INTER AMERICAN UNIVERSITY OF PUERTO RICO
METROPOLITAN CAMPUS
ECONOMICS AND ADMINISTRATIVE SCIENCES FACULTY
SCHOOL OF MANAGEMENT

COURSE SYLLABUS

I. GENERAL INFORMATION

COURSE TITLE	:	Work Measurement and Methods of Improvement
CODE AND NUMBER	:	BADM-6110
CREDITS	:	THREE (3)
ACADEMIC TERM	:	
PROFESSOR	:	
OFFICE HOURS	:	
OFFICE TELEPHONE	:	
ELECTRONIC MAIL	:	

II. DESCRIPTION

Job simplification and laborsaving, operation analysis, operation-time standards and their determination, performance rating and allowances, work measurement by statistical sampling and labor cost control.

III. OBJECTIVES

1. The student will be able to demonstrate an understanding of the mission of Time and Motion Study in manufacturing and services operations.
2. The student will be able to analyze current manufacturing and services data, including leading manufacturers of durable goods.
3. The student will be able to understand how the Time and Motion Studies fits into the organization and the importance of conducting such studies both in manufacturing and service operations.
4. The student will understand the technical contributions of Frederick Taylor, and Frank and Lillian Gilbreth.
5. The student will understand how to use graphic representations such as Flow Process Charts, Flow Diagrams, and others.
6. Will understand the importance of graphic representations to the operation in a modern complex business environment.
7. The student will have an understanding of the guideline for the micro motion study. The student will understand the importance on how in many operation situations attention to small details in processes lead to small incremental improvements, and how those small incremental improvements lead to better quality of products and services while augmenting process performance.
8. The student will understand operator/machine chart.
9. The student will understand the design of work station.
10. The student will understand the principles of motion economy by using efficient and effective work station design.
11. The student will understand how MTM analysis is conducted.

12. The student will understand the stop watch time study process.
13. The student will understand the procedures and forms of time study.
14. The student will understand the purpose and use allowances.
15. The student will understand the purpose and necessary information for line balancing
16. The student will understand work sampling and wage payment system related work systems.

IV. COURSE CONTENT

TOPIC	TEXBOOK CHAPTER
• Introduction to Time and Motion Study	1
• Problem solving tools	2
• Operations Analysis	3
• Manual Work Design	4
• Workplace, Equipment, and Tool Design	5
• Work Environment Design	6
• Proposed Method Implementation	9
• Time Study	10
• Performance Rating and Allowances	11
• Standard Data	12
• Predetermined Times Systems	13
• Work Sampling	14
• Wage Payment	17

V. ACTIVITIES

A. Lectures
B. Case Studies
C. Supplementary readings
D. Internet searches
E. Audiovisual Support: Powerpoint presentations, videos
F. Presentation and discussion of relevant academic journal or trade journal articles

Heavy emphasis is given to practice problems at the end of the textbook as a mean to compensate for a real life laboratory. End of chapter cases provide scenarios and data obtained from real life milieu which can be used in analyzing each particular situation with the work measurement methods learned in class.

VI. EVALUATION

Required activities to achieve course objective should include various pedagogical activities such as, homework, presentations, short quizzes, partial examinations and interactive participation. It is highly recommended the utilization of the Blackboard platform as a support system for the course. Assessment techniques should be applied at professor discretion.

1. Students are expected to review prerequisite material as needed, and to read assignments and complete written exercises prior to the class session.

2. Students are required to actively participate in class discussions.

3. The student will be required to complete case studies and homework problems as a mean to practice the acquired practical knowledge in the classroom.

4. This course requires intense practice of quantitative exercises presented in class. Therefore it is important that student's complete al assigned text exercises and case analysis before coming to the classroom. This is a way of acquiring practical knowledge in the classroom.

5. The exercises require the use of MTS forms and formulas as a way of better solving the assigned problems. Furthermore it provides the student a way to situational analysis in a closer way to those used in the area of production and operations.

6. Due to the nature of the intense mathematical practice attendance to class is mandatory with a higher evaluation weight at the end of the course.

VII. SPECIAL NOTES

A. Special Accommodations

Students who require special accommodations must request these services at the beginning of the course as soon as they notice that they need help. Students can access this service with Professor Jose Rodriguez, Coordinator of Students with Special Needs at the Guidance and Counseling Office on the first floor at Metro's Student Center.

B. Plagiarism

Plagiarism, dishonesty, fraud and any other type of manipulation or inappropriate behavior related with academic performance are unacceptable in our institution. Disciplinary actions will be taken on students found guilty of such practice as established in Chapter V, Article 1, Section B.2 of the Student's Rules and Regulations handbook.

Inter American University has very strict regulations regarding plagiarism (using the ideas or words of others without giving proper credit), so it is important that you specifically read Chapter 5, Article 1, Section B.2c of the Student' Rules and Regulations Handbook. This section clearly explains what plagiarism is. In addition, it explains the types of sanctions students are exposed to when they commit it.

C. Use of Electronic Devices

Cellular (mobile) telephones and any other electronic device that could interrupt the teaching-learning process or disrupt a milieu favorable for academic excellence will be deactivated. Critical situations will be dealt with in an appropriate manner. The use of electronic devices that permit the accessing, storing or sending of data during tests or examinations is prohibited.

VIII. RESOURCES

a) Required Textbook

Niebel, B. and Freivalds, A., 2009, *Methods, Standards, and Work Design*, 12th.Edition, McGraw-Hill, Boston, MA.

b) Audiovisual and Information Technology

Campus On-line Services at - http://cai.inter.edu/

- **Use of CIT Open Lab is encouraged for use of Spreadsheets and other support software such as SPSS.**
- **ProQuest**
- **Infotrac (Database)**
  - Business and Company Resource Center
  - General Business File Internacional
  - Expanded Academic ASAP
- **Students are required to have a stop watch for use in class. Although many smart cell phones have stop watches integrated, it is highly recommended to use an inexpensive stop watch.**

IX. BIBLIOGRAPHY

References

Fred E. Meyers (1992*).Motion and Time Study. Improving Work Methods and Management.* First Edition, Upper Saddle River, NJ: Prentice Hall.

Fred E. Meyers and James R. Stewart. (2002). *Motion and Time Study for Lean Manufacturing*. Third Edition, Upper Saddle River, NJ: Prentice Hall.

Ralph M. Barnes. *Motion and Time Study Design and Measurement of Work.* Seventh Edition, Quinn- Woodbine, Inc, J. Wiley.