SmarterComputing

zEnterprise Skills and the Academic Initiative

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Client Skills & AI Leader

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"I just had a kid James Wells tell me that he had just solved part II of the Master the Mainframe Contest. It took him 30 hours. He is not in Computer Science (but he will be next year). So you just had a high school student do 30 hours of "homework" . Do you know how hard it is to make a high school student do homework for 30 hours?"

Seth Reichelson **seth_reichelson@scps.k12.fl.us**
Teacher at Lake Brantely High School FL

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Goal – Replace the baby boomers (1946-1964) in enterprise computing

"You're not getting any younger" :D

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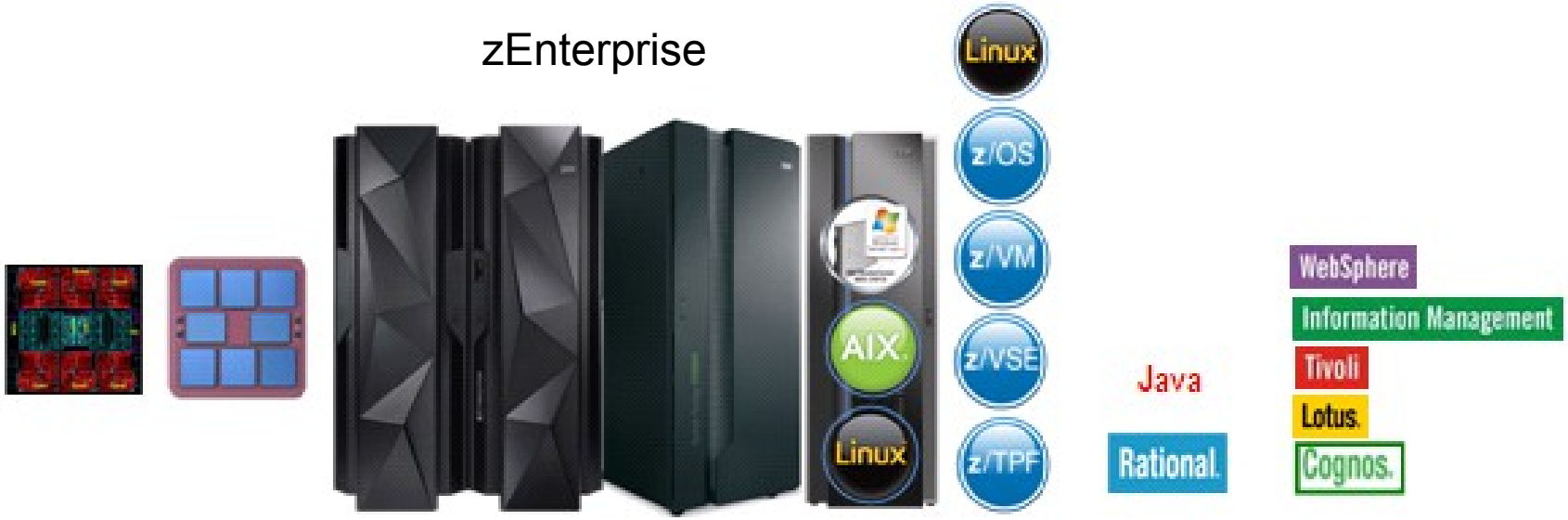
IBM System z Academic Initiative - Goal with educators

- Inspire enterprise systems education and hands on learning
- Not selling IBM products
- Enable and Assist at no charge



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Academics embrace “Enterprise Computing”

- *Students use but don’t build*
- *Students lack problem solving skills*
- *Students lack enterprise thinking skills*
- *Students lack “fundamental” technology skills*

Syracuse University Answer:

Global Enterprise Technology Minor

THE SCHOOL OF
INFORMATION
STUDIES
at Syracuse University
“Expanding human capabilities through information”

IBM's goal with customers

- Partner clients and community with z schools (professors)
- Assist clients with locating mainframe talent
- Assist clients with internal training programs

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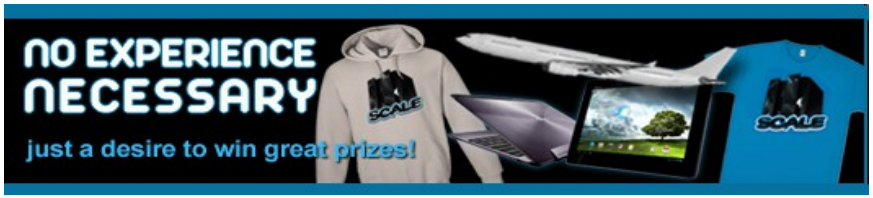
Sources of z educated students

Master the Mainframe Contest Wall of Fame

- Recommend internet search:
  - "IBM Master the Mainframe Contest Winners"
  - "Master the Mainframe facebook"
- Part 3 winners are the elite with the most acquired experience
- Send note to **zskills@us.ibm.com** requesting student contact information



zAI Participating Universities

- ibm.com/university/contest
- Organized by state & country tabs
- Note universities with "Case Study"
- Search on:
  - "IBM System z participating schools"

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The IBM System z Academic Initiative

Over 1000 schools

Using the z AI program

These 25 schools in North America have taken mainframe education to the next level -

- multiple courses

- *certificate programs*
- *minors*
- *concentrations.*

Binghamton University NY	merwyn@binghamton.edu
California State at Dominquez Hills	mbeheshti@csudh.edu
Cegep De Thetford Quebec	flahaye@cegepth.qc.ca
Columbus State U, GA	rogers_neal@colstate.edu
DeVry University	ageist@devry.com
Eastern Illinois University	vahampton@eiu.edu
Fairleigh Dickinson University, NJ	lowy@fdu.edu
Fairmont State University, WV	Richard.Harvey@fairmontstate.edu
Illinois State University	cjong@ilstu.edu
Marist College, NY	learnzos@marist.edu
North Carolina A&T University	cwseay@ncat.edu
Northern Illinois University	rrannie@cs.niu.edu
Pace University NY	hwinkler@pace.edu
Redlands University, CA	eric_blum@redlands.edu
Robert Morris University, PA	turchek@rmu.edu
Rochester Institute of Technology	lwhfac@rit.edu
Ryerson University Toronto	jshuster@ryerson.ca
New York Institute of Technology	mpanero@nyit.edu
Syracuse University, NY	ddischia@syr.edu
University of Arkansas	DDouglas@walton.uark.edu
University of MD Eastern Shore	bcmitchell@umes.edu
University of North Texas	Steve.Guynes@unt.edu
University of South Carolina	pattenk@sc.edu
West Texas A&M University	H.Paul.Haiduk@cs.wtamu.edu
Widener University PA	syoon@mail.widener.edu

Professor H. Paul Haiduk, West Texas A&M University

"Don, bottom line is that employers are going to have to make an investment in us if they expect to have a chance at hiring our graduates. Why? Because other companies have already invested in us in many ways. It's called competition. Recruiting is not like the old days where they swoop down when they feel like it and cherry pick. And I am a strong believer in developing long-term relationships that allow all parties to have some relative certainty in expectations.

Our program growth is significant. We expect to get approval to hire another faculty in near future. In a couple of years we will have a significant number of graduates to work on IBM Enterprise Systems."

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Enterprise-level talent.

Enterprise-class careers.

- Lets employers post detailed job requirements for job seekers of all experience levels to review and apply
- Free, secure, and easy to use for employers and job applicants
- Global pool of talent specializing in mainframe technology, including both students and experienced professionals

→ **SystemzJobs.com**

IBM

In this 3 minute video, professors, students, and hiring managers from diverse universities and enterprises describe their education and passion for working with System z technology. This interview footage comes together into a unified story of the next generation of enterprise-level talent now taking on enterprise class careers.

IBM

Academic Initiative Program at a Glance

Schools worldwide access our enterprise systems

Hubs

Marist College, NY

U of Arkansas

Illinois State U

Syracuse U

NC A&T U

SC IT-ology

Brazil

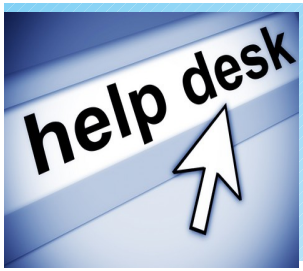
Germany

France

China

For any curriculum

School Enablement - global
55 courses / modules, z/OS mastery exams, coupons, professor seminars, ambassadors, funding and support worldwide, faculty awards



SystemzJobs.com – Job Board – global
connect students with employers

Skills Help Desk *zskills@us.ibm.com*
assists clients and community

Student Mainframe Contests - global
33 countries and growing
colleges and high schools

Providing a service to our clients
roundtables, resources, career days
internships, resumes, advisory boards, training

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How educators get started

Join the initiative at: ibm.com/**university/academicinitiative**

Download Course Materials

Request access to mainframes

Hubs that provide remote access world wide (zskills@us.ibm.com)

Attend faculty education

Professor seminars, education workshops

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IBM zEnterprise Academic Initiative Claims

- **1,082 Schools in 67 countries**
  Participating Schools
- **59,000+ students from 33 countries in mainframe contests**
  Master the Mainframe on facebook
- **3,877 students from 40 countries completed z/OS Entry Level Mastery Test**
  FAQs
- **4209 students and professionals using SystemzJobs.com – job board, 345 employers**
  2 minute video on YouTube
- **Resources at no charge for the mainframe community**
  Free resources
- **8 detailed case studies (why schools are teaching System z**
  Detailed case studies of 8 schools
- **YouTube videos (IBM clients using Academic Initiative)**
  The next generation of enterprise systems experts

Enterprise Computing Education

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2013 IBM Enterprise Systems Educator Seminar

June 3 - 5 - Hosted at Syracuse University

The IBM Academic Initiative is proud to sponsor and invite you to this no cost, face-to-face enterprise system summer seminar. Introduce your students to the most secure computing platform, most current state-of-the-art hardware - the "cloud in a box" - the IBM System z.

- **Learn Enterprise Systems curriculum strategies and best practices**
  - How to get started
  - The best approach to integrate enterprise systems topics into a course
  - Which topics to consider (RDz, COBOL, JCL, REXX, etc.)

- **Attend engaging workshops taught by leading university professors**
  Topics include: Virtualization, Databases (integrate DB2 using RDz and System z), Big Data (DB2, Hadoop, Data Analytics, Cognos), and Master Data Management: InfoSphere

- **Engage in hands-on workshops and lab exercises**

And that's not all! While you're here, you'll…

- **Tour** the Green Data Center

skil

Turkey

China

North America

Brazil

India

Enterprise Computing Community
Conference 2013
Marist College, Poughkeepsie, NY
June 9 - 11, 2013

Home

General Information
- ECC Home
- Conference Home
- Conference Committee
- Conference Speakers
- Call for Papers
- Registration
- Submissions

Programs
- Conference Schedule
- Conference Presentations

Promotional Materials
- Sponsorship Flyer

About the National Conference

ECC 2013, the fifth annual conference will be hosted by Marist College with collaboration from our esteemed academic and industry partners from Sunday, June 9th, 2013 through Tuesday, June 11th, 2013.

Like us on Facebook!

Like 104

Features

Keynote Speakers

Timothy Lance

Charles Severance

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Marist College Instructor Led Online z/OS classes

647 students from 90 businesses

Accenture S.A.
ABSA Bank
ACG - Auto Club Group
ADP
Aegon USA
Aetna, Inc.
Aformatik Trng. & Consulting GmbH & Co.
Archer Daniels Midland
ASR Nederland N.V.
Alcan Global ATI- North America
Ameritech
Atlantic & Pacific Tea Company
Auto Zone
Bank of America
Bank of Tokyo
BMC Software
Boston University
Central Hudson Gas & Electric
CIGNA Healthcare
Citigroup
Commonwealth Office of Technology, State of KY
ConvergEx Group
Computer Sciences Corporation
Credit Suisse
Deere & Company (John Deere)
Department of Veterans Affairs
Depository Trust & Clearing Corporation (DTCC)
Desert Sands Unified School District
Donovan Data Systems
DW Installations
EMC
Emirates Airlines
Everis Outsourcing
Fidelity Investments
Great Lakes Higher Education Guaranty Corp.
Great West Life Assurance Company
Handelsbanken
IBM
Insurance Services Offices (ISO)
Internal Revenue Service
JP Morgan Chase
Kansas City Life Ins.
KG
Kawasaki Motors Corp. USA
Kimline Propane
Liberty Mutual Insurance Company
LexisNexis
Louisiana Housing Fin Ag / Baton Rouge
M & T Bank
Marist College
Marriott Corporation
MassMutual Financial Group
Merlin International – Veterans Affairs
Metavante
Mitchell Martin
Mortgage Guaranty Insurance Company
Nationwide Insurance Company
New York University
Norfolk Southern Corporation
Northrup Grumman
NYCE Payments Network LLC
NYS Dept of Tax & FinOCIT, Sacramento Cty.
Outsourcing deTecnica deSistemas - Hardware
Ohio Public Employees Retirement
System Partsearch Technologies
Progressive Insurance
PSC Electrical Contracting
Referrential Systems
Rutgers University - Office of IT
Safenet Security, Inc.
SAIC
Scotia Bank
Sears Holdings Corporation
Secura Insurance Company
Self Employed Consultant
State Farm Insurance
Systemware, Inc.
T. Rowe Price
TAG
Tata Consulting
Thomson Financial-Transaction Services
Tjornin Consulting Pty, Ltd.
University of Maryland Eastern Shores (UMES)
Unum Group
USDA
US Treasury
Verizon
Wachovia Bank
Washington State Department of Transportation
Wells Fargo

www.idcp.org

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IBM Destination z Enterprise Computing Scholarship 2013

To be considered for this scholarship, students must have demonstrated excellence in their enterprise computing coursework, with plans for continued growth on the mainframe platform in their academic and professional careers.

1. Chris Richardson, **University of South Carolina**
2. Subashre Ramachandran, **Northern Illinois University**
3. James Ewell, **West Texas A&M University**
4. Ronesha Sharma, **University of Arkansas**
5. Joseph Lodin, **Rochester Institute of Technology**
6. Theodore Huntley, **Illinois State University**
7. Jenna-Shae Banks, **North Carolina A&T University**
8. Dontrell Harris, **North Carolina A&T University**
9. Jie Hou, **Northern Illinois University**
10. Shane Hale, **Rochester Institute of Technology**

2013 SHARE Academic Award for Excellence – Deadline June 21

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Plug into these resources

TPF Users Group

SHARE
z Technical University

zNextGen

Enterprise Computing Community

Destination z
Enterprise Executive

z Journal (MainframeZone.com)

z/OS Hot Topics

Enterprise Computing Community

oration

The Next Generation Enterprise Systems Skills

Thank You

Don Resnik
IBM Enterprise Systems

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IBM System z Academic Initiative Resources for Schools

Mainframe courses available:

Foundational principles

- **Intro to the Mainframe: z/OS Basics* (full semester package)**
- **Intro to the Mainframe: Networking***
- **Intro to the Mainframe: Security***
- **Intro to the Mainframe: Large Scale Commercial Computing**

Operating systems

- **Linux on System z**
- **Introduction to z/VM®**
- **Introduction to z/VSE Basics**
- **UNIX® System Services (Module)**

User interfaces

- **ISPF: z/OS Basic Interfaces**

Storage management

- **VSAM**
- Programming languages
- **Assembler**
- **COBOL**
- **JCL**

Other

- **z/OS Advanced Topics***
- z/OS Emerging Technologies*
- z/OS Installation

Tivoli security, systems, network, and storage management courses

- **IBM Tivoli License Compliance Manager for z/OS 4.2 Implementation**
- **IBM Tivoli System Automation for z/OS 3.1 Introduction and Operations**
- **IBM Tivoli System Automation for z/OS 3.1 Implementation and Administration**
- **IBM Tivoli Workload Scheduler 8.2 for zOS Scheduler's Workshop**

Information, data and transaction management

- **Enterprise Server Data Management**
- **DB2 for z/OS Fundamentals**
- **DB2 Family Fundamentals (Cross product)**
- **DB2 SQL Workshop (Cross product)**
- **DB2 for z/OS Database Admin Workshop, Part 1**
- **DB2 for z/OS Database Admin Workshop, Part 2**
- **DB2 Programming Workshop for z/OS**
- **DB2 for z/OS Application Development**
- **DB2 for z/OS Query Optimization and Performance Tuning**
- **Intro to IMS***
- **An Introduction to IMS (Textbook reference)**
- **Transaction Management**

Application development

- **WebSphere Application Server for z/OS**
- **Intro to IBM WebSphere Developer for z (Web based)**
- **WebSphere MQ for z/OS System Administration**
- **Developing COBOL with IBM Rational Developer for System z**

Diagnosis

- **z/OS RAS and Diagnostics***

eLearning resources:

- **Interactive e-Learning Module: *z/OS Basics***
- **Flash Demo: Introduction to Rational Developer for System z**
- **Develop a batch DB2 for z/OS COBOL application using RDz**
- **Developing and debugging a COBOL DB2 application**
- **Editing record-oriented programs with the System z LPEX editor**
- ***Learn about your future in Large Systems***
- ***Careers in Mainframes***

***available in audio version**

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Mini Survey of 9 TPF Clients

1. Please select your mainframe skills situation.

7__ We have openings now
2__ We don't need mainframe skills at this time, but we will in the next 1 - 2 years
__ We don't need mainframe skills at this time, but we will in the next 3 - 5 years
__ We do not need System z skills

2. What is your preference for increasing mainframe skills? Please enter a percentage that equals 100%. For example, College hires - 25%, Professional hires - 25%, Internal training - 25%. Outsource - 25%

_2_ College hires 10, 10 x, 50, 50, 50, 5, 25
_1_ Professional hires 90, 40, x, 50, 50, 50, 40, 65
_4_ Internal training 15, x, 5, 10
_3_ Outsource 35, 50

3. Rate the success your company has with these recruiting alternatives for TPF talent. (1 = high success, 5 = low or no success)

__ Partner with colleges and universities 3, 1, 0, 5, 5, 5, 5, 5
_x_ Advertise job opportunities on company web site 2, 2, , 5, 3, 5, 3, 3, 3
__ Advertise job opportunities on Job boards 4, 5, 5, 3, 5, 3, 4, 2
_x_ Referrals 2, 5, 3, 2, 5, 2, 3, 1
__ Social recruiting (LinkedIn, Facebook, Twitter) NA, 5, 4, 3, 5, 2, 5, 5

4. Where are your most critical future skills requirements?

_6_ Infrastructure (Systems Programmers or Systems Engineers)
_3_ Software and application development (what languages?
__ Operations
__ Other (Please explain) _____C, C++ Assembler, BAL, C++, BAL & C, Assembl;er & C++

5. What technology or software is your most immediate need for TPF or System z education? Web Services, SOA (2) Network interface for SOA, Assembler, C, CP Internals, Systems Programming, Internals, C++, SOA

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