

**Southern Illinois University**

**Motion & Time Study**

**IT 382/494a Syllabus**

- I. **COURSE NUMBER & TITLE:** IT 382, Motion & Time Study
- II. **CREDIT HOURS:** 3 credit hours
- III. **DESCRIPTION OF COURSE:** Principles and practices of motion and time, including process charts, operation charts, motion summary and time standards.
- IV. **TEXTBOOK:** Niebel, Benjamin and Freivalds, Andris, Methods, Standards and Work Design, 12<sup>th</sup> Edition, New York, NY, McGraw Hill, 2003.
- V. **Location:** Champaign, IL **Room:** M227
- VI. **COURSE OBJECTIVES:** Upon completion of the course the students will be able to:
- a) To learn the principles of good motion design.
  - b) To learn the four methods of setting standards.
  - c) To gain an understanding of how motion and time study is used in management of an industrial operation.
- VII. **STUDENT RESPONSIBILITIES:**
- a) All examinations must be taken at the scheduled time. If not, there will be an immediate 10% penalty and an additional penalty of 10% per week for every week they are late. Exceptions to this policy will be for TDY, emergency leave, etc.. Upon return from TDY, etc., the student has one week to complete the late work before the late penalty kicks in.
  - b) All work submitted late **MUST HAVE ATTACHED DOCUMENTATION** to support it's being considered for "late – excused" status. Failure to submit said documentation will be grounds for refusing such status by the instructor. Talking to the instructor in the hallway during break, etc. does not constitute "documentation".

## VIII. INCOMPLETES:

It is the policy of the professor not to give incomplete grades. Occasionally, one realizes that events do occur which may merit the awarding of an Incomplete. In accordance with written university policy, an Incomplete grade will not be granted for any reason in a case where the student would not pass the course if all unfinished assignments were converted to zero points. Effectively, this means that you have to have completed around 75% of the course to even be considered for an Incomplete. In the event that the student feels an incomplete is applicable in their case, it is their responsibility to document the reason in writing and to secure it's approval. If you fail to complete this step, an Incomplete will not be granted. Talking to the instructor on the phone, or in the hallway, does not constitute "in writing".

## IX. STUDENT EVALUATIONS:

- a) Two examinations will be given at the times indicated below. Examinations will cover the reading assignment (theory), material presented outside the text material (supplemental material), and in-class problems/practices sessions. Examination questions are multiple choice and problems to be solved. Problems will be similar to examples that are solved during class.
- b) The following is a listing of homework questions (for a Total of 30 points towards your final grade) which are due by the end of class on the assigned weekend.

### **Weekend #1 (10 points)**

Chapter 1:	1, 2, 4, 5 & 6
Chapter 2:	1, 2, 4 & 6
Chapter 3:	3 & 12
Chapter 4:	8, 9, 10, 11, 13, 15 & 18
Chapter 5:	1 & 6
Chapter 6:	6 & 11
Chapter 7:	None
Chapter 8:	3 & 13

### **Weekend #2 (10 points)**

Chapter 9:	3, 15, 19 & 20
Chapter 10:	13 & 14
Chapter 11:	1, 3, 5 & 6

**Weekend #3: (10 points)**

Chapter 12:	1 & 3
Chapter 13:	1, 2, 4 & 5
Chapter 14:	1 & 11
Chapter 15:	1
Chapter 16:	2, 5 & 7
Chapter 17:	18
Chapter 18:	1 & 2

c) **An individual project** is to be completed in which you are to choose your own short-cycled process (less than 2 minutes per part) with around 10 steps to analyze (for a Total of 20 points towards your final grade). Professionalism in all parts of the project, to include things like typed pages, is expected. The project is weighted as follows:

- 1) (2 pts) Executive overview: In five sentences or less, summarize your findings.
- 2) (3 pts) Describe the part/process in a clear, detailed description. (Photos / sketches are very helpful)
- 3) (5 pts) Prepare either a process chart or process flow diagram. (Choose whichever fits your project best)
- 4) (3 pts) Prepare a left-and-right-hand operation chart. Draw a detailed layout of the workplace, making use of and pointing out motion study principles.
- 5) (2 pts) Make specific recommendations for improvements/needed changes that are warranted. (Note: You are not required to have any. However, if you have none, then explain why there are none, in detail).
- 6) (5 pts) Overall professionalism of project. This covers things like typing, spelling, grammar and use of the English language. Also included are things like correctness of calculations, proper use of techniques, etc.

d) Grading will be based on the assignments noted below. The final grade will be based on the following:

**IT 382**

Exam 1	110 pts	A	90 – 100%
Exam 2	128 pts	B	80 – 89%
Homework	50 pts	C	70 – 79%
		D	60 – 69%
		F	< 60%

- Homework = 30 pts
- Individual Project = 20 pts

Participation	<u>12 pts</u>
Total	300 pts

**IT 494a**

Project	
Paper/Presentation	90 pts
Surprise Me Points	<u>10 pts</u>
Total	100 pts

IX    INSTRUCTOR:     Laurence Hornibrook  
                          (309) 274-3639 Home  
                          (309) 740-7403 Work  
                          (309) 231-8923 Cell Phone  
                          [laurence.hornibrook@ps.net](mailto:laurence.hornibrook@ps.net)

X     INSTRUCTOR AVAILABILITY: Your instructor is available for conference and/or assistance immediately before, during and after scheduled class periods or at a mutually-agreed upon time and place. Students are encouraged to discuss problems with assignments, course material, suggestions, etc.

XI SCHEDULE OF ACTIVITIES:

<u>SESSION</u>	<u>DAY</u>	<u>SUBJECT</u>	<u>CHAPTER</u>
I	Sat	Course Introduction Motion Analysis	1 – 4
	Sun	Work Design	5 - 8
II	Sat	Exam 1 (2 hours) Time Study	Practice
	Sun	Time Study	9 - 11
III	Sat	Standard Data MTM – Methods Time Measurement Work Sampling	12 13 14
	Sun	Motion & Time Wrap-up Exam 2 (2 hour)	15 – 18