San José State University
Department of Psychology
PSYC 173: Human Factors
Section 1, Summer 2016

Instructor Contact Information

Instructor: Dave Schuster, Ph.D.

Office Location: ADM 144

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Office Hours: Available by appointment only; no office hours for summer

Course Information

Classroom: HGH 124

Class Days/Time: Tues. & Thurs., 1:00pm - 4:45pm

Prerequisites: PSYC 001

Course Description

How can technology make our lives safer, more efficient, and more enjoyable? To answer this question, you need to consider the capabilities, characteristics, and limitations of people. This course will introduce you to human factors, a field focused on understanding the interactions among humans and other elements of human-machine systems.

From the catalog: Human psychology and physiological characteristics and methods for taking these into account in designs and development of human-machine systems. Current human factor engineering efforts in lab, design process and operational environment.

Course Format

This course uses elements from a flipped classroom delivery format. Internet access is required, as described below.
Learning Outcomes

Program Learning Outcomes
Upon successful completion of the requirements for a major in psychology, students will be able to:

- PLO1 - Knowledge Base of Psychology - identify, describe, and communicate the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology
- PLO2 - Research Methods in Psychology - design, implement, and communicate basic research methods in psychology, including research design, data analysis, and interpretations
- PLO3 - Critical Thinking Skills in Psychology - use critical and creative thinking, skeptical inquiry, and a scientific approach to address issues related to behavior and mental processes
- PLO4 - Application of Psychology - apply psychological principles to individual, interpersonal, group, and societal issues
- PLO5 - Values in Psychology - value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society

Course Learning Outcomes
The major goal of this course is to provide you with an introduction to Human Factors as it is used in science and practice.

Upon successful completion of this course, you will be able to:

- CLO1 - Describe human factors, appropriately use its fundamental terminology, and describe its importance in the effectiveness of human-machine systems
- CLO2 - Apply research, principles, and methods of human factors to human-machine system design, system evaluation, and training
- CLO3 - Describe how human capabilities and limitations interact with design to affect human-machine system performance
- CLO4 - Perform basic usability testing

The learning objectives will be assessed via assignments, exam questions, and the final project.
Required Materials

**Reliable Access to the Internet**
Having access to the Internet is your responsibility, so have backup plans in case you have problems with your primary computer. I cannot accept excuses about technology problems as valid, unless the entire University network or all of Canvas is offline.

**Canvas and E-Mail: Communication, Grades, Quizzes, and Submissions**
Use of the Canvas learning management system and e-mail are required. Supplementary course material will be made available on Canvas regularly. This includes additional required reading assignments. Communication regarding the course will be sent via the e-mail address linked to your MySJSU account or posted to Canvas. It is your responsibility to make sure you are enrolled in Canvas and receiving my e-mails.

Answers about Canvas can be found at [http://guides.instructure.com](http://guides.instructure.com).

**Required Textbook**

You will need the textbook throughout the course and occasionally during class. Because the purchase price of this text is high ($255.60 new at the Spartan Bookstore, which is $20 more than the bookstore charged for this same book last semester), rental options are recommended for students who may not need the text beyond this course ($35.65 for rental through August from amazon.com; $43.48 rental from barnesandnoble.com). These prices were obtained on June 2, 2016.

**Laptop or Tablet (recommended)**
You are encouraged to bring a laptop computer or a tablet to class, since most materials will be available through Canvas, but a laptop is not required. Laptops can only be used during class for course-related work. Instead of bringing a laptop, you can print materials from Canvas and bring them to class.

**Calculator**
You will occasionally need a scientific or graphing calculator for this course; a calculator app on a phone, tablet, or laptop is fine. Bring a calculator to every class meeting. You will not need (or be allowed to use) your calculator during exams. Your calculator must have statistics functions, a square root function, and an exponent button.

Grading Policy

**How to be Successful in this Course**
SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per
week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3 at http://www.sjsu.edu/senate/docs/S12-3.pdf.

It is essential that you make time to:

- Check Canvas and your e-mail for course announcements and changes
- Read the assigned textbook pages and readings posted to Canvas
- Check this syllabus for due dates and upcoming assignments and plan accordingly
- Attend class meetings
- Complete any work at home for the activity and remember to turn it in
- Ask questions in class or via e-mail

Grading Scale
Grades will be available to you on Canvas throughout the course. Grades are assigned based on your final point total (out of 1000 points for the course):

- A+ 966+ points
- A  916 - 965 points
- A-  896 - 915 points
- B+  866 - 895 points
- B  816 - 865 points
- B-  796 - 815 points
- C+  766 - 795 points
- C  716 - 765 points
- C-  696 - 715 points
- D+  666 - 695 points
- D  616 - 665 points
- D-  595 - 615 points
- F  < 595 points

Rounding is Included in the Grading Scale
The point totals reflect rounding up to the nearest percentage. For example, an A- would normally require 900 points (or 90% of 1000 points). With rounding, it only requires 896 points (or 89.6% of 1000 points). Because rounding is built in to the grading scale, your grade will be based on your
final point total, rounded to the nearest whole point (so, 895.75 points is an A-, but 895.25 points is a B+). To be fair to everyone in the class, these are firm cutoffs; please do not ask for more rounding, special extra credit, or other unfair adjustments to your grade.

Grade Checks
Under Federal privacy laws, I can never e-mail grades to you. Instead, you have my official permission to use the Canvas printout as a record of your current progress in the course. If you need a signed grade check, then please bring the grade check form with a printout of your current Canvas grade to my office hours. Grade checks are only available during office hours or by appointment.

Course Requirements and Assignments

Activities
Activities are 20.4% of your final grade (204 points total). There are no make-ups or extensions on activities for any reason.

Each activity is worth 34 points. Activities are designed to give you hands-on practice with the techniques discussed in the lecture and readings. Activities will be assigned most weeks and will be due either at the end of class or immediately at the start of the next class meeting. You may be asked to complete a homework portion of the activity before or after we meet; these are required to receive credit. You must be present for the entire in-class portion of the activity to receive credit. You are encouraged to work collaboratively, but everyone must do his or her own work unless otherwise specified; copying is not allowed and will not be tolerated.

Note that strict policies apply to the activities:

- There are no make-ups or extensions on activities for any reason. Most activities require equipment or class collaboration, so they would be logistically difficult to reschedule.
- Late activities are not accepted. All deadlines are strict. No credit is awarded for late work.
- All activities must be submitted online from the assignment page on Canvas. Hard copies are not accepted.
- In place of make-ups, extensions, and partial credit, the lowest activity grade is dropped. You do not need to notify me if you will miss an activity, although I am happy to discuss its content with you when you return.

Exams
Exams are 60% of your final grade (600 points total).

Each exam is worth 200 points. The three exams will focus on applying the knowledge learned in the previous part of the course. While they are not intended to be cumulative, later exams may require skills and knowledge learned in the earlier part of the course. The exams are closed book.
Final Project
The final project is 19.6% of your final grade (196 points total).

Instead of a final exam, you will be asked to prepare a project on a topic of your interest. More details about the project, including a rubric for grading, will be posted to Canvas during the course. As part of the project, you will present your work in a poster presentation. This presentation will take place during our scheduled final exam period, and you must be present to receive credit.

Extra Credit
Your grade should reflect your performance in the course over the entire course. For this reason, there are limited opportunities for extra credit.

Make-Up and Extension Policy
Make-ups or extensions for any graded assignment will only be given when:

- The assignment is not labeled, "no make-ups or extensions for any reason."
- The reason is exceptional, unforeseen, and unavoidable. Examples of exceptional circumstances are health emergencies, religious obligations, and military service. Work scheduling is not a sufficient reason for a make-up or extension.
- You provide written documentation.
- You notify me immediately after you become aware of the circumstances requiring a make-up or extension by filling out this form:
- You submit a request form at http://goo.gl/forms/0yJQ2KbvtP.

If the need for a make-up is known before the assignment due date, the assignment must be completed early. Make-up exams will be scheduled based on instructor availability. Do not e-mail your instructor with requests for a make-up or extension; instead, complete the request form.

Learning Environment
We will be working in groups frequently. The success of our class depends on respect for everyone involved. Specifically:

- Come to class having read the assigned material. Showing up unprepared is unfair to the rest of your group and will waste your time as well. If you are unprepared, excuse yourself from your group to catch up on your own.
- Class will start on time; avoid arriving late. If you are late, enter quietly.
- Silence your electronics during class.
- Don’t text, check your phone, IM, surf off-topic websites during class, or sleep; if you need to do these things, leave the room quietly and return quietly when finished. If you do any of these things in class, you will be asked to leave.
- Stay on topic during group work.
University Policies

Recording and Distributing Class Content

University Policy S12-7, http://www.sjsu.edu senate/docs/S12-7.pdf, requires students to obtain instructor’s permission to record the course. Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor’s permission to make audio or video recordings in this class, and authorized recording is for the general lecture time only. Group work may only be recorded with permission of all group members. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor. By enrolling in this course, you have not been given any rights to reproduce or distribute these recordings. Course material developed by the instructor remains the intellectual property of the instructor. You may not publically share or upload instructor-generated material for this course without written permission of the instructor.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester’s Catalog Policies section at http://info.sjsu.edu/static/catalog/policies.html. Add/drop deadlines can be found on the current academic year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/academic_calendars/. The Late Drop Policy is available at http://www.sjsu.edu/aars/policies/latedrops/policy/. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.

General Expectations, Rights and Responsibilities of the Student

As members of the academic community, students accept both the rights and responsibilities incumbent upon all members of the institution. Students are encouraged to familiarize themselves with SJSU’s policies and practices pertaining to the procedures to follow if and when questions or concerns about a class arises. To learn important campus information, view University Policy S90-5 at http://www.sjsu.edu/senate/docs/S90-5.pdf and SJSU current semester’s Policies and Procedures, at http://info.sjsu.edu/static/catalog/policies.html. In general, it is recommended that students begin by seeking clarification or discussing concerns with their instructor. If such conversation is not possible, or if it does not address the issue, it is recommended that the student contact the Department Chair as the next step.

Academic Integrity

Please review http://www.sjsu.edu/senate/docs/F15-7.pdf carefully. In particular, I have no discretion in reporting suspected violations of academic integrity and will follow the required documentation process.
Your commitment as a student to learning is evidenced by your enrollment at San José State University. The University Academic Integrity Policy F15-07 at http://www.sjsu.edu/senate/docs/F15-7.pdf, requires you to be honest in all your academic course work. Faculty members are required to report infractions to the office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at http://www.sjsu.edu/studentconduct/.

Instances of academic dishonesty will not be tolerated. Cheating on assignments or plagiarism (presenting the work of another as your own, or the use of another person’s ideas without giving proper credit) may result in a failing grade on the assignment, a failing grade in the course, and/or sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include any material you have submitted in another class or plan to submit for another class, please note that SJSU’s Academic Integrity Policy S07-2 requires approval of instructors.

**Campus Policy in Compliance with the American Disabilities Act**

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at http://www.sjsu.edu/aec to establish a record of their disability.

**Accommodation to Students’ Religious Holidays**

San José State University shall provide accommodation on any graded class work or activities for students wishing to observe religious holidays when such observances require students to be absent from class. It is the responsibility of the student to inform the instructor, in writing, about such holidays before the add deadline at the start of each semester. If such holidays occur before the add deadline, the student must notify the instructor, in writing, at least three days before the date that he/she will be absent. It is the responsibility of the instructor to make every reasonable effort to honor the student request without penalty, and of the student to make up the work missed. See University Policy S14-7 at http://www.sjsu.edu/senate/docs/S14-7.pdf.

**About Diversity**

Consistent with the mission of San José State University, I welcome persons of differing backgrounds and experiences including but not limited to age, disability and health status, ethnicity and race, family structure, geographic region, language, religious/spiritual and secular beliefs, resident status, sex, sexual orientation and gender identity/expression, and socioeconomic status.

It is my goal to foster an environment in which diversity is recognized and embraced, and every person is treated with dignity, respect, and justice. I hope that your academic experience in this
course and at San José State University will provide the opportunity to gain knowledge and experiences necessary to thrive in a diverse, global environment.

Useful Resources at San José State

**Library Liaison**
Your library liaison can help with library research questions.

Bernd Becker (Psychology)
Phone: (408) 808-2348
Email: bernd.becker@sjsu.edu

Yiping Wang (Industrial and Systems Engineering)
Phone: (408) 808-2633
Email: yiping.wang@sjsu.edu

**Computer Labs**
Computer labs for SJSU student use are available in the:

- Academic Success Center at [http://www.sjsu.edu/at/asc/](http://www.sjsu.edu/at/asc/) located on the 1st floor of Clark Hall
- Associated Students Lab on the 2nd floor of the Student Union
- Martin Luther King Library

Check with each lab for hours and to see what software is available for your use.

**Microsoft Office at No Cost**
SJSU’s license for Microsoft Office allows you a free subscription to Office 365, which includes downloads of Word, Excel, PowerPoint, and others. Visit the [eligibility web site](http://www.office.com/getoffice365).

**Adobe Creative Cloud at No Cost**
SJSU provides students with free Adobe software for SJSU-related activities. Visit the [program web site](http://its.sjsu.edu/services/software/adobe/).

**Axure Prototyping Tool at No Cost**
Axure provides a free non-commercial license to SJSU students who submit proof of enrollment. This software is not required for this course but may be useful. Visit [Axure’s web site](http://www.axure.com/edu). This free license is provided by Axure, not SJSU, and is subject to their licensing terms.

**SJSU Peer Connections**
Peer Connections, a campus-wide resource for free mentoring and tutoring, strives to inspire students to develop their potential as independent learners while they learn to successfully
navigate through their university experience. You are encouraged to take advantage of their services which include course-content based tutoring, enhanced study and time management skills, more effective critical thinking strategies, decision making and problem-solving abilities, and campus resource referrals.

In addition to offering small group, individual, and drop-in tutoring for a number of undergraduate courses, consultation with mentors is available on a drop-in or by appointment basis. Workshops are offered on a wide variety of topics including preparing for the Writing Skills Test (WST), improving your learning and memory, alleviating procrastination, surviving your first semester at SJSU, and other related topics. A computer lab and study space are also available for student use in Room 600 of Student Services Center (SSC).

Peer Connections is located in three locations: SSC, Room 600 (10th Street Garage on the corner of 10th and San Fernando Street), at the 1st floor entrance of Clark Hall, and in the Living Learning Center (LLC) in Campus Village Housing Building B. Visit Peer Connections website at http://peerconnections.sjsu.edu for more information.

**SJSU Writing Center**
The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the Writing Center website at http://www.sjsu.edu/writingcenter. For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook. (Note: You need to have a QR Reader to scan this code.)

**Counseling Services**
Personal Counselors are available to help students identify and accomplish their academic and career goals, enhance personal development, meet life's challenges, and improve interpersonal relationships.

Free short-term psychological counseling is available to individuals and couples that are matriculated students of San José State University. Students are eligible to receive six sessions per semester.

The SJSU Counseling Services is located on the corner of 7th Street and San Fernando Street, in Room 201, Administration Building. Professional psychologists, social workers, and counselors are available to provide consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit the Counseling Services website at http://www.sjsu.edu/counseling.
Wellness Workshops

Attending to your wellness is critical to your success at SJSU. Early in your college career is the best time to take advantage of workshops and programs offered through the SJSU Student Health Center/Wellness & Health Promotion Department. Past workshops have included time management, community resources, study skills & note-taking, overcoming stress, test anxiety & test taking skills, goal setting, assertiveness & communication, improving self-esteem, graduate school, first-generation success, and more. For more information and a schedule of workshops, visit the Workshop list at [http://www.sjsu.edu/counseling/students/Workshops](http://www.sjsu.edu/counseling/students/Workshops).
Course Schedule
The course schedule is subject to change; modifications will be posted to Canvas.

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<thead>
<tr>
<th>Meeting</th>
<th>Date</th>
<th>Topics</th>
<th>Readings</th>
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<td>from Wickens et al. (2004) other readings will be required &amp; posted to Canvas</td>
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<td>1</td>
<td>Tue. June 7</td>
<td>Definitions and history</td>
<td>Chapters 1-3</td>
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<td>Human factors methods</td>
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<td>Activity 1</td>
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<td>Thu. June 9</td>
<td>Sensation and perception</td>
<td>Chapters 4 &amp; 5</td>
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<td><strong>Exam 1</strong></td>
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<td>Thu. June 16</td>
<td>Cognitive factors</td>
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<td>Activity 3</td>
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<td>Tue. June 21</td>
<td>Decision making</td>
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<td><strong>Exam 2</strong></td>
<td>Chapters 10 &amp; 11</td>
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<td>Physical ergonomics &amp; anthropometry</td>
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<td>Thu. June 30</td>
<td>Safety</td>
<td>Chapters 13 &amp; 14</td>
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<td>Human-computer interaction</td>
<td>Chapter 15</td>
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<td><strong>Project Presentations</strong></td>
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