



IBM ISV & Developer Relations

IBM Academic Initiative



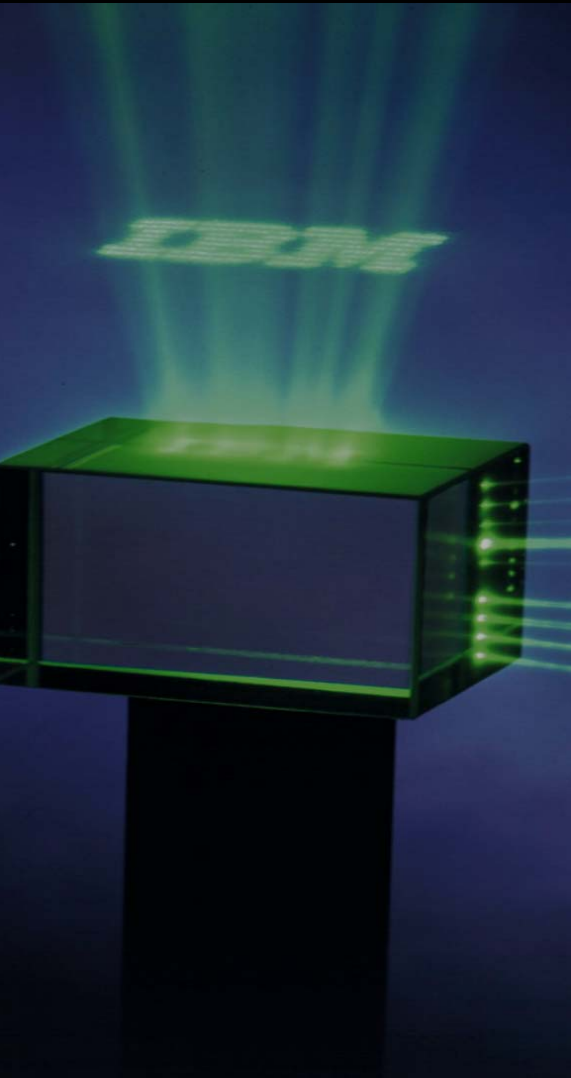
In-demand skills for an On Demand world

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Agenda



- **Why IBM created the Academic Initiative**
- **What is the Academic Initiative**
- **How you can join**
- **Key Links**
- **Services Science, Management and Engineering (SSME)**
- **The IT Services Curriculum**

The Demand Side

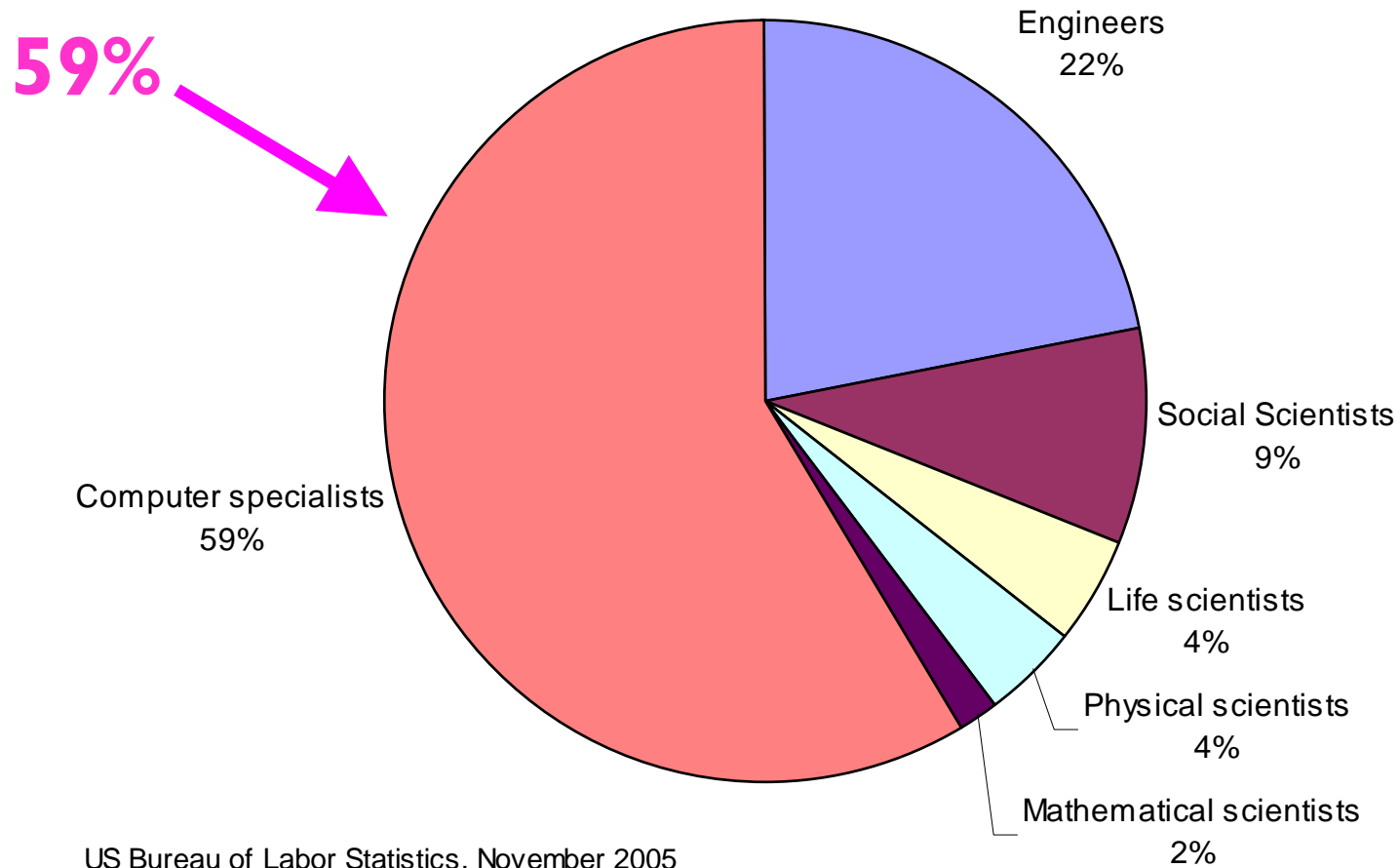
DEMAND
For
Skilled
Employees
IS
Going
UP!

The need for system engineers, skilled developers and IT professionals is greater than ever

- The number of job openings for IT professionals nationwide has increased by 47.6% from 2004 to 2006.
- **186,000 national job openings every day of the year.**
- 71% of all vacant positions in science and engineering between 2004 and 2014, or 1.6 million jobs, will be in information technology.
- The fastest-growing occupation in the next decade is projected to be computer software engineers
- There are more people employed in the US in the IT industry today than at the height of the .com era!
- Approximately 70 million Baby Boomers will exit the workforce during the next 15 years, with only 40 million workers coming in

* SkillProff, Watson Wyatt, Monster.com; U.S. Department of Labor; Bureau of Labor Statistics; Information Technology Association of America

Projected Science & Engineering Job Openings (new jobs plus net replacements, 2004-2014)



US Bureau of Labor Statistics, November 2005
<http://www.bls.gov/pub/mlr/2005/11/art5full.pdf>

What is Needed, What is Not? Integration for systems engineers requires a common language to orchestrate all the members

“COLD” Jobs

2005

“HOT” Jobs

IT jobs in the United States that have been most affected by global resourcing include:

- Application Development
- Application Maintenance
- Packaged Application Tools
- Transcription Services
- Contact and Call-Center Staff
- Specialized Business Process Outsourcing Services

Demand is rising for new IT jobs in areas including:

- Business Analysis
- Security Analysis
- Vendor Management
- Service Management
- System Integration
- Data Mining
- Business Intelligence
- Database Administration
- Network Engineering
- Network Architecture
- Internet / Web Architecture
- Web Services

IBM Governmental Programs Study



The Future of Talent Management

IT Labor Demand Research

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Partial List of Employers Included in the Statistics

3Com Corporation	Cisco Systems, Inc.	Intuit Inc.	SBC Communications
Abbott Laboratories	Citigroup Inc.	J.P. Morgan Chase & Co.	SRA International, Inc.
Accenture Ltd	Citrix Systems, Inc.	Kaiser Foundation Health	Staples, Inc.
Adobe, Inc	Comcast Holdings	Keane, Inc.	State Street Corporation
ADP, Inc.	Computer Associates	KPMG International	Sun Microsystems, Inc.
Aetna	CSC	Kronos Incorporated	SunTrust Banks, Inc.
AIG Inc.	Compuware Corporation	Liberty Mutual Insurance	Sybase, Inc.
Akamai Technologies, Inc.	Concentra Inc.	Lockheed Martin Corp.	Symantec Corporation
Allmerica Financial Corp.	Countrywide Financial Corp.	MIT	The Boeing Company
ALLTEL Corporation	eBay Inc.	McKesson Corporation	The Gillette Company
Amazon.com, Inc.	EMC Corp.	Metropolitan Life Insurance	The Hartford Insurance
Amgen Inc.	Ernst & Young International	Microsoft Corp.	The MathWorks, Inc.
Analog Devices, Inc.	Fiserv, Inc	Millennium Pharmaceuticals	The McGraw-Hill Companies
AOL	FleetBoston Financial Corp.	Morgan Stanley	The MITRE Corporation
Apple Computer, Inc.	FMR Corp.	Motorola Corp.	The Pepsi Bottling Group
Autodesk, Inc.	Freddie Mac	Nextel Communications, Inc.	The Progressive Corp.
BAE Systems	Gartner, Inc.	Nokia Corporation	The Thomson Corp.
Bank of America Corp.	GE Corp	Northrop Grumman Corp.	Time Warner Inc.
BearingPoint, Inc.	General Dynamics Corp.	Novell, Inc	Travelers
Blue Cross and Blue Shield	Goodrich Corp.	NVIDIA Corporation	Tyco International Ltd.
Boehringer Ingelheim	Google, Inc.	Partners HealthCare System	UBS Warburg LLC
Booz Allen Hamilton Inc.	GTECH Holdings Corp.	Perot Systems Corporation	Unisys Corp.
Bose Corporation	Hewlett-Packard Company	Pfizer Inc	UnitedHealth Group Inc.
Cambridge Health Alliance	Household International, Inc.	Pitney Bowes	Verizon Communications
Capital One Financial Corp.	Hyperion Solutions Corp.	PriceWaterhouseCoopers	Wachovia Corporation
Cendant Corporation	IBM Corp.	Raytheon	Washington Mutual, Inc.
CIGNA	ING Americas	SAIC Corp.	Wyeth
Cingular Wireless LLC	Intel Corporation	SAP America, Inc.	Yahoo! Inc.

Source: SkillProof

IT Job Market

Nationwide

The number of job openings for IT professionals nationwide has increased by 47.6% from 2004 to 2006.

Source: SkillProof

Job Openings by Category, Nationwide, 2006

Systems Engineering / Support	48,510
Software Development	39,910
IT Management	26,370
IT Architects/Consultants	27,330
IT Sales and Marketing	17,910
Systems Administration	9,100
Business/Process Design	6,930

Source: SkillProof

Growth of Required, Hot Tech Skills, Nationwide, 2004 – 2006

SOA	1,148.4%
PHP	198.3%
Linux	120.8%
Web Services	99.5%
JavaScript	98.2%
C#	80.3%
SOAP	78.1%
XML	66.4%

Source: SkillProof

Global Team Skills Required, Nationwide, 2006

Employers in their job descriptions increasingly look for job candidates who are able to work in global teams as a prerequisite to land the job. The number of IT job openings with this requirement grew by 247.4% from 2004 to 2006.

There are currently 2,710 IT job openings (estimate) with this requirement nationwide.

Source: SkillProof

The Supply Side

Supply

of

Skilled

Students

is

Going

DOWN!

Student enrollment in science and engineering continues to decline

- **Newly declared computer-science majors down 32% from 2000 – 04 (1)**
- **Incoming freshmen who expressed an interest in majoring in computer science has plummeted by 59% in the last four years. (2)**
- **Women's interest in computer science fell 80% between 1998 – 2004 (2)**
- **Only 0.3 percent of incoming freshmen women in 2004 expressed an interest in majoring in computer science (2)**

Sources (1) CRA, (2) HERI at UCLA (3) US dept of Labor Statistics

IBM Academic Initiative

- Partner with colleges and universities to drive the use of Open Standards/Open Source/IBM Technologies in Higher Education
- Collaborate with organizations and consortiums
- Better educate millions of students for a more competitive IT workforce



WebSphere. software

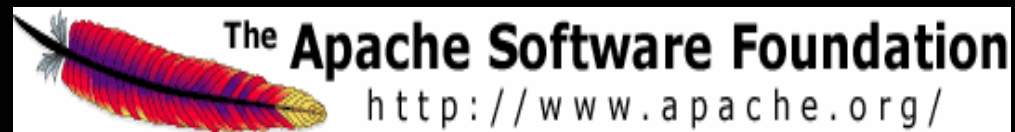
Rational. software

DB2. Information Management
Software

Lotus. software

Tivoli. software

@SERVER



IBM Academic Initiative offerings

- **Certifications**
- **Student Opportunity System (SOS)**
- **Tutorials, articles and Redbooks**
- **Forums, webcasts and newsletters**
- **IBM middleware and tools**
- **Access to IBM hardware**
- **Course materials and textbooks**
- **Curriculum evaluation services**
- **Professional Development for faculty and IT staff**



IBM success story – University of Arkansas Walton College of Business

The Sam M Walton College of Business (WCOB)

Relationship Manager: Phil Farley

Technical Enablement: Willy Farrell

■ Challenge

– The Information Systems Department within the Walton College of Business recognized unmet potential in exposing their students to large system, open standards/open source & IBM technologies critical to their research interests and those companies hiring their graduates.

■ Solution

– IBM provided the WCOB all the middleware solutions required to teach large systems, including DB2, WebSphere, Tivoli, Rational and zSeries software. A 3 day custom software enablement training for the IS faculty with a focus on IBM's Rational tools was delivered to interested faculty. Very large DB2 databases provided by local companies and Rational technologies are being integrated into the classes along with a full SAP ERP curriculum running on Linux on the mainframe - utilizing DB2.



■ Value

– WCOB MIS students now will graduate with an appreciation of the open paradigm and a broader knowledge of the tools they are likely to encounter in the field. "This collaboration with IBM is a landmark event that propels the Walton College into 'world-class' caliber in the area of industrial-strength enterprise information technology," said Fred Davis, professor, chair of the Walton College information systems department and David D. Glass Chair in Information Systems.

■ Results

– All IS students are now exposed to open source/open standard and IBM technologies, enhancing their prospects for further education, hiring and long term career success.

Benefits for faculty, students and industry

- **Potential partnerships with IBM customers, consortiums and Business Partners**
- **Industry-leading certifications**
- **Access to leading-edge, open standards-based technology**
- **Access to world-class curriculum**
- **Ongoing faculty skills development**
- **Increase in student placement**



What's next?

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Download software and try it out

Add a lab

Complete an online tutorial



How to enroll in the Academic Initiative

- **Go to:** <http://www.ibm.com/university>
 - Apply now
 - **NO COST, NO OBLIGATION...**

Questions?

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THANK YOU!



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