UNIVERSITY COLLEGE of the FRASER VALLEY

PAC FORM #2

COURSE IMPLEMENTATION DATE: [Fall 2003]
COURSE REVISED IMPLEMENTATION DATE: []
COURSE TO BE REVIEWED: [Fall 2007]
(Four years after implementation date)

OFFICIAL COURSE OUTLINE INFORMATION

Students are advised to keep course outlines in personal files for future use.
Shaded headings are subject to change at the discretion of the department and the material will vary - see course syllabus available from instructor

FACULTY/DEPARTMENT: **Computer Information Systems**

CIS 386 | FORMER COURSE NUMBER | **3** UCFV CREDITS

Human Factors
COURSE DESCRIPTIVE TITLE

CALENDAR DESCRIPTION:

Human factors engineering or ergonomics concerns itself with the study of human capabilities and limitations and their relationship to things, processes and work environments. This course provides a broad overview of the field with an emphasis on human-computer interface development, user-centered design and usability evaluation. Students learn principles of work and system design that help to improve system performance and reliability.

PREREQUISITES: Acceptance to CIS degree program
COREQUISITES:

SYNONYMOUS COURSE(S)
(a) Replaces: _____ *(Course #)*
(b) Cannot take: _____ *(Course #)* For further credit.

SERVICE COURSE TO: _____ *(Department/Program)* _____ *(Department/Program)*

TOTAL HOURS PER TERM: **45**

STRUCTURE OF HOURS

Lectures:	**45**	Hrs
Seminar:		Hrs
Laboratory:		Hrs
Field Experience:		Hrs
Student Directed Learning:		Hrs
Other (Specify):		Hrs

TRAINING DAY-BASED INSTRUCTION
LENGTH OF COURSE: _____
HOURS PER DAY: _____

MAXIMUM ENROLLMENT: **35**
EXPECTED FREQUENCY OF COURSE OFFERINGS: **Once per year**
WILL TRANSFER CREDIT BE REQUESTED? (lower-level courses only) ☐ Yes ☐ No
WILL TRANSFER CREDIT BE REQUESTED? (upper-level requested by department) ☐ Yes ■ No
TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE: ☐ Yes ■ No

AUTHORIZATION SIGNATURES:

Course Designer(s): **Patrick O'Brien** Chairperson: _____ *(Curriculum Committee)*

Department Head: **Paul Franklin** Dean: **Karen Evans**

PAC Approval in Principle Date: _____ PAC Final Approval Date: March 26, 2003

CIS 386 Human Factors
COURSE NAME/NUMBER

LEARNING OBJECTIVES / GOALS / OUTCOMES / LEARNING OUTCOMES:

Upon completion of this course, students will:

Acquire a general understanding of the basic concepts of human factors and ergonomic cognitive psychology
Apply basic design principles to develop systems
Evaluate systems for usability
Identify and correct human error related causes of systems failure
List industry examples of codes/standards/practices regarding human factors
Evaluate HFE published research

METHODS:

A combination of lecture and guided practice. Students will examine case studies and research topics. Students will work in groups to solve problems (problem based learning). Students will demonstrate their abilities to meet course objectives by in class and electronic participation, completion of assignments, and writing exams

PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):
Credit can be awarded for this course through PLAR ■ Yes ☐ No

METHODS OF OBTAINING PLAR:

Course challenge with departmental approval

TEXTBOOKS, REFERENCES, MATERIALS:
[Textbook selection varies by instructor. An example of texts for this course might be:]

Bailey, Robert W.: Human Performance Engineering: Designing High Quality Professional User Interfaces for Computer Products, Applications and Systems, Third Edition

Casey, Steven M.: Set Phasers on Stun: And Other True Tales of Design, Technology, and Human Error

Norman, David A.: The Psychology of Everyday Things

SUPPLIES / MATERIALS:

STUDENT EVALUATION:
[An example of student evaluation for this course might be:]

Participation/Quizzes	10%
Exam Mid Term	30%
Exam Final	30%
Assignments	30%

COURSE CONTENT:
[Course content varies by instructor. An example of course content might be:]

HFE is the study of the relationship of human capabilities, to performance of activities within specific environments.

What is Human Factors – Historical Perspective

Human Capabilities:
- Limits and differences
- Sensing
- Cognitive processing
- Perception and problem solving
- Memory
- Motivation

Activity:
- Basic design
- Human Computer interface
- Selection and usability criteria
- Performance aids
- Documentation and training
- Human error based causes of systems failure

Environment:
- Physical environment
- Social environment

Human Factors Engineering in industry:
Standards, codes and practices
HFE resources
HFE software

Research in Human Factors Engineering