

KENTUCKY'

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OFFICE OF THE

SENATE COUNCIL

# 1. General Information

1a. Submitted by the College of: COMMUNICATION AND INFORMATION

Date Submitted: 1/11/2013

1b. Department/Division: Library &Information Science

1c. Contact Person

Name: Will Buntin

Email: will.buntin@uky.edu

Phone: 859-257-3317

Responsible Faculty ID (if different from Contact)

Name: Jeff Huber

Email: jeffrey.huber@uky.edu

Phone: 859-257-2334

1d. Requested Effective Date: Specific Term/Year 1 Fall 2013

1e. Should this course be a UK Core Course? No

# 2. Designation and Description of Proposed Course

2a. Will this course also be offered through Distance Learning?: No

2b. Prefix and Number: ICT 301

2c. Full Title: Introduction to Databases

2d. Transcript Title:

2e. Cross-listing:

2f. Meeting Patterns

LECTURE: X

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 3

2i. Is this course repeatable for additional credit? No

If Yes: Maximum number of credit hours:

If Yes: Will this course allow multiple registrations during the same semester?

2j. Course Description for Bulletin: This course is intended to give students a solid background in databases, with a focus on relational database management systems. Topics include data modeling, database design theory, data definition and manipulation languages, storage and indexing techniques, query processing and optimization, and database programming interfaces.

# KENTUCKY

# **New Course Report**

- 2k. Prerequisites, if any:
- 2I. Supplementary Teaching Component:
- Will this course taught off campus? No If YES, enter the off campus address:
- 4. Frequency of Course Offering: Spring,

Will the course be offered every year?: Yes

If No, explain:

- 5. Are facilities and personnel necessary for the proposed new course available?: Yes
  If No, explain:
- 6. What enrollment (per section per semester) may reasonably be expected?: 35
- 7. Anticipated Student Demand

Will this course serve students primarily within the degree program?: Yes

Will it be of interest to a significant number of students outside the degree pgm?: No

If Yes, explain: [var7InterestExplain]

- 8. Check the category most applicable to this course: Relatively New Now Being Widely Established, If No, explain:
- 9. Course Relationship to Program(s).
  - a. Is this course part of a proposed new program?: Yes
  - If YES, name the proposed new program: Information Communication Technology
  - b. Will this course be a new requirement for ANY program?: No

If YES, list affected programs:

- 10. Information to be Placed on Syllabus.
  - a. Is the course 400G or 500?: No
- b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from 10.a above) are attached: Yes

# **Distance Learning Form**

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No



# New Course Report

Hybrid: No

- 1. How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?
- 2. How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.
- 3. How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.
- 4. Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?
- If yes, which percentage, and which program(s)?
- 5. How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?
- 6. How do course requirements ensure that students make appropriate use of learning resources?
- 7.Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.
- 8. How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (http://www.uky.edu/UKIT/)?
- 9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO
- If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.
- 10. Does the syllabus contain all the required components? NO
- 11.1, the instructor of record, have read and understood all of the university-level statements regarding DL.

#### Instructor Name:

SIGNATURE|JTHU222|Jeffrey T Huber|Dept approval for ZCOURSE\_NEW ICT 301|20121204

SIGNATURE|CEMONA2|E C Monaghan|College approval for ZCOURSE\_NEW ICT 301|20121204

SIGNATURE|JMETT2|Joanie Ett-Mims|Undergrad Council approval for ZCOURSE\_NEW ICT 301|20121217



# ICT 301: Introduction to Databases

#### Instructor

TBD 320 Lucille Little Fine Arts Library Lexington, KY 40506-0224. Phone: 859.257.8876 (administration)

Fax: 859.257.4205

Preferred method of contact: email

#### Office Hours

TBD and by appointment. Contact me via e-mail to schedule an appointment to meet: I will frequently respond as soon as possible, usually within 24 hours.

# **CLASS INFORMATION**

This is a face-to-face course. You are required to attend scheduled classroom sessions. The Blackboard course management system will be used to facilitate the class. You will need access to an appropriate computer with a broadband Internet connection. Please visit http://www.uky.edu/Blackboard/ to learn about this system and the login requirements.

# **COURSE INFORMATION**

## **Course Description**

This course is intended to give students a solid background in databases, with a focus on relational database management systems. Topics include data modeling, database design theory, data definition and manipulation languages, storage and indexing techniques, query processing and optimization, and database programming interfaces.

## **Course Objectives**

Students successfully completing the course will be able to:

- Develop a clear understanding of the basic concepts and principles of database systems
- Design a database application using a relational DBMS
- Describe and apply Structured Query Language (SQL)
- Describe and apply Extensible Markup Language (XML) technology and standards

#### **Course Overview**

This course is designed as a hands-on course to develop proficiency in core database concepts. The course will evolve from understanding data using Excel, then transition to understanding relational databases by designing and building databases using Access and querying using Structured Query Langue (SQL). The course also provides an introduction and overview of Extensible Markup Language (XML), including writing basic XML. Programming projects are required.

#### **Required Text**

Database Concepts, 5th Edition, by David Kroenke, David Auer, Pearson, ISBN-10: 0132742926.

Additional course readings will be made available on the course Blackboard site.

#### STUDENT EVALUATION

#### **Grading Parameters**

Access Assignments	120 points (40%)		
Database Concept Assignments	60 points (20%)		
Test 1	30 points (10%)		
Test 2	30 points (10%)		
Individual Final Project	60 points (20%)		

#### **Access Assignments**

Assignments must be submitted as electronic documents (single file for each assignment; save it as a zip file if assignment is in multiple files) via Blackboard on the due dates. There will be 12 assignments. They accounts for 40% (12 x 10 points = total 120 points) of your grade.

## **Database Concept Assignments**

The aim of the database concept assignment is to develop an understanding for the contents covered in each week. Review questions (RQ) or exercises (PS) from the textbook or other topics will be utilized. There will be 12 assignments. They accounts for 40% (12 x 5 points = total 60 points) of your grade.

#### Tests

Each test will include 20 multiple choice questions. These tests are given through Blackboard. They test the content covered preceding each test.

#### Individual Final Project

As a requirement of the course, you will develop a small, but fully functional database system using Access. You need to find a real world situation that you can use as a basis for the project such as a CD collection management system, a personal book management system and so on. In general, the project requires you to design and build tables, queries, forms, and reports for users who

#### **Grading Policy**

Class assignments are due on or by the due date noted on the individual assignments. Late assignments will only be accepted with prior approval from the instructor.

#### **Grading Scale**

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[90% – 100%] = A (Exceptional Achievement)

[80% – 89%] = B (High Achievement)

[70% – 79%] = C (Average Achievement)

[60% – 69%] = D (Below Average Achievement)

[0% – 59%] = E (Fail)
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#### **GENERAL COURSE POLICIES**

#### Midterm Grade Policy

Mid-term grades will be posted in myUK by the deadline established in the Academic Calendar (http://www.uky.edu/Registrar/AcademicCalndar.htm)

#### **Attendance Policy**

You are expected to attend every class session. Each student will be allowed to miss no more than two class sessions without a grade penalty. Every missed class after that will result in a 5 point penalty for the student's attendance grade. If a student misses 20% or more of the class, the student will fail the course and will be expected to withdraw from the course (SR 5.2.4.1-2).

# Excused Absences (S.R. 5.2.4.2)

Summarized from Senate Regulation 5.2.4.2: A student shall not be penalized for an excused absence. The following are defined as excused absences:

- Significant illness of the student or serious illness of a member of the student's household (permanent or campus) or immediate family.
- The death of a member of the student's household (permanent or campus) or immediate family.
- Trips for members of student organizations sponsored by an educational unit, trips for University classes, and trips for participation in intercollegiate athletic events, including club sports registered with the university as well as varsity sports. Prior notification is required.
- Major religious holidays. Prior notification is required.
- Any other circumstances which the Instructor of Record finds reasonable cause for absence.

Students missing any graded work due to an excused absence bear the responsibility of informing the Instructor of Record about their excused absence within one week following the period of the excused absence (except where prior notification is required), and of making up the missed work. The Instructor of Record shall give the student an opportunity to make up the work and/or the exams missed due to an excused absence, and shall do so, if feasible, during the semester in which the absence occurred.

Excused absences' effect on grading: Summarized from Senate Regulation 5.2.4.2: If attendance is required by the class policies elaborated in the syllabus or serves as a criterion for a grade in a course, and if a student has excused absences in excess of one-fifth of the class contact hours for that course, a student shall have the right to petition for a "W", and the Instructor of Record may require the student to petition for a "W" or take an "I" in the course. If a student has an excused absence on a day when a quiz is given, the instructor may not deny permission for a makeup exam and simply calculate the student's grade on the basis of the remaining requirements.

#### Verification of Absences

Faculty have the right to request appropriate verification when students miss class due to illness or death in the family. Any absence for University related travel should be provided prior to the absence.

#### **Submission of Assignments**

Assignments are due on the day listed or set in consultation with the instructor. Eamil or computer failures will not be accepted as valid excuses for late work. If you have a situation arise that will impact your ability to turn in your work on a timely basis, make the instructor aware of it as soon as possible.

## Academic Integrity, Cheating & Plagiarism

According to Senate Regulation 6.3.1: "All academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission." For specific information regarding the University's code and regulations on plagiarism and cheating, visit:

http://www.uky.edu/StudentAffairs/Code/

http://www.uky.edu/StudentAffairs/Code/part2.html

http://www.uky.edu/Ombud/Plagiarism.pdf: "Plagiarism: What is it?"

## **Group Work & Student Collaboration**

Unless otherwise noted, all assignments are expected to be done by the individual student. Students are only allowed to collaborate on assignments when explicity allowed by the instructor or syllabus.

#### **Incompletes**

Student requests for an Incomplete (an I grade) will be considered within University guidelines and only in extreme circumstances. See section 5.1.3.2 <a href="http://www.uky.edu/StudentAffairs/Code/part2.html">http://www.uky.edu/StudentAffairs/Code/part2.html</a>.

#### Classroom Behavior

Students are expected to full participate in class. This means having completed all assigned readings prior to class and arriving prepared to discuss the topics for that class period. Participation also includes activity on our Blackboard shell used to facility in-class activities. All students participating in class room discussions are expected to provide relevant discussion, be respectful of other class mates and their opinions and share any relevant personal experience that may add to the topic at hand.

#### Academic accommodations due to disability

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address <a href="mailto:jkarnes@email.uky.edu">jkarnes@email.uky.edu</a>) for coordination of campus disability services available to students with disabilities.

Distance Learning Students are expected to have a minimum level of technological acumen and the availability of technological resources. Students must have regular access a computer with a reliable Internet connection and audio capabilities. Internet Explorer 7 (IE) or Firefox 2.x are the recommended browsers for those using a Windows-based PC. Those using Firefox 3.x may encounter problems with assignment uploads. Those using an Apple computer with MAC OS X (10.5.x) may use Firefox 3.x or Safari 3.x.

Please be certain that your computer and/or browser allow you to view Adobe Reader documents (.pdf). Microsoft Office and other software products are available free for students:

# https://iweb.uky.edu/MSDownload/

## Where to get Help

As your instructor, I am your first go-to person for technology problems. If you need more immediate assistance, please contact:

- Teaching and Learning Services Center (TASC) <a href="http://www.uky.edu/TASC/">http://www.uky.edu/TASC/</a> 859-257-8272
- Information Technology Customer Service Center (UKIT) <a href="http://www.uky.edu/UKIT/">http://www.uky.edu/UKIT/</a>
   <a href="http://www.uky.edu/UKIT/">859-257-1300</a>

#### **Library Services**

• Distance Learning Services

http://www.uky.edu/Libraries/DLLS

Carla Cantagallo, DL Librarian

Local phone number: 859 257-0500, ext. 2171

Long distance phone number: (800) 828-0439 (option #6)

Email: dliservice@email.uky.edu

• DL Interlibrary Loan Service:

http://www.uky.edu/Libraries/libpage.php?lweb\_id=253&llib\_id=16

#### **DIVERSITY, ASSESSMENT & TECHNOLOGY**

All UK professional education programs address and affirm the value of diversity in education, the use of technology to support all aspects of instructional programming, and the importance of attaining high levels of skill in assessing the outcomes of instruction. This course provides students an opportunity to demonstrate attention to these themes and reflect on the mechanisms that this course has provided to demonstrate improved skills in these areas.

# **COURSE SCHEDULE**

An asterisk (\*) is placed by optional, but recommended, readings.

	Course Overview					
Week 1	*Tutorial: Choose between Access and Excel					
	*HREmpoyee Tutorial					
	Kroenke & Taylor, Chapter 1 (pp. 1-12)					
Week 2	*Jeffrey Hoffer, M. B. Prescott, and F. R. McFadden. (2005). Modern Database					
week 2	Management (pp. 7-15 and 23-30)					
	Database Concept Assignment 1 is due					
	Kroenke & Taylor, Chapter 1 (pp. 13-19)					
111	*Greg Riccardi. (2003). Database Management (pp. 5-13) Access Assignment 1 (pp. 19 – 34) is due					
Week 3						
	Database Concept Assignment 2 is due					
	Kroenke & Taylor, Chapter 2 (pp. 52-64)					
	*Tutorial: Introduction to Data Modeling					
Week 4						
704.10	Access Assignment 2 (pp. 34 – 45) is due					
	Database Concept Assignment 3 is due					
	Kroenke & Taylor, Chapter 2 (pp. 64-74)					
Week 5	*Tutorial: <u>Building Relationships</u>					
	Access Assignment 3 (pp. 49 – 50) is due					
	Database Concept Assignment 4 is due					
i se sta vičti i ti gradina se si	Kroenke & Taylor, Chapter 3 (pp. 101-126)					
Wools 6	SQL 'Basic' at http://www.w3schools.com/sql/default.asp					
Week 6	Access Assignment 4 (pp. 75 – 89) is due					
	Database Concept Assignment 5 is due					
	Kroenke & Taylor, Chapter 3 (pp. 126-137)					
	SQL 'Advanced' at http://www.w3schools.com/sql/default.asp					
Week 7	Test 1					
	Database Concept Assignment 6 is due					
	Kroenke & Taylor, Chapter 3 137-151 and Chapter 3A (pp. 195-204)					
	SQL 'Functions' at http://www.w3schools.com/sql/default.asp					
Week 8	*Tutorial: Creating Queries					
vveek 8						
	Access Assignment 5 (pp. 93 – 96) is due					
	Database Concept Assignment 7 is due					
	XML JavaScript: http://www.w3schools.com/xml/xml_http.asp					
Week 9	*Tutorial: <u>Use Expressions and Other Criteria</u>					
	Access Assignment 6 (pp. 152 – 163) is due					
	Database Concept Assignment 8 is due					
	Kroenke & Taylor, Chapter 4 (pp. 215-229)					
	*Jeffrey Hoffer, M. B. Prescott, and F. R. McFadden. (2005). Modern Database					
Week 10	Management (pp. 211-215)					
	Access Assignment 7 (pp. 163 – 179) is due					
	Database Concept Assignment 9 is due					
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	Kroenke & Taylor, Chapter 4 (pp. 229-239)				
Week 11	Access Assignment 8 (pp. 186 – 187) is due				
	Database Concept Assignment 10 is due				
	Kroenke & Taylor, Chapter 5 (pp. 253-262)				
	*G. Riccardi. (2003). Database Management with Web site development applications				
Week 12	(Chapter 11)				
	Access Assignment 9 (pp. 239 – 247) is due				
	Final project first deliverables are due				
	Kroenke & Taylor, Chapter 5 (pp. 263-278)				
	*G. Riccardi. (2003). Database Management with Web site development applications				
Week 13	(Chapter 12)				
	Access Assignment 10 (pp. 250) is due				
	Database Concept Assignment 11 is due				
	XML Basics: http://www.w3schools.com/xml/				
	XML Basics for new users: http://www.ibm.com/developerworks/library/x-newxml/				
Week 14	Access Assignment 11 (pp. 278 – 284) is due				
	Database Concept Assignment 12 is due				
	XML Advanced: http://www.w3schools.com/xml/xml_namespaces.asp				
	RSS Tutorial: http://www.ibm.com/developerworks/library/x-newxml/				
Week 15	Test 2				
	Access Assignment 12 (pp. 288) is due				
	Final project is due				