Management Information Systems
Spring 07 Newsletter

by Dr. Armstrong

Curriculum Information

Scheduling Information for Summer/Fall 07

Upon your return from spring break the scheduling process for summer and fall will begin. It is essential that you take this process seriously otherwise you may end up completing the wrong courses and thus delay your graduation. You should already have a program plan that was developed in your Foundations course which outlines the specific courses and semesters in which you are to enroll in the business core and specific major courses. Information on course requirements within the general education program can be found in the 05-07 University Catalog starting on Page 59.

Note: As a business major you must earn a "C" or better in both English 101 and MAT 108 (or a "D" or better in MAT 181). The Foundations of Business Administration (BSN101) is to be taken during the freshmen year. See Page 142 of the 05-07 University Catalog for information on course sequences. Information on repeating courses may be found on Page 46.

Beginning Fall 07 MAT181 will not be a pre-requisite to INM200. Students will be able to take the courses.

If they are planning graduate in December 2007 you must complete a senior check-out form. The deadline for submission is March 30th.

Summer Undergraduate Scheduling

Undergraduate scheduling for summer (on-campus courses) will begin Monday, March 26th. Scheduling for on-line courses begins Monday, March 19th for all students. Scheduling online will be available as follows:

Fall Scheduling - March 26th-April 6th
Term III Scheduling - March 26th - April 18th
Term IV Scheduling - March 26th - May 7th
Term V Scheduling - March 26th - June 6th

The actual process is simple: have your schedule reviewed and approved by your faculty advisor; go to info.ship.edu; and click on Student Information System using your social security number and library id number to log in.

There is a hold on your scheduling session that can only be removed by your advisor. There are no exceptions to this rule. **A group advisement session is scheduled for Wednesday, March 21st at 3:30 in Grove 302.** If you have not already met with your advisor or attended the February scheduling meeting you should attend this one so you can be released.

Below are the courses to be offered during the summer, fall and spring semesters:

Summer 07	Fall 07	Spring 08
ISM142 – Term 3 – Online	ISM240	ISM300
ISM300 – Term 3 – Online	ISM242	ISM340
	ISM300	ISM420
	ISM344	ISM442
	ISM355	ISM446

Double Major Option

One of the best ways to increase your employment opportunities is by selecting a second major. You have 16 free elective credit hours which, if applied to a second major, would leave only 1 course to be taken beyond your free elective credits. Some excellent combinations include MIS & Accounting, MIS & Management, MIS & Finance, and MIS & Supply Chain Management.

Internships

Now is the time to begin planning for an internship. Although this is an option in your program, I would highly encourage you to commit time to this learning experience. Given the competitive nature of information systems and that many organizations seek individuals with some amount of work experience; you will put yourself in a much better competitive position by completing an internship.

The best time to arrange for this (you are not limited to only one) is sometime after the completion of your sophomore year; perhaps during the summer; or even during one of the regular academic semester.

The following is the internship workshop schedule for the spring semester.

- March 21st @ 3:30 - Grove Forum
- April 24th @ 3:30 – Grove Forum

Note: You must pre-register for the workshop in Grove 117.

Please see Joan Carson in Grove 117 if you have any questions on internships positions or requirements.

Undergraduate Research Assistant

Consider applying for a department research assistant position next year.

Career/Job Market Information

10 Reasons to Major in Computing

1. Computing drives innovation in the businesses and organizations (supply & distribution systems; customer relationship management; enterprise resource planning; accounting and financial management systems to name a few.

2. Computing majors will provide you with a foundational knowledge of problem solving and logical thinking that will be helpful to you no matter what you choose to do in life.

3. Computing jobs are among the highest paid and have the highest job satisfaction.

4. Contrary to popular belief there are more, and not fewer jobs. U.S. Information Technology (IT) employment was 17% higher in 2004 than in 1999. Computing also has the greatest potential for new jobs through 2014.

5. Contrary to what some people believe, IT professionals do not sit in a cubicle pounding out code 18 hours per day. They work with those from the various functional areas within the organization as well as consultants and other IT specialists. Thus, team skills; communication; and management skills are essential.

6. You do not have to be a nerd to be in the IT profession. You do not have to live, eat, and breathe computing to be a good IT employee. You can have a life, relationships, a family.

7. Computing is not about being a lone wolf. It is about being part of a team that requires people with many different kinds of skills.

8. Computing is one of those fields where it is almost impossible to predict what will happen next. This is why we cannot even begin to imagine all the ways that you can make a contribution to it and it can make your life's work exciting and real.

9. There will always be opportunities beyond your normal job to do consulting work ranging from training/education to computer installation and customization

10. Where else can you get paid to work/play with the newest gadgets?

Exactly What is Information Systems?

Historically, information systems programs prepared students to work with functionally oriented business applications such as payroll, accounts receivables, inventory management, etc. On the technology side, IS students could expect to become familiar with computer applications related to these traditional business areas, especially database management systems, and with spreadsheets and other off-the-shelf software products that had broad utility to business people.

Modern IS programs focus on the broader role of IT-enabled information utilization and business processes in a wide range of enterprises, while still maintaining their close association with business schools. What information does the enterprise need? How is that information generated? Is it delivered to the people who need it? Is it presented to them in ways that permits them to use it readily? Is the organization structured to be able to use technology effectively? Are the business processes of the organization well designed? Do they use the opportunities created by information technology fully? Does the organization fully use the communication and collaboration capabilities of information technologies? Is the organization capable of adapting quickly enough to changing external circumstances? These are the important issues that various types of enterprises increasingly rely on IS people to address.

For information systems graduates, new requirements affect their career paths. Web-based distributed technologies provide the infrastructure for globally connected organizations. IS graduates must be able to assess and evaluate organizational information needs, specify information requirements, and design practical systems to satisfy these requirements.

New Recruits Still Scarce

Experts hope to reverse the trend with smart ideas to entice fresh talent to the field.

by Drew Robb

July 17, 2006 (Computerworld) -- Back in the days when mainframes ruled, there was a close ratio between IT workers and computers. Now, PCs worldwide number close to 1 billion, but the number of IT workers joining the field is dwindling fast.

"We're seeing a lack of talented IT professionals looking for new positions," says Greg Fittinghoff, vice president of business systems development at Time Inc. in New York. "We're also noticing that the pipeline of candidates from top consulting companies looking for permanent placement is drying up."

Experts say this problem will only get worse by 2010. As the demand for IT-savvy staffers continues to grow, the number of people seeking computer science degrees is in a free fall. "According to the Bureau of Labor Statistics, one out of every four new jobs between now and 2012 will be IT-related," says Mark Hanny, vice president of IBM's Academic Initiative outreach program. Yet according to the Computing Research Association, the percentage of college freshmen listing computer science as their probable major fell 70% between 2000 and 2004. The drop-off has been even more severe among women, who, although they now make up the majority of students on college campuses, account for only 28% of the computer science bachelor's degrees granted, down from 38% in 1984.

To turn this trend around, several initiatives are under way to encourage more workers to join the IT field. Some programs help students who are currently taking computer science courses complete their studies; others take the longer view, targeting K-12 students with free software, classroom speakers and age-appropriate curricula.

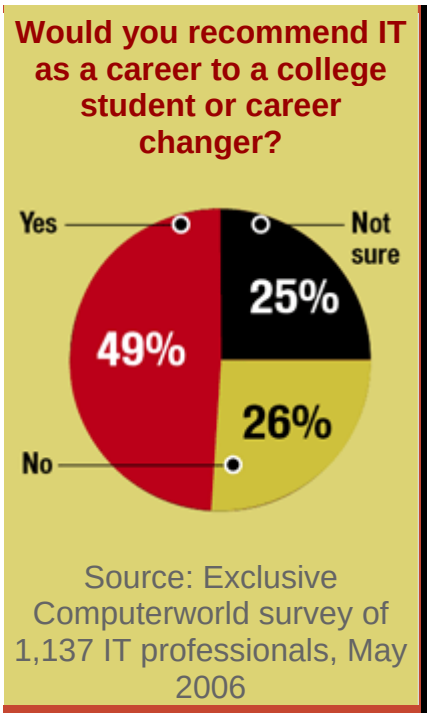
But Hanny says that none of the current activities is enough to completely solve the shortage in the next few years; it will take something similar to the nation's response to Sputnik. "In the K-12 area, it would be so much better to see this come together as a national effort," he says. "If we want to continue to maintain our leadership, we must get more of our students excited about this as a career at a very young age."

Downgrading Drudgery

Several factors have been cited for the drop in interest, including the threat of outsourcing, the loss of jobs after the dot-com meltdown, and a boom in disciplines such as biology attracting students who might otherwise opt for IT.

"High school guidance counselors and parents who are advising students of potential career paths are reluctant about promoting CS/IT as an attractive choice," says Wanda Dann, associate professor of computer science at Ithaca College in New York. "They are uncertain about well-paying jobs being available upon graduation."

Weak Endorsement



Dann says computer science might have hit a low point on enrollments, but statistics have yet to indicate that there will be an increase by 2010. "More needs to be done," she says. "For example, the communications media could contribute by picking up coverage of the shortage and helping us to get the word out to parents and guidance counselors around the nation."

But a more fundamental issue lies in the failure to attract students at an early age. Randy Pausch, a professor in Carnegie Mellon University's computer science department and co-director of the university's Entertainment Technology Center, says a major factor is IT's image. As Pausch puts it, "The field has a well-deserved reputation for people who are socially inept introverts."

This is compounded by a high dropout rate among those who do embark upon a computer science degree.

"On average, at least half of college students majoring in CS/IT withdraw from the major, and the majority of these students withdraw during the first year," says Dann.

To counter that trend, outreach activities, particularly for girls and underrepresented minorities, have been established, as well as efforts to improve IT's image. Experts say a revamping of the way the subject is taught is also needed. Toward that end, Pausch, Dann and others have developed a new approach to teaching programming. It features educational software known as "Alice" and uses a drag-and-drop method to teach object-oriented programming; it's available as a free download at www.alice.org.

Once students learn the basics of object-oriented programming, it's easier for them to code it. A National Science Foundation study of at-risk students found that those who used Alice had a grade of B in first-level computer science, compared with a C for a control group. And 88% of those who started out with Alice moved on to second-level computer science, compared with only 47% of those who didn't use Alice.

"We're highly optimistic," says Pausch. "Reports from the field, especially from community colleges, are that the Alice approach is highly motivating for kids, and being motivated to do the work is a great reason to want to stay in a major."

But one of the biggest benefits is that it opens up the programming field to women and girls who previously wouldn't have been interested in computer science, instantly doubling the number of potential recruits. Pausch says projects like Alice will help soften IT's image and attract a wider range of students.

"The people who make video games and do effects for movies already have a sort of cool image, because what they make is cool," he says. "Plus, getting more women into the field will, in and of itself, reduce the geek image."

One other major change is that IT is no longer being viewed as a strictly separate discipline. Rather, it is regarded as a method to enable other types of activities. "IT is showing up pervasively across many jobs," says IBM's Hanny. "We are getting a lot of demand across fields -- not just IT and engineering, but business schools and nursing schools who want to be able to integrate IT into their core curriculum."

So if a company is looking for IT staffers to automate its supply chain operations, for example, it can go one of two ways. The company can train someone who majored in computer science in the intricacies of supply chain management. Or it can hire a business

major who understands supply chain management but has also taken some computer classes. In the second scenario, some of the coding might need to be done by a consultant, but the resulting solution might better address the company's business needs.

"It isn't the technology. It is the business model that is creating new ways for companies to differentiate themselves in the marketplace," says Hanny. "And those business models are all IT-related.

Source: http://www.computerworld.com/action/article.do?command=viewArticleTOC&specialReportId=9000100&articleId=112364

Line between Business and IT Blurs

The IT department will still exist, but the sharpest tech workers will move effortlessly between IT and business units.

by Mary K. Pratt

July 17, 2006 (Computerworld) -- As more CIOs move toward business and IT alignment over the next several years, the makeup and structure of IT will change. IT and business unit employees will work more closely together -- and in some cases, interchangeably.

But today's technology leaders say this trend doesn't signal an end to the independent IT department, which still plays a critical role in companies by providing the structure, expertise and continuity needed to build and maintain a strong infrastructure.

"Someone needs to collect and manage things. If you leave it up to the different business units, even if they're technology-savvy, there's no leader across the company. So the need for a clear strategy will warrant a collective umbrella we call IT today," says Autumn Bayles, CIO at Tasty Baking Co. in Philadelphia. "But we will see more of a blur between whether you work in IT or work in the business. You'll see more opportunities to cross between the lines."

Bayles is already seeing that happening. "My folks are always out in the business," she says. And conversely, Bayles says, there are tech-savvy "superusers" in the business units who work with her.

The line between IT and business is blurring even in her own position. Bayles has a mix of business responsibilities in addition to ones involving IT; she took over distribution, supply chain and manufacturing planning, and customer service a year ago.

"It's largely driven by the fact that the technology is so embedded in the processes of those operations that it's a natural [combination]," Bayles says, adding that CIOs will increasingly pick up other responsibilities in the coming years.

On the other hand, Bayles also has pure technologists within her 13-person IT department. She points to an SAP specialist on staff who is highly valuable in his role.

In the 2010 job market, Bayles and other CIOs say, such deep technical skills will still be needed to maintain "the pipes and plumbing." But they also say that as their companies move toward adopting alignment as a model, they will use outside vendors to gain those skills. Those left as internal IT staffers will need technical skills, but they'll need much more business knowledge to succeed professionally, says Saby Mitra, an associate professor of IT management at Georgia Institute of Technology's College of Management in Atlanta. "You're going to see a situation where technical knowledge is important," he says, "but it's only a small part of the picture."

For example, when Traci A. Logan interviews developers, she's interested in how well they collaborate with others and manage projects, as well as how quickly they can learn. Their IT credentials? While still critical, they are increasingly becoming secondary to business acumen and related skills.

"That [business skill set] is going to be more important than the straight technical skills they know, because you're going to see a closer marriage between the business and IT," says Logan, vice president of information technology and vice provost for academic affairs at Bentley College in Waltham, Mass.

Logan and other tech execs are aligning their IT departments' resources and projects with their organizations' overall goals and objectives -- a move that requires IT workers who know how business works. Project Management in Demand

The must-have skills for IT staffers four years from now will include excellent verbal and written communication skills and strong organizational skills, says Katherine Spencer Lee. As executive director of Robert Half Technology, a Menlo Park, Calif.-based IT

staffing company, Spencer Lee is already seeing an increasing demand for project managers and business analysts -- the business-facing technology positions that are key to successfully aligning IT and the business units.

Likewise, IT executive Phil Zwieg says he sees a growing need for tech workers who can handle project coordination, project risk assessment and project budgeting. He also sees more need for workers who have expertise in a particular industry or in domains such as accounting, finance and human resources.

"I see all of those things getting emphasis as we roll into the 2010 time frame," says Zwieg, vice president of information systems at Northwestern Mutual Life Insurance Co. in Milwaukee and vice president for advocacy and communities of interest at the Society for Information Management (SIM), an association of senior-level IT professionals.

IT positions will require not only all of the basic technical competencies, but also negotiation and contract management skills and the ability to manage relationships with outside vendors, says Kate M. Kaiser, an associate professor of IT at Marquette University and coordinator of a recent SIM study titled "The Information Technology Workforce: Trends and Implications 2005-2008." Similarly, tech workers who have experience working with foreign companies -- specifically those in China and India, two big players in offshore services -- will be in big demand by 2010, she says.

Although IT leaders agree that tech workers will need more and more business skills in the next several years, they disagree on how that will affect the actual structure of the IT department.

Some say IT and business units will overlap, with more IT staffers shifting into business roles. Mitra says a hybrid structure will evolve: One group will be dedicated to maintaining standardization and consistency within the infrastructure, and the other will be a decentralized organization in which business analysts in business units answer to business executives, with a dotted line to the CIO.

But others say that kind of change won't occur by 2010.

"What will slow it down will be the need to manage the pieces," Bayles says. "You always need that organizational structure to be effective at getting things done. Maybe someday we'll overcome that, but I don't see it happening in the next four years."

Source: http://www.computerworld.com/action/article.do?command=viewArticleTOC&specialReportId=9000100&articleId=112368

Hot Skills, Cold Skills

by Stacy Collett

July 17, 2006 (Computerworld) The most sought-after corporate IT workers in 2010 may be those with no deep-seated technical skills at all. The nuts-and-bolts programming and easy-to-document support jobs will have all gone to third-party providers in the U.S. or abroad. Instead, IT departments will be populated with "versatilists" -- those with a technology background who also know the business sector inside and out, can architect and carry out IT plans that will add business value, and can cultivate relationships both inside and outside the company.

That's the general consensus of three research groups that have studied the IT workforce landscape for 2010 -- the year that marks the culmination of the decade of the versatile workforce. What's driving these changes? Several culprits include changes in consumer behavior, an increase in corporate mergers and acquisitions, outsourcing, the proliferation of mobile devices and growth in stored data.

What's more, the skills required to land these future technical roles will be honed outside of IT. Some of these skills will come from artistic talents, math excellence or even a knack for public speaking -- producing a combination of skills not commonly seen in the IT realm.

On the edges of this new world, expertise in areas such as financial engineering, technology and mathematics will come together to form the next round of imaginative tools and technologies. Google Inc., eBay Inc. and Yahoo Inc. are already hiring math, financial analysis, engineering and technology gurus who will devise imaginative algorithms to fulfill users' online needs. And the National Academy of Sciences has identified a budding area of expertise that combines technology capabilities with artistic and creative skills, such as those found in computer gaming.

Closer to home, "the most effective workforce will be outward-focused, business-driven competency centers," says Diane Morello, an analyst at Gartner Inc. and author of the report "IT Professional Outlook."

"They might be competency centers formed around mergers and acquisitions," she explains. "People in IT might be involved in information integration and systems integration, customer service or some really smart ways where companies can leverage scarce and high-value talent that tend to get dismantled at the end of every project. People will be geographically distributed -- so [they'd] better be adaptable and [able to] work with people on teams that [they] don't know." Project management and application development skills -- "whether for service providers, software developers or IT organizations -- are characteristics that will be absolute" in 2010, Morello adds.

Also, projects will be multisourced. "You'll be working with people from different types of channels," Morello says. "That will raise opportunities in relationships and sourcing management" and require IT workers to think about process design and management.

By 2010, six out of 10 people affiliated with IT will assume business-facing roles, according to Gartner. What's more, IT organizations in midsize and large companies will be at least 30% smaller than they were in 2005. Gartner also predicts that by 2010, 10% to 15% of IT professionals will leave their IT occupations as a result of the automation of tasks or because of a lack of interest in the sector.

"For my money, the hot jobs in 2010 will be these enabler jobs: business enterprise architects, business technologists, systems analysts and project managers," says David Foote, CEO and chief research officer of Foote Partners LLC, an IT management consultancy and workforce research firm in New Caanan, Conn. "If I were in IT, I would be in one of these jobs in the next five years. A lot of people can't because they're pure technologists. But there are some pretty safe bets for them both inside and outside of the service industry." "There is much more emphasis on the business domain and on project management skills than on the technical skills," says Kate Kaiser, an associate professor at Marquette University in Milwaukee. In September 2005, Kaiser led a Society for Information Management (SIM) study of 104 CIOs to determine their skills needs through 2008. She expects the top 10 skills identified to remain in the top 12 by 2010.

"It's not that you don't need technical skills, but there's much more of a need for the business skills, the more rounded skills," she notes.

IT professionals who will survive and perhaps thrive in 2010 will expand their knowledge base and stretch beyond their comfort zones. Those who don't will find job opportunities in niche areas. With that in mind, Morello, Foote and Kaiser offer some advice.

Source: http://www.computerworld.com/action/article.do?command=viewArticleTOC&specialReportId=9000100&articleId=112360

In Summary

When	What
Freshman	1. Develop your academic program schedule in BUS100 2. Meet and discuss your interest and career aspirations with your advisor 3. Select general education courses that not only fulfill university requirements but also strengthen your IT preparation – e.g. foreign languages; communication; logic; cultures; diversity; any course that deals with international topics 4. Attend College of Business social and academic events
Sophomore	1. Start your MIS sequence in the fall with ISM240 followed by ISM340 in the spring 2. Consider enrolling in the Study Aboard program 3. Attend any Career Night activities 4. Join the MIS Club and other student business clubs
Junior	1. Begin planning for an internship by attending an Internship Workshop and discuss with your advisor 2. Create a resume based on past and future completed courses – have it reviewed by your advisor 3. Visit SU's Career Development Center for resume review & suggestions; utilize their resources to begin to target specific geographic areas and technology type positions 4. Consider on-campus technology-related employment, e.g. Computer Services trouble-shooter; lab assistant; RESNET
Senior	1. Finalize your resume, develop a cover letter and have reviewed 2. Begin to build your business wardrobe 3. Attend job fairs 4. Participate in on-campus recruitment interviews

My final comments:

This provided information is but a sampling representation of current opportunities and trends. The only certainty is that tomorrow will be different than today. If you prepare well; develop good work habits; have a thirst for knowledge; and show some enthusiasm, this major in Management Information Systems will take you far. Enjoy the journey.