a SINGLE MS PowerPoint ® format file. Minimum Requirements
  - Length – minimum of 10 slides
  - Same source restrictions as Term Paper

### **XIV. OTHER STUDENT SERVICES INFORMATION**

Information about the Library is available at <http://brazosport.edu/students/for-students/places-services/library/about-the-library/> or by calling 979-230-3310.

For assistance with online courses, an open computer lab, online and make-up testing, audio/visual services, and study skills, visit Learning Services next to the Library, call 979-230-3253, or visit <http://brazosport.edu/students/for-students/places-services/learning-services/>.

For drop-in math tutoring, the writing center, supplemental instruction and other tutoring including e-tutoring, visit the Student Success Center, call 979-230-3527, or visit <http://brazosport.edu/students/for-students/student-success-center/math-center/>.

To contact the Physical Sciences and Process Technologies Department call 979-230-3618.

The Student Services provides assistance in the following:

|                         |              |
|-------------------------|--------------|
| Counseling and Advising | 979-230-3040 |
| Financial Aid           | 979-230-3294 |
| Student Life            | 979-230-3355 |

To reach the Information Technology Department for computer, email, or other technical assistance call the Helpdesk at 979-230-3266.



Get the information you need – when you need it. Click <http://geni.us/BRAZO> to install **BC Connect** on your mobile device to receive reminders, explore careers, map your educational plan, be in the know about events, find out about scholarships, achieve your goals and much more.

## Ergonomics and Human Factors in Safety

| CIP     | Rubric | Number | Course Title                           | Status | Semester Credit Hrs | Min Cont Hrs | Max Cont Hrs |
|---------|--------|--------|--|--------|---------------------|--------------|--------------|
| 15.0701 | OSHT   | 2005   | Ergonomics and Human Factors in Safety | Active | 0                   | 48           | 128          |
| 15.0701 | OSHT   | 2305   | Ergonomics and Human Factors in Safety | Active | 3                   | 48           | 96           |
| 15.0701 | OSHT   | 2405   | Ergonomics and Human Factors in Safety | Active | 4                   | 64           | 128          |

**Course Level:** Intermediate

**Course Description:** The relationship of human behavior and ergonomics as applied to workplace safety.

**End-of-Course Outcomes:** Explain the psychology of human behavior as it relates to workplace safety; identify ergonomic hazards; recommend appropriate controls; and relate the human and workplace factors which contribute to ergonomic hazards.

**Lab Recommended**

**CIP Code Description:** 15.0701 (Occupational Safety and Health Technology/Technician)

**Effective Date:** September 1, 2016