Collin County Community College District
APPLICATION FOR SABBATICAL LEAVE

Instructions
Please complete this application by responding to all items. Attach requested documentation (in the order requested) and secure the appropriate signatures prior to submitting the application to the chair of the Sabbatical Committee. Please submit the original and 10 copies.

Name ____________________________

Title Professor of CIS/E-Business Media_Division ____________________________ Business, Information & Engineering Technology

Have you ever been granted a sabbatical? Yes If yes: Date: Fall 1999
Please provide a brief description of your previous sabbatical project:

Completed my Doctoral Research and Proposal Defense

Sabbatical Leave Period Being Requested

Dates: Beginning Date August 2008 Ending Date December 2008

Length: [ X ] One semester [ ] Two semesters [ ] Other ____________________________

Applicant’s Agreement

ABSTRACT

Please give a summary description of the project and its significance in a language that can be readily understood by persons in areas of expertise other than your own. PLEASE DO NOT EXCEED SPACE PROVIDED BELOW.

The purpose of my sabbatical leave will be to do research on the application of current technologies and emerging technologies and their implications to student learning and the learning environment.

I want to identify changes in current workplace skills that are impacted by emerging technologies. The advances of technology provide a challenge to the understanding and definition of literacy. I want to ascertain what new skill requirements will be expected of our students going into the workplace in the 21st century.

I will interview industries within our community to gain an understanding of the requirements for employees applying emerging technologies. Virtual collaboration is projected to replace much face to face collaboration in the workplace in the 21st century. Other skills that will be required in the workplace are more effective means of "abstraction, system thinking, and experimentation."

I want to determine curriculum changes that will be required to accommodate the new required skill set for our students going into the workplace. Our curriculum will need to be up to date and in line with industry expectations. This will impact our faculty and their current understanding of the new technologies and their required skill set. I plan on providing information to assist the faculty in my department of the new technologies and the impact on our current curriculum. I will be able to provide this information to other colleagues throughout our district and to effectively engage community resources, such as our advisory committees.
Tony McRae, Ed.D.

Purpose

The purpose of my sabbatical is to conduct research on the application of current technologies and emerging technologies and their implications to student learning and the learning environment.

Investigate and document the recommendations of what students will need to effectively and efficiently engage in skills and knowledge for application to the workplace.

Update and expand my current knowledge and technical literacy for the courses that I teach (web development, business computing, geographical information systems, and computer graphics). Provide up to date information to other members in my department and division.

Serve as a resource for the college, advisory committees, and the community on the skills needed to engage in the use of emerging technologies related to Computer Information Systems/Electronic Business Media.

Objectives

Conduct research on current technologies that have been implemented in the past three years related to my discipline. White papers and other industry feedback will be reviewed to get a synopsis of the current marketable skills needed in the work place.

Conduct research that supports CCCC's Strategic Plan (Goal 4: Identify and design academic programs that meet the evolving needs of the business community), the Quality Enhancement Plan (Goal 1.6: Student's Perceptions of Learning Gains Measured by Selected Items on the Community College Experiences Questionnaire - Understanding the role of science and technology in society).

Conduct research on the impact of technology in the learning environment related to my discipline. Research journals and other published resources to identify possible issues related to the impact of technology on student learning.

Research published projections of technologies that will be forth coming in the next several years.

Methods of Procedures

I will seek out local industries and corporations that have implemented new technologies in the past three years. I will glean from interviews and other sources the necessary skill set required to be effective and efficient using these new technologies.

I will contact technology developers and experts to determine what will be the most significant emerging technologies making the most impact on higher education and the field of Computer Information Systems/Electronic Business Media.

Read published research, evaluation, and analysis of the impact on student learning and the learning environment by emerging technologies.

Review national associations (Association of Information and Imagery Management (AIRM) Information Technology Association of America (ITAA), Alternative Technology Association (ATA), Global IT Trade Association (CompTIA), among others) to research employee performance related to emerging technologies.
Develop a grid of identified marketable skills outlined in published research, corporate white papers, and national/state associations.

**Rationale**


Technology is a constant evolving process. In my discipline, it becomes a challenge to keep up with new technologies and the implications to our students. Recent emerging technologies are bringing to bear the changes that will be placed on our students to function in the workplace. Surface technology has recently been introduced to the mainstream public sector through Apple Corporations IPhone. Microsoft is set to launch a public campaign on their version of Surface Technology – The Microsoft Surface Table. Just these two recent innovations identify the changes that will be taking place in the 21st century. According to Rand Corporation (Karoly, 2004), the number one skill needed by workers will be the ability to collaborate effectively in a virtual process.

Another current technology that has emerged is Asynchronous Javascript and Extensible Markup Language (AJAX) working with server pools (collections of cached data). This process allows for large data items (such as images) to be presented in the browser without delay. There are a number of advances and technologies that are coming out that impact web development. Web 1.0 provided an explosion of web services, now Web 2.0 will provide distributed collaboration through GeoWebs.

Information processes are changing the way businesses operate. Many companies are using business intelligence to complete information processing. Newer technological efforts will be appearing soon through a process called “mash-ups”; a process (enterprise level) of fusing many processes to operate as one process creating federated organizations.

In the area of Information/Knowledge Management, database design is moving to a far more superior workhorse for corporations and institutions. Object-oriented designs are getting more complex to enable databases to do much more “intelligent” processing.

Job Tracking extensions are being created to allow workers to deal with multiple job tasks, either repetitive or interval activity. The worker/management will need to be able to interface with this software and use it in a very efficient and effective manner.

Networks are getting much more robust and more intelligent as well. Due to the increase in data acquisition through data mining, the ability to store large volumes of data and knowledge (business intelligence) will require the design, implementation, and management of scalable storage environments.

As new technologies emerge, the definition of literacy takes on new meaning and understanding. Marketable skills will become more demanding with an increase in the ability to defend strategies in the workplace by employees. Other skills that will become necessary are: “abstraction, system thinking, experimentation, and collaboration” (Reich, 1991).

Collaboration will take on more of a virtual skill as face to face collaboration wanes due to globalization of corporations. Students will need confidence to demonstrate to perspective employers that they are able to utilize quality communication skills in a virtual environment. The students will have to learn to discern from social “chat” to formal, professional communications. Furthermore, they will have to be comfortable
utilizing wikis, blogs, virtual groupware, they usually engage in as a social event. The workplace will not tolerate the social taxonomies/tagging that is acceptable in current online social events. However, these technologies are quite useful in the workplace when used in a professional manner.

**Benefits**

Students will gain awareness to emerging technologies that will impact their possible future employment.

Students will benefit from new emerging technologies in the learning environment for both online and on site courses within the department of Computer Information Systems/Electronic Business Media.

Students will have the benefit of hands on experience with these new technologies as they are introduced at Collin County Community College.

Students will gain improved skills in new collaborative environments.

New sharing of information will be provided to Collin Community College colleagues for a better understanding of the new emerging technologies.

I will benefit from the research conducted on current and future trends in technologies used in my discipline.

**Timetable for accomplishing this project:**

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<th>Month</th>
<th>Activities</th>
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| **August 2008** | · Begin research and attend professional development activities off campus related to my research.  
                   · Attend workshops/seminars dealing with student outcomes and student learning assessments related to emerging technologies.  
                   · Research white papers published by industry members related to skills necessary for the 21st century workplace. |
| **September and October 2008** | · Seek out five or more businesses that will allow me to interview training and/or HR personnel to ascertain the skills they deemed essential to conduct business in the workplace.  
                   · Continue all research related to sabbatical project. |
| **November and December 2008** | · Complete all research, interviews, and professional development. Prepare final report. |
Bibliography:


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