COURSE TITLE: Exploring the Technological Frontier

COURSE NUMBER: CPSC 705
CREDIT HOURS: 3

PROFESSOR: Winfried Karl RUDLOFF, Ph. D., Dr. h.c.
E-MAIL: w-rudlof@govst.edu
WEBSITE: http://faculty.govst.edu/science/faculty/rudloff/wkr.htm
OFFICE: Room F2637  Tel. 534-4533

OFFICE HOURS: MW 02:00 - 04:00 pm, or by appointment

TRIMESTER: Winter 2007

RATIONALE AND COURSE DESCRIPTION:

This course is designed as a pragmatic, high technology-oriented approach to understanding and handling the coming age of global knowledge. The lectures attempt to treat new concepts and technologies of knowledge-based systems in a broad manner where multi-dimensional learning is evoked through recent advances in knowledge transfer. The multimedia, hypertext/hypermedia-based mode of our approach is reinforced through hands-on exercises in our computer lab. The students will experience the power of new technologies that will provide them with the intellectual tools for the 21st Century.

The course is intended to explore a variety of knowledge transfer modes as a holistic approach to learning and creative interaction. Besides attending traditional ex cathedra lectures and lab-reinforced practice, the students will venture beyond the confines of a classroom and will be exposed to technologies that may promote multi-dimensional learning in a virtual community beyond the physical boundaries of the university. As part of GSU’s efforts in internationalisation, and within the framework of the Electronic University without Borders (W. Rudloff, 1994), the students will browse through the World-Wide-Web for information and will interact with students and faculty from around the globe. They will learn how to design web pages on the internet and how to create electronic publications as an advanced approach to Writing Across the Curriculum. We will experiment with long-distance learning within the framework of the virtual classroom, vclass, by Elluminate™.

LEARNING OBJECTIVE:

The main objective of this course is to guide the students to an understanding of the principles of recent computer and multimedia technologies, and have them develop innovative, if not "crazy", ideas on topics that they may conceive, thus, applying these technologies for their professional presentations and communications.

MODES OF LEARNING INTERACTIONS AND SOURCES OF INFORMATION:

The recommended textbooks and notes are considered merely as an introduction to this course. The students are encouraged to develop a broad outlook. Thus, all students are required to participate in the collection and interpretation of information that expands beyond the horizons of the computer science discipline. The students should use traditional resources (books, journals, libraries, etc.) as well as global electronic communication facilities (Internet, telecommunication, multimedia, etc.). The knowledge acquired will be collated electronically in a hypertext-hypermedia and multimedia environment that can multi-dimensionally be accessed and transmitted via communication networks.
PREREQUISITES:

Basic computer literacy, an open mind, and the desire to learn about the future.

TEXTBOOKS, AUTHORING & READING MATERIAL:

Required:

Jcafe, inc.: Guide Author Electronic Multimedia Publishing Tool, Student Edition 5.0


ACTIVITIES:

This course requires a strong sense of independence on the part of the students. As an important initiation into the subject matter, students should read the recommended material and get some feeling about the subject matter. However, this course is primarily a participatory effort to study implications of new technology on the process of conveying ideas to a professional audience in a multi-dimensional approach. The students are encouraged to actively research the subject matter using traditional as well as state-of-the-art channels of communication. The results may be presented in colloquia, as written reports, co-authored papers, proposals etc. that may have the potential for contributions in professional publications. The faculty is essentially tutoring the learning process as primus inter pares, first among equals, rather than exclusively lecturing ex cathedra, and learning is done in the triangular configuration of student-instructor-computer interaction.

SELECTED TOPICS FOR DISCUSSION AND LABORATORY PRACTICE
(List should be expanded through students’ contributions)

1. The Virtual World of Multimedia: Hardware Fundamentals
3. A Picture is Worth a Thousand Words: Scanners/Cameras as Pertinent Multimedia Input Devices
4. Microsoft Windows as Interactive Operating System
5. Integrating audio with your computer: CD-ROM and the Sound of Digital Music
7. WORMS: Creating Your Own CD-ROM.
8. The Visual Interface: Editing Video Tapes with the Computer.
11. It’s a Small World: The Internet and Global Communication with Multimedia.
12. Digital movie editing

COURSE EVALUATION:

Class Participation in Discussions 20%
Midterm Seminar Presentation 25%
Final Multimedia Presentation 25%
Project Report 30%

Letter grades will be given based on a statistical evaluation of the overall number grades.

Note: This Syllabus may be downloaded in pdf-form from our website: http://faculty.govst.edu/science/faculty/rudloff/wkr.htm