MEMORANDUM TO: Ogden College of Science and Engineering Curriculum Committee

Dr. Jack Rudolph	Dr. James Gary	Dr. Keith Andrew
Dr. Martin Stone	Dr. Huanjing Wang	Dr. Edward Kintzel
Dr. Greg Arbuckle	Dr. Julie Ellis	Dr. Kelly Madole
Dr. Mark Revels	Dr. Warren Campbell	Dr. Steve Haggbloom
Dr. Bruce Schulte	Dr. David Keeling	Dr. Les Pesterfield
Dr. Phil Lienesch	Dr. Xingang Fan	
Dr. Cathleen Webb	Dr. Bruce Kessler	
Dr. Hemali Rathnayake	Dr. Richard Schugart	

FROM: Kenneth Crawford, Chair

SUBJECT: Agenda for <u>Thursday, December 4, 2014</u>, 4:00 p.m. in COHH 4123

A. OLD BUSINESS:

    I.   Consideration of the minutes of the November 6, 2014 meeting.

B. NEW BUSINESS:

Consent Items

Department of Computer Science
    I. Proposal to Revise Course Prerequisites/Corequisites
- a. CS 299, Introduction to Research in Computer Science, 3 hrs.
- b. CS 315, Introduction to Unix, 3 hrs.
- c. CS 325, Computer Organization and Architecture, 3 hrs.
- d. CS 360, Software Engineering I, 3 hrs.
- e. CS 381, Introduction to Computer Networks, 3 hrs.
- f. CS 382, Programming Languages, 3 hrs.
- g. CS 389, Practicum in Computer Science, 1-4 hrs.
- h CS 396, Intermediate Software Project, 3 hrs.
- i. CS 443, Database Management Systems, 3 hrs.
- j. CS 446, Interactive Computer Graphics, 3 hrs.
- k. CS 456, Artificial Intelligence, 3 hrs.

Action Items

Department of Computer Science
    I. Proposal to Make Multiple Revisions to a Course
- a. CS 181, Computer Science II, 4 hrs.
- b. CS 280, Computer Science III, 3 hrs.
- c. CS 380, Data Structures and Algorithm Analysis, 3 hrs.

    II. Proposal to Create a New Course
- a. CS 351, Database Management System I, 3 hrs.

II. Proposal to Revise a Program
   a. Ref. 629P/629, Major in Computer Science, 44-50 hrs.
   b. Ref. 341, Minor in Computer Science, 23 hrs.

C. **OTHER BUSINESS**

MEMBERS PRESENT:

Dr. Martin Stone
Dr. Mark Revels
Dr. Bryan Reaka
Dr. James Gary
Dr. Huanjing Wang
Dr. Warren Campbell

Dr. Keith Andrew
Dr. Hemali Rathnayake
Dr. Steve Haggbloom w/ proxy for Kelly Madole
Dr. Richard Schugart
Dr. David Keeling

FROM: Ken Crawford, Chair

OLD BUSINESS:
Campbell/Keeling moved for approval of the minutes from the September 30, 2014 meeting. Motion passed.

NEW BUSINESS:

Consent Agenda
The CM 363, CM 462 and GEOG 22 proposals were passed on a Campbell/Keeling motion. All Computer Science Department consent proposals were tabled.

Action Agenda

Department of Agriculture
Keeling/Campbell moved for approval of the Proposal to Revise a Program, Ref. 508. Motion passed.

Department of Architectural and Manufacturing Science
Keeling/Campbell moved to bundle items A and B and moved for approval of the Proposals to Make Multiple Revisions. Motion passed.
Reaka/Campbell moved for approval of the Proposal to Revise a Program, Ref. 533 with a friendly amendment to make a grammar correction and add a bullet that notes PHYS course still exist. Proposal passed.

Department of Computer Science
All Department of Computer Science action proposals were tabled.

Department of Psychological Sciences
Keeling/Campbell moved to approve Proposal to Create a New Minor Program, Minor in Neuroscience with a friendly amendment to change implementation date to Fall 2015. Motion approved.

OTHER BUSINESS:

Martin Stone was appointed as the UCC Rep for Ogden.

Meeting was adjourned at 4:45pm.

Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
   1.1   Course prefix (subject area) and number: CS 299
   1.2   Course title: Introduction to Research in Computer Science

2. **Current prerequisites/corequisites/special requirements:**
   A "B" or better in CS 180 and 181 or consent of instructor

3. **Proposed prerequisites/corequisites/special requirements:**
   A "B" or better in CS 180 and 221 or consent of instructor

4. **Rationale for the revision of prerequisites/corequisites/special requirements:**
   The revision of course prerequisites is consistent with the renumbering of CS 181 to CS 221.

5. **Effect on completion of major/minor sequence:**
   None

6. **Proposed term for implementation:**
   Fall 2015

7. **Dates of prior committee approvals:**

   Department of Computer Science   October 21, 2014

   Ogden College Curriculum Committee   _____

   Undergraduate Curriculum Committee   _____

   University Senate   _____

Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
   1.1   Course prefix (subject area) and number: CS 315
   1.2   Course title: Introduction to UNIX

2. **Current prerequisites/corequisites/special requirements:**
   CS 181 (corequisite)

3. **Proposed prerequisites/corequisites/special requirements:**
   CS 221 (corequisite) with a grade of "C" or better

4. **Rationale for the revision of prerequisites/corequisites/special requirements:**
   The revision of course prerequisites is consistent with the renumbering of CS 181 to CS 221.

5. **Effect on completion of major/minor sequence:**
   None

6. **Proposed term for implementation:**
   Fall 2015

7. **Dates of prior committee approvals:**

   Department of Computer Science   October 21, 2014
                                                    _____
   Ogden College Curriculum Committee
                                                    _____
   Undergraduate Curriculum Committee
                                                    _____
   University Senate
                                                    _____

Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
    1.1   Course prefix (subject area) and number: CS 325
    1.2   Course title: Computer Organization and Architecture

2. **Current prerequisites/corequisites/special requirements:**
    CS 181 with a grade of "C" or better

3. **Proposed prerequisites/corequisites/special requirements:**
    CS 221 with a grade of "C" or better

4. **Rationale for the revision of prerequisites/corequisites/special requirements:**
    The revision of course prerequisites is consistent with the renumbering of CS 181 to CS 221.

5. **Effect on completion of major/minor sequence:**
    None

6. **Proposed term for implementation:**
    Fall 2015

7. **Dates of prior committee approvals:**

    Department of Computer Science   October 21, 2014   _____
    Ogden College Curriculum Committee   _____
    Undergraduate Curriculum Committee   _____
    University Senate   _____

Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
   1.1   Course prefix (subject area) and number: CS 360
   1.2   Course title: Software Engineering I

2. **Current prerequisites/corequisites/special requirements:**
   A grade of "C" or better in CS 181

3. **Proposed prerequisites/corequisites/special requirements:**
   A grade of "C" or better in CS 221

4. **Rationale for the revision of prerequisites/corequisites/special requirements:**
   The revision of course prerequisites is consistent with the renumbering of CS 181 to CS 221.

5. **Effect on completion of major/minor sequence:**
   None

6. **Proposed term for implementation:**
   Fall 2015

7. **Dates of prior committee approvals:**

   Department of Computer Science   October 21, 2014

   Ogden College Curriculum Committee   _____

   Undergraduate Curriculum Committee   _____

   University Senate   _____

Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
   1.1   Course prefix (subject area) and number: CS 381
   1.2   Course title: Introduction to Computer Networks

2. **Current prerequisites/corequisites/special requirements:**
   CS 280 with a grade of "C" or better

3. **Proposed prerequisites/corequisites/special requirements:**
   CS 338 with a grade of "C" or better

4. **Rationale for the revision of prerequisites/corequisites/special requirements:**
   The revision of course prerequisites is consistent with the renumbering of CS 280 to CS 338.

5. **Effect on completion of major/minor sequence:**
   None

6. **Proposed term for implementation:**
   Fall 2015

7. **Dates of prior committee approvals:**

Department of Computer Science	October 21, 2014
Ogden College Curriculum Committee	_____
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University Senate	_____

Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
   1.1   Course prefix (subject area) and number: CS 382
   1.2   Course title: Programming Languages

2. **Current prerequisites/corequisites/special requirements:**
   A grade of "C" or better in CS 181

3. **Proposed prerequisites/corequisites/special requirements:**
   A grade of "C" or better in CS 221

4. **Rationale for the revision of prerequisites/corequisites/special requirements:**
   The revision of course prerequisites is consistent with the renumbering of CS 181 to CS 221.

5. **Effect on completion of major/minor sequence:**
   None

6. **Proposed term for implementation:**
   Fall 2015

7. **Dates of prior committee approvals:**

   Department of Computer Science   October 21, 2014
                                                     _____

   Ogden College Curriculum Committee   _____

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Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
   1.1 Course prefix (subject area) and number: CS 389
   1.2 Course title: Practicum in Computer Science

2. **Current prerequisites/corequisites/special requirements:**
   A grade of "C" or better in CS 251 and consent of computer science department head.

3. **Proposed prerequisites/corequisites/special requirements:**
   A grade of "C" or better in CS 351 and consent of Computer Science department head.

4. **Rationale for the revision of prerequisites/corequisites/special requirements:**
   The revision of course prerequisites is consistent with replacing CS 251 with CS 351.

5. **Effect on completion of major/minor sequence:**
   None

6. **Proposed term for implementation:**
   Fall 2015

7. **Dates of prior committee approvals:**

   Department of Computer Science   October 21, 2014

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Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
   1.1   Course prefix (subject area) and number: CS 396
   1.2   Course title: Intermediate Software Project

2. **Current prerequisites/corequisites/special requirements:**
   A grade of "C" or better in CS 251, ENG 307, and either COMM 161 or 145

3. **Proposed prerequisites/corequisites/special requirements:**
   A grade of "C" or better in CS 351, ENG 307, and either COMM 161 or 145

4. **Rationale for the revision of prerequisites/corequisites/special requirements:**
   The revision of course prerequisites is consistent with replacing CS 251 with CS 351.

5. **Effect on completion of major/minor sequence:**
   None

6. **Proposed term for implementation:**
   Fall 2015

7. **Dates of prior committee approvals:**

   Department of Computer Science   October 21, 2014
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   Ogden College Curriculum Committee
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   Undergraduate Curriculum Committee
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   University Senate
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**Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)**

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
   1.1   Course prefix (subject area) and number: CS 443
   1.2   Course title: Database Management Systems

2. **Revise course title:**
   2.1   Current course title: Database Management Systems
   2.2   Proposed course title: Database Management Systems II
   2.3   Proposed abbreviated title: Database Mgt Systems II
   2.4   Rationale for revision of course title:
          The revision of course title is consistent with the new proposed course CS 351
          (Database Management Systems I).

3. **Revise course prerequisites/corequisites/special requirements:**
   4.1   Current prerequisites/corequisites/special requirements: (indicate which)
          CS 251 and 280, or permission of instructor
   4.2   Proposed prerequisites/corequisites/special requirements:
          Grades of "C" or better in CS 338 and CS 351, or permission of instructor
   4.3   Rationale for revision of course prerequisites/corequisites/special requirements:
          The revision of course prerequisites consistent with replacing CS 251 with CS
          351 and renumbering CS 280 as CS 338. Requiring a grade of "C" or better will
          improve students' chances for success in CS 443.
   4.4   Effect on completion of major/minor sequence:
          None

4. **Proposed term for implementation:**
   Fall 2015

85 **Dates of prior committee approvals:**

Department of Computer Science	October 21, 2014
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Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1.   **Identification of course:**
       1.1   Course prefix (subject area) and number: CS 446
       1.2   Course title: Interactive Computer Graphics

2.   **Current prerequisites/corequisites/special requirements:**
       MATH 307 and CS 280 both with grades of "C" or better

3.   **Proposed prerequisites/corequisites/special requirements:**
       MATH 307 and CS 338, both with grades of "C" or better

4.   **Rationale for the revision of prerequisites/corequisites/special requirements:**
       The revision of course prerequisites is consistent with the renumbering of CS 280 to CS 338.

5.   **Effect on completion of major/minor sequence:**
       None

6.   **Proposed term for implementation:**
       Fall 2015

7.   **Dates of prior committee approvals:**

       Department of Computer Science   October 21, 2014
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       Ogden College Curriculum Committee
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       Undergraduate Curriculum Committee
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Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise Course Prerequisites/Corequisites
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
    1.1   Course prefix (subject area) and number: CS 456
    1.2   Course title: Artificial Intelligence

2. **Current prerequisites/corequisites/special requirements:**
    CS 360 and CS 280, both with grades of "C" or better

3. **Proposed prerequisites/corequisites/special requirements:**
    CS 360 and CS 338, both with grades of "C" or better

4. **Rationale for the revision of prerequisites/corequisites/special requirements:**
    The revision of course prerequisites is consistent with the renumbering of CS 280 to CS 338.

5. **Effect on completion of major/minor sequence:**
    None

6. **Proposed term for implementation:**
    Fall 2015

7. **Dates of prior committee approvals:**

    Department of Computer Science   October 21, 2014
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    Ogden College Curriculum Committee
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    Undergraduate Curriculum Committee
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    University Senate
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Ogden College of Science and Engineering
Department of Computer Science
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
    1.1   Current course prefix (subject area) and number: CS 181
    1.2   Course title: Computer Science II

2. **Revise course title:** NA
    2.1   Current course title:
    2.2   Proposed course title:
    2.3   Proposed abbreviated title:
    2.4   Rationale for revision of course title:

3. **Revise course number:**
    3.1   Current course number: CS 181
    3.2   Proposed course number: CS 221
    3.3   Rationale for revision of course number:
    The revision of course number is consistent with the ongoing restructuring of the computer science undergraduate program.

4. **Revise course prerequisites/corequisites/special requirements:**
    4.1   Current prerequisites/corequisites/special requirements:
    PHIL 215 and CS 180 with grades of C or better, and eligibility to enroll in a calculus course based on criteria developed by the Department of Mathematics
    4.2   Proposed prerequisites/corequisites/special requirements:
    CS 180 with grade of C or better, and eligibility to enroll in a calculus course based on criteria developed by the Department of Mathematics
    4.3   Rationale for revision of course prerequisites/corequisites/special requirements:
    PHIL 215 teaches logic. Logic is pre-knowledge for CS 338 rather than CS 181. PHIL 215 will become a prerequisite for CS 338.
    4.4   Effect on completion of major/minor sequence:
    None

5. **Revise course catalog listing:** NA
    5.1   Current course catalog listing:
    5.2   Proposed course catalog listing:
    5.3   Rationale for revision of course catalog listing:

6. **Revise course credit hours:** NA
    6.1   Current course credit hours:

6.2   Proposed course credit hours:

6.3   Rationale for revision of course credit hours:

7.   Revise grade type: NA

7.1   Current grade type:

7.2   Proposed grade type:

7.3   Rationale for revision of grade type:

8.   Proposed term for implementation:

Fall 2015

9.   Dates of prior committee approvals:

Department of Computer Science	October 21, 2014
Ogden College Curriculum Committee	_____
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University Senate	_____

Ogden College of Science and Engineering
Department of Computer Science
Proposal to Make Multiple Revisions to a Course
(Consent Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1.   **Identification of course:**
   1.1   Current course prefix (subject area) and number: CS 280
   1.2   Course title: Computer Science III

2.   **Revise course title:** NA
   2.1   Current course title:
   2.2   Proposed course title:
   2.3   Proposed abbreviated title:
   2.4   Rationale for revision of course title:

3.   **Revise course number:**
   3.1   Current course number: CS 280
   3.2   Proposed course number: CS 338
   3.3   Rationale for revision of course number:
       CS 338 was renumbered to CS 280 in Fall 2011. The change from CS 338 to CS 280 caused unexpected problems with the CS minor, so we have decided to revert to the previous numbering. In fact, the 300 level is more appropriate for the material being covered, and the majority of students enrolling in this course (83% in Spring 2014) have junior status.

4.   **Revise course prerequisites/corequisites/special requirements:**
   4.1   Current prerequisites/corequisites/special requirements:
       A grade of "C" or better in CS 181 and MATH 136
   4.2   Proposed prerequisites/corequisites/special requirements:
       A grade of "C" or better in CS 221, PHIL 215, and MATH 136
   4.3   Rationale for revision of course prerequisites/corequisites/special requirements:
       CS 181 has been renumbered CS 221. PHIL 215 teaches logic, which provides a basis for understanding the content of CS 338.
   4.4   Effect on completion of major/minor sequence:
       None

5.   **Revise course catalog listing:** NA
   5.1   Current course catalog listing:
   5.2   Proposed course catalog listing:
   5.3   Rationale for revision of course catalog listing:

6.   **Revise course credit hours:** NA

6.1   Current course credit hours:
6.2   Proposed course credit hours:
6.3   Rationale for revision of course credit hours:

7.   **Revise grade type:** NA
7.1   Current grade type:
7.2   Proposed grade type:
7.3   Rationale for revision of grade type:

8.   **Proposed term for implementation:**
Fall 2015

9.   **Dates of prior committee approvals:**

Department of Computer Science   October 21, 2014

Ogden College Curriculum Committee   _____

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Ogden College of Science and Engineering
Department of Computer Science
Proposal to Make Multiple Revisions to a Course
(Action Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of course:**
    1.1   Current course prefix (subject area) and number: CS 380
    1.2   Course title: Data Structures and Algorithm Analysis

2. **Revise course title:** NA
    2.1   Current course title:
    2.2   Proposed course title:
    2.3   Proposed abbreviated title:
    2.4   Rationale for revision of course title:

3. **Revise course number:**
    3.1   Current course number: CS 380
    3.2   Proposed course number: CS 421
    3.3   Rationale for revision of course number:
           The revision of course number is consistent with the ongoing restructuring of the
           computer science undergraduate program. No other CS courses use this course as
           a prerequisite.

4. **Revise course prerequisites/corequisites/special requirements:**
    4.1   Current prerequisites/corequisites/special requirements:
           A grade of "C" or better in CS 280 and STAT 301
    4.2   Proposed prerequisites/corequisites/special requirements:
           A grade of "C" or better in CS 338 and STAT 301
    4.3   Rationale for revision of course prerequisites/corequisites/special requirements:
           The revision of course prerequisites is consistent with the renumbering of CS 280
           to CS 338.
    4.4   Effect on completion of major/minor sequence:
           None

5. **Revise course catalog listing:** NA
    5.1   Current course catalog listing:
    5.2   Proposed course catalog listing:
    5.3   Rationale for revision of course catalog listing:

6. **Revise course credit hours:** NA
    6.1   Current course credit hours:
    6.2   Proposed course credit hours:

6.3   Rationale for revision of course credit hours:

7.   **Revise grade type:** NA
    7.1   Current grade type:
    7.2   Proposed grade type:
    7.3   Rationale for revision of grade type:

8.   **Proposed term for implementation:**
    Fall 2015

9.   **Dates of prior committee approvals:**

    Department of Computer Science   October 21, 2014
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    University Senate
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Ogden College of Science and Engineering
Department of Computer Science
Proposal to Create a New Course
(Action Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of proposed course:**
   1.1   Course prefix (subject area) and number: CS 351
   1.2   Course title: Database Management Systems I
   1.3   Abbreviated course title: Database Mgt Systems I
   1.4   Credit hours: 3   Variable credit (yes or **no**)
   1.5   Grade type: standard letter grade
   1.6   Prerequisites/corequisites:
           CS 221 with a grade of "C" or better
   1.7   Course description:
           An introduction to relational database management systems and their applications. Topics include relational model, relational algebra, SQL, indexes, security, integrity rules, effective database design methods, and database applications.

2. **Rationale:**
   2.1   Reason for developing the proposed course:
           This course will replace CS 251 Introduction to Database Systems. The new upper level course number is consistent with the ongoing restructuring of the computer science undergraduate program. Also, the majority of students taking CS 251 (90% in Spring 2014) have at least junior status.

   2.2   Projected enrollment in the proposed course:
           The estimated demand for this course is one section of 20-40 students per year, based on previous demand for CS 251.

   2.3   Relationship of the proposed course to courses now offered by the department:
           CS 351 will provide the foundation for students taking CS 443 (Database Management Systems II), which covers many theoretical topics, such as relational algebra, transaction management, consistency maintenance and database recovery.

   2.4   Relationship of the proposed course to courses offered in other departments:
           CIT offers Database Administration I (CIT 350) and Database Administration II (CIT 352). They focus on database applications for business use. Geography/Geology offers GEOG 443 GIS Databases. This course focuses on the ESRI Geodatabase model in ArcGIS desktop

software along with spatial database engines used with database management systems software.

2.5 Relationship of the proposed course to courses offered in other institutions: The Computer Science program at Western Kentucky University will follow the same accreditation standards and model curriculum guidelines as other Computer Science programs in the U.S. Eastern Kentucky University offers Database Systems (CSC 313), Ball State University offers Database Design (CS 346), and Appalachian State University offers Introduction to Database Systems (CS 3430).

3. Discussion of proposed course:

3.1 Schedule type:
L

3.2 Learning Outcomes:
- Understand the role of a database management system in an organization.
- Understand basic database concepts, including the structure and operation of the relational data model.
- Understand and apply basic database design principles, including E-R diagrams and database normalization.
- Construct database queries using Structured Query Language (SQL).
- Apply database programming techniques in problem solving.
- Understand database security and administration.

3.3 Content outline:
- Database approach concepts and database environment
- The relational data model and constraints
- Relational algebra
- Entity-Relationship (E-R) modeling
- Normalization
- Structured Query Language and database programming techniques
- Database security and administration

3.4 Student expectations and requirements:
Course grades will be determined by student performance on class activities, projects, assignments and examinations.

3.5 Tentative texts and course materials:
Concepts of Database Management, 7th Edition, Philip J. Pratt/Joseph J. Adamski, ISBN-10: 1111825912, ISBN-13: 9781111825911

4. Resources:

4.1 Library resources: Present library holdings are sufficient.

4.2 Computer resources: University computing resources are sufficient.

5. **Budget implications:**
   5.1 Proposed method of staffing: The present number of computer science faculty is sufficient.
   5.2 Special equipment needed: None
   5.3 Expendable materials needed: None
   5.4 Laboratory materials needed: None

6. **Proposed term for implementation:**
   Fall 2015

7. **Dates of prior committee approvals:**

Department of Computer Science	November 20, 2014
Ogden College Curriculum Committee	_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise A Program
(Action Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1. **Identification of program:**
    1.1 Current program reference number:
    629P (seeking admission)
    629 (officially admitted)
    1.2 Current program title:
    Major in Computer Science
    1.3 Credit hours: 44-50

2. **Identification of the proposed program changes:**
    - Change the course numbers for CS 181, CS 280, and CS 380
    - Replace CS 251 with CS 351.

3. **Detailed program description:**

The major in computer science requires a minimum of 44 semester hours. To be admitted to the computer science major, students must complete CS 180, ~~181~~, and CS ~~280~~ with grades of C or better. In addition, all CS courses counting toward the CS program major must be completed with a grade of "C" or better. Computer Science electives may include from 0-6 hours of 200-level courses. Students must adhere to all University Policies as indicated in the WKU catalog section "Academic Information." Additional requirements are as follows:	The major in computer science requires a minimum of 44 semester hours. To be admitted to the computer science major, students must complete CS 180, **221**, and CS **338** with grades of C or better. In addition, all CS courses counting toward the CS program major must be completed with a grade of "C" or better. Computer Science electives may include from 0-6 hours of 200-level courses. Students must adhere to all University Policies as indicated in the WKU catalog section "Academic Information." Additional requirements are as follows:

Systems/Scientific Applications Concentration
  1. 50 hours are required including 47 hours of computer science courses and 3 hours of STAT 301.
  2. ENG 307, MATH 136, and PHIL 215 are required.
  3. Completion of these 11 CS core courses (35 credit hours): CS 180, ~~181~~, ~~251~~, ~~280~~, 325, 360, ~~380~~, 382, 396, 425, and 496.
  4. Completion of 12 hours of CS electives from the following courses: CS 370, 381, 443,
	Systems/Scientific Applications Concentration
	  1. 50 hours are required including 47 hours of computer science courses and 3 hours of STAT 301.
	  2. ENG 307, MATH 136, and PHIL 215 are required.
	  3. Completion of these 11 CS core courses (35 credit hours): CS 180, **221**, **338**, 325, **351**, 360, 382, 396, **421**, 425, and 496.
	  4. Completion of 12 hours of CS electives from the following courses: CS 370, 381, 443,

445, 446, 450, and 456. 5. Completion of 2 courses from the following list: MATH 127, 137, 305, 307, 331, 405, 406, 470 and 473. 6. Completion of one year of a laboratory science (a two semester sequence of the same science) and one additional science course. All must be designed for Science/Engineering majors. 7. One additional course from the above list of ~~MATH~~ courses (this course may not be used to satisfy any other CS major degree requirement) or one additional science course designed for science/engineering majors.	445, 446, 450, and 456. 5. Completion of 2 courses from the following list: MATH 127, 137, 305, 307, 331, 405, 406, 470 and 473. 6. Completion of one year of a laboratory science (a two semester sequence of the same science) and one additional science course. All must be designed for Science/Engineering majors. 7. One additional course from the above list of **Mathematics** courses (this course may not be used to satisfy any other CS major degree requirement) or one additional science course designed for science/engineering majors.
Any Minor Option 1. 44 hours of computer science courses are required. 2. ENG 307, MATH 136, STAT 301, and PHIL 215 are required. 3. Completion of these 11 CS core courses (35 credit hours): CS 180, ~~181~~, ~~251~~, ~~280~~, 325, 360, ~~380~~, 382, 396, 425, and 496. 4. Completion of an additional 9 hours of CS electives at the 200-level or above (excluding CS 226 and 257) including 3 hours at the 400-level and another 3 hours at the 300-level or higher. Note: At most 1.5 hours of credit for CS 239 may count towards the major. At most 3 hours of credit for CS 239 and 245 (only for languages for which credit is not received through another course) may count towards the major. 5. Completion of any additional minor/major.	Any Minor Option 1. 44 hours of computer science courses are required. 2. ENG 307, MATH 136, STAT 301, and PHIL 215 are required. 3. Completion of these 11 CS core courses (35 credit hours): CS 180, **221**, **338**, 325, **351**, 360, 382, 396, **421**, 425, and 496. 4. Completion of an additional 9 hours of CS electives at the 200-level or above (excluding CS 226 and 257) including 3 hours at the 400-level and another 3 hours at the 300-level or higher. Note: At most 1.5 hours of credit for CS 239 may count towards the major. At most 3 hours of credit for CS 239 and 245 (only for languages for which credit is not received through another course) may count towards the major. 5. Completion of any additional minor/major.
Specialty Concentration 50 hours of computer science courses are required. 1. ENG 307, MATH 136, STAT 301, and PHIL 215 are required. 2. Completion of these 13 CS core courses (41 credit hours): CS 180, ~~181~~, ~~251~~, ~~280~~, 325, 360, ~~380~~, 381, 382, 396, 425, 443, and 496. 3. An additional 18 hours of specialty courses, selected in consultation with a CS advisor, not used to satisfy specific other graduation requirements for the CS major or for the	Specialty Concentration 1. 50 hours of computer science courses are required. 2. ENG 307, MATH 136, STAT 301, and PHIL 215 are required. 3. Completion of these 13 CS core courses (41 credit hours): CS 180, **221**, **338**, 325, **351**, 360, 381, 382, 396, **421**, 425, 443, and 496. 4. An additional 18 hours of specialty courses, selected in consultation with a CS advisor, not used to satisfy specific other graduation requirements for the CS major or for the

Colonnade Program, including 9 hours of which are at the 300 level or above.	Colonnade Program, including 9 hours of which are at the 300 level or above.
4. Completion of an additional 9 hours of CS electives at the 200-level or above (excluding CS 226 and 257) including 3 hours at the 400-level and another 3 hours at the 300-level or higher. Note: At most 1.5 hours of credit for CS 239 may count towards the major. At most 3 hours of credit for CS 239 and 245 (only for languages for which credit is not received through another course) may count towards the major.	5. Completion of an additional 9 hours of CS electives at the 200 level or above (excluding CS 226 and 257) including 3 hours at the 400 level and another 3 hours at the 300 level or higher. Note: At most 1.5 hours of credit for CS 239 may count towards the major. At most 3 hours of credit for CS 239 and 245 (only for languages for which credit is not received through another course) may count towards the major.

4. **Rationale for the proposed program change:**

The program revision reflects replacing CS 251 with CS 351 and the renumbering of CS 181 as CS 221, CS 280 as CS 338, and CS 380 as CS 421.

5. **Proposed term for implementation and special provisions (if applicable):**

Fall 2015

6. **Dates of prior committee approvals:**

Department of Computer Science   _____ October 21, 2014 _____

Ogden College Curriculum Committee   _____

Undergraduate Curriculum Committee   _____

University Senate   _____

Ogden College of Science and Engineering
Department of Computer Science
Proposal to Revise A Program
(Action Item)

Contact Person: Huanjing Wang, huanjing.wang@wku.edu, 745-2672

1.   **Identification of program:**
        1.1   Current program reference number: 341
        1.2   Current program title: Minor in Computer Science
        1.3   Credit hours: 23

2.   **Identification of the proposed program changes:**
        • Change the course numbers for CS 181 and CS 280
        • Replace CS 251 with CS 351
        • Delete the additional requirements
        • Change number of credit hours from 23 to 20

3.   **Detailed program description:**

~~The following 23 credit-hour program leads to a minor in computer science.~~ All CS courses counting toward the CS program minor must be completed with a grade of "C" or better: 1. Completion of the following 11 credit hours: ~~CS 180, 181, and 251 or 280.~~ 2. ~~Completion of at least 12 hours of CS courses at the 300-level or higher.~~ 3. ~~Completion of: MATH 119 or MATH 136, and PHIL 215.~~	**The following 20 credit-hour program leads to a minor in computer science.** All CS courses counting toward the CS program minor must be completed with a grade of "C" or better. **1. Completion of the following two required courses (8 hours):** **CS 180 and CS 221** **2. Completion of the one of the following courses (3 hours):** **CS 338 or CS 351** **3. Completion of 9 additional hours of CS courses at the 300-level or higher.**

4.   **Rationale for the proposed program change:**
        The revision of the program is consistent with replacing CS 251 with CS 351 and with renumbering CS 181 as CS 221 and CS 280 as CS 338. To encourage more students to pursue the CS minor, the minimum requirements has been reduced to 20 hours. At University of Kentucky, the minor in Computer Science requires a minimum of 20 hours of course work in CS; at the University of Alabama minor in Computer Science requires a minimum of 18 hours of course work in CS; at Miami University minor in Computer Science requires a minimum of 18 hours of course work in CS.

5.   **Proposed term for implementation and special provisions (if applicable):**

Fall 2015

6.   **Dates of prior committee approvals:**

Department of Computer Science   _____October 21, 2014_____

Ogden College Curriculum Committee   _____

Undergraduate Curriculum Committee   _____

University Senate   _____