

CAPC Minutes for March 3, 2009
11:30 – 12:30 University Center Room 268

Members in attendance: Maria Bullen; John Burningham; Wendy Burns-Ardolino; Jennell Charles; Nikki Finlay; Rebecca Gmeiner; Todd Janke; Cathy Jeffrey; Tatiana Krivosheev; Cherie Long; Catherine Matos; Kelli Nipper; Charlene Romer; Manning Sabatier; Zi Wan; Ximena Zornosa.

Non-Members in attendance: Ethel Callen; Tom Eaves; Michelle Furlong; Mary Lamb; Doug Wheeler; Tammy Wilson.

Approval of Minutes

A motion was made by Burns-Ardolino, seconded by Finlay to approve the Minutes from the meeting of February 17, 2009. Council approved. They are posted at <http://adminservices.clayton.edu/provost/CAPC/minutesdefault.htm>

Old Business - None

New Business

1. ENGL 3220, new course proposal – Lamb gave a brief overview of the new course proposal. The course cannot be repeated; therefore, the proposal will be adjusted by chair. The curriculum change will be brought to CAPC at a later date. After some discussion a motion was made by Burns-Ardolino, seconded by Finlay to approve as amended. Council approved unanimously; therefore, a second reading is not required.
2. Revisions to the CNET Program – Burningham explained necessary changes to the CNET program due to reorganization of the College of Professional Studies. After discussion a motion was made by Finaly, seconded by Sabatier to approve as a group the changes listed below. Council approved unanimously and a second reading is not required.
 - CNET 1130, new course proposal
 - CNET 1131, new course proposal
 - CNET 1132, new course proposal
 - CNET 2226, new course proposal
 - CNET 4110, restrict enrollment to students without credit in CNET 2226
 - Revisions to Certificate in Computer Networking Technician Program
 - Revisions to A.A.S. in Computer Networking Technology Program
3. MUSC 4990, prerequisite change – A motion was made by Burns-Ardolino, seconded by Romer to table due to issue with Junior Qualifying Exam. Council tabled.
4. CHEM 4201, new course proposal – New course proposed by Furlong can be taken in several areas and will support the BS in Biology degree that is going to be proposed. No additional faculty will be required. Burns-Ardolino made a motion to approve, Wan seconded, and Council approved. A second reading is not required.
5. SCI4901, new course proposal – This course will also be used in the Biology curriculum. There is a faculty search underway. The course title was changed to fit within the 30 characters for Banner. The Secondary Education Track has not been approved by CAPC; however, it will be on the agenda soon. A motion was made to approve the new course proposal by Finlay, Sabatier seconded, Council approved. Once the Secondary Education is approved the curriculum changes will be brought forward.
6. Biology Program revisions – After some discussion a motion was made by Romer, seconded by Finlay to approve Option 1 CAPC approved. A motion was made by Romer, seconded by Sabatier to table Option 2 until Education submits Secondary Education program information to CAPC. Council tabled Option 2.
7. Discuss about revising CAPC bylaws to allow on-line voting. Eaves stated he did not feel comfortable with online voting. Council discussed as group changing the meetings to once per month. Issue will be addressed during the first meeting of next year. Eaves and Burningham will work on policy regarding service to Council.

Announcements - None

Looking Ahead: March 17; April 7; April 21; May 5 (if necessary, Finals Week)

A motion to adjourn was made by Finlay, seconded by Burns-Ardolino.

Submitted by: Tammy Wilson

ENGL 3220: Argumentative Writing

This form is used for new course approval.

Signatures are required before submitting to the next level for review.

(Note: This form is not required for each individual course that is included in the comprehensive proposal for a new program.)

Department: Language and Literature

Degree Program: Bachelor of Arts

Signature, Department Head

Action Taken
Date of Action Approved
 Disapproved
 Non-Applicable

School/College: Arts and Sciences

Signature, Dean of School/College originating proposal

Action Taken
Date of Action Approved
 Disapproved
 Non-Applicable

Provost Office

Signature, Associate Provost

Action Taken
Date of Action Approved
 Disapproved
 Non-Applicable

CAPC

Signature, Chairperson of CAPC

Action Taken
Date of Action Approved
 Disapproved
 Non-Applicable

Provost

Signature, Provost

Action Taken
Date of Action Approved
 Disapproved
 Non-Applicable

A. Catalog Information

1. **Subject prefix, number, and hours (SCH and contact) distribution:** (Number subject to Registrar's approval.)
ENGL 3220 (3-0-3)

2. **Title:** *Argumentative Writing*

3. **Restrictions (if any):**

- a. Prerequisite(s): ENGL 1102 with a C or better or permission of instructor
- b. Co-requisite(s) (normal or absolute): N/A
- c. Other restrictions (e.g. major, junior standing, permission, etc.): N/A
- d. Other comments (e.g. recommended sequencing, career course notice, etc.): may be repeated up to 6 credit hours
- e. Fees (Explain): None
- f. Grade mode (normal or pass/fail): Normal
- g. Course(s) are deleted as a consequence: None.

4. **Course description for catalog:**

A course in the methods of developing academic, professional, and civic written arguments; the course includes the application of classical and contemporary rhetorical theories of argument, the analysis of various arguments, and multiple revisions of papers.

5. **Semester of implementation:**

Fall 2009

B. Justification

1. **Where will the course fit in the curriculum and what students are likely to take it?**

The course will fit into the curriculum for the English B.A. writing emphasis (writing core--15 hours required). It will also count for English elective credit for the English B.A. literature emphasis (24 hours required). It may also count as an elective for other majors.

2. **Why is the course needed at CSU?**

The course will enrich existing English course offerings, especially those in the writing emphasis. In addition, since the only pre-requisite for the course is a C in Eng. 1102, many non-English majors may choose to take the course, including majors in history, communications, psychology, and political science.

3. **What similar courses (models) at other institutions have helped guide this proposal?**

Kennesaw State University, WRIT 3160 Argumentative Writing

Prerequisite: ENGL 2110. The study and practice of argumentative writing. The course includes the study of current models of effective arguments and the process of forming written arguments. The course features extensive writing and revision, workshop discussion, and readings of classical and contemporary arguments.

- **Georgia State University, ENGL 3080 History, Theory, and Practice of Argumentative Writing**

Nonmajor prerequisite: grade of C or higher in Engl 1102 or 1103. Readings from such authors as Aristotle, Plato, Perelman, and Toulmin. Practice at methods for developing an argument.

4. Why are the restrictions (prerequisites, co-requisites, etc.) needed?

The prerequisite ensures that undergraduate students are studying with a group of qualified peers. In addition, students who have successfully completed ENGL 1102 will be more likely to have the skills needed for success in this advanced course.

5. What impact will the addition of this course have on *other* courses and/or *other* programs (e.g. similar courses, enrollment shifts, faculty shifts, accreditation impact, adjusted curriculum, etc.) at CSU?

The course will be included in the rotation of the courses in English, especially in the rotation of the courses in writing.

C. Course Content**1. What learning outcomes for the major will the course address?**

- a. This course will enhance the preparation of students for graduate study (creative writing, English, technical/professional writing, journalism, comparative literature, library science, and other related fields)
- b. This course will provide content/discipline foundation for careers in writing, editing, education, media, public relations, journalism and others.

Specific course outcomes:

By the end of the course, students will be able to:

- Explain how rhetorical theory helps us analyze and produce arguments
- Outline the structure of classical oratory and Rogerian argument
- Use the Toulmin model for generating and analyzing arguments
- Compare and contrast traditional argument with Rogerian and invitational argument
- Use a variety of argumentative strategies, including ethical, pathetic, and logical appeals
- Analyze and address the audience, kairos, and rhetorical situation of various arguments
- Produce coherent, organized, readable, effective arguments in print and electronic rhetorical situations
- Write, revise, and edit multiple drafts of arguments

2. How will the course address the general education outcomes of Communication and Critical Thinking? (If not applicable to the proposed course, please explain.)

- a. Through detailed, intensive analysis and evaluation of texts and writing using various rhetorical strategies, this course will enhance students' writing and critical thinking skills
- b. Content and assignments in the course will allow students to improve their writing and research skills to levels of excellence expected of undergraduate students

2. Tentative course materials (textbooks, software, etc.)Possible Textbooks:

Mauk, John and John Metz. *Inventing Arguments*. 2nd ed. Wadsworth Cengage, 2009.
 Ramage, John D., John C. Bean, and June Johnson. *Writing Arguments: A Rhetoric with Readings*. 3rd, Concise Ed. New York: Pearson/Longman.
 Instructor Course Packet.

Supplemental Texts:

Booth, Wayne. *The Rhetoric of Rhetoric: The Quest for Effective Communication*. Blackwell, 2004.

Kolln, Martha. *Rhetorical Grammar: Grammatical Choices, Rhetorical Effects*. 5th edition. Longman, 2007.

Tannen, Deborah. *The Argument Culture: Stopping America's War of Words*. Ballantine, 1998.

4. Expected method(s) of delivery (on-campus, on-line, hybrid, etc.)

On campus

5. Attach a tentative course outline (one page or less)

Week 1	Argument: An Intro., Ramage Ch. 1; Think Paper 1 Due
Week 2	Reading and Writing Arguments; Ramage Ch. 2-3
Week 3	Choose essays for analysis; handout rhetorical analysis assignment
Week 4	Logos, Ethos, Pathos: Ramage Ch. 4-8
Week 5	Toulmin theory; audience awareness; Kairos and the Rhetorical Situation; Think Paper 2 Due
Week 6	Stasis Theory, Types of Claims: Ramage Ch. 10; Draft of rhet. analysis due for peer editing
Week 7	Rhetorical Analysis due; present to class; hand out Lutz and propose articles
Week 8	Lutz, "Doubts about Doublespeak," "How to Detect Propaganda," Fallacies App. I and ex. Due
Week 9	New Rhetorics: Rogers; feminist/ine argument; Think Paper 3 Due; assign exploratory paper
Week 10	Argument in Electronic Media: Tannen 1-3
Week 11	Tannen 4-9; Think Paper 4 Due; peer groups—select readings
Week 12	Peer Review of Exploratory Papers
Week 13	Exploratory Paper Due; Presentation of Exploratory Papers; plan final draft
Week 14	Draft of Argumentative Essay Due; Peer Revision
Week 15	Argumentative Essay presentations and final paper due

D. Faculty, Facilities, and Expenses**1. Will the course be taught by existing faculty with existing qualifications or will new faculty or faculty development be needed?**

The course will be taught by existing faculty with current qualifications.

2. What impact will having faculty teach this course have on other courses?

None

3. What proportion of course sections are expected to be taught by full-time and part-time faculty?

All sections will be taught by full-time faculty.

4. What expenditures (e.g., new equipment, new facilities, new software, etc.), if any, will be required beyond faculty salaries and routine clerical support?

None.

5. Indicate several examples of (up-to-date) library resources currently held by the CSU Library that would support the curriculum of this course.

Galileo's databases, Communication and Mass Media Complete, ERIC, and MLA would support the curriculum of the course.

Connors, Robert J., Lisa S. Ede, and Andrea A. Lunsford, eds. *Essays on Classical Rhetoric and Modern Discourse*. 1984.

Fisher, Walter. *Human Communication as Narration: Toward a Philosophy of Reason, Value, and Action*. 1987.

Jamieson, Kathleen Hall and Karlyn Kohrs Campbell. *Dirty Politics: Deception, Distraction, and Democracy*. 1992.

Perelman, Chaim and Lucia Olbrechts-Tyteca. *New Rhetoric: A Treatise on Argumentation*. 1969.

Schiappa, Edward. *Warranting Assent: Case Studies in Argument Evaluation*. 1995.

6. What additional library resources must be added to support the proposed course?

The course can be taught with existing resources, but additional resources would be helpful, including:

Aristotle. *On Rhetoric: A Theory of Civic Discourse*. Trans. George Kennedy. Oxford UP, 1991.

Jamieson, Kathleen Hall. *Eloquence in an Electronic Age: The Transformation of Political Speechmaking*. Oxford UP, 1988.

7. What is the initial funding amount for library resources? What annual amount should be added to future budgets to continue the support for the course?

No initial funding is needed for the course.

E. Enrollment

1. What is the estimated number of sections per year?

One

2. What is the estimated average enrollment per section?

Eighteen

3. What is the estimated total enrollment per year?

Eighteen

4. What is the estimated reduction in enrollment in other courses as a consequence of the new course? (Explanation, if any)

None.

Memo

To: Benita Moore, Rodger Bates

From: John Burningham

Subject: CNET 4110 – IP Telephony

With the addition of CNET 2226 (Fundamentals of IP Telephone), we need to add a note in the CNET 4110 course description that the course is not open to students with credit in CNET 2226 because of content overlap.

Associate of Applied Science in Computer Networking Technology

Core Curriculum (Areas A – E)	21 hours
CRIT 1101 Critical Thinking (Area B1)	3 hours
ENGL 1101 English Composition I (Area A1)	3 hours
ENGL 1102 English Composition II (Area A1)	3 hours
HIST 2111 or HIST 2112 (Area E3)	3 hours
MATH 1101 Mathematical Modeling (Area A2)*	3 hours
POLS 1101 American Government (Area E1)	3 hours

Select one of the following (Area D2)	3 hours
MATH 1221 Finite Mathematics	
MATH 1231 Introductory Statistics	
MATH 1241 Survey of Calculus	
MATH 1113 Precalculus	
MATH 1501 Calculus I	
MATH 2502 Calculus II	

Lower Division Major Requirements	39 hours
ITFN 1101 Foundations of Information Technology	3 hours
ITFN 1303 Foundations of Programming, C#**	3 hours
ITFN 2123 Foundations of Project Management	3 hours
COMM 1110 Spoken Communications	3 hours
CPTG 2201 Advanced Computer Applications	3 hours
CNET 1130 Network Fundamentals and LAN Switching	4 hours
CNET 1131 Routing and WAN Technologies	4 hours
CNET 1132 CCNA Certification	1 hour
CNET 2225 Fundamentals of Wireless LANS	3 hours
CNET 2226 Fundamentals of IP Telephony	3 hours

Select nine (9) hours of ITFN lower division	9 hours
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Total Degree Requirements	60 hours
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* Depending on math placement score, may take one of the following:
MATH 1111, MATH 1241, MATH 1113, or MATH 1501

** **Programming options are: ITFN 1303/ITFN 2313 or CSCI 1301/CSCI 1302 or WBIT 1310/WBIT 2311. ITFN 2314 may be taken in place of ITFN 2313 or CSCI 1302 or WBIT 2311.**

Approved Program Revisions – 03/03/2009

Certificate in Computer Networking Technician

Core Curriculum (Areas A – E)	18 hours
CRIT 1101 Critical Thinking (Area B1)	3 hours
ENGL 1101 English Composition I (Area A1)	3 hours
ENGL 1102 English Composition II (Area A1)	3 hours
HIST 2111 or HIST 2112 (Area E3)	3 hours
MATH 1101 Mathematical Modeling (Area A2)*	3 hours
POLS 1101 American Government (Area E1)	3 hours

Lower Division Major Requirements	36 hours
ITFN 1101 Foundations of Information Technology	3 hours
ITFN 1303 Foundations of Programming, C#**	3 hours
COMM 1110 Spoken Communications	3 hours
CPTG 2201 Advanced Computer Applications	3 hours
CNET 1130 Network Fundamentals and LAN Switching	4 hours
CNET 1131 Routing and WAN Technologies	4 hours
CNET 1132 CCNA Certification	1 hour
CNET 2225 Fundamentals of Wireless LANS	3 hours
CNET 2226 Fundamentals of IP Telephony	3 hours

Select nine (9) hours of ITFN lower division 9 hours

Total Certificate Requirements 54 hours

* Depending on math placement score, may take one of the following:
MATH 1111, MATH 1241, MATH 1113, or MATH 1501

** **Programming options are: ITFN 1303/ITFN 2313 or CSCI 1301/CSCI 1302 or WBIT 1310/WBIT 2311. ITFN 2314 may be taken in place of ITFN 2313 or CSCI 1302 or WBIT 2311.**

CNET 1130: Networking Fundamentals and LANs

This form is used for new course approval.

Signatures are required before submitting to the next level for review.

(Note: This form is not required for each individual course that is included in the comprehensive proposal for a new program.)

Department: Administrative & Technology Management

Degree Program: A.A.S. in Computer Networking Technology &
Certificate in Computer Networking Technician

Signature, Department Head

Date of Action

Action Taken
() Approved
() Disapproved
() Non-Applicable

School/College: College of Professional Studies

Signature, Dean of School/College originating proposal

Date of Action

Action Taken
() Approved
() Disapproved
() Non-Applicable

Provost Office

Signature, Associate Provost

Date of Action

Action Taken
() Approved
() Disapproved
() Non-Applicable

CAPC

Signature, Chairperson of CAPC

Date of Action

Action Taken
() Approved
() Disapproved
() Non-Applicable

Provost

Signature, Provost

Date of Action

Action Taken
() Approved
() Disapproved
() Non-Applicable

A: Catalog Information

1. Subject prefix, number, and hours (SCH and contact) distribution: (Number subject to Registrar's approval.) CNET 1130 (3-2-4)

2. Title: Networking Fundamentals and LANs

3. Restrictions (if any):

- a. Prerequisite(s): Exit or Exemption from Learning Support Reading, English and Math.
- b. Co-requisite(s) (normal or absolute) ITFN 1101 (normal)
- c. Other restrictions: e.g. major, junior standing, permission, etc.
- d. Other comments: e.g. recommended sequencing, career course notice, etc.
- e. Fees: none
- f. Grade mode [normal or pass/fail]: Normal
- g. What course(s) are deleted as a consequence: CNET 1130/1131/1132 (9 hrs total) will replace CNET 1105/1120/2220/2221 (12 hrs total).

4. Course description for catalog:

Introductory computer networking course focused on the OSI 7 and TCP/IP networking model, IPv4 addressing and subnetting, basic switching concepts including VLANs and inter-VLAN routing, and wireless LAN concepts.

5. Semester of Implementation: Fall 2009

B. Justification.

1. Where will the course fit in the curriculum and what students are likely to take it?
First semester Computer Networking students in the certificate and A.A.S. program.
2. Why is the course needed at CSU?
Consolidation and removal of content that is duplicated in ITFN 1101.
3. What similar courses (models) at other institutions have helped guide this proposal?
The Cisco Networking Academy CCNA curriculum is utilized by hundreds of institution world-wide, the curriculum is divided into four courses; CSU has been delivering it as CNET 1105/1120/2220/2221 (12 credits total). We are reorganizing the delivery into two 4-credit courses and one 1-credit course for a total of 9-credits in the revised sequence.
4. Why are the restrictions needed? (prerequisites, co-requisites, etc.)
ITFN 1101 is required as a co-requisite if not already completed; the prerequisite is to match ITFN 1101's prerequisite of exit from learning support.
5. What impact will the addition of this course have on *other* courses and/or *other* programs at CSU? (e.g. similar courses, enrollment shifts, faculty shifts, accreditation impact, adjusted curriculum, etc.)
This course along with CNET 1131/1132 will replace the CNET 1105/1120/2220/2221 course sequence.

C. Course Content

1. What learning outcomes for the major will the course address?
 - a. Comprehension of OSI and TCP/IP Networking Model.
 - b. Comprehension and application of IPv4 addressing and subnetting.
 - c. Understanding of the networking infrastructure, including routers, switches, bridges, repeaters, interfaces, and cabling.
 - d. Operation and configuration of basic Local Area Network (LAN) infrastructure.
 - e. Operation and configuration of Virtual LANs (VLANs) and inter-VLAN routing.
 - f. Understanding of basic wireless LAN (WLAN) concepts and configuration
2. How will the course address the general education outcomes of Communication and Critical Thinking? (If not applicable to the proposed course, please explain.)

The student will apply critical thinking in troubleshooting and resolving laboratory problems.
3. Tentative course materials (textbooks, software, etc.)

CCNA Official Exam Certification Library (ICND1 & ICND2)

(CCNA Exam 640-802), 3rd Edition

By Wendell Odom.

Published by Cisco Press.

Series: Exam Certification Guide.

ISBN: 1-58720-183-6

Sept 4, 2007

Pages: 1475

Edition: 3rd

CCNA Portable Command Guide (2nd Ed.)

By Scott D. Empson

ISBN: 1-58720-193-3

Cisco Academy Web Site: <http://cisco.netacad.net>

NetLab: <http://netlab.clayton.edu>

Learn-to-Subnet: <http://www.learntosubnet.com/>

4. Expected method(s) of delivery (on-campus, on-line, hybrid, etc.)

Hybrid; lecture, on-line curriculum with activities, hands-on laboratory, on-line laboratory, and on-line assessment.

5. Attach a tentative course outline (one page or less)

Introduction to Network Fundamentals
OSI and TCP/IP Networking Models
Transmission Control Protocol (TCP) and User Datagram Protocol (UDP)
IPv4 Addressing and Subnetting
Ethernet and the IEEE 802.3 Protocol
Internetworking Operating System (IOS) Basics
Local Area Network (LAN) Design
Basic Switch Concepts and Configuration
Virtual Local Area Networks (VLANs)
Virtual Tunneling Protocol (VTP)
Spanning Tree Protocol (STP)
Inter-VLAN Routing
Basic Wireless Concepts and Configuration

D. Faculty, Facilities and Expenses

1. Will the course be taught by existing faculty with existing qualifications or will new faculty or faculty development be needed?
Existing CNET faculty will teach the course

2. What impact will having faculty teach this course have on other courses?
Elimination of course in old sequence CNET 1105/1120/2220/2221.

3. What proportion of course sections are expected to be taught by full-time and part-time faculty?
100% Full-time

4. What expenditures, if any, will be required beyond faculty salaries and routine clerical support?
(e.g. new equipment, new facilities, new software, etc.)
Existing laboratory supports laboratory infrastructure.

5. Indicate several examples of (up-to-date) library resources currently held by the CSU Library that would support the curriculum of this course.
None needed, most current information is on-line.

6. What additional library resources must be added to support the proposed course?
None

7. What is the initial funding amount for library resources? What annual amount should be added to future budgets to continue the support for the course?
None

Part E. Enrollment

1. What is the estimated number of sections per year?
two(2)
2. What is the estimated average enrollment per section?
15-20
3. What is the estimated total enrollment per year
30-40
4. What is the estimated reduction in enrollment in other courses as a consequence of the new course? (explanation, if any)
Reduction only in old course sequence CNET 1105/1120/2220/2221, there will also be an increase in ITFN lower division courses with curriculum realignment.

CNET 1131: Routing and WAN Technologies

This form is used for new course approval.

Signatures are required before submitting to the next level for review.

(Note: This form is not required for each individual course that is included in the comprehensive proposal for a new program.)

Department: Administrative & Technology Management

Degree Program: A.A.S. in Computer Networking Technology &
Certificate in Computer Networking Technician

Signature, Department Head

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

School/College: College of Professional Studies

Signature, Dean of School/College originating proposal

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

Provost Office

Signature, Associate Provost

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

CAPC

Signature, Chairperson of CAPC

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

Provost

Signature, Provost

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

A: Catalog Information

1. Subject prefix, number, and hours (SCH and contact) distribution: (Number subject to Registrar's approval.) CNET 1131 (3-2-4)

2. Title: Routing and WAN Technologies

3. Restrictions (if any):

- a. Prerequisite(s): ITFN 1101 (C or better); CNET 1130 (C or better)
- b. Co-requisite(s) (normal or absolute)
- c. Other restrictions: e.g. major, junior standing, permission, etc.
- d. Other comments: e.g. recommended sequencing, career course notice, etc.
- e. Fees: none
- f. Grade mode [normal or pass/fail]: Normal
- g. What course(s) are deleted as a consequence: CNET 1130/1131/1132 (9 hrs total) will replace CNET 1105/1120/2220/2221 (12 hrs total).

4. Course description for catalog:

This course covers TCP/IP routing concepts with emphasis on RIP, EIGRP, OSPF Single-area, VLSM, CIDR; WAN technologies including PPP, Frame Relay, Cable, DSL, broadband wireless, ACLs , VPNs, DHCP, NAT, and an introduction to IPv6..

5. Semester of Implementation: Fall 2009

B. Justification.

1. Where will the course fit in the curriculum and what students are likely to take it?
Second semester Computer Networking students in the certificate and A.A.S. program.
2. Why is the course needed at CSU?
Consolidation of course sequencing in CNET program
3. What similar courses (models) at other institutions have helped guide this proposal?
The Cisco Networking Academy CCNA curriculum is utilized by hundreds of institution world-wide, the curriculum is divided into four courses; CSU has been delivering it as CNET 1105/1120/2220/2221 (12 credits total). We are reorganizing the delivery into two 4-credit courses and one 1-credit course for a total of 9-credits in the revised sequence.
4. Why are the restrictions needed? (prerequisites, co-requisites, etc.)
ITFN 1101 and CNET 1130 are required as a prerequisite; content in these courses are required for the student to advance through the course sequence.
5. What impact will the addition of this course have on *other* courses and/or *other* programs at CSU? (e.g. similar courses, enrollment shifts, faculty shifts, accreditation impact, adjusted curriculum, etc.)
This course along with CNET 1130/1132 will replace the CNET 1105/1120/2220/2221 course sequence.

C. Course Content

1. What learning outcomes for the major will the course address?
 - a. Configuring and troubleshooting of routed networking utilizing RIP, EIGRP, or single-area OSPF protocols..
 - b. Comprehension and application of VLSM and CIDR in routed networks.
 - c. Understanding , configuration, and troubleshooting of WAN technologies
 - d. Introduction to security considerations on LANs and WANs.
 - e. Application of Access Control Lists (ACLs) to filter traffic.
 - f. Implementation of Virtual Private Networks (VPNs) for teleworker and site-to-site security.
 - g. Implementation of Dynamic Host Configuration Protocol (DHCP), Network Address Translation (NAT)
 - h. Introduction to IPv6 .
2. How will the course address the general education outcomes of Communication and Critical Thinking? (If not applicable to the proposed course, please explain.)

The student will apply critical thinking in troubleshooting and resolving laboratory problems.
3. Tentative course materials (textbooks, software, etc.)

CCNA Official Exam Certification Library (ICND1 & ICND2)

(CCNA Exam 640-802), 3rd Edition

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Pages: 1475

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CCNA Portable Command Guide (2nd Ed.)
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ISBN: 1-58720-193-3

(optional – STRONGLY Recommended)

Cisco Academy Web Site: <http://cisco.netacad.net>

NetLab: <http://netlab.clayton.edu>

Learn-to-Subnet: <http://www.learntosubnet.com/>

4. Expected method(s) of delivery (on-campus, on-line, hybrid, etc.)

Hybrid; lecture, on-line curriculum with activities, hands-on laboratory, on-line laboratory, and on-line assessment.

5. Attach a tentative course outline (one page or less)

Introduction to Routing and Packet Forwarding
Static Routing
Introduction to Dynamic Routing
Variable Length Subnet Masks (VLSM)
Classless Inter-Domain Routing (CIDR)
Distance Vector and Link-State Routing Protocols
 Routing Information Protocol (V1 and V2)
 Enhanced Interior Gateway Routing Protocol (EIGRP)
 Open Shortest Path First (OSPF) Single-Area
Introduction to Wide Area Networks (WANs)
Point-to-Point Protocol (PPP)
Frame Relay
Network Security
Virtual Private Networks (VPNs)
Access Control Lists (ACLs)
Dynamic Host Configuration Protocol (DHCP)
Network Address Translation (NAT)
Configuring and troubleshooting of routing and WAN services

D. Faculty, Facilities and Expenses

1. Will the course be taught by existing faculty with existing qualifications or will new faculty or faculty development be needed?
Existing CNET faculty will teach the course

2. What impact will having faculty teach this course have on other courses?
Elimination of course in old sequence CNET 1105/1120/2220/2221.

3. What proportion of course sections are expected to be taught by full-time and part-time faculty?
100% Full-time

4. What expenditures, if any, will be required beyond faculty salaries and routine clerical support?
(e.g. new equipment, new facilities, new software, etc.)
Existing laboratory supports laboratory infrastructure.

5. Indicate several examples of (up-to-date) library resources currently held by the CSU Library that would support the curriculum of this course.
None needed, most current information is on-line.

6. What additional library resources must be added to support the proposed course?
None

7. What is the initial funding amount for library resources? What annual amount should be added to future budgets to continue the support for the course?
None

Part E. Enrollment

1. What is the estimated number of sections per year?
two(2)

2. What is the estimated average enrollment per section?
15-20

3. What is the estimated total enrollment per year
30-40

4. What is the estimated reduction in enrollment in other courses as a consequence of the new course? (explanation, if any)
Reduction only in old course sequence CNET 1105/1120/2220/2221, there will also be an increase in ITFN lower division courses with curriculum realignment.

CNET 1132: CCNA Certification

This form is used for new course approval.

Signatures are required before submitting to the next level for review.

(Note: This form is not required for each individual course that is included in the comprehensive proposal for a new program.)

Department: Administrative & Technology Management

Degree Program: A.A.S. in Computer Networking Technology &
Certificate in Computer Networking Technician

Signature, Department Head

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

School/College: College of Professional Studies

Signature, Dean of School/College originating proposal

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

Provost Office

Signature, Associate Provost

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

CAPC

Signature, Chairperson of CAPC

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

Provost

Signature, Provost

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

A: Catalog Information

1. Subject prefix, number, and hours (SCH and contact) distribution: (Number subject to Registrar's approval.) CNET 1132 (1-0-1)

2. Title: Routing and WAN Technologies

3. Restrictions (if any):

- a. Prerequisite(s): CNET 1131 (C or better)
- b. Co-requisite(s) (normal or absolute)
- c. Other restrictions: e.g. major, junior standing, permission, etc.
- d. Other comments: e.g. recommended sequencing, career course notice, etc.
- e. Fees: none
- f. Grade mode [normal or pass/fail]: Normal
- g. What course(s) are deleted as a consequence: CNET 1130/1131/1132 (9 hrs total) will replace CNET 1105/1120/2220/2221 (12 hrs total).

4. Course description for catalog:

This course is a review of the Cisco CCNA certification topics covered in CNET 1130, and CNET 1131. Students are required to take the necessary certification CCNA exam(s) at their own cost.

5. Semester of Implementation: Fall 2009

B. Justification.

1. Where will the course fit in the curriculum and what students are likely to take it?
Third semester Computer Networking students in the certificate and A.A.S. program.
2. Why is the course needed at CSU?
Consolidation of course sequencing in CNET program
3. What similar courses (models) at other institutions have helped guide this proposal?
The Cisco Networking Academy CCNA curriculum we are utilizing is divided into four courses CSU has been delivering as CNET 1105/1120/2220/2221 (12 credits total). We are reorganizing the delivery into two 4-credit courses and one 1-credit course for a total of 9-credits in the revised sequence.
4. Why are the restrictions needed? (prerequisites, co-requisites, etc.)
CNET 1131 is required as a prerequisite; content in these courses are required for the student to advance through the course sequence.
5. What impact will the addition of this course have on *other* courses and/or *other* programs at CSU? (e.g. similar courses, enrollment shifts, faculty shifts, accreditation impact, adjusted curriculum, etc.)
This course along with CNET 1130/1131 will replace the CNET 1105/1120/2220/2221 course sequence.

C. Course Content

1. What learning outcomes for the major will the course address?
 - a. Review of Cisco CCNA certification requirements
 - b. Review of routing and switching concepts, including networking models.
 - c. Review configuration and troubleshooting of basic networks.
 - d. Certification examination
2. How will the course address the general education outcomes of Communication and Critical Thinking? (If not applicable to the proposed course, please explain.)

The student will apply critical thinking in troubleshooting and resolving laboratory problems.
3. Tentative course materials (textbooks, software, etc.)

CCNA Official Exam Certification Library (ICND1 & ICND2)

(CCNA Exam 640-802), 3rd Edition

By Wendell Odom.

Published by Cisco Press.

Series: Exam Certification Guide.

ISBN: 1-58720-183-6

Sept 4, 2007

Pages: 1475

Edition: 3rd

CCNA Portable Command Guide (2nd Ed.)
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By Scott D. Empson

ISBN: 1-58720-193-3

(optional – STRONGLY Recommended)

Cisco Academy Web Site: <http://cisco.netacad.net>

NetLab: <http://netlab.clayton.edu>

Learn-to-Subnet: <http://www.learntosubnet.com/>

4. Expected method(s) of delivery (on-campus, on-line, hybrid, etc.)

On-campus
5. Attach a tentative course outline (one page or less)

Cisco CCNA Certification Exam requirements and policies
Review of IPv4 Addressing and Subnetting
Review of Basic Router and Switching Concepts, Configuration, and Troubleshooting
Review of Routing Protocols: RIPv1, RIPv2, EIGRP, and single-area OSPF
Review of ACLs and basic network security
Review of Wireless LAN technology
Certification Examination(s)

D. Faculty, Facilities and Expenses

1. Will the course be taught by existing faculty with existing qualifications or will new faculty or faculty development be needed?

Existing CNET faculty will teach the course

2. What impact will having faculty teach this course have on other courses?
Elimination of course in old sequence CNET 1105/1120/2220/2221.
3. What proportion of course sections are expected to be taught by full-time and part-time faculty?
100% Full-time
4. What expenditures, if any, will be required beyond faculty salaries and routine clerical support?
(e.g. new equipment, new facilities, new software, etc.)
Existing laboratory supports laboratory infrastructure.
5. Indicate several examples of (up-to-date) library resources currently held by the CSU Library that would support the curriculum of this course.
None needed, most current information is on-line.
6. What additional library resources must be added to support the proposed course?
None
7. What is the initial funding amount for library resources? What annual amount should be added to future budgets to continue the support for the course?
None

Part E. Enrollment

1. What is the estimated number of sections per year?
two(2)
2. What is the estimated average enrollment per section?
15-20
3. What is the estimated total enrollment per year
30-40
4. What is the estimated reduction in enrollment in other courses as a consequence of the new course? (explanation, if any)
Reduction only in old course sequence CNET 1105/1120/2220/2221, there will also be an increase in ITFN lower division courses with curriculum realignment.

CNET 2226: Fundamentals of IP Telephony

This form is used for new course approval.

Signatures are required before submitting to the next level for review.

(Note: This form is not required for each individual course that is included in the comprehensive proposal for a new program.)

Department: Administrative & Technology Management

Degree Program: A.A.S. in Computer Networking Technology &
Certificate in Computer Networking Technician

Signature, Department Head

Date of Action

Action Taken
() Approved
() Disapproved
() Non-Applicable

School/College: College of Professional Studies

Signature, Dean of School/College originating proposal

Date of Action

Action Taken
() Approved
() Disapproved
() Non-Applicable

Provost Office

Signature, Associate Provost

Date of Action

Action Taken
() Approved
() Disapproved
() Non-Applicable

CAPC

Signature, Chairperson of CAPC

Date of Action

Action Taken
() Approved
() Disapproved
() Non-Applicable

Provost

Signature, Provost

Date of Action

Action Taken
() Approved
() Disapproved
() Non-Applicable

A: Catalog Information

1. Subject prefix, number, and hours (SCH and contact) distribution: (Number subject to Registrar's approval.) CNET 2226 (2-2-3)

2. Title: Fundamentals of IP Telephony

3. Restrictions (if any):

- a. Prerequisite(s): CNET 1131 (C or better)
- b. Co-requisite(s) (normal or absolute)
- c. Other restrictions: e.g. major, junior standing, permission, etc.
- d. Other comments: e.g. recommended sequencing, career course notice, etc.
- e. Fees: none
- f. Grade mode [normal or pass/fail]: Normal
- g. What course(s) are deleted as a consequence: None

4. Course description for catalog:

This course will prepare the student to implement an IP Telephony solution in a non-enterprise business. Topics covered will include the Public Switched Telephone Network (PSTN), Voice over IP (VoIP), call management, and Quality of Service (QoS) issues.

5. Semester of Implementation: Fall 2009

B. Justification.

1. Where will the course fit in the curriculum and what students are likely to take it?
Third semester Computer Networking students in the certificate and A.A.S. program.
2. Why is the course needed at CSU?
Revision of the certificate and A.A.S. CNET programs to support current technology and program goals. Network convergence (Data/Voice/Video) is an evolving technology into even the smallest of business networks, students must be prepared to support the technology.
3. What similar courses (models) at other institutions have helped guide this proposal?
This is a new course, designed upon the industrial CCNA-Voice certification requirements:
https://cisco.hosted.jivesoftware.com/community/certifications/voice_ccna/iiuc?view=overview

CSU is currently offering CNET 4110 which is focused on the larger enterprise business.
University of Nebraska-Kearney
University of Wisconsin-Stout
Century College
4. Why are the restrictions needed? (prerequisites, co-requisites, etc.)
CNET 1131 is required as a prerequisite; content in CNET 1131 (and thereby CNET 1130) are required to prepare the student for this course.
5. What impact will the addition of this course have on *other* courses and/or *other* programs at

CSU? (e.g. similar courses, enrollment shifts, faculty shifts, accreditation impact, adjusted curriculum, etc.)

CNET 4110 will be phased out of the B.A.S. program over the next few years, with an added restriction that students with credit in CNET 2226 can not take CNET 4110 because of the partial content overlap.

C. Course Content

1. What learning outcomes for the major will the course address?

Understanding of the Public Switch Telephone Network (PSTN).

Describe Voice over IP (VoIP) components and technologies.

Design, configure, and troubleshoot a small business IP Telephony solution.

2. How will the course address the general education outcomes of Communication and Critical Thinking? (If not applicable to the proposed course, please explain.)
The student will apply critical thinking in troubleshooting and resolving laboratory problems.

3. Tentative course materials (textbooks, software, etc.)

CCNA Voice

By J. Cioara, M. J. Cavanaugh, and K. A. Krake

ISBN: 1-58720-207-1

4. Expected method(s) of delivery (on-campus, on-line, hybrid, etc.)

On-campus

5. Attach a tentative course outline (one page or less)

The Public Switch Telephone Network (PSTN)

Converged Networks, data, voice, and video

Voice over IP (VoIP)

Vocoders and bandwidth considerations

Quality of Service (QoS) issues for VoIP

Dial Plans

Voice Gateways and Trunks

VLANs for data and voice traffic

Configuring and troubleshooting Telephony services for small businesses

D. Faculty, Facilities and Expenses

1. Will the course be taught by existing faculty with existing qualifications or will new faculty or faculty development be needed?
Existing CNET faculty will teach the course

2. What impact will having faculty teach this course have on other courses?
This course will be offered alternating semesters with CNET 2225.
3. What proportion of course sections are expected to be taught by full-time and part-time faculty?
100% Full-time
4. What expenditures, if any, will be required beyond faculty salaries and routine clerical support?
(e.g. new equipment, new facilities, new software, etc.)
Existing laboratory supports laboratory infrastructure.
5. Indicate several examples of (up-to-date) library resources currently held by the CSU Library that would support the curriculum of this course.
None needed, most current information is on-line.
6. What additional library resources must be added to support the proposed course?
None
7. What is the initial funding amount for library resources? What annual amount should be added to future budgets to continue the support for the course?
None

Part E. Enrollment

1. What is the estimated number of sections per year?
two(2)
2. What is the estimated average enrollment per section?
15-20
3. What is the estimated total enrollment per year
30-40
4. What is the estimated reduction in enrollment in other courses as a consequence of the new course? (explanation, if any)
Realignment of CNET program with less CNET prefix courses along with an increase in ITFN lower division courses.

MEMORANDUM

FROM: Dr. Douglas Wheeler, Head, Department of Music

THROUGH: Dr. Nasser Momayezi, Dean, College of Arts and Sciences

THROUGH: Curriculum Committee, College of Arts and Sciences

THROUGH: Dr. Sharon Hoffman, Provost

TO: CAPC

RE: Proposal for Modification of Course Prerequisite

DATE: January 30, 2009

We propose to revise the pre-requisite requirement for the Music Capstone MUSC 4990 course. The change would require students to successfully pass the newly instituted Junior Qualifying Examination. Since the Capstone requires the synthesis of a wide body of musical knowledge, the desire is to make sure the student is prepared, through demonstration by testing, to undertake and successfully complete a significant research assignment.

Course involved:

MUSC 4990 Music Capstone

Currently: Departmental Approval required

Proposed Change: Add: Prerequisite: Passing the Junior Qualifying Examination

Rationale for proposed changes:

Faculty have noticed that BA students are sometimes ill equipped to pursue a rigorous capstone project due to gaps in musical skills. In addition we have noticed that some talented students who should pursue a BM professional music degree would rather pursue a BA degree to avoid taking the Bachelor of Music Qualifying Examination (required of all students taking a BM degree). With this new requirement, we hope to insure that BA students will have the necessary music skills to pursue a quality capstone research project and insure that all students, regardless of degree program, will have to pass a qualifying examination prior to degree completion.

CHEM 4201: Advanced Organic Chemistry

Department: Natural Sciences

Degree Program: Bachelor of Science in Biology

Signature, Department Head

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

School/College: College of Arts and Sciences

Signature, Dean of School/College originating proposal

Date of Action **Action Taken**
() Approved
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() Non-Applicable

Provost Office

Signature, Associate Provost

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

CAPC

Signature, Chairperson of CAPC

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

Provost

Signature, Provost

Date of Action **Action Taken**
() Approved
() Disapproved
() Non-Applicable

A: Catalog Information

1. Subject prefix, number, and hours (SCH and contact) distribution: CHEM 4201 (3-0-3)

2. Title: Advanced Organic Chemistry

3. Restrictions (if any):

- a. Prerequisite(s): CHEM 2412 with a grade of C or higher.
- b. Co-requisite(s): none
- c. Other restrictions: none
- d. Other comments: none
- e. Fees: none
- f. Grade mode: normal
- g. What course(s) are deleted as a consequence: none

4. Course description for catalog:

A mechanistic study of the important classes of organic reactions will be presented. Topics include rearrangements, cycloadditions, carbocations, carbanions, free radicals, carbenes, and nitrenes. An introduction to molecular orbital theory and stereoelectronic effects will be provided.

5. Semester of Implementation:

Fall 2009

B. Justification.

1. Where will the course fit in the curriculum and what students are likely to take it?

This course will count as an elective in the biology major curriculum. It can also be used as an elective for the chemistry minor. Students seeking a biology degree, non-degree seeking pre-pharmacy students, and students seeking the chemistry minor are likely to take this course.

2. Why is the course needed at CSU?

This course is needed at CSU to offer an advanced elective in organic chemistry for science students. This course will be an elective course for Biology and Pre-pharmacy majors and Chemistry minors who wish to study advanced chemistry in graduate school. It will eventually be an elective for the BS in Chemistry that will be proposed soon. The course will be taught by a faculty member in Natural Sciences who specializes in this area. Currently there are no upper-division organic chemistry courses in the Department of Natural Sciences, yet there are two faculty members who specialize in organic chemistry. This course will provide an advanced course that organic chemistry faculty members will be able to teach.

3. What similar courses (models) at other institutions have helped guide this proposal?

Georgia Institute of Technology

CHEM 4311 - Advanced Organic Chemistry (3-0-3)

Construction reactions and functional group interconversions as applied to multistep organic synthesis.

Georgia Southern University

CHEM 4331 - Advanced Organic Chemistry (3-0-3)

A course designed to build upon the knowledge gained in CHEM 3341 (Organic I) and CHEM 3342 (Organic II). Topics covered may include considerations of structural and mechanistic organic chemistry, synthetic organic chemistry and bioorganic chemistry.

Prerequisite: CHEM 3342.

North Georgia College and State University

CHEM 4444K - Advanced Organic Chemistry - 4 hours

An advanced study of theoretical aspects of organic reactions which will include molecular orbital theory and pericyclic reactions, kinetic isotope effects, linear free-energy relationships, and solvent effects. The lecture as well as the laboratory will emphasize data analysis and the independent use of the primary literature.

Prerequisites: Organic Chemistry II, Physical Chemistry I.

Georgia Southwestern State University

CHEM 4330 - Modern Organic Chemistry (3-0-3)

A course designed to introduce students interested in organic chemistry as a profession to some of the modern theory and practice of an exciting and rewarding field. Topics will include modern synthetic and analytical methods employed by organic chemists and the theories that explain and enlarge the understanding of the art.

Pre-requisites: CHEM 3302

Valdosta State University

CHEM 4420 - Physical Organic Chemistry (3-0-3)

A study of the methods used to elucidate organic reaction mechanisms. Topics covered include: reaction kinetics, isotope effects; linear free energy relationships; general acid and base catalysis and the acidity functions; reactive intermediates including free radicals, carbenes, carbanions, and carbocations; symmetry controlled reactions; photochemistry.

Prerequisites: CHEM 3402 and CHEM 3802

4. Why are the restrictions needed? (prerequisites, co-requisites, etc.)

Students will need the background knowledge provided by Organic Chemistry I and II (CHEM 2411 and CHEM 2412) in order to be successful in this course. Therefore, a minimum grade of C in CHEM 2412 will ensure a student has this knowledge.

5. What impact will the addition of this course have on *other* courses and/or *other* programs at CSU? (e.g. similar courses, enrollment shifts, faculty shifts, accreditation impact, adjusted curriculum, etc.)

The addition of this course will have no significant impact on other courses or programs offered at CSU. The Department of Natural Sciences has an elective rotation. This course will be placed in the rotation and will be an option for science majors and minors to use in their program of study. Adding this course to the rotation will reduce the frequency of other upper-

division chemistry electives in the schedule, but the impact will be negligible. There are no similar courses taught at CSU.

C. Course Content

1. What learning outcomes for the major will the course address?

Biology Outcomes 3, 4, 5, and 7 will be addressed by this course.

3. *Apply knowledge of physical sciences, mathematics, and statistics to address biological concepts*

4. *Communicate scientific information orally and in writing*

5. *Collect, evaluate and interpret scientific data, and employ critical thinking in the natural sciences*

7. *Identify and describe the impact of biological and physical sciences on the environment and society*

2. How will the course address the general education outcomes of Communication and Critical Thinking? (If not applicable to the proposed course, please explain.)

This is not applicable to this course since this course cannot be used in the general core curriculum.

3. Tentative course materials (textbooks, software, etc.)

Smith and March, *March's Advanced Organic Chemistry: Reactions, Mechanisms, and Structure*, 6th edition

4. Expected method(s) of delivery (on-campus, on-line, hybrid, etc.)

On-campus

5. Attach a tentative course outline (one page or less)

Tentative Course Outline Topics:

1. Localized Chemical Bonding.
2. Delocalized Chemical Bonding.
3. Bonding Weaker than Covalent.
4. Stereochemistry.
5. Carbocations, Carbanions, Free Radicals, Carbenes, and Nitrenes.
6. Mechanisms and Methods of Determining Them.
7. Irradiation Processes in Organic Chemistry.
8. Acids and Bases.
9. Effects of Structure on Reactivity.
10. Aliphatic Substitution: Nucleophilic and Organometallic.
11. Aromatic Substitution, Electrophilic.
12. Aliphatic, Alkenyl, and Alkynyl Substitution, Electrophilic and Organometallic.
13. Aromatic Substitution, Nucleophilic and Organometallic.
14. Substitution Reactions: Free Radicals.
15. Addition to Carbon-Carbon Multiple Bonds.
16. Addition to Carbon-Hetero Multiple Bonds.
17. Eliminations.

18. Rearrangements.
19. Oxidations and Reductions.

D. Faculty, Facilities and Expenses

1. Will the course be taught by existing faculty with existing qualifications or will new faculty or faculty development be needed?

The course will be taught by existing faculty.

2. What impact will having faculty teach this course have on other courses?

The addition of this course will have no significant impact on other courses or programs offered at CSU. The Department of Natural Sciences has an elective rotation. This course will be placed in the rotation and will be an option for science majors and minors to use in their program of study. Adding this course to the rotation will reduce the frequency of other upper-division chemistry electives in the schedule, but the impact will be negligible. There are no similar courses taught at CSU.

3. What proportion of course sections are expected to be taught by full-time and part-time faculty?

100% full-time

4. What expenditures, if any, will be required beyond faculty salaries and routine clerical support? (e.g. new equipment, new facilities, new software, etc.)

None

5. Indicate several examples of (up-to-date) library resources currently held by the CSU Library that would support the curriculum of this course.

The following relevant journals are available via Galileo: *Organic Syntheses*; *Journal of Physical Organic Chemistry*; *Current Organic Chemistry*.

6. What additional library resources must be added to support the proposed course?

None

7. What is the initial funding amount for library resources? What annual amount should be added to future budgets to continue the support for the course?

None

Part E. Enrollment

1. What is the estimated number of sections per year? 1 / every other year
2. What is the estimated average enrollment per section? 25
3. What is the estimated total enrollment per year? 25

4. What is the estimated reduction in enrollment in other courses as a consequence of the new course? None

SCI 4901–Methods of Science Instruction For Secondary Education

Department: Natural Sciences

Degree Program: BS Biology (Secondary Education Track)

Signature, Department Head

Date of Action **Action Taken**
()Approved
()Disapproved
()Non-Applicable

School/College: **College of Arts and Sciences**

Signature, Dean of School/College originating proposal

Date of Action **Action Taken**
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()Non-Applicable

Provost Office

Signature, Associate Provost

Date of Action **Action Taken**
()Approved
()Disapproved
()Non-Applicable

CAPC

Signature, Chairperson of CAPC

Date of Action **Action Taken**
()Approved
()Disapproved
()Non-Applicable

Provost

Signature, Provost

Date of Action **Action Taken**
()Approved
()Disapproved
()Non-Applicable

A: Catalog Information

1. Subject prefix, number, and hours (SCH and contact) distribution: (Number subject to Registrar's approval.)

SCI 4901 - (3-2-4)

2. Title: Methods of Science Instruction For Secondary Education

3. Restrictions (if any):

- a. Prerequisite(s): Entrance into Teacher Education Program
- b. Co-requisite(s) (normal or absolute): N/A
- c. Other restrictions: Admission into the Biology Secondary Education Track
- d. Other comments: e.g. recommended sequencing, career course notice, etc.: N/A
- e. Fees: Explain. N/A
- f. Grade mode [normal or pass/fail]: Normal
- g. What course(s) are deleted as a consequence: None

4. Course description for catalog:

This course will explore theory and pedagogy of science instruction with a focus on teaching methods across a variety of topics. Appropriate integration of technology into science teaching and learning will be emphasized. Field experience will be included.

5. Semester of Implementation:

Fall 2010

B. Justification.

1. Where will the course fit in the curriculum and what students are likely to take it?

The course will fit into the BS in Biology Secondary Education Tract. It will be a required upper level course for students in this program.

2. Why is the course needed at CSU?

This course will provide a depth of understanding that is essential to adequately prepare graduates to teach secondary school science. It is a requirement for completion of the Secondary Education program in Biology.

3. What similar courses (models) at other institutions have helped guide this proposal?

The University of West Georgia (3-2-4)

SEED 4242 Instructional Strategies for Secondary Science Education

Prerequisite: Admission to Teacher Education.

This course is designed to introduce pre-service students to the creative and integrative processes of science and science instruction by focusing attention on problem solving, discovering, and exploring.

This course will present various instructional methods that are designed to enhance learning. We will investigate current science education theories and practices. This course will also explore the science curricula and various resources. An additional focus on this course is to help the student develop an effective science teaching style. Application for field experience required prior to enrollment. This course includes a field experience at the secondary level.

Kennesaw State University

SCED 4415. Teaching Science

Prerequisite: EDUC 3308 and permission of the science education program coordinator.

An examination of curriculum issues, learning theories, teaching strategies, instructional materials and assessment procedures for teaching secondary school science. Includes a secondary school field experience in science teaching and seminars. Proof of liability insurance is required prior to receiving a school placement.

Columbus State University

EDSE 4135. Curriculum and Methods in Secondary Science (3-6-6)

Prerequisite: Admission to Teacher Education.

Lesson and unit planning, curriculum design, implementation strategies, and selection of materials for secondary science. Emphasis on science processes and recommendations from national curriculum movements. In depth supervised participation in planning, instructing and assessing student learning. Teacher candidates will develop and refine skills for teaching whole class groups of adolescents in grades 6-12.

4. Why are the restrictions needed? (prerequisites, co-requisites, etc.)

To ensure necessary level of science preparation. Students who have not already been accepted into the Secondary Education program in Biology will not be allowed to take the course.

5. What impact will the addition of this course have on *other* courses and/or *other* programs at CSU? (e.g. similar courses, enrollment shifts, faculty shifts, accreditation impact, adjusted curriculum, etc.)

The addition of this course will not impact other courses at CSU because it is a unique course specific to secondary education program. A science education lecturer will be hired to teach this course so it should not cause any shifts in faculty assignments. The addition of this course, along with other secondary teacher education courses, will require Natural Sciences to adjust the Biology degree program. A memo describing the curriculum change is included.

C. Course Content

1. What learning outcomes for the major will the course address?

Teacher Education Unit Outcomes 1, 2, 3, 4, 5 and 6.

Outcome 1. Diagnoses Learning Needs

Candidate uses a variety of assessment techniques and utilizes appropriate technologies to gather information about all students and integrates this information to determine learners' strengths and areas to be developed.

Outcome 2 Plans for Student Learning

Candidate integrates knowledge of discipline content, of the nature of diverse learners, of learning theories, of instructional strategies and of state/local curriculum guides to plan instruction.

Outcome 3. Facilitates Student Learning

Candidate implements instructional plans with flexibility and is guided by knowledge of discipline content, of the nature of all learners, of learning theories and of instructional strategies.

Outcome 4. Demonstrates Appropriate Knowledge

Candidate has general knowledge across a broad spectrum of liberal arts and sciences and possesses discipline specific knowledge at a level appropriate for the chosen teaching field.

Outcome 5. Fosters Student Well being to Support Learning

Candidate interacts with diverse students, school colleagues, parents, and agencies in the larger community to foster student well being and learning.

Outcome 6. Assumes the Role of Professional Teacher

Candidate acts in accordance with the structure, standards and responsibilities of the profession and recognizes the role of the school in supporting a democratic society.

Biology Outcomes 2, 4, 5, and 6.

Outcome 2: Demonstrate a mastery of a broad range of basic lab and technology skills applicable to biology.

Outcome 4: Communicate scientific information in a clear and concise manner both orally and in writing.

Outcome 5: Demonstrate the ability to collect, evaluate and interpret scientific data, and employ critical thinking to solve problems in biological science and supporting fields.

Outcome 6: Collaborate effectively on team-oriented projects.

2. Tentative course materials (textbooks, software, etc.)
 - Chiappetta, E.L., and Koballa, T.R. (2008) *Science instruction in middle and secondary schools*. Upper Saddle River: Merrill Prentice-Hall.
 - Koballa, T.R., and Tippins, D.J. (2004) *Cases in middle and secondary science education: The promise and dilemmas*. Upper Saddle River: Merrill Prentice-Hall.
3. Expected method(s) of delivery (on-campus, on-line, hybrid, etc.)

On campus and in the field.

4. Attach a tentative course outline (one page or less)

Lecture Topics

- I. Thinking through Teaching Dilemmas
- II. Analyzing Literary Works in Science Classes
- III. Field/Laboratory Journal, Scientific Observations and the Scientific Method
- IV. Teaching Science with Essential Questions: Inquiry Science
- V. Problem Solving
- VI. Using Controversy to Teach Science Lessons
- VII. Classroom/Laboratory Safety and Fire Safety
- VIII. Citizen Science and Service Learning
- IX. Diverse Learners
- X. Assessment and Evaluation
- XI. Using the Web to Teach Science (web design, web resources, etc.)

Activities

- I. Creating a Learning Unit:
 - a. Lesson plans
 - b. Pre/post tests
 - c. Vocabulary lists
 - d. Background knowledge
 - e. Projects
 - f. Rubrics
 - g. Instructional strategies
- II. Journal on field experiences
 - a. Weekly Plans
 - b. Reflections on success and difficulties
 - c. Changes to make
- III. Class assignments associated with text readings
- IV. Judging science fairs

V. Lab lesson design and presentation

D. Faculty, Facilities and Expenses

1. Will the course be taught by existing faculty with existing qualifications or will new faculty or faculty development be needed?

The course will be taught by a new science education faculty member.

2. What impact will having faculty teach this course have on other courses?

No impact since we will hire a new faculty member to teach the course.

3. What proportion of course sections are expected to be taught by full-time and part-time faculty?

The course will be taught by full-time faculty.

4. What expenditures, if any, will be required beyond faculty salaries and routine clerical support? (e.g. new equipment, new facilities, new software, etc.)

None.

5. Indicate several examples of (up-to-date) library resources currently held by the CSU Library that would support the curriculum of this course.

- The American Biology Teacher
- Journal of Research in Science Teaching
- School Science and Mathematics
- The Journal of Computers in Math & Science Teaching

6. What additional library resources must be added to support the proposed course? None.

7. What is the initial funding amount for library resources? What annual amount should be added to future budgets to continue the support for the course? None.

Part E. Enrollment

1. What is the estimated number of sections per year? 1
2. What is the estimated average enrollment per section? 10 initially and 30 later
3. What is the estimated total enrollment per year? 10 initially and 30 later
4. What is the estimated reduction in enrollment in other courses as a consequence of the new course? (explanation, if any) 0

Below is an excerpt from the Academic Catalog including changes to be made by this proposal.

Bachelor of Science in Biology

The Bachelor of Science (B.S.) degree in Biology has been designed in consultation with Georgia employers to fit present and emerging needs in the State of Georgia. The program features two tracks: General Biology and Secondary Teacher Education. The General Biology track has emphasis in areas in Biomedical Applications, preparation for graduate school, Pre-Veterinary Medicine, Forensic Science, Environmental Science, Pre-Pharmacy, and Physical Therapy and Physicians Assistant Program Preparation. The Secondary Teacher Education track is designed to prepare students to teach high school science courses.

BACHELOR OF SCIENCE IN BIOLOGY DEGREE PROGRAM REQUIREMENTS

Core Curriculum (Areas A - E)42 hours

All Core Curriculum requirements for the Biology degree are shown in the suggested degree program sequence.

Lower Division Core Requirements (Core Curriculum Area F)18 hours

BIOL 1107 Principles of Biology I	3 hours
BIOL 1107L Principles of Biology Laboratory I.....	1 hour
BIOL 1108 Principles of Biology II	3 hours
BIOL 1108L Principles of Biology Laboratory II.....	1 hour
BIOL 2500 Introductory Plant Biology.....	2 hours
CHEM 2411 Organic Chemistry I.....	3 hours
CHEM 2411L Organic Chemistry Laboratory I.....	1 hour
CHEM 2412 Organic Chemistry II.....	3 hours
CHEM 2412L Organic Chemistry Laboratory II.....	1 hour

Upper Division Biology Major Core Requirements32 hours

BIOL 3200 Cell Biology.....	3 hours
BIOL 3250 Introductory Microbiology	3 hours
BIOL 3250L Introductory Microbiology Laboratory	1 hour
BIOL 3380 Evolution and Population Biology	3 hours
BIOL 3500 Ecology	3 hours
BIOL 3500L Ecology Laboratory	1 hour
BIOL 3650 Comparative Vertebrate Anatomy.....	3 hours
BIOL 3650L Comparative Vertebrate Anatomy Laboratory	1 hour
BIOL 4100 Animal Physiology	3 hours
BIOL 4201 Genetics.....	3 hours
PHYS 1111 Introductory Physics I	3 hours
PHYS 1111L Introductory Physics Laboratory I	1 hour
PHYS 1112 Introductory Physics II.....	3 hours
PHYS 1112L Introductory Physics Laboratory II	1 hour

Deleted: 45

Deleted: BIOL 3100
Biocomputing . 3 hours¶

Deleted: BIOL 3222 Off-Campus
Internship, BIOL 3223 On-Campus
Internship, BIOL 3224 Introductory
Research or BIOL 4222 Biology
Research Practicum . 3 hours¶

Deleted: BIOL 4202L Biotechnology
Laboratory . 3 hours¶
BIOL 4500 Biology Seminar . . 1 hour¶
BIOL 4999A or BIOL 4999B Student
Evaluation . 0 hours¶
CHEM 4202 Biochemistry I . 3 hours¶

Biology Major Tracks (Choose one track).

Option 1: General Biology Track..... 28 hours

BIOL 4900 Biocomputing	3 hours
BIOL 3222 Off-Campus Internship, BIOL 3223 On-Campus Internship, BIOL 3224 Introductory Research or BIOL 4222 Biology Research Practicum*.....	3 hours
BIOL 4202L Biotechnology Laboratory.....	3 hours
CHEM 4202 Biochemistry I.....	3 hours
BIOL 4500 Biology Seminar	1 hour
BIOL 4999A or BIOL 4999B Student Evaluation	0 hours
<u>Emphasis Area Courses (select 15 hours from one of the seven areas).....</u>	<u>15 hours</u>

* Consult your advisor to determine which of these courses best fits your academic needs.

Option 2: Secondary Teacher Education Track 31 hours

EDUC 2110 Investigating Critical/Contemp. Issues	3 hours
EDUC 2120 Exploring Socio-Culture	3 hours
EDUC 2130 Exploring Teaching & Learning	3 hours
EDUC 3030 Exploring-Exceptional Learner	3 hours
EDUC 3200 Curriculum and Assessment	3 hours
EDUC 3210 Classroom Management	3 hours
EDUC 4003 Seminar	1 hour
EDUC 4730 Internship	8 hours
SCI 4901 Methods and Strategies for Secondary Science Teachers	4 hours

MEMORANDUM

TO: John Burningham, Chair of CAPC

CC: Erica Gannon

FROM: Dr. Nasser Momayezi, Dean of the College of Arts and Sciences

RE: Proposal for the modification of the existing Biology Program curriculum

DATE: November 10, 2008

Modification of the Biology Program Curriculum:

We propose to revise the Biology curriculum. Below are bullet points summarizing the proposed revisions. Also attached is a marked version of the proposed curriculum compared to the current curriculum. “Track changes” was used to show the changes in the catalog curriculum.

- **Change #1:** The Department of Natural Sciences is going to include a track for Biology majors who want to teach high school science courses. We have included a “Secondary Teacher Education” track in the existing Biology degree program. Students can complete a BS in Biology and be certified to teach high school science courses. The BS in Biology degree program with the Secondary Teacher Education track includes 123 total hours (see discussion below). The EDUC courses in the BS in Biology Secondary Education track will be taught by the Department of Teacher Education. Course proposals to support secondary education tracks in various existing baccalaureate programs (History, English, and Math) will be submitted soon by the Department of Teacher Education.

○ **Justification (see attached USG Strategic Plan):**

- There is currently a shortage of secondary education teachers in Science, Technology, Engineering and Math (STEM) fields in Georgia. The University System of Georgia Strategic Plan goal number four states that the USG will strengthen its partnerships with the state’s other education agencies. Within this goal the USG will address the challenge of increasing demand for high quality, effective teachers for Georgia’s public schools. Two actions proposed by the Board of Regents are to double the number and diversity of teachers produced by USG institutions and to prepare more mathematics and science teachers at USG institutions. Clayton State is including this new track to help meet the USG strategic plan to double the number of teachers and to prepare more science teachers at USG institutions.
- The proposed BS in Biology with Secondary Teacher Education Track is very similar to other models at sister institutions. It requires 123 credit hours, which is actually lower than other schools such as Kennesaw State University.

- **Change #2:** Department of Natural Sciences is going to change the Upper Division Biology Core by moving the following courses from the Upper Division Biology core to a track called “**General Biology**”:

CHEM 4202	BIOL 4202L	BIOL 4900
BIOL 4999 A or B	Choice of Internship/Practicum Course	

After this change is complete ALL Biology majors will be required to complete the general core curriculum areas A-F (60 hours), the Biology core (32 hours) and one of two tracks. The track called “General Biology Track” will contain 28 hours and will include the courses listed above along with 15 additional hours (directed electives) they select from courses listed in 7 different emphasis areas. These emphasis areas currently exist. This track will be taken by students who do not aim to be certified as secondary education teachers. The track called “Secondary Teacher Education Track” will contain 31 hours and will include courses specific to secondary education. Please see the proposed new curriculum for details.

○ **Justification:**

- In order to be properly prepared for teaching high school science courses, several criteria should be met. First, teachers should have the knowledge and ability to meet the Georgia performance standards, Professional Standards Commission certification rules and the National Council for Accreditation of Teacher Education standards. The Department of Teacher Education will propose several new courses to prepare Secondary Education majors in these areas. It has been determined that secondary education majors should have at least 31 credit hours to prepare them for teaching and to meet accrediting agencies standards. The 31 credit hours of courses will be placed in the “Secondary Teacher Education” track. It is also important that teachers have the scientific knowledge required to teach high school students science effectively. The National Science Teacher Association guidelines and the Georgia Performance Standards for grades 9-12 are clearly met by the newly proposed biology core and the existing areas D and F of general education core of the Biology degree. The courses that were removed are not necessary for high school science teachers to teach well and are not typically found in a Secondary Education Science Program. They are geared towards students who are seeking to either go to graduate school in a biological and biochemical related field or to professional school in a medical related field.
- There may be some concern that the BS in Biology Program with a track in Secondary Teacher Education has 123 total hours, which is 3 hours more than a typical BS program. Most Secondary Education Programs do have over 120 hours. The University System of Georgia has, in the past, approved program slightly above 120 hours in teacher education due to the accreditation requirements. There is no other 3 hour course that can be removed from the Secondary Teacher Education Track or the Biology Core that would not compromise the student’s ability to gain adequate knowledge in biology or teacher education.