Outline of Term Project
IE 665 – Applied Ergonomics, Instructor: Dr. Arijit Sengupta

**Purpose:** The objective of this project is to get you familiarized with a selected ergonomics research area. You will study the state of art in the selected area from ergonomics publications in journals, textbook and internet sources. Then you will analyze a task, procedure, environment, or device common in the workplace, assess the resulting risk of injury, and provide tangible recommendations for any changes that should occur. Additionally you will work in a team of two to three, in order to develop interpersonal skills, teamwork skills, and mutual interdependence. Also you will improve your communication skill by preparing a written report and an in-class presentation.

**Resources:** textbooks, journal articles, internet, and industrial/commercial literature

**Potential Topics**
- Workplace Ergonomic and Redesign or Evaluation of a Series Workplaces
- Office Ergonomics and Redesign or Evaluation of Chair, Office Workstations, or Computer Peripherals
- Posture Analysis Tools (RULA, REBA, OWAS etc) and Application of Posture Analysis in Several Repetitive Tasks in Industry
- Detailed Motion-Time Study of Several Tasks in the Workplace
- Laboratory based investigation using Force plate, Flock of birds, EMG, Elgon, Static Strength, HR/BP etc.
- Biomechanical Force Analysis (Static and/or Dynamic) of Several Tasks in the Workplace
- Lifting Analysis (NIOSH) of Several Tasks in the Workplace
- Ergonomic Redesign or Evaluation of a Series of Hand Tools in the Workplace
- Environmental Analysis (Temperature, Humidity, Lighting, Dust, Noise, Pressure, etc.) of the Workplace
- Other, pending approval from instructor

**Initial Project Proposal:** Once you select a topic your Team will need to present a 1-to-2-page project proposal to demonstrate the merit of the project. The outline should specify the topic you of your choice, what aspect(s) of the topic you will cover, a brief outline of steps you will follow, which resources you expect to need in your research and the significance of your project. This must be thorough but to the point. This proposal will be graded on content and comprehensiveness, but not on presentation. This is **due on the third week** of the class and will be returned to you on the following week.

**Final report and class presentation:** A final report and class presentation will be **due on the 13th week** of the course. You will be required to submit one copy of a 15-25 pages written report. An in-class Presentation (20 minutes = 15 minute presentation + 5 minute Q&A) will be given by your Team.

Required Format of the final report: Title Page (1 page), Abstract/Summary (1 page), Table of content (1 page), Introduction (2-4 pages), Methodology and Materials Used, including any photos/tables/graphs/diagrams (3-4 pages), Results and Discussion, including any photos/tables/graphs/diagrams (6-10 pages), Recommendations/Conclusions (1-4 pages), Bibliography/References/Endnotes (1 page). No appendices please. Please print with double spacing text on single-sided 8.5”x11” pages.

**Grading Scheme (breakdown of 100 marks)**
- Project Proposal (10)
- Final class presentation (20)
- Overall Impression (10)
Creative use of audio, visual, “demonstrations/props”, or “hand out” aids (5)
Dealing with Questions from audience (5)
Content: Is it Technically/Scientifically Comprehensive and Correct (5)

Written Report (70)
Content: Is it Technically/Scientifically Comprehensive and Correct? (50)
Is it Clear, concise and error free? (10)
Is it Impressive in its presentation and writing style? (10)