

IE 556 00 Job Design

Spring 2024: Distance Asynch arrange hours (3 credits)
(syllabus & schedule updated Wednesday, Nov. 15th, 2023)

Instructor: Vincent G. Duffy, Ph.D., CPE, Professor, School of Industrial Engineering; Department of Agricultural & Biological Engineering, Purdue University. Grissom Hall 270; email: duffy@purdue.edu Phone: 1-765-496-6658. **Office Hours:** by appointment.
Teaching Assistant: TBA

Course description: Task analysis, personnel selection and training, job and organization design, and criteria development and use. Human factors related to job design in order to increase job satisfaction and productivity.

Required Texts: 1. *Essentials of Business Research Methods*, 4th Ed. Hair, Jr., et al. Routledge, New York, 2019; 2. *Quality Management for Organizational Excellence* (Goetsch and Davis, 2021, 9th ed. Pearson). 3. *Handbook of Human Factors and Ergonomics*, 5th Ed., Editor: G. Salvendy and W. Karwowski, Wiley 2021. Both available through Purdue Libraries as e-book. Two of the three books are available through Purdue Libraries. The 3rd is in Vital Source.

Students who may be interested in the course include: Engineering, Psychology, Technology/Polytechnic, Engineering Education, Health & Human Sciences and Management. Students should be at least at senior status, with interest in research. Graduate students will gain preparation & experience that will support current or future thesis and dissertation efforts.

Application areas include: Computing applications, vehicle design, rail, truck and air transportation, mining, manufacturing, healthcare.

Learning Objectives: To provide students with the foundations of the research process and applications in human factors, human-computer interaction, operations management and multivariate data analysis. Students should be able to identify and justify product and process evaluations considering modern aspects of job design, work design and various computer-based consumer products. Supplementary readings will have applications of engineering, computer sciences, information sciences and psychological principles and methods to the analysis and design of human work systems.

Grading: Participation (20%) through discussion boards, Presentations (20%) recorded and uploaded to BrightSpace, Low Stakes Evaluations (online practice quizzes 20%), Mid-term (20%), Final exam (20%). Presentations will be summary of chapter or brief article summaries based on a List of 10 Ways to Evaluate New and Existing Research. A review session and study guide will be provided in advance of the mid-term. 2 presentations: 1 will be based on a book chapter and the second will be based on a research article. Presentations will be 5-6 minutes. Late materials submitted after any announced due dates will have a deduction of up to 10% per day up to a maximum of 40 percent. A final meeting is scheduled in finals week to discuss project & report.

Supplementary reading: a list of articles will be provided. Those can be downloaded through e-journals using Purdue ID & Password within Purdue Libraries. Those articles will be reviewed in class in the context of a "List of 10 Ways to Analyze New and Existing Research".

Course web site: We plan to use classroom management system available by subscription at Tophat.com and Blackboard through myCourses login. <https://mycourses.purdue.edu/>

Two additional online systems for will support participation and homework:
<https://openhotseat.org> and <https://openreply.org> with PUID for no cost.

Grades: Grading will take into account +/- . For instance, overall course scores averaging 98+ will receive A+. 94-97 will be guaranteed A. 90-93 will be guaranteed A-. 88-89 will be guaranteed B+. 84-87 will be guaranteed, B; 80-83 will be guaranteed B-; 78-79 will be guaranteed C+; 74-77 C; 70-73 C-. Lower scores may receive D or F. Late work will have deduction of 10% per day up to 40% if not previously approved. Cheating will be defined according to the student code of conduct and will result in zero for assignment or F course grade. Please ask in advance if any clarification is needed. Please see additional information about student code of conduct and Title IX recommended by Purdue Student Government on bottom of this page on this syllabus. Use of 'crib sheets' for tests and any joint homework or reports will be described and announced in advance. By the two statements below, it is implied that student representatives are in agreement that students should maintain highest standards of conduct and should maintain high expectation of one another in regard to conduct.

It is also important that each student have the sense that they are welcome to be part of the group as contributors. In the event that students are made to feel unwelcome or intimidated based on race, ethnicity or gender, matters should be brought to my attention and will be considered as part of Title IX in regard to fair access to education. We should mention that we believe cooperation and discussion contribute to learning and certainly, we want all students to have fair access to those opportunities for learning that include fair treatment within any activities that take place inside or outside the classroom.

The statements below highlight wording recommended by Purdue Student Government (PSG) for code of conduct and two options that include a. Title IX reporting and b. other consult related "advice seeking" that does not initially require reporting and is confidential (within CARE).

Revised and Adopted by PSG (originally published October 2010; re-emphasized in video April 2017).
Revised and adopted by PSG (published April 2017).

"The purpose of the Purdue University academic community is to discover and disseminate truth. In order to achieve these goals, the university commits itself towards maintaining a culture of academic integrity and honesty. For this to be possible, self-discipline and a strong desire to benefit others must be present within each individual. Therefore, we students must follow the Regulations Governing Student Conduct of Purdue University out of a sense of mutual respect, rather than out of fear of the consequences of their violation."

Therefore, be it RESOLVED,

that Purdue Student Government encourages faculty to include a clause in their syllabi outlining their role as a mandatory reporter to the Title IX office and additional resources available to students seeking help

That information is recommended to appear as follows:

Purdue University is devoted to fostering a secure, equitable, and inclusive community. If you or someone you know has been the victim of sexual violence and are interested in seeking help, there are services available. Reporting the incident to any Purdue faculty and certain other employees, including resident assistants, will lead to reference to the Title IX Coordinator, as these individuals are mandatory reporters. The Title IX office can investigate report of sex-based discrimination, sexual harassment, or sexual violence. Title IX ensures that both parties in a reported event have equal opportunity to be heard and participate in a grievance process. To file an online report visit https://cm.maxient.com/reportingform.php?PurdueUniv&layout_id=15 or contact the Title IX coordinator at 765-494-7255.

The Center for Advocacy, Response, and Education (CARE) offers confidential support and advocacy that does not require the filing of a report to the Title IX office. The CARE staff helps each survivor assess their reporting options and access resources that meet personal needs. The CARE office can be found at 205 North Russell Street in Duhme Hall (Windsor), room 143 Monday – Friday 8:00 AM to 5:00 PM. They can also be reached at their 24/7 hotline 765-495-CARE or at CARE@purdue.edu.

and that Purdue Student Government deliver this resolution to the Student Affairs Committee of the University Senate for consideration.


Student Body President


Student Senate President