

COURSE DESCRIPTION

Department and Course Number: CSCI 305

Course Title: Software for Global Use

Current Catalog Description: Study of the principles and practice of software internationalization with emphasis on the design and customization of software to accommodate linguistic and cultural diversity.

Total Credits: 3 hours

Coordinator: Steven Schoenly, Associate Professor of Computer and Information Science.

Textbook: This course has never been taught. No textbook has been selected. Possible candidates might include the following:

Andy Deitsch and David Czarnecki, *Java Internationalization*, O'Reilly, 2001; ISBN 0-596-00019-7.
Tony Graham, *Unicode : A Primer*, Hungry Minds, 2000; ISBN 0764546252.

Other required materials: None

References: The course will likely supplement the textbooks with a number of papers and Web materials.

Course Goals: The goal of the course is to address technical and social issues related to specification, design, implementation, deployment, and maintenance of software systems for use in many nations by different cultural and language groups.

Prerequisites by Topic: Advanced programming expertise (CSCI 211). (The international studies corequisite will be dropped because INST 101 is only open to majors in international studies.)

Major Topics Covered in the Course: (taken from table of contents of Deitsch and Czarnecki textbook)

1. Introduction to Internationalization
2. Writing Systems and Locales
3. Formatting Messages
4. Character Sets and Unicode
5. Searching, Sorting, and Text Boundary Detection
6. Fonts and Text Rendering
7. Internationalized Graphical User Interfaces
8. Input Methods
9. Internationalized Web Applications

Laboratory projects: Likely exercises include practice in analyzing requirements from the perspective of internationalization and application of specific design and programming techniques and technologies to software design.

Estimate of ABET/CAC Category Content:

	CORE	ADVANCED		CORE	ADVANCED
Data Structures	_____	_____	Computer Organization and Architecture	_____	_____
Algorithms	_____	_____ 1	Concepts of Programming Languages	_____	_____ 1
Software Design	_____	_____ 1		_____	_____

Oral and Written Communications:

Not a significant focus of this course.

Social and Ethical Issues:

When this course is taught, social and ethical issues relating to privacy, cultural sensitivity, and legal constraints will be major topics for the class

Theoretical Content (Foundations):

When this course is taught, it will likely focus primarily on practical, concrete issues rather than theoretical foundations of linguistics and culture.

Problem Analysis:

When this course is taught, it will likely focus considerable attention on analysis of problems with respect to identifying cultural assumptions and sensitivities and understanding how to generalize software for use in international settings

Solution Design:

When this course is taught, it will likely focus considerable attention to design and implementation issues related to the internationalization of software.