CS 63.12 Course Outline as of Fall 2009

CATALOG INFORMATION

Dept and Nbr: CS 63.12 Title: ADVANCED ACCESS
Full Title: Advanced Access
Last Reviewed: 5/10/2010

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	0	8	Lab Scheduled	0
		Contact DHR	3.50		Contact DHR	61.25
		Contact Total	5.50		Contact Total	96.25
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 166.25

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	CIS 69.33

Catalog Description:
An advanced course in Microsoft Access designed for students who have successfully completed the beginning course. This course will explore advanced queries, including SQL, forms, and reports. Macros and modules will be used to develop sophisticated turnkey applications; multi-user applications and security will be discussed.

Prerequisites/Corequisites:
Course Completion of CS 63.11 (or CIS 69.31 or CIS 82.21)

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: An advanced course in Microsoft Access designed for students who have successfully completed the beginning course. This course will explore advanced queries, including SQL, forms, and reports. Macros and modules will be used to develop sophisticated turnkey applications; multi-user applications and security will be discussed. (Grade or P/NP)
Prerequisites/Corequisites: Course Completion of CS 63.11 (or CIS 69.31 or CIS 82.21)

Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 1997	Inactive:	Fall 2015
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
The student will:
1. Design relational database applications using the rules of normalization
2. Create database applications using:
   a. tables
   b. main forms and subforms
   c. main reports and subreports
   d. select, crosstab, and update queries with the query by example grid and SQL
3. Automate the database application using
   a. macros
      1) automate switchboards
      2) create custom menus
      3) design custom toolbars
      4) create custom search buttons
      5) document and debug macros
   b. VBA
      1) compare and contrast VBA and the use of macros in applications
      2) create modules and procedures
      3) declare and use variables
      4) make use of decision making and repetition code
      5) use arrays
      6) apply elementary Object Oriented Programming techniques
      7) make use of the collections in Access
      8) write code using Access recordsets
      9) execute queries at run-time
      10) work with external data

11) trap errors
12) debug programs

c. Create groups, users and assign permissions in the Security feature

d. Explore add-in utilities
1) rename objects using Ferret
2) split a database into front and back end for multi-user environment

Topics and Scope:

1. Overview of the Access objects
   a. tables
   b. queries
   c. forms
   d. reports
   e. macros
   f. modules
2. Definition of relational database
3. Normalization
   a. goals of normalization
   b. first normal form
   c. second normal form
   d. third normal form
   e. fourth normal form
   f. fifth normal form
4. Names in Microsoft Access
   a. the Leszynski-Reddick (L_R) convention
5. Primary keys and indexes
6. Relationships
   a. rules for creating relationships
   b. referential integrity
7. Queries
   a. review of simple queries
   b. dynasets and snapshots
   c. joining tables
      1) equi-joins
      2) outer-joins
      3) the not-in query
      4) self -joins
   f. parameter queries
   g. calculations in queries
   h. SQL
      1) history of SQL
      2) syntax conventions
      3) select query syntax
      4) action query syntax
8. Forms
   a. controls
      1) bound
      2) unbound
      3) calculated

b. main and subforms
    1) designing
    2) properties
    3) the event trigger cycle
c. drill down forms
    1) macros
    2) visual basic
d. switchboards

9. Macros
a. the user interface
b. organizing the tasks
c. documenting your application
d. macro groups
e. starting up your application
f. conditions in macros
g. macro loops
h. macro errors
i. troubleshooting
j. single stepping through macros
k. autokeys macros
l. automating switchboards
m. looking up information in tables and queries
    1) combo boxes
    2) dlookup
    3) autolookup query
n. navigating to controls and records
o. data entry operations
    1) validating data
    2) adding records
    3) changing data
    4) deleting records
p. controlling the user interface
    1) custom menu bars
    2) custom tool bars
    3) custom key assignments

10. Visual Basic or Macros

11. Event driven programming
a. event driven vs traditional methods
b. handling events with VBA

12. Modules and procedures
a. forms and reports modules
b. standard modules
c. the general object
d. VBA handlers
e. compiling code

13. Procedures
a. subroutines and functions
b. procedure declaration

14. Variables
a. variable types
b. declaring variables
c. constants

d. variable scope and lifetime
15. Making decisions
a. If...Then
b. If...Then...Else
c. Else If
d. Logical operators with the If Statement
e. Operator precedence
16. Repetition
a. loops
b. nested control structures
c. exiting a control structure
17. Arrays
a. static arrays
b. dynamic arrays
18. Object Oriented Programming
a. Objects
1) properties
2) methods
3) classes
b. Collections
1) containers and documents
2) forms container
3) errors collection
4) default collections
19. Recordsets
a. opening
b. refreshing
c. moving through recordsets
d. counting records
e. looking for specific records
f. bookmarks
g. editing records in recordset
20. Queries at run-time
a. drill down forms
b. SQL
21. Displaying selected records at run-time
22. Working with external data
23. Error handling
a. planning for errors
b. types of errors
c. VBA errors
d. form and report errors
e. DAO errors
24. Debugging
a. program execution
b. the debug window
25. Data access in a multi-user environment
a. chaining databases
b. attachment managers
c. setting the default environment
d. locking schemes
26. Security

a. activating the security system
b. creating groups
c. creating users
d. assigning permissions

27. Managers and add-in utilities
a. database splitter
b. Ferret

Assignment:

1. Read 25-30 pages per week in textbook
2. Read and complete one lab assignment per week (provided by instructor)

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments are more appropriate for this course.	Writing 0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems	Problem solving 20 - 40%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None	Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion, In lab examinations	Exams 40 - 70%

Other: Includes any assessment tools that do not logically fit into the above categories.

Attendance, class participation and project	Other Category 10 - 40%

Representative Textbooks and Materials:
"Access 97 Macro & VBA Handbook", by Susann Novalis - Sybex 1997