

**ISE 448/548 SPRING 2004**  
**(Call #: 03561)**  
**“Human Machine Systems”**

**Helmut T. Zwahlen, Ph.D., Russ Professor Emeritus of Industrial and  
Manufacturing Systems Engineering, Research Professor, Ohio University, Athens,  
Ohio 45701 zwahlen@ohio.edu**

**Lecture Outline & Reading Assignments**

**Book Used:** ‘Human Factors in Engineering and Design’, Sanders & McCormick, 1993

**Academic Conduct:** Cheating on examinations, submitting work from other students as your own, or plagiarism will result in an F on the assignment and possible further action from the university.

**Attendance Policy:** Class attendance is encouraged and required.

<b>Day</b>	<b>Lecture.</b>	<b>Topic Area</b>
<b>03/30/04 Tuesday</b>	<b>1.</b>	<b>Introduction to Human Factors</b>  Chapter 1: Human Factors and Systems Chapter 2: Human Factors Research Methodologies
<b>04/01/04 Thursday</b>	<b>2.</b>	<b>Information Input and Processing</b>  Chapter 3: Information Input and Processing
<b>04/06/04 Tuesday</b>	<b>3.</b>	<b>Design of Visual Information and Presentation – Part 1</b>  Chapter 4: Text, Graphics, Symbols, Codes (first part)
<b>04/08/04 Thursday</b>	<b>4.</b>	<b>Design of Visual Information and Presentation – Part 2</b>  Chapter 4 (contd.): Text, Graphics, Symbols, Codes Chapter 5: Visual displays of dynamic information
<b>04/13/04 Tuesday</b>	<b>5.</b>	<b>Design of Auditory, Tactual and Olfactory Displays</b>  Chapter 6: Auditory, Tactual and Olfactory Displays
<b>04/15/04 Thursday</b>	<b>6.</b>	<b>Human Output and Control – Part 1</b>  Chapter 8: Physical work and manual materials handling
<b>04/20/04 Tuesday</b>	<b>7.</b>	<b>Human Output and Control – Part 2</b>

## Chapter 8: Physical work and manual materials handling

- 04/22/04**  
**Thursday**
- 8. Human Output and Control – Part 3**
- Chapter 9: Motor Skills  
Chapter 10: Human Control of systems
- 04/27/04**  
**Tuesday**
- 9. Human Output and Control – Part 4**
- Chapter 11: Controls and Data Entry Devices  
Chapter 12: Hand tools and devices
- 04/29/04**  
**Thursday**
- MID TERM**
- 05/04/04**  
**Tuesday**
- 10. Anthropometry, Work Place Design and Seating – Part 1**
- Chapter 13: Applied Anthropometry, work-space design and seating
- 05/06/04**  
**Thursday**
- 11. Anthropometry, Work Place Design and Seating – Part 2**
- Chapter 14: Arrangements of components within a physical space  
Chapter 15: Interpersonal aspects of work place design
- 05/11/04**  
**Tuesday**
- 12. Environmental Conditions – Part 1**
- Chapter 16: Illumination
- 05/13/04**  
**Thursday**
- 13. Environmental Conditions – Part 2**
- Chapter 17: Climate
- 05/18/04**  
**Tuesday**
- 14. Environmental Conditions – Part 3**
- Chapter 18: Noise
- 05/20/04**  
**Thursday**
- 15. Environmental Conditions – Part 4**
- Chapter 19: Motion
- 05/25/04**  
**Tuesday**
- 16. Human Factors Applications – Part 1**
- Chapter 20: Human Error, Accidents and Safety
- 05/27/04**  
**Thursday**
- 17. Human Factors Applications – Part 2**
- Chapter 21: Human Factors and the Automobile  
Chapter 22: Human Factors in Systems Design

**Midterm: April 29<sup>th</sup>, 2004**

**Final Exam: Wednesday, June 9<sup>th</sup>, 2004, Time: 10.10 AM**

**Office: RTEC 017**

**Office Hours: 10:30 am to 11:30 am Tuesday and Thursday**