



**Subject Description Form**

<b>Subject Code</b>	SD1A01M
<b>Subject Title</b>	<b>Everyday Ergonomics</b>
<b>Credit Value</b>	3
<b>Level</b>	1
<b>Pre-requisite/ Co-requisite/ Exclusion</b>	None
<b>Role and Purposes</b>	<p>The aims of everyday ergonomics are to develop the student's awareness and understanding of Ergonomics and Human Factors, Anthropometry, human limitation and capabilities, and general principles for Chinese population. The course explores the diversity of human body size and shape with a focus on the unique requirements of Chinese anthropometrics. In addition, the course introduces the basic knowledge of human visual information processing and control systems, and human cognition in order to educate the students about the ergonomics issues in everyday things. These ergonomics issues are closely related to human interaction and relationship in workplaces, health and safety considerations, and social communication. Understanding ergonomics needs will improve the productivity and the quality of life for Chinese, and eventually help to build a harmonious society. The goal of everyday ergonomics is to promote awareness of the need for China fit products and services in daily life for China's surging domestic market under the challenge of globalization.</p>
<b>Subject Learning Outcomes</b>	<p>Upon completion of the subject, students will be able to:</p> <ul style="list-style-type: none"><li>(a) Understand the area of ergonomics discipline</li><li>(b) Understand the ergonomics information and principles in everyday life</li><li>(c) Understand human anthropometry, limitations and capabilities</li><li>(d) Understand how ergonomics issues relate to human interactions and relationships</li><li>(e) Understand how to use ergonomics knowledge to improve the productivity and quality of life</li><li>(f) Aware of China-specific ergonomic issues</li></ul>



<b>Syllabus</b>	<b>Day</b>	<b>Activity</b>
	Day 1	Morning: Leave Hong Kong Afternoon: Arrive Shanghai Visit Tongji Campus
	Day 2	Morning: Course introduction Afternoon: Lecture Ergonomics in design
	Day 3	Morning: Lecture Human body and anthropometry Afternoon: workshop Body measurement workshop
	Day 4	Morning: Lecture The human information processing Afternoon: Visit Shanghai city Signage design exercise
	Day 5	Morning: Group discussion Afternoon: Guest lecture (Shanghai Design)
	Day 6	Morning: Lecture Ergonomics in public design Afternoon: Visit Shanghai city Collecting information
	Day 7	Field visit (project preparation)
	Day 8	Field visit (project preparation)
	Day 9	Morning: Visit Tongji Design school Afternoon: Group discussion
	Day 10	Final group presentation and report
	Day 11	Morning: Leave Shanghai
<b>Teaching/Learning Methodology</b>	Teaching methodology will consist of lectures, tutorials, case studies, experiential exercises, group discussions and presentations. Guest lecturers will augment course materials.	



Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
			a.	b.	c.	d.	e.	f.
	1. Assignments	40%	√	√	√	√	√	√
2. Final project presentation	20%	√	√	√	√	√	√	
3. Final written report	40%	√	√	√	√	√	√	
Total	100 %							
<p><i>To pass this subject, students are required to obtain Grade D or above in BOTH the Continuous Assessment and Exam components.</i></p> <p>The various methods are designed to ensure that all students taking this subject –</p> <ul style="list-style-type: none"> <li>• Assignments will be given based on reading the recommended material including lecture notes, textbooks, and journal articles.</li> <li>• Group project must be China-related ergonomics study to ensure the student understand ergonomics issues related to Chinese.</li> <li>• Group project will be evaluated in oral presentation.</li> <li>• Group written report is required to understand the content of the course.</li> </ul>								
Student Study Effort Expected	Class contact:							
	▪ Lectures from day 1 to day 9	36 Hrs.						
	▪ Assignments in day 3, day 4 and day 6	10 Hrs.						
	▪ Final presentation in day 10	6 Hrs.						
	Other student study effort:							
	▪ Reading	20 Hrs.						
	▪ Final project	50 Hrs.						
Total student study effort		122 Hrs.						
Reading List and References	<p><b><i>Recommended Textbook</i></b></p> <ul style="list-style-type: none"> <li>• Norman, D.A., 2002. <i>The Design of Everyday Things</i>, Basic Books: New York.</li> <li>• Wickens, C. D., Lee, J. D., Liu, Y. and Gordon-Becker, S. E., 2004. <i>An Introduction to Human Factors Engineering (2nd ed.)</i>, Pearson Prentice Hall: Upper Saddle River, NJ.</li> </ul>							



***Recommended Magazines/Journals***

- *Ergonomics in Design*
- *Applied Ergonomics*

***References***

- Ball R., Shu C., Xi P., Rioux M., Luximon Y., Molenbroek J., 2010. A comparison between Chinese and Caucasian head shapes, *Applied Ergonomics*, 41(6), 832-839.
- Baxter, M., 1995. Product design: Practical methods for the systematic development of new products, Chapman & Hall: London.
- Bond M.H., 2008. The psychology of the Chinese people. Chinese University Press: Hong Kong.
- Dul J. and Weerdmeester B., 2008. Ergonomics for beginners: a quick reference guide, CRC Press: Boca Raton.
- Fok T.F., Ng P.C., Hon K.L.E., 2007. Neonatal anthropometry for the Chinese, The Chinese University Press: Hong Kong.
- GB10000-88. Human dimensions of Chinese adults. Beijing: Standards Press of China, 1988.
- Luximon Y., Ball R. and Justice L., 2012. The 3D Chinese head and face modeling, *Computer-Aided Design*, 44 (1), 40-47.
- Norman, D.A., 2004. Emotional Design: Why We Love (or Hate) Everyday Things, Basic Books: New York.
- Norman, D.A., 2007. The Design of Future Things, Basic Books: New York.
- Norman, D.A., 2011. Living with complexity, MIT Press: Cambridge, Massachusetts.
- Pheasant, S. and Haslegrave, C.M., 1996. Bodyspace: Anthropometry, Ergonomics and the Design of Work, Third Edition, Taylor and Francis: London.
- Rubin, J., 2008. Handbook of Usability Testing: How to Plan, Design, and Conduct Effective Tests, Wiley: New York, second edition.
- Sanders, M.S. and McCormick, E.J., 1993. Human Factors in Engineering and Design, Seventh Edition (International), McGraw-Hill Inc.: New York.
- Tilley, A.R., 2002. The Measure of Man & Woman: Human Factors in Design, John Wiley & Sons: New York.