Academic Orientation

Computer Science Majors

Friday, August 21, 2009
Advising Team

Dr. William Fleischman (MSC 167B)

Dr. Mary-Angela Papalaskari (MSC 162C)
Advising Expectations

“Tool” to introduce yourself to your advisor

- 14 pairs of statements
- No right or wrong answers, just preferences
- As of now, what would you like your advisor to do for you over the next 8 semesters
- Choose one letter for each pair and circle it
Jobs of the Advisor

- Consult for
  - Schedule planning
  - Internship ideas
  - Study abroad
  - Career planning
  - Summer opportunities
The Advisor and Your Courses

- Plan the choice of courses for the next several semesters
- Help build the schedule for the next semester
- Approve registration for Villanova and for courses taken elsewhere
- Help modify schedules
Schedule Information

- Current semester: no advanced placement
  - Algorithms and Data Structures I (Java)
  - Calculus I
  - Core Humanities Seminar
  - Foreign Language
  - Humanities or Social Science
More Schedule Information

- Advanced Placement
- Previous college credit
  - Courses at your high school
  - Courses at the nearby college
Important Dates

- Drop/Add deadline: F, Aug 28
- Labor Day: M, Sep 7 -- no class
- Fall break: M, Oct 12 – F, Oct 16
- Midterm grades: W, Oct 21
- WX deadline: W, Nov 11
- Spring registration: F, Oct 31
- Thanksgiving break: no classes W-F, Nov 25 - 27
- Final exams: Sa, Dec 12 – F, Dec 18
Universal Information Source: The fantastic, all-powerful, information rich CS Department web site

csc.villanova.edu
Degree Requirements

- **Computer science**
  - 13 required courses
  - 3 elective courses

- **Mathematics**
  - 3 required courses (11 credit hours)

- **Science**
  - 8 credit hours of science (for science majors)
  - Total of 26 credit hours of math and science

- **17 humanities and social science courses**

- **Free electives (as needed)**
Value-Added Requirements

In subsequent semesters, talk to your advisor about:

- Writing Intensive courses
- Writing Enriched courses
- Diversity courses
Value Added Courses

- Cognitive science
- Bioinformatics, computational molecular biology
- Summer Business Institute
- Minors such as mathematics, communication, English, business
- Study Abroad
- Internship for academic credit
- BS/MS 5-year program
Opportunities

- ViCS Program
  - Enrichment Seminar
- Scholarships
- Contests
- Paper or poster presentations at technical meetings
- Study abroad with internship: Rome and the Vatican
- Web Office
  - Creating virtual tours
Computing Community

- ACM Student Chapter
  - Monthly meetings
  - Workshops
  - Social events (lose to faculty in volleyball)
Computing Community

Competition

- MIT Battlecode programming competition
- International Collegiate Programming Contest
- Microsoft ImagineThat
- Google Summer of Code
Computing Community (2)

- **Upsilon Pi Epsilon**
  - Computing honor society
  - Former national president is Villanova alumna

- **National Center for Women in Information Technology (NCWIT)**
  - Pacesetter University
Computing Community (3)

- Villanova Mac Users Group

- Service Projects
  - Computer recycling: TeamChildren
  - Julio de Burgos School
  - Programming workshops for the Girl Scouts
  - MagicSchool summer camp
Computing Community (4)

Spaces

- Department library (MSC 159)
- Halls
- Projects (Software Engineering) lab (MSC 158)
- Intelligent Systems lab (MSC 156)
- CEET Center (St. Mary’s N110)
- CS Help Desk (MSC 292)
  - schedule posted at csc.villanova.edu/support/cscHelpDesk
Introductions

- Meet your fellow majors:
  - Form a line ordered by birthday: all those born on the 1st, regardless of month come 1st, then those born on the 2nd, etc.
  - Introduce yourself to the two people next to you (one on each side).
Working for the Department

- Work-study and regular
- Application form
- Hiring documents to complete I-9 form
  - Passport
  - Driver’s license AND social security card
Department Jobs

- Research assistance
  - Faculty research grants
- Web site maintenance and development
- Lab support
- Office support: individual faculty members and department office
Faculty Introductions

- Dr. Tom Way
  - Nanocomputing
  - ACT Lab
Research Topics (1)

- Programming languages and systems control for Mindstorm robots.
Research Topics (2)

- Contexts for optimum web search strategies.
Research Topics (3)

- Algorithm taxonomy: examples from traditional games.
Research Topics (4)

- Web site taxonomy and focused design principles.
Research Topics (5)

- Packing spheres into an ellipsoid: heuristic search strategies.
Research Topics (6)

- Code optimization: 20Kb vs. 20Mb program space.
Research Topics (6)

- Non-visual interfaces.
Research Topics (7)

- Virtual reality in interdisciplinary projects.
Research Topics (8)

- Web services: development, description, deployment.
Research Topics (9)

- Constructing and maintaining wireless network topologies.
Research Topics (10)

- Folding and unfolding polyhedra.
Research Topics (10)

- Folding and unfolding polyhedra.
Research Topics (11)

- Programming games and applications for the iPhone and iPod Touch.
Will Rogers says

“I believe in college since it gets young people out of the house just at the time when they start asking difficult questions.”
Keys to Success

- Talk to your instructors, once a week at least
- Talk to your advisors
- Study with your peers
- Become involved in the computing community—ACM student chapter
- Exhibit responsibility
- Manage time wisely: at least 40 hours study time per week
More Keys

- Come to class every time
- Read before class
- Endorse student-centered learning and active class participation
- Start assignments early
Exercises

- By next Tuesday (August 25) visit each member of your advising team
  - Introduce yourself
  - Describe your high school
  - Relate your summer activities

- By next Friday (August 28) check that your Wildcard opens MSC 156 and MSC 158

- By next Friday review the slides from today and follow the links
Things to Remember

- The 7 fastest growing occupations are in the field of Computing
- Computer Scientists are needed as leaders in virtually all other fields
- Computer game design is a driving force in the growth of computing
- Knowledge and skills gained by studying Computer Science can lead anywhere