University Studies Cluster Course Addition Adding an already approved "U" course to another cluster  
(When addressing questions, please attach a separate sheet)

1. COURSE TITLE AND NUMBER: CS 347U: The Internet Age

PROPOSING FACULTY (Name, signature, and department): Wu-chang Feng

CMPS

TO WHAT CLUSTER ARE YOU PROPOSING ADDING THIS "U" COURSE? Freedom, Privacy, and Technology

FOR WHAT OTHER CLUSTER(S) HAS THIS COURSE ALREADY BEEN APPROVED? None

1. AVAILABILITY: With what regularity has the course been—or will the course be—offered? Annually

2. GENERAL EDUCATION GOALS: SUITABILITY & CLUSTER INTEGRITY Discuss the place of this particular course within the cluster to which you wish to add it, indicating how adding the proposed course will contribute to, while also sustaining, the thematic integrity of the cluster. See attached proposal

OBTAIN CHAIR AND CLUSTER COORDINATOR SIGNATURES BEFORE SUBMITTING

DEPARTMENT CHAIR(S): Wu-chang Feng

DATE: 12/1/08 DATE: 

CLUSTER COORDINATOR James

DATE: 12/1/08

THE ORIGINAL + 3 COPIES OF THE PROPOSAL MUST BE RECEIVED AT UNIVERSITY STUDIES (CH 117) BY NOVEMBER 7, 2008

Proposals submitted by this due date will be reviewed for inclusions in clusters beginning in AY 2009 - 2010.

PROPOSING FACULTY Wu-chang Feng

COURSE NUMBER AND TITLE CS 347U: The Internet Age
COURSE APPROVED FOR CLUSTER INCLUSION
All changes to Clusters must be approved by PSU's Senate Curriculum Committee.

CHAIR UNST COMMITTEE: ____________________________

DATE: ________________ . DATE: ________________ .

CHAIR, CLUSTER COORDINATOR: ____________________________.

DATE: ___________ 1/1/08.
University Studies Cluster Proposal Cover Sheet
For Academic Year 2009-2010

Cluster Proposed for: Freedom, Privacy, and Technology
Title of course: The Internet Age
Course Number: CS 347 U
Proposing Faculty: Wu-chang Feng
Cluster Coordinator: Jamie Ross

Proposal Type:
___ Cluster Course to New Cluster
__ New Course to Cluster
___ Removal

Other clusters this course is assigned to: None

Proposals are due to the University Studies office (CH 117) with 12 duplicate copies by Friday, November 9, 2007 so that they may be reviewed and forwarded to the UCC Committee for final approval.
PROPOSING FACULTY
Wu-chang Feng, CMPS (Computer Science)

Signature:

PROPOSED CLUSTER
Freedom, Privacy, and Technology

1. THE COURSE

A. COURSE TITLE, NUMBER, AND CATALOG DESCRIPTION
CS 347U: The Internet Age
This course examines the Internet and its evolution over the last 30 years. The course will start with an overview of the Internet's design philosophy and architecture, along with some of its essential protocols. We will then examine contemporary technical, social, political and legal issues that it now faces including:

- Design flaws and vulnerabilities (spam, malware, DNS/route hijacking)
- User privacy and security (privacy, anonymity, authentication, secrecy, non-repudiation)
- Conflicts with the law (net neutrality, intellectual property, freedom of speech)
- Disruptive influence on traditional businesses (media delivery, telephony)
- Evolution as a social medium (netnews, bulletin boards, IRC, social networks)
- Evolution as a publishing medium (blogs, Wikis, RSS, Mashups)
- Internet governance (TLD control, IP address allocation, international cooperation)

B. DEVELOPMENT
This is a new course

C. AVAILABILITY
The course will be offered annually at a minimum. It will be more frequently offered based on demand

D. PREREQUISITES
None

2. COURSE OUTLINE
Course readings will consist of on-line materials provided by the instructor each week.

Weeks 1-2 (Internet Basics)
- A crash course on how it works
  - Needed to explain some of the security/privacy/legal issues
  - How did we get here?
  - How was it designed?
  - What does it consist of?
- The Internet's naming system
- How to register and setup your own (Register.com)
- Why is it open to identity spoofing attacks?
- The Web's transport system
- How to make it scalable
- Why it is open to denial of service attacks?

- The Internet's postal service
- What makes it open to spam and phishing attacks?

Week 3-4 (Changing society)
- Changing modes of communication: The web as a social phenomenon
  - How our communication modes evolved over the Internet
  - E-mail, NetNews (small group communication), IRC
  - Instant messaging, Social networks via Facebook/MySpace/LinkedIn
  - Within on-line games
    - Second Life (secondlife.com virtual world)

- Changing content-generation: Towards user-driven content
  - How user-participation in content generation changed the web.
  - Community-driven news (Slashdot, Youtube)
  - Blogs (Blogger.com)
  - Wikis (Wikipedia)
  - Users as producers and consumers

- Changing knowledge distribution: The web as a reference resource
  - Issues in citing web sources
  - The problem of accuracy and attribution
  - The non-persistent nature of web content

- Changing commerce: Connecting buyers and sellers
  - Enabling open markets and facilitating transactions
  - Obsoleting bricks and mortar: EBay, Amazon, Paypal
  - Obsoleting traditional markets: VoIP/Skype
    - Before, Internet data over voice network (modems)
    - Now, voice over data network (Skype) -> gateways to voice network

Week 5-6 (Issues with governments and the law)
- Privacy
  - What are common threats to privacy on the Internet?
    - Referer URLs, Cookies, Saved form and password data
    - Password and account stealing
  - What can the government legally collect?
    - IP addresses, request history, password data?
  - Do wiretapping laws apply to VoIP (voice over IP) data?
  - Preserving privacy with technology
    - Cryptography and its use on the Internet
    - https, virtual private networks, 802.11 security via WEP/WPA

- Intellectual property
  - YouTube and fair-use
  - Blogs and excerpting articles
  - The legality of deep-linking
3. GENERAL EDUCATION GOALS

A. COURSE CONTENT & SUITABILITY FOR CLUSTER

The course directly addresses the themes of freedom and privacy and what they mean in the context of the Internet. The course will address how laws are applied to network communication. In addition, the basic technical underpinnings of the Internet will be covered so that students can explore how technology can often circumvent laws.

B. UNST GOALS

The course encourages Inquiry and Critical Thinking by forcing students to analyze and write about contemporary issues related to the Internet. Students will become experts on a number of specific topics and will use a combination of slide presentations, blogs, and forums to analyze, organize, and communicate their thoughts on those topics to the rest of the class. The course will also address ethics and responsibility in the context of the
Internet by examining controversial topics such as spam and vulnerability disclosure.

C. CLASSROOM ENVIRONMENT
The course will combine traditional lectures with small breakout groups on individual topics, in-class round-table discussion, and virtual interaction outside of the classroom. The lectures will be used to teach the technical underpinnings of the Internet that must be understood before tackling important problems facing the Internet. Smaller breakout groups and round-table discussions will occur when tackling specific contemporary topics. Finally, the course will make active use of blogging, bulletin-board and wiki software to encourage on-line discussion of topics outside of the classroom (a virtual lab).