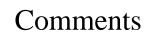# CS and CpE Curriculum Review

Department of Computer Science

University of Virginia

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Comments

- Course on Internet applications
  - not same as networking course
  - covers implications
  - Java, Javabeans, XML, wireless
  - building applications in a distributed environment
  - systems integration

Internet Applications Architecture

- Java applets
- net model
- network standards
  - IETF
  - IP multicast
- web programming
- new net ___

- integration of
  - wireless
  - TCP/IP
  - PSDN
  - cable/broadband

- most valuable class: cs340 soft engr
- need to design a lot more than code
- need spec & UML
- nothing on QA
- understanding what the building blocks are
- teach people how to think about software
- front end: spec & biz plan

- how to scale?
- multidisciplinary
- need to add one course on business issues
- healthy dose of ethics and law
- intellectual property: patents and copyrights
- outcome: background needed to proceed to advanced degrees

- we teach at a lower level; jobs at upper level
- have TCC use business case model
- weave these ideas into existing courses
- Jay: three course programming sequence
- CS201: inter-platform development
- Pat: too much software development; more systems

- more mention of engineering in CS objectives than in CE objectives.
- don't repeat statement of C- prereq. requirement everywhere (not a huge hurdle, is it?)
- cross-electives between different departments with similar missions

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- paths or tracks across departments using electives
- what is our "product"? do we have a marketing problem -- what's the difference between degrees? need simple explanation
- track names: software developer; advanced degree/ researcher; federal service,...

- advising thing? need roadmap? outside of catalog
- tracks become menus of electives to avoid student's smorgasbord
- internet security stuff is really good
- having case studies showing how things go wrong in the real world

- show people what makes a news story, e.g. rounding error, scaling, etc.
- bring practitioners into classes who can comment on "reality"
- communicate effectively: take a speech course?
- just speaking once or twice a term as part of a group not enough

- write an effective memo or email -- how to make it **concise**
- public argumentation -- evaluate how a student get their points across (???)
- how to talk to the Dilbert crew (boss, marketing) -- non-technical
- multi-disciplinary teams with Darden?

- communication is part of "organization behavior" -- can we have a Dilbert course?
- emphasis on oral communications (and early)
- lifelong learning: CS majors want more tech skills, want business skills,

- could UVa provide lifelong learning opps? e.g. business camp
- professional societies, reading journals
- offer one-week refresher course on hot ideas, trends
  - but does this help our accreditation
- instilling learning excitement

- could ask HR departments if grads are meeting need, if need more training
- we should instill a fear of obsolescence in our graduates
- ask alumni what they've done: courses, certifications, new skills, etc

- grads of department can go through alumni association to use our Web course, etc.
- can we weave alumni back for short courses back into undergrad program, experience
- internships, co-op: beware laws about employment status

- class on how to test
- class on how to teach CS university educators
- faculty internships etc in industry

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