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

“You’re not getting any younger” :D
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
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
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
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](mailto:zskills@us.ibm.com) requesting student contact information

**zAI Participating Universities**

- [ibm.com/university/contest](http://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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**NO EXPERIENCE NECESSARY**
just a desire to win great prizes!
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 Dominguez Hills
  mbeheshiti@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@fd.edu
- Fairmont State University, WV
  Richard.Harvey@fairmontstate.edu
- Illinois State University
  cjiang@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
“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.”
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
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.
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

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

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

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!

Keynote Speakers

Timothy Lance
Charles Severance

Features
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
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
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
The Next Generation Enterprise Systems Skills

Thank You

Don Resnik
IBM Enterprise Systems
# 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**
- **Linux on System z**
- **Introduction to z/VM®**
- **Introduction to z/VSE Basics**
- **UNIX® System Services (Module)**
- **ISPF: z/OS Basic Interfaces**
- **VSAM**
- **Programming languages**
- **Assembler**
- **COBOL**
- **JCL**
- **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**
- **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*
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, 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, Assembler & 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