

CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS
COURSE MODIFICATION PROPOSAL
Courses must be submitted by October 15, 2010,
to make the next catalog (2011-12) production

DATE (CHANGE DATE EACH TIME REVISED): 9/23/10; REV 12.15.10

PROGRAM AREA(S): COMPUTER SCIENCE

Directions: All of sections of this form must be completed for course modifications. Use YELLOWED areas to enter data. All documents are stand alone sources of course information.

1. Course Information.

[Follow accepted catalog format.] (Add additional prefixes if cross-listed)

OLD

Prefix IT Course# 420 Title Database Theory and Design for
 IT Units (3)
 3 hours lecture per week
 hours blank per week

X Prerequisites: Math 300
 Consent of Instructor Required for Enrollment
 Corequisites:

Catalog Description (Do not use any symbols):
 Database structure including: structure definition, data models, semantics of relations, and operation on data models. Database schemas: element definition, use and manipulation of the schema. Elements of implementation. Algebra of relations on a database. Hierarchical data bases. Discussion of information retrieval, reliability, protection and integrity of databases.

| | | |
|------------------------------|---------|--------------------------------------|
| General Education Categories | Graded | Repeatable for up to units |
| Lab Fee Requested | CR/NC | Total Completions |
| | X A - F | Multiple Enrollment in same semester |
| Course Level: | | Optional (Student's choice) |
| X Undergraduate | | |
| Post-bac/Credential | | |
| Graduate | | |

NEW

Prefix IT Course# 420 Title Database Theory and Design for
 IT Units (3)
 3 hours lecture per week
 hours blank per week

X Prerequisites: Math 301
 Consent of Instructor Required for Enrollment
 Corequisites:

Catalog Description (Do not use any symbols):
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| Post-bac/Credential | | |
| Graduate | | |

2. Mode of Instruction (Hours per Unit are defaulted)

Hegis Code(s) _____
 (Provided by the Dean)

Existing

Proposed

| | <u>Existing</u> | | | | <u>Proposed</u> | | | | |
|---------------|-----------------|----------------|----------------------|--------|-----------------|----------------|----------------------|--------|-----------------------------|
| | Units | Hours Per Unit | Benchmark Enrollment | Graded | Units | Hours Per Unit | Benchmark Enrollment | Graded | CS No. (filled out by Dean) |
| Lecture | 3 | 1 | 30 | y | 3 | 1 | 24 | y | |
| Seminar | | 1 | | | | 1 | | | |
| Lab | | 3 | | | | 3 | | | |
| Activity | | 2 | | | | 2 | | | |
| Field Studies | | | | | | | | | |
| Indep Study | | | | | | | | | |
| Other blank | | | | | | | | | |

3. Course Attributes:

General Education Categories: All courses with GE category notations (including deletions) must be submitted to the GE website: <http://summit.csuci.edu/geapproval>. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.

A (English Language, Communication, Critical Thinking)

- A-1 Oral Communication
- A-2 English Writing
- A-3 Critical Thinking

B (Mathematics, Sciences & Technology)

- B-1 Physical Sciences
- B-2 Life Sciences – Biology
- B-3 Mathematics – Mathematics and Applications
- B-4 Computers and Information Technology

C (Fine Arts, Literature, Languages & Cultures)

- C-1 Art
- C-2 Literature Courses
- C-3a Language
- C-3b Multicultural

D (Social Perspectives)

E (Human Psychological and Physiological Perspectives)

UDIGE/INTD Interdisciplinary

Meets University Writing Requirement

Meets University Language Requirement

American Institutions, Title V Section 40404: Government US Constitution US History
Refer to website, Exec Order 405, for more information: <http://senate.csuci.edu/comm/curriculum/resources.htm>

Service Learning Course (Approval from the Center for Community Engagement must be received before you can request this course attribute).

4. Justification and Requirements for the Course. [Make a brief statement to justify the need for the course]

OLD

Required course for the BSIT

X Requirement for the Major/Minor

Elective for the Major/Minor

Free Elective

NEW

Required course for the BSIT

X Requirement for the Major/Minor

Elective for the Major/Minor

Free Elective

Submit Program Modification if this course changes your program.

5. Student Learning Outcomes. (List in numerical order. You may wish to visit resource information at the following website: <http://senate.csuci.edu/comm/curriculum/resources.htm>)

Upon completion of the course, the student will be able to:

OLD

1. Identify the main components of a Database System.
2. Create a Entity-Relation diagram for a database system.
3. Normalize a given database design.
4. Create SQL queries that retrieve the appropriate data.
5. Create SQL queries that update the database.
6. Create SQL queries using inner and outer joins.
7. Design and implement a simple database system.

Upon completion of the course, the student will be able to:

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5. Create SQL queries that update the database.
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7. Design and implement a simple database system.

6. Course Content in Outline Form. (Be as brief as possible, but use as much space as necessary)

OLD

1. Integrity Constraints.
2. File Systems and Databases.
3. Database Models.
4. Logical Views of Data.
5. Data Redundancy Issues.

NEW

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3. Database Models.
4. Logical Views of Data.
5. Data Redundancy Issues.

- 6. Entity-Relationship Modeling.
- 7. Normalization of Database Designs.
- 8. ER-Diagrams
- 9. First, Second and Third Normal Forms.
- 10 SQL.
- 11 Database Access Control and Authentication.

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- 7. Normalization of Database Designs.
- 8. ER-Diagrams
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Does this course content overlap with a course offered in your academic program? Yes No X
 If YES, what course(s) and provide a justification of the overlap.

Does this course content overlap a course offered in another academic area? Yes No X
 If YES, what course(s) and provide a justification of the overlap.

Overlapping courses require Chairs' signatures.

7. Cross-listed Courses (Please note each prefix in item No. 1)

- A. List cross-listed courses (Signature of Academic Chair(s) of the other academic area(s) is required).
- B. List each cross-listed prefix for the course:
- C. Program responsible for staffing:

8. References. [Provide 3-5 references]

OLD

- 1. Fundamentals of Database Systems Ramez Elmasri Addison Wesley Higher Education 2002 0201741539
- 2. Database Systems Peter Rob, Carlos Coronel Course Technology 2002 061906269X
- 3. Database Systems: The Complete Book Ullman, Jeffrey D. Prentice Hall 2002 0130319953

NEW

- 1. Fundamentals of Database Systems (6th ed) Ramez Elmasri Addison Wesley Higher Education 2010 0136086209
- 2. Database Systems 6th Edition Peter Rob, Carlos Coronel Course Technology 2004 061921323X
- 3. Database Systems: The Complete Book (2nd ed) Garcia-Molina, Ullman and Widom. Prentice Hall 2008 0131873253

9. Tenure Track Faculty qualified to teach this course.
 All Computer Science faculty

10. Requested Effective Date or First Semester offered: Fall 2011

11. New Resource Requested: Yes No X
 If YES, list the resources needed.

- A. Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.)
- B. Library Needs (streaming media, video hosting, databases, exhibit space, etc.)
- C. Facility/Space/Transportation Needs:
- D. Lab Fee Requested: Yes No (Refer to the Dean's Office for additional processing)
- E. Other.

12. Indicate Changes and Justification for Each. [Check all that apply and follow with justification. Be as brief as possible but, use as much space as necessary.]

- | | |
|---|---|
| <input type="checkbox"/> Course title | <input type="checkbox"/> Course Content |
| <input type="checkbox"/> Prefix/suffix | <input type="checkbox"/> Course Learning Objectives |
| <input type="checkbox"/> Course number | X References |
| <input type="checkbox"/> Units | <input type="checkbox"/> GE |
| <input type="checkbox"/> Staffing formula and enrollment limits | <input type="checkbox"/> Other <input type="checkbox"/> |

X Prerequisites/Corequisites

Reactivate Course

Catalog description

X Mode of Instruction

Justification: Since the course was first proposed, Math has created a Discrete Math course for IT students. This course, Math 301, rather than the general course, Math 300, is taken by IT majors. References updated

13. Will this course modification alter any degree, credential, certificate, or minor in your program? Yes No X

If, YES attach a program update or program modification form for all programs affected.

Priority deadline for New Minors and Programs: **October 4, 2010** of preceding year.

Priority deadline for Course Proposals and Modifications: **October 15, 2010**.

Last day to submit forms to be considered during the current academic year: **April 15th**.

Peter Smith

9/23/2010

Proposer(s) of Course Modification

Date

Type in name. Signatures will be collected after Curriculum approval.

Approval Sheet

Course: IT420

If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

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| Program Chair | | |
|---------------|--|--|

Signature

Date

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| Program Chair | | |
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Signature

Date

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| Program Chair | | |
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Signature

Date

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|-------------------------|--|--|
| General Education Chair | | |
|-------------------------|--|--|

Signature

Date

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| Center for Intl Affairs Director | | |
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Signature

Date

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| Center for Integrative Studies Director | | |
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Signature

Date

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| Center for Multicultural Engagement Director | | |
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Signature

Date

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| Center for Civic Engagement and Service Learning Director | | |
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Signature

Date

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|------------------|--|--|
| Curriculum Chair | | |
|------------------|--|--|

Signature

Date

| | | |
|-----------------|--|--|
| Dean of Faculty | | |
|-----------------|--|--|

Signature

Date