CURRICULUM AND NEW PROGRAMS

January 12, 2009

A G E N D A

I. Minutes

II. New Business

College of Sciences & Health Professions

- **Mathematics and Computer Science**

-Change in Checksheet for Computer Science with Math Concentration
-Change in Checksheet for Computer Science with Business Concentration
-New Course - CSCI 2300 – Computational Informatics I
-New Course - CSCI 2311 – Advanced Visual Basic Programming
-New Course - CSCI 3200 – Design and Analysis of Algorithms
-New Course - CSCI 3300 – High Performance Computing
-New Course - CSCI 4921 – Senior Project I
-New Course - CSCI 4922 – Senior Project II

IV. Other Items

Curriculum and New Programs Meeting
January 12, 2009

A meeting of the Curriculum and New Programs Committee was held on Monday, January 12, 2009 at 9:00 a.m. in the Academic Administration Building, Room 172 with Dr. Abiodun Ojemakinde, Vice President for Academic Affairs, presiding. Those in attendance were Mrs. Arna Albritten, Dr. Marva Banks, Dr. Audrey Beard, Dr. Deborah Bembry, Dr. Rhonda Bryant, Dr. Leroy Bynum, Professor Gwendolyn Campbell, Dr. Wilburn Campbell, Dr. Khalil Dajani, Dr. Babafemi Elufiede, Dr. Rani George, Dr. Linda Grimsley, Dr. James Hill, Dr. Marcia Hood, Dr. Joyce Johnson, Dr. LaVerne McLaughlin, Dr. Peter Ngwafu, Dr. Charles Ochie, Dr. Gavin Putzer, Dr. Michael Rogers, Dr. Seyed Roosta, Dr. Sharry M. Sackor, Dr. Don Snyder, Dr. Marilyn Spearman, Dr. Cathy Williams and Dr. Richard Williams.

Opening Remarks

Dr. Ojemakinde greeted the committee members and distributed the agenda and minutes of the last meeting for review.

Minutes

The minutes of the December 1, 2008 meeting were read. It was moved and seconded that the minutes be approved. The minutes were approved.

New Business

College of Sciences and Health Professions
Mathematics and Computer Science

Dr. Joyce Johnson asked Dr. Seyed Roosta to present the proposals for the Department of Math and Computer Science. Dr. Roosta presented the proposal to change the check sheet for Computer Science with Math Concentration.

The rationale for this proposal is that this change in check sheet for Computer Science program supports two new courses offered in the program, Senior Project I and Senior Project II.

The inclusion of this change in the Computer Science program with Math concentration will decrease the required number of general electives to one (1).

The proposal will be voted on at the next meeting.

Dr. Roosta presented the proposal to change the check sheet for Computer Science with Business Concentration.

The rationale for the proposal is that this change in the check sheet for the Computer Science program supports two new courses offered in program, Senior Project I and Senior Project II.

The inclusion of this change in the Computer Science program with Business concentration will decrease the required number of general electives to two (2).

The proposal will be voted on at the next meeting.

Dr. Roosta presented the proposal to add a new course CSCI 2300 – Computational Informatics I.

CSCI 2300	Computational Informatics I	3(3-0)

The rationale for the proposal is that this course offers an introduction to computational informatics science of how information is represented and transmitted in biological systems. Students will learn Biological Technical Scenes, Patterns and Downloading Datasets (Protein Databanks, SWISS-PROT, EMBL and GenBank), Database Management (Pharmacogenomics and Aggression), Search Engins Algorithms (Intelligent Agents and User Interface Tools Programming with PERL Database), Data Mining (Statistics and Sampling), Web Technologies (Internet Sequence Retrieval System) and Data Visualization (Animation and Visualization Tools).

Prerequisites: BIOL 1111 – Introduction to Biological Sciences and CSCI 1101 Introduction to Computers or consent of the instructor.

The proposal will be voted on at the next meeting.

Dr. Roosta presented the proposal to add a new course CSCI 2311 - Advanced Visual Basic Programming.

CSCI 2311	Advanced Visual Basic Programming	3(3-0)

The rationale for the proposal is that Advanced Visual Basic will incorporate the basic concepts of programming and the design techniques of an object oriented language. It covers advanced internet and user interface features and applications; error handling; graphics, database, and XML applications. A second course is needed to cover the database concepts, web applications and advanced programming techniques. The general elective credit hours will increase and the institution's overall degree requirement will not be affected.

Prerequisites: CSCI 2211 Visual Basic Programming.

The proposal will be voted on at the next meeting.

Dr. Roosta presented the proposal to add a new course CSCI 3200 - Design and Analysis of Algorithms

CSCI 3200	Design and Analysis of Algorithms	3(3-0)

The rationale for the proposal is that the design, analysis and implementation of algorithms are important issues to all computer science students because all of them use algorithms and because

there is an increasing demand for the design of algorithms that require new skills in their development. This course is about the algorithmics which is the systematic study of the design and analysis of algorithms. The objective is to provide students with some basic tools needed to develop their own algorithms, in whatever field of application they may be required. We concentrate on the fundamental techniques used to design efficient algorithms, and we pay special attention to integrating the design of algorithms with the analysis of the efficiency. There are several advantages concentrating on the foundations of design and analysis of algorithm methods rather than on the detail of an assortment of fashionable algorithm. More important, is the advantage for students meaning that their knowledge will be useful throughout their career, and they experience using a variety of actual algorithms. This course will be considered as a major elective course, so the inclusion of this course in our list of course offerings will not increase the required number of credits for computer science majors.

Prerequisite: CSCI 3122 Data Structures or consent of the instructor.

The proposal will be voted on at the next meeting.

Dr. Roosta presented the proposal to add a new course CSCI 3300 – High Performance Computing.

CSCI 3300	High Performance Computing	3(3-0)

The rationale for the proposal is that in parallel computing several processors cooperate to solve a problem, which reduces computing time because several operations can be carried out simultaneously. From the computation point of view, this provides sufficient justification to investigate the concept of parallel processing. In this course, we are intended to investigate four steps that are involved in performing a computational problem in parallel. The first step is to investigate the nature of parallel computing with respect to architectures. The second step involves designing parallel algorithms or parallelizing the existing sequential algorithms. The third step is to map the problem into suitable parallel computer, and the last step involves writing a parallel program utilizing an applicable parallel programming approach. An important reason to utilize high performance computing can be illustrated by the applications. The applications are representative of a host of situations in which the probability of success in performing a computational task is increased through the use of parallel processing. This course will be considered as a major elective course, so the inclusion of this course in our list of course offerings will not increase the required number of credits for computer science majors.

Prerequisite: CSCI 3211 and CSCI 3122 or consent of the instructor.

The proposal will be voted on at the next meeting.

Dr. Roosta presented the proposal to add a new course CSCI 4921 – Senior Project I.

CSCI 4921	Senior Project I	1(1-0)

The rationale for the proposal is that students will broaden their educational experience by reading and understanding technical literature in the areas of mathematics and computer science, organizing and writing a professional-level proposal, attending seminars and preparing a professional-level presentation. Students will draw upon and synthesize knowledge from their previous course work. Through revision of both the proposal and the oral presentation; students will improve their ability to communicate the main ideas.

Prerequisite: Consent of the instructor and senior standing in the Department of Mathematics and Computer Science.

The proposal will be voted on at the next meeting.

Dr. Roosta presented the proposal to add a new course CSCI 4922 – Senior Project II.

CSCI 4922 Senior Project II 2(2-0)

The rationale for the proposal is that students will broaden their educational experience by reading and understanding technical literature in the areas of mathematics and computer science, organizing and writing a professional-level paper, project implementation and coding, attending seminars and preparing a professional-level presentation. Project implementation should satisfy all requirements mentioned in the approved proposal accomplished during the CSCI 4921. Students will draw upon and synthesize knowledge from their previous course work and educational experience.

Prerequisite: Consent of the instructor and senior standing in the Department of Mathematics and Computer Science and CSCI 4921 Senior Project I.

The proposal will be voted on at the next meeting. Dr. Roosta will provide corrections to the proposal for the second reading.

Other Items

1. Dr. Johnson stated that using the GRE as an exit exam is prohibited. The GRE should not be used as an exit exam for undergraduate students. Departments have to develop their own exit exam. All programs must stop using the GRE for an exit exam.

2. Dr. Ojemakinde informed the committee of the ongoing budget issue with the state. We have been informed by the Chancellor's Office to prepare for an additional budget cut up to 2%. He encouraged everyone to read the information memo from Mr. Larry Wakefield, Vice President for Fiscal Affairs, regarding budget cuts and to use caution with purchases with state funds.

3. Dr. Ojemakinde reminded the committee of the President's email message regarding the successful reaffirmation from SACS as of December 2008. We were officially affirmed. He thanked the committee again for their support and

efforts.

4. Periodic reports will be given regarding employment of faculty. Faculty must meet requirements to teach in their appropriate areas.

5. Dr. Cherry is helping with the search to find qualified candidates to fill the position of Director of the QEP. We are behind schedule at this time.

6. Dr. Wilburn Campbell announced that Dr. Claude Perkins, ASU Retiree, has been chosen as President of Virginia Union.

7. Mrs. Albritten encouraged faculty to complete their faculty roster each day. Registration has been extended to January 14, 2009 at 5:00 p.m.

8. Dr. Johnson reported that Business and Criminal Justice programs have kicked off their online classes.

9. Dr. Rani George stated that January 16, 2009 is the deadline date for Graduate Faculty applications.

10. Dr. Johnson told faculty to contact Tarrah Mirus for help to provide checklist for what's needed for online classes.

Adjournment

The meeting was adjourned at 9:40 a.m.

Dr. Abiodun Ojemakinde, Presiding
Dr. LaVerne McLaughlin, Recorder