California State University Channel Islands  
New Course Proposal  

Program Area: Computer Science

1. **Catalog Description of the Course.**  
IT 429 COMPUTER NETWORKS FOR IT (3)  
Three hours of lecture per week  
Prerequisites: IT 362  
Basic software design and analysis considerations in networking computers into coherent, cooperating systems capable of processing computational tasks in a distributed manner. Network topology, routing procedures, message multiplexing and process scheduling techniques.

2. **Mode of Instruction.**

<table>
<thead>
<tr>
<th>Units</th>
<th>Hours per Unit</th>
<th>Benchmark Enrollment</th>
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</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Seminar</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Laboratory</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Activity</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
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3. **Justification and Learning Objectives.**

Justification: BSIT required course.  
Learning Objectives:  
Students who successfully complete this course will:  
1. Be able to analyze a computer network and its components  
2. Be able to define and explain typical network protocol layers.  
3. Be able to explain the components of a "packet" in the http protocol.  
4. Be able to design and implement a peer-to-peer configuration.  
5. Be able to analyze network security issues.  
6. Be able to explain the functions of a hub, switch, and router.  
7. Be able to describe basic data encryption techniques.

4. **Is this a General Education Course?**

No.

5. **Course Content in Outline Form.**

Topics:  
1. Network Architectures  
2. Network Hardware Devices.  
3. Data Communication Protocols  

6. **Cross-listed Courses.**

None.

7. **References.**

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Publisher</th>
<th>Year</th>
<th>ISBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Network security: private communication in a public world (2nd ed)</td>
<td>Kaufman, Perlman and Speciner</td>
<td>Prentice-Hall</td>
<td>2002</td>
<td>0130460192</td>
</tr>
<tr>
<td>4. Network Management</td>
<td>Subramanian, Mani</td>
<td>Addison-Wesley</td>
<td>2000</td>
<td>0201357429</td>
</tr>
</tbody>
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8. **Faculty Qualified to Teach This Course.**

Qualified Faculty: Smith, Wolfe

9. **Frequency.**

Projected semesters to be offered: Fall, Spring

10. **New Resources Required.**

a. New Equipment needs: Use of existing computer lab.  
b. New Library needs: none  
c. New Space/Facilities needs: none

11. **Program Modifications.**

None.

12. **Proposer of Course.**

Proposer: Smith, Wolfe  Date: 7/13/2004