



A) COURSE

Course Id:	Course
5974	ERGONOMICS

Class Hours per Week	Lab hours per week	Complementary practices	Credits	Total hour course
3	0	3	6	48

B) GENERAL COURSE INFORMATION:

	EE (IEA)	ME (IM)	MME (IMA)	EME (IME)	MTE (IMT)
Level:	NA	NA	X	NA	NA
Course Type (Required/Elective)	NA	NA	Elective	NA	NA
Prerequisite Course:	NA	NA		NA	NA
CACEI Classification:	NA	NA	IA	NA	NA

C) COURSE OBJECTIVE

At the end of the course, the student will be capable of:

KNOW THE HUMAN CHARACTERISTICS AS PART OF ITS PRODUCTIVE, SOCIAL, CULTURAL AND ETHNIC DEVELOPMENT, AS IT IS VERY IMPORTANT TO ESTABLISH LINKS BETWEEN MAN - MAN, MAN - PHYSICAL COMPONENTS, MAN - ENVIRONMENT, PHYSICAL COMPONENTS - PHYSICAL COMPONENTS, PHYSICAL COMPONENTS - ENVIRONMENT.

D) TOPICS (CONTENTS AND METHODOLOGY)

1. (THE HUMAN BODY, ANTHROPOMETRY)		16 Hours
Specific Objective:		
	1.1 ANTHROPOMETRIC THEORY. 1.2 ANTHROPOMETRIC DATA. APPLICATION. 1.3 ELDERLY AND HANDICAPPED. 1.4 ANTHROPOMETRY SEATS. 1.5 ANTHROPOMETRIC TABLES. 1.6 METROLOGICAL ANALYSIS. 1.7 FUNCTIONAL BODY DIMENSIONS. 1.8 WORK POSITIONS. 1.9 ANATOMICAL POSITION. 1.10 GROWTH, MATURITY AND OLD AGE. YPES OF CONSTITUTIONS.	
Readings and other resources	Books, Articles, Further literature, Internet Links.	
Teaching Methodologies	Exhibition themes, concept analysis, problem resolution and discussion, group work and individual.	



Learning Activities	
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2. (ARTICULATED MOVEMENT, GONIOMETRY)		16 Hours
Specific Objective:		
	2.1 UPPER EXTREMITIES. 2.2 SHOULDER. 2.3 ELBOW. 2.4 FOREARM. 2.5 WRIST. 2.6 HAND AND FINGERS. 2.7. LOWER EXTREMITIES 2.8 HIP. 2.9 KNEE. 2.10 ANKLE. 2.11 FOOT. 2.12 METATARSUS AND FINGERS.	
Readings and other resources	Books, Articles, Further literature, Internet Links.	
Teaching Methodologies	Exhibition themes, concept analysis, problem resolution and discussion, group work and individual.	
Learning Activities		

3. (BODY STRUCTURE, CENTRAL NERVOUS SYSTEM)		16 Hours
Specific Objective:		
	3.1 THE WORDS AND SYMBOLS. 3.2 COMMUNICATION MAN - MACHINE. 3.3 THE PHYSICAL ENVIRONMENT, VIBRATION AND NOISE. 3.4 ERGONOMICS AND SAFETY. 3.5 MONITORING AND MAINTENANCE 3.6 INPUT AND OUTPUT HUMAN. 3.7 ENVIRONMENT 3.8 OVERVIEW. 3.9 WORK SKILLS. 3.10 HEART RHYTHMS AND WORKING HOURS. 3.11 COGNITIVE ERGONOMICS AND INTERACTION HUMAN - COMPUTER. 3.12 THE QUALITY SYSTEMS ISO 9000 AND QS - 9000: PLATFORMS FOR CHANGE.	
Readings and other resources	Books, Articles, Further literature, Internet Links.	
Teaching Methodologies	Exhibition themes, concept analysis, problem resolution and discussion, group work and individual.	
Learning Activities		

E) TEACHING AND LEARNING METHODOLOGIES

THE COURSE WILL BE TEACH IN A TRADITIONAL METHOD, WITH SOME IMAGES VIA MULTIMEDIA PLAYER AND DVD, TO ACCELERATE THE UNDERSTANDING OF THE TOPICS COVERED DURING THE CLASSES AND GIVE DYNAMISM TO THE COURSE
 CONDUCTING MATERIAL BOOK READINGS CONCERNING THE ISSUES THAT CONCERNS US DOING CRITICAL ANALYSIS OF THE IMPLEMENTATION OF THE THOUGHTS , AS FAR AS REGARDS THEIR PROFESSIONAL PERFORMANCE.

F) EVALUATION CRITERIA:

Evaluation:	Schedule	Suggested Form of Evaluation and weighing	Topics
1er. Evaluation Partial	Session 16	Exam 85% , Homework 10%, Assistance	Unity 1



		5%	
2º Evaluation Partial	Session 32	Exam 85% , Homework 10%, Assistance 5%	Unity 2
3er. Evaluation Partial	Session 48	Exam 85% , Homework 10%, Assistance 5%	Unity 3
Evaluation Final Ordinary		100% Average partial evaluations	
Other Activity:			
Exam Extraordinary	Week 17 of the semester in progress	100% Exam	100% Program
Exam of title	According to schedule school secretary	100% Exam	100% Program
Exam regularization	According to schedule school secretary	100% Exam	100% Program

G) BIBLIOGRAPHY AND ELECTRONIC RESOURCES

RICARTE GONZÁLEZ PILAR, RELACIONES EN EL ENTORNO DE TRABAJO, ED. DONOSTIARRA.

SANTOS DURÁN JOSÉ LUIS, SEGURIDAD EN ..., ED. DONOSTIARRA.

TAYLOR C. MICHAEL, LOS SECRETOS DEL CERTIFICADOR DE ISO 9000, ED. PANORAMA.

RODRÍGUEZ M. GERARDO, MANUAL DE DISEÑO INDUSTRIAL, ED. UAM. / GUSTAVO GIL.

MGM. PANERO Y ZELNIK, LAS DIMENSIONES HUMANAS EN LOS ESPACIOS INTERIORES. ED. GUSTAVO GIL.

CRONEY JOHN, ANTROPOMETRÍA PARA DISEÑADORES. ED. GUSTAVO GIL.

ACADEMIA AMERICANA DE CIRUJANOS ORTOPÉDICOS / DIRECCIÓN GENERAL IMSS, GONIOMETRÍA. JEFATURA DE SERVICIOS GENERALES / DEPARTAMENTO DE REPRODUCCIONES GRÁFICAS, IMSS.

OBORNE DAVID J., ERGONOMÍA EN ACCIÓN, ED. TRILLAS.

MC. CORMICK ERNEST J., ERGONOMÍA, ED. GUSTAVO GIL.

WARR PETER, ERGONOMÍA APLICADA, ED. TRILLAS.

ZINCHENKO Y MUNIPOV, FUNDAMENTOS DE ERGONOMÍA, ED. PROGRESO, MOSCÚ 1985.

CARTER DAVID, PSICOLOGÍA EN EL DISEÑO AMBIENTAL. ED. CONCEPTO.

BONILLA RODRÍGUEZ ENRIQUE DR. , LA TÉCNICA ANTROPOMÉTRICA APLICADA AL DISEÑO INDUSTRIAL, ED. UAM / XOCHIMILCO.

CERTERETTE Y FRIEDMAN, MANUAL DE PERCEPCIÓN, ED. TRILLAS.

MURRELL K.F.H., ERGONOMICS. CHAPMAN & HALL. LONDRES 1980

CECILIA FLORES, ERGONOMÍA PARA EL DISEÑO (SPANISH EDITION), EDITORIAL DESIGNIO, 2009.

CESAR RAMIREZ, ERGONOMIA Y PRODUCTIVIDAD / ERGONOMICS AND PRODUCTIVITY, LIMUSA, 2004



JULIO LILLO JOVER, ERGONOMIA / ERGONOMICS: EVALUACION Y DISEÑO DEL ENTORNO / EVALUATION AND ENVIRONMENT DESIGN (EL LIBRO UNIVERSITARIO. MANUALES), ALIANZA, 2007

Main Books

Complementary Books