

**SARDAR PATEL UNIVERSITY**  
**Programme: M.Sc (Home Science)**  
**Subject: Family Resource Management**  
**Semester: II**  
**Syllabus with Effect from: June - 2013**

<b>Paper Code: PH02EFRM02</b>	<b>Total Credit: 4</b>
<b>Title Of Paper: Ergonomic Work Place Analysis</b>	

<b>Unit</b>	<b>Description in detail</b>	<b>Weightage (%)</b>
<b>I</b>	<b>Introduction to Ergonomics</b> Definition, History and Applications of Ergonomics. Biomechanics - definition, scope and application Anthropometry- definition, scope and application.	
<b>II</b>	<b>Environmental Risk Factors at Workplace</b> Heat and Cold Stress Lighting and Noise Psychosocial	
<b>III</b>	<b>Controlling Risk Factors at Workplace</b> Engineering Controls Administrative Controls Personal Protective Equipments System Improvements	
<b>IV</b>	<b>Identifying Risk Factors at Workplace</b> Screening for Risk Factors Describing Task Collecting Information Setting Priorities	
<b>V</b>	<b>Work Place Analysis (EWA)</b> Nordic Musculoskeletal Questionnaire (NMQ) Dutch Musculoskeletal Questionnaire (DMQ) Ovaku Working Posture Analyzing System.(OWAS) Postural Evaluation Tools: Rapid Upper Limb Assessment (RULA) and Rapid Entire Body Assessment (REBA). Measurement of Work Effort and Fatigue: Borg Ratings of Perceived Exertion Scale and Muscle Fatigue Assessment method. <b>Ergonomic Consideration for the Physically Challenged.</b>	

**Basic Text & Reference Books:-**

- Astrand, P.O. and Rodahi, K (1986): Textbook of Work Physiology, McGraw Hill, New York.
- Haupt, W.Q. and Feinleis, M.E. (1979): Physiology of Movements, Vol. 7, Verlog Publications; Berlin Spinger.
- Grandjean, E. (1968): Fitting the Task to the Man; A Textbook of Occupational Ergonomics: Taylor and Francis London.
- Chaffin, D.B. Katch, F.I. and Katch, V.L.(1981 & 1991): Exercise Physiology, 4th Edition, Henry Kempton Publisher, Baltimore.
- Chaffin, D.B. and Anderson G.B.(1984) : Occupational Biomechanics, John. Wiley and Sons.



- Wells, K. and Luttgens Kathrya (1976); Kinesiology: Scientific Basis of Human Motion 6th Education.
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- Nag, P.K.(1996): Ergonomics and work Design: Emerging issues in Organizational Science, New Age international (p) Ltd. New Delhi.
- Kumar Shrawan (1997): Perspectives in rehabilitation ergonomics: Taylor & Francis, London.
- Steidle and Braton: Work in home. Wiley Eastern Company, New York.
- Close Guy (1980): Work improvement, john Wiley and Sons, New York.
- Grandjeans Ettens (1978): Ergonomics of the Home, Taylor and Francis, London.
- Murell, K.F.H. (1965): Ergonomics, Champ man Hall, London.
- Anshel, Jeffrey (1989); Visual Ergonomics in the Workplace, Taylor and Francis; London.
- Macleod, Dan (1995): The Ergonomics edge: Improving Safety,Quality and Productivity, Van Nostrand Reinhold New York.
- Crossman, Richard (1995): Ergonomics Pocket Guide, Genium Publication
- Dul, Jun and Weerdmeester Bernard (2001): Ergonomics for Beginners: Taylor & Francis, London
- Parsons, K.C. (2001): Human Thermal Environments: Taylor & Francis, London
- Ringdahl Lars Harms (2001): Safety Analysis: Taylor & Francis, London
- Jordan. P.W. (2001): Pleasure with Product: Taylor & Francis, London
- Norris. B. and Wilson, J.R.(2001):Designing Safety into Products:Taylor & Francis, London
- Wilson, J.R and Covlett, N. (2001): Evaluation of Human Work. A Practical Ergonomics Methodology: Taylor & Francis, London
- Pheasant Stephan (2001): Body Space, Anthropometry, Ergonomics and the Design of Work, Taylor & Francis, London
- Jordan pat (1998): Human Factors in Product Design: Current Practice and Future Trends: Taylor & Francis, London
- Wogalter, M.Dejoy, D.and Laugherty,K.(2001):Warning and Risk Communication: Taylor & Francis, London.

