**California State University Channel Islands**
# NEW COURSE PROPOSAL
**Courses must be submitted by October 15, 2013, and finalized by the end of that fall semester for the next catalog production.**
**Use YELLOWED areas to enter data.**

DATE (*Change if modified and redate file with current date)*)    10/3/13; REV 10.8.13

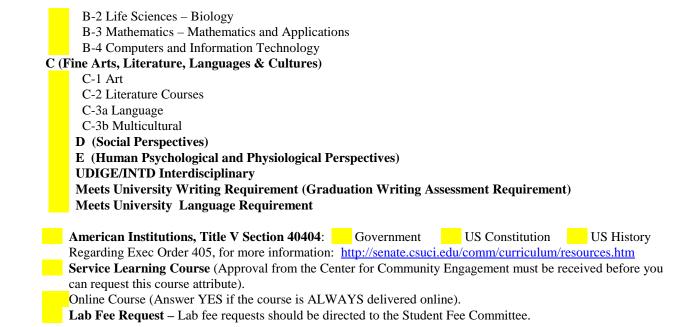PROGRAM AREA(S)    COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

1.  **Course Information.** *[Follow accepted catalog format.]*
    **Prefix(es)** (Add additional prefixes if cross-listed) **and Course No.  IT 428**
    **Title:  COMPUTER NETWORKS FOR HEALTH INFORMATICS   Units: 3**
    X Prerequisites IT 152
    ☐ Corequisites ☐
    ☐ Consent of Instructor Required for Enrollment
    **Catalog Description** (Do not use any symbols ):  Basic software design and analysis considerations in networking computers into coherent, cooperating systems for health-related applications. Issues of privacy and security will be emphasized.

**Grading Scheme:**

X  A-F Grades

☐ Credit/No Credit
☐ Optional (Student Choice)

**Repeatability:**

☐ Repeatable for a maximum of ☐ units
Total Completions Allowed ☐
☐ Multiple Enrollment in Same Semester

**Course Level Information:**

X  Undergraduate

☐ Post-Baccalaureate/Credential
☐ Graduate

**Mode of Instruction/Components** (*Hours per Unit are defaulted*).

| | Units | Hours per Unit | Default Section Size | Graded Component | CS & HEGIS # (Filled in by the Provost's Office) |
|---|---|---|---|---|---|
| Lecture | 3 | 1 | 24 | y | |
| Seminar | | 1 | | | |
| Laboratory | | 3 | | | |
| Activity | | 2 | | | |
| Field Studies | | | | | |
| Indep Study | | | | | |
| Other Blank | | | | | |

Leave the following hours per week areas blank.  The hours per week will be filled out for you.
3 hours lecture per week
        hours  blank per week
 Is this course always delivered online?  Yes_____    No_____  (Answer YES if the course is ALWAYS delivered online).

2.  **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 (Graduation Writing Assessment Requirement)**
**Meets University  Language Requirement**

**American Institutions, Title V Section 40404**:     Government       US Constitution       US History
Regarding 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).
Online Course (Answer YES if the course is ALWAYS delivered online).
**Lab Fee Request –** Lab fee requests should be directed to the Student Fee Committee.

3. **Justification and Requirements for the Course.**  (Make a brief statement to justify the need for the course)
   A.  Justification:  This course is required in the Health Informatics option within the BS in Health Science degree

   B.  Degree Requirement:       X  Requirement for the Major/Minor        **Note:  Submit Program Modification if**
   Elective for the Major/Minor        **this course changes your program**.
   Free Elective

4. **Student Learning Outcomes.** List in numerical order.  Please refer to the Curriculum Committee's "Learning Outcomes" guideline for measurable outcomes that reflect elements of Bloom's Taxonomy: *http://senate.csuci.edu/comm/curriculum/resources.htm*.  The committee recommends 4 to 8 student learning outcomes, unless governed by an external agency (e.g., Nursing).
   Upon completion of the course, the student will be able to:
   1. Design network protocols at all but the physical layer
   2. Implement software incorporating a variety of network protocols
   3. Evaluate the security of a network design
   4. Assess the compliance of a network with respect to HIPAA
   5.Synthesize ideas clearly and convincingly in oral and written form.

5. **Course Content in Outline Form.**  *[Be as brief as possible, but use as much space as necessary]*
   * Introduction -- switching schemes, network layer architecture
   * Current Privacy requirements
   * Application layer – protocols
   * Transport layer – connectionless (UDP), reliable data
   * Network Layer – virtual circuit networks, datagram networks, routing algorithms, dynamic host configuration
   * Wireless networks – wireless multiple access algorithms,
   * UNIX Network Programming -- client/server model,
   * Data security – encryption, attacks on networks and countermeasures

Does this course content overlap with a course offered in your academic program? **Yes** X **No** `▮`
If YES, what course(s) and provide a justification of the overlap. Overlaps with IT429 but this course is less technical and geared towards Health Science majors.

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.

6. **Cross-listed Courses** (*Please note each prefix in item No. 1) Beyond three disciplines consult with the Curriculum Committee.*
   A. List Cross-listed Courses (Signature of Academic Chair(s) of the other academic area(s) is required).
      List each cross-listed prefix for the course: `▮`

   B. Program responsible for staffing: Computer Science and Information Technology

7. **References.** *[Provide 3 - 5 references]*

   Tannenbaum, Computer Networks , 4th ed., Prentice Hall (2002) ISBN 0130661023
   Comer, Internetworking with TCP/IP , Vol 1, 4th ed., Prentice Hall (2000) ISBN 0130183806
   Stevens, Unix Network Programming , 2nd edition, Prentice Hall (1998) ISBN 013490012X
   Rhodes-Ousley, Bragg and Strassberg, Network Security, the complete reference, McGraw-Hill (2003) ISBN 978-0072226973

8. **Tenure Track Faculty Qualified to Teach This Course.**

   All Computer Science faculty

9. **Requested Effective Date:**
   First semester offered: Fall 2014

10. **New Resources 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** `▮` **(Lab fee requests should be directed to the Student Fee Committee)**

    E. Other
    `▮`

11. **Will this new course 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 1, 2013 of preceding year.

Priority deadline for Course Proposals and Modifications:  October 15, 2013, of preceding year.
Last day to submit forms to be considered during the current academic year:  April 15th.


Peter Smith                                                                                    10/3/13

Proposer of Course (Type in name.  Signatures will be collected after Curriculum approval)       Date

# Approval Sheet

**Program/Course:** IT428

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.

The CI program review process includes a report from the respective department/program on its progress toward accessibility requirement compliance. By signing below, I acknowledge the importance of incorporating accessibility in course design.

| Program Chair | | |
|---|---|---|
| | Signature | Date |

| Program Chair | | |
|---|---|---|
| | Signature | Date |

| Program Chair | | |
|---|---|---|
| | Signature | Date |

| General Education Chair | | |
|---|---|---|
| | Signature | Date |

| Center for International Affairs Director | | |
|---|---|---|
| | Signature | Date |

| Center for Integrative Studies Director | | |
|---|---|---|
| | Signature | Date |

| Center for Multicultural Engagement Director | | |
|---|---|---|
| | Signature | Date |

| Center for Civic Engagement Director | | |
|---|---|---|
| | Signature | Date |

| Curriculum Chair | | |
|---|---|---|
| | Signature | Date |

| AVP | | |
|---|---|---|
| | Signature | Date |