



# NORTHERN ARIZONA UNIVERSITY

**ECCC**

**Proposal for New Course**

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1. Effective **BEGINNING** of what term and year?: Spring 2013  
*See effective dates calendar.*
2. College: Extended Campuses
3. Academic Unit: Personalized Learning
4. Course subject and number: CIT 311
5. Units: 3
6. Long course title: Analysis, Design, and Modeling of Databases  
*(max 100 characters including spaces)*
7. Short course title: Analysis, Design, and Database Modeling  
*(max. 30 characters including spaces)*
8. Catalog course description *(max. 60 words, excluding requisites):*

**CIT 311 Analysis, Design, and Modeling of Databases**

Fundamentals to database development with an emphasis on relational database concepts, query language, data modeling, proving the ability to manage the dissemination of information via different formats, including data types, storage, archiving, and retrieval systems, applying common compliant data models/standards to meet the sophisticated demand for data organization and manipulation.

9. Grading option: Letter grade  Pass/Fail  Both

10. Co-convened with: \_\_\_\_\_ 10a. UGC approval date\*: \_\_\_\_\_  
(For example: ESE 450 and ESE 550)

\*Must be approved by UGC before UCC submission, and both course syllabi must be presented

11. Cross-listed with: \_\_\_\_\_

(For example: ES 450 and DIS 450)

Please submit a single cross-listed syllabus that will be used for all cross-listed courses.

12. May course be repeated for additional units? Yes  No
- 12a. If yes, maximum units allowed? n/a
- 12b. If yes, may course be repeated for additional units in the same term? Yes  No
13. Prerequisites: n/a
14. Co requisites: n/a
15. Is this course in any plan (major, minor or certificate) or sub plan (emphasis or concentration)?  
Yes  No

If yes, describe the impact and attach written responses from the affected academic units prior to college curricular submission.

16. Is there a related plan or sub plan proposal being submitted? Yes  No   
If no, explain.

17. Does this course include combined lecture and lab components? Yes  No   
If yes, note the units specific to each component in the course description above.

18. Does this course duplicate content of existing courses? Yes  No   
If yes, list the courses with duplicate material. If the duplication is greater than 20%, explain why NAU should establish this course. n/a

19. Names of the current faculty qualified to teach this course: Jeannie L. Copley

20. Justification for new course.

This course is needed to support the curriculum of the new Personalized Learning degree: Bachelor of Business Administration – Computer Information Technology.

**Answer 21-22 for UCC/YCC only:**

21. Is this course being proposed for Liberal Studies designation? Yes  No   
If yes, forward this form along with the appropriate supporting documentation to the Liberal Studies Committee.

22. Is this course being proposed for Diversity designation? Yes  No   
If yes, forward this form along with the appropriate supporting documentation to the Diversity Committee

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Reviewed by Curriculum Process Associate

Date

Approvals:

[Signature] Sept. 14, 2012  
Department Chair/ Unit Head (if appropriate) Date

[Signature] 12-Sept-13  
Chair of college curriculum committee Date

[Signature] 11/13/12  
Dean of college Date

For Committee use only:

[Signature] 11-7-12  
UCG/UGC/YCC Approval Date

Approved as submitted: Yes  No       Approved as modified: Yes  No

**Please attach proposed Syllabus in approved university format.**



**NORTHERN ARIZONA  
UNIVERSITY**  
*Extended Campuses*

## **PERSONALIZED LEARNING**

### **MASTER SYLLABUS - PROPOSED Analysis, Design, and Modeling of Databases (CIT 311)**

#### **I. Description:**

Fundamentals to database development with an emphasis on relational database concepts, query language, data modeling, proving the ability to manage the dissemination of information via different formats, including data types, storage, archiving, and retrieval systems, applying common compliant data models/standards to meet the sophisticated demand for data organization and manipulation.

#### **II. Student Learning Outcomes:**

- Perform simple, and intermediate level, SQL data retrieval operations
- Create an appropriate (normalized) conceptual data model for a small-scale transaction-processing database based upon sample documents and/or a user's description.
- Use Entity-Relationship (ER) modeling elements to capture the fundamental design of a database in diagrammatic form
- Use SQL and SQL\*plus statements to:
  1. create the structure of a database,
  2. control access to the database,
  3. retrieve selected data from a database, and
  4. maintain data in a database.
- Demonstrate a working knowledge of the following concepts:
  1. The Database Development Cycle and alternative development methods.
  2. Normalization and Normal Forms.
  3. Client-Server and Distributed Databases, as well as, integration of databases in web-based systems
  4. Data warehousing and Online Analytical processing Systems
  5. Fundamentals of database administration
- Apply an appropriate ethical framework to ethical dilemmas related to information systems.