

FORMAT 1

Submit original with signatures + 1 copy + electronic copy to Faculty Senate (Box 7500).
See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/> for a complete description of the rules governing curriculum & course changes.

TRIAL COURSE OR NEW COURSE PROPOSAL

SUBMITTED BY:

Department	Computer Science	College/School	CEM
Prepared by	Jon Genetti	Phone	474-5737
Email Contact	jdgenetti@alaska.edu	Faculty Contact	same

1. ACTION DESIRED (CHECK ONE):

Trial Course	<input type="checkbox"/>	New Course	<input checked="" type="checkbox"/>
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2. COURSE IDENTIFICATION:

Dept	CS	Course #	371	No. of Credits	3
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Justify upper/lower division status & number of credits: Will have ENGL 211/213 and CS 202 as prerequisites and requires knowledge of mid-level CS concepts. Standard lecture course with 3 hours of contact time per week.

3. PROPOSED COURSE TITLE: Computer Ethics and Technical Communication

4. To be CROSS LISTED? YES/NO

NO	If yes, Dept:		Course #	
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(Requires approval of both departments and deans involved. Add lines at end of form for additional required signatures.)

5. To be STACKED? YES/NO

NO	If yes, Dept.		Course #	
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Stacked course applications are reviewed by the (Undergraduate) Curricular Review Committee and by the Graduate Academic and Advising Committee. Creating two different syllabi—undergraduate and graduate versions—will help emphasize the different qualities of what are supposed to be two different courses. The committees will determine: 1) whether the two versions are sufficiently different (i.e. is there undergraduate and graduate level content being offered); 2) are undergraduates being overtaxed?; 3) are graduate students being undertaxed? In this context, the committees are looking out for the interests of the students taking the course. Typically, if either committee has qualms, they both do. More info online – see URL at top of this page.

6. FREQUENCY OF OFFERING: Every Fall

Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) — or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING (AY2013-14 if approved by 3/1/2013; otherwise AY2014-15) Fall 2013

8. COURSE FORMAT:

NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school's curriculum council. Furthermore, any core course compressed to less than six weeks must be approved by the core review committee.

COURSE FORMAT: (check all that apply)

<input type="checkbox"/>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input checked="" type="checkbox"/>	X	6 weeks to full semester
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OTHER FORMAT (specify)

Mode of delivery (specify lecture, field trips, labs, etc) Lecture

9. CONTACT HOURS PER WEEK:

3	LECTURE hours/weeks	0	LAB hours/week	0	PRACTICUM hours/week
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Note: # of credits are based on contact hours. 800 minutes of lecture=1 credit. 2400 minutes of lab in a science course=1 credit. 1600 minutes in non-science lab=1 credit. 2400-4800 minutes of practicum=1 credit. 2400-8000 minutes of internship=1 credit. This must match with the syllabus. See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-guidelines-for-computing/> for more information on number of credits.

OTHER HOURS (specify type)

10. COMPLETE CATALOG DESCRIPTION including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible):

Example of a complete description:

FISH F487 W, O Fisheries Management

3 Credits Offered Spring

Theory and practice of fisheries management, with an emphasis on strategies utilized for the management of freshwater and marine fisheries. Prerequisites: COMM F131X or COMM F141X; ENGL F111X; ENGL F211X or ENGL F213X; ENGL F414; FISH F425; or permission of instructor. Cross-listed with NRM F487. (3+0)

CS F371 Computer Ethics and Technical Communication

3 Credits Offered Fall

Explores the social, legal and ethical issues aggravated, transformed or created by computer technology. Additional focus on technical communication skills needed in the computer industry. Prerequisites: ENGL F211X or ENGL F213X; COMM F131X or COMM F141X; CS F202. (3+0)

11. COURSE CLASSIFICATIONS: Undergraduate courses only. Consult with CLA Curriculum Council to apply S or H classification appropriately; otherwise leave fields blank.

H = Humanities

S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? **If YES, attach form.**

YES:

NO:

IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive, **Format 6**

W = Writing Intensive, **Format 7**

Natural Science, **Format 8**

11.A Is course content related to northern, arctic or circumpolar studies? If yes, a

“snowflake” symbol will be added in the printed Catalog, and flagged in Banner.

YES

NO

12. COURSE REPEATABILITY:

Is this course repeatable for credit?

YES

NO

Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).

How many times may the course be repeated for credit?

TIMES

If the course can be repeated for credit, what is the maximum number of credit hours that may be earned for this course?

CREDITS

If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course?

CREDITS

13. GRADING SYSTEM: Specify only one. Note: Later changing the grading system for a course constitutes a Major Course Change.

LETTER:

PASS/FAIL:

RESTRICTIONS ON ENROLLMENT (if any)

14. PREREQUISITES

ENGL 211X or ENGL 213X; COMM I31X or COMM 141X; CS 202

These will be *required* before the student is allowed to enroll in the course.

Reference the registration implications below due to Banner coding of these terms:

Prerequisite: Course completed and grade of “C” (2.0) or higher prior to registering for the course that requires it.

Concurrent: Course may be taken simultaneously (and allows for a course to have been previously completed).

Co-requisite: Courses **MUST** be taken simultaneously and does **NOT** allow for fact that a course was previously completed!

15. SPECIAL RESTRICTIONS, CONDITIONS

16. PROPOSED COURSE FEES

\$0

Has a memo been submitted through your dean to the Provost for fee approval?

Yes/No

17. PREVIOUS HISTORY

Has the course been offered as special topics or trial course previously?

Yes/No

NO

If yes, give semester, year, course #, etc.:

18. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

A faculty member to teach the course once a year and a classroom for the course. The department will use 0.25 FTE saved from suspension of the MSE program.

19. LIBRARY COLLECTIONS

Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

No

Yes

No library resources are necessary.

20. IMPACTS ON PROGRAMS/DEPTS

What programs/departments will be affected by this proposed action?

Include information on the Programs/Departments contacted (e.g., email, memo)

None.

21. POSITIVE AND NEGATIVE IMPACTS

Please specify **positive and negative** impacts on other courses, programs and departments resulting from the proposed action.


Based on assessment, this will better prepare CS majors for their senior capstone sequence (CS 471/472).

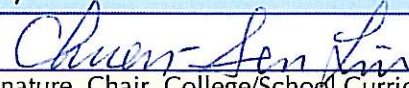
JUSTIFICATION FOR ACTION REQUESTED

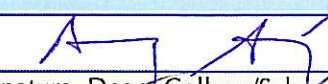
The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

See attached.

APPROVALS: Add additional signature lines as needed.

 Date 11/1/12
Signature, Chair, Program/Department of: Computer Science

 Date 11/06/12
Signature, Chair, College/School Curriculum Council for: Engineering and Mines

 Date 11/10/12
Signature, Dean College/School of: Engineering and Mines

Offerings above the level of approved programs must be approved in advance by the Provost.

Signature of Provost (if above level of approved programs) Date

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

	Date	
Signature, Chair Faculty Senate Review Committee: ___Curriculum Review ___GAAC ___Core Review ___SADAC		

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

	Date	
Signature, Chair, Program/Department of:		
	Date	
Signature, Chair, College/School Curriculum Council for:		
	Date	
Signature, Dean, College/School of:		

JUSTIFICATION FOR ACTION REQUESTED

In the Computing Accreditation Commission of ABET final statement dated 8/13/2012, they listed a program deficiency:

Criterion 3. Student Outcomes. The criterion requires that the program must enable students to attain, by the time of graduation: "(e) An understanding of professional, ethical, legal, security and social issues and responsibilities." There is no clear evidence of instruction in any of the courses in the computer science curriculum that addresses social, ethical and legal issues related to the computing discipline.

...

This weakness will be examined carefully at the next review. In preparation for that review, the CAC anticipates the preparation of documentation with respect to this shortcoming that focuses on the following items:

- *The new course "Computer Ethics and Technical Communication" is to be implemented, and a full syllabus for the course is to be provided*
- *Evidence of assessment work done on the new course as well as any continued work on existing courses as it pertains to this outcome.*

The current catalog does not have a course that covers computer ethics in detail, so we need to create one. In our assessment reports last year, we also noted several weaknesses under the following criteria:

*B3 – Ability to create a Software Requirements Document
C3 – Ability to design a software system based on a Software Requirements Document
D4 – Ability to create effective program documentation (as a group)
D7 – Ability to contribute effectively to a group presentation
E1 – Understand and apply the ACM code of ethics
E2 – Understands and honors the property rights of others
E3 – Demonstrates ethical decision making
F1 – Ability to write a technical "white paper"
F2 – Ability to give an effective oral presentation
F3 – Ability to create effective program documentation*

A recommendation from the assessment report:

CS 371: Computer Ethics and Technical Communication (new course)

- *Require creation of a software process document to improve performance for criteria B3 and C3.*
- *Cover writing a user's manual. (D4)*
- *Use video to help presentation skills. (D7)*
- *Include an ethics component to increase amount of ethics in curriculum and improve performance for criteria E1, E2 and E3.*
- *Cover specifics of GPL, BSD, public domain, and commercial licenses. (E2)*
- *Cover the difference between "I think X is illegal" and "X violates USC23.197(q)", particularly as it relates to policy issues in large organizations. (E3)*
- *Require creation of a technical white paper to improve performance for criteria F1.*
- *Require a technical presentation to improve performance for criteria F2.*
- *Require creation of a user's manual to improve performance for criteria F3.*

ENGL 314 does not cover enough of the technical writing skills (noted above) needed, nor can it be modified since it must be accessible to all students. The department agreed (and reported) that for these reasons we should develop a new course as part of our curriculum update. The department also decided to drop ENGL 314 as a required course to maintain the same number of credits for graduation.

We would like to offer this class as a new permanent course starting the Fall 2013 semester.

CS 371 - F01
Computer Ethics and Technical Communication – 3 credits
Fall 2013

Instructor: Dr. Jon Genetti
Email: jdgenetti@alaska.edu
Office: 208-B Chapman
Office Phone: 474-5737
Office Hours: TBD or by appointment

Prerequisites: ENGL 211X or ENGL 213X; COMM 131X or COMM 141X; CS 202

Required Text: *Ethical and Social Issues in the Information Age* by Joseph Kizza, Springer, 2nd edition.

Location and Time: Room TBD, MWF TBD

Catalog description: Explores the social, legal and ethical issues aggravated, transformed or created by computer technology. Additional focus on technical communication skills needed in the computer industry.

Course goals: To introduce you to the social, legal and ethical issues created as a result of computer technology. Some issues have been aggravated (made into a problem by computer technology,) some have been transformed (made into a different problem,) or created issues that never existed before (e.g. cell phone tracking.) Also to provide you with the technical communication skills needed for successful completion of your degree and your future work in industry.

Assessment: The following items will be used in the following proportions to determine student grades.

Software Requirements Document*	10%
User's Manual*	10%
White Paper 1*	5%
White Paper 2*	5%
White Paper 3*	5%
Computer Ethics Case Study*	10%
Legal/Social Issue Case Study*	10%
Resume/Cover Letter*	5%
Presentation	10%
Mid-term Exam	15%
Final Exam	15%

Expected Student Outcomes:

- Ability to create a Software Requirements Document (B3)
- Ability to contribute effectively to a group presentation (D7)
- Understand and apply the ACM code of ethics (E1)
- Understands and honors the property rights of others (E2)
- Demonstrates ethical decision making (E3)
- Ability to write a technical "white paper" (F1)
- Ability to give an effective oral presentation (F2)
- Ability to create effective program documentation (F3)

Instructional Methods – Classroom lectures, case studies, written/oral assignments.

Assignments – Assignments will reinforce lecture concepts and demonstrate application of critical thinking skills. Unless otherwise specified, all assignments must be done on an individual basis. **LATE SUBMISSIONS WILL NOT BE ACCEPTED.** Assignments marked with an * will be evaluated based on:

Formatting and layout (Does it look like a professional created it?)	20%
Spelling and grammar	20%
Technical content (is it complete and correct?)	60%

Policies – Examinations **must** be taken at the scheduled time. In particular, there **will be no** early final exams. You may discuss homework assignments with others, but everything you turn in **must** be your own work.

Disabilities Services – The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. I will work with the Office of Disabilities Services (208 Whitaker Bldg, 474-5655) to provide reasonable accommodation to students with disabilities.

Tentative Schedule:

Week 1:

- Lecture 1: Introduction & course mechanics
- Lecture 2: What is Computer Ethics?
- Lecture 3: ACM Code of Ethics for computer science professionals

Week 2:

- Lecture 4: A resume for technical professions
- Lecture 5: Cover letters and memos (Assignment: cover letter and resume)
- Lecture 6: Program help screens and documentation

Week 3:

- Lecture 7: Aggravated social issues
- Lecture 8: Aggravated ethical issues (Assignment: written case study)
- Lecture 9: Aggravated legal issues

Week 4:

- Lecture 10: Transformed social issues
- Lecture 11: Transformed ethical issues
- Lecture 12: Transformed legal issues

Week 5:

- Lecture 13: New social issues
- Lecture 14: New ethical issues (Assignment: written case study)
- Lecture 15: New legal issues

Week 6:

- Lecture 16: Case study presentations (each student gives a 10-15 minute presentation)
- Lecture 17: Case study presentations (each student gives a 10-15 minute presentation)
- Lecture 18: Case study presentations (each student gives a 10-15 minute presentation)

Week 7:

- Lecture 19: Mid-term exam review
- Lecture 20: In-class mid-term exam
- Lecture 21: Mid-term exam feedback and discussion

Week 8:

- Lecture 22: What is a technical white paper?
- Lecture 23: How to write a white paper (Assignment: White Paper 1)
- Lecture 24: How to do a cost-benefits analysis

Week 9:

- Lecture 25: What is a software requirements document?
- Lecture 26: How to specify software requirements (Assignment: Software Requirements Document)
- Lecture 27: What is a software design document?

Week 10:

- Lecture 28: What is a software process?
- Lecture 29: What is the Waterfall Model?
- Lecture 30: What is the Agile Model?

Week 11:

Lecture 31: How to write a user's manual

Lecture 32: How to write a user's manual (Assignment: User's Manual)

Lecture 33: Types of live program help

Week 12:

Lecture 34: Intellectual Property Rights

Lecture 35: Software Licenses (Assignment: White Paper 2)

Lecture 36: Open-source and free software licenses

Week 13:

Lecture 37: History of software patents

Lecture 38: Software patents today

Lecture 39: Legal issues from software patents (Assignment: White Paper 3)

Week 14:

Lecture 40: Case study: litigation based on software patents

Lecture 41: Case study: litigation based on software licensing

Lecture 42: Case study: current computer ethics scenario

Week 15:

Lecture 43: Case study: current event

Lecture 44: Final exam review

Lecture 45: Final exam