

From: BATEC Center <info@batec.org>

Subject: March Newsletter

Reply: info@batec.org



National Center of Excellence for Computing and Information Technologies

March 20, 2013

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Director's Note

It is a very exciting time to be in the computing and information technology arena! It looks like there is finally significant attention being paid to developing the necessary workforce to stay competitive.

President Obama [highlighted](#) it in his State of the Union:

"If we want to make the best products, we also have to invest in the best ideas... Now is not the time to gut job-creating investments in science and innovation. Now is the time to reach a level of research and development not seen since the height of the Space Race... Four years ago, we started Race to the Top - a competition that convinced almost every state to develop smarter curricula and higher standards, for about 1 percent of what we spend on education each year. Tonight, I'm announcing a new challenge to redesign America's high schools so they better equip graduates for the demands of a high-tech economy. We'll reward schools that develop new partnerships with colleges and employers, and create classes that focus on science, technology, engineering, and math - the skills today's employers are looking for to fill jobs right now and in the future."



Code.org, a non-profit foundation dedicated to improving access to computing education, was launched in mid-February. Their website <http://www.code.org> was released two weeks later and already has over a half a million pledges to work together to ensure that "Every student in every school should have the opportunity to learn to code". I have signed that pledge and I hope you will join me and do the same!

I had the opportunity to attend the [NCWIT Aspirations in Computing Awards](#) at the Google offices in Cambridge where ten high school female students were honored for their achievements in technology. It was an electrifying evening where these girls demonstrated their passion for the field and celebrated with their families and local business and education professionals.

On the workforce front, every major outlet is touting the availability of jobs in the tech sector. In analyzing job postings over the last 90 days on [Burning Glass Labor Insight](#), the highest percentage of jobs in that time period were in the Computer and Mathematical occupational group. With over total 3.5M job postings, that equates to over a half million jobs! [Monster's Technology Outlook 2013 report](#) concurs, "If you've got the right combination of skills and experience putting those skills to work to solve mobile, interactive, big data or healthcare technology challenges, 2013 should be a very sweet year for your career." [PayScale.com](#), an online salary database, reports that technology jobs are 'hot' because they are in a high-demand, rapidly growing field (projected growth at over 14%).

I look forward to working with all of you to continue our quest to create the best learning and earning environment for our students.

Best regards,
Deborah Boisvert, BATEC Executive Director

National

LoveTech

We love the benefits of a good technical education, and our LoveTech program is aimed at helping your students share this belief. Look out for the LoveTech video contest, to be unveiled across the BATEC national network at the end of March!



We want students, faculty, and industry across our network to grab a camera or put together animation, slides, typography - anything! - and tell us in 60-90 seconds why they LoveTech. Get It? IF you are struggling to understand the concept, let us share with you the early results from three community colleges in the city of Boston. Technology students from Bunker Hill Community College, Middlesex Community College and MassBay Community College have created six 90-second videos to give you an idea, and you can check them all out at www.youtube.com/bateccenter.

The LoveTech contest is simply about creating a sense of community among students and faculty in our different regions. We plan to invite our faculty and students from our partner institutions to help us share the "love", and promote the excitement of technical education.

Summer Institutes

We are pleased to announce that BATEC will host its 2013 National Summer Institute in the City of Boston. This Professional Development series will feature a new and revised week long format. Industry trainers from the likes of EMC and Oracle and Subject Matter Experts from across the country will lead the courses you find listed below.

The Summer Institute will be held over a two week period. The first week (Week 1) will start on Monday, July 29th and finish on Friday, August 2nd. The second week (Week 2) will start on Monday, August 5th and finish on Friday, August 9th.

We would be immensely grateful to gauge your interest and availability through [this brief survey](#).

Each course, listed below, will be conducted over a five-day period:

- SI-2013.101 App Inventor Mobile Programming
- SI-2013.102 Big Data Analytics
- SI-2013.103 Cisco CCNA Exploration
- SI-2013.104 Cyber Security
- SI-2013.105 Exploring Computer Science
- SI-2013.106 IT Problem Solving

SI-2013.107 Office 365 Deployment
SI-2013.108 Oracle SQL
SI-2013.109 Oracle PL/SQL
SI-2013.110 Windows 8 Administration

Registration will open in early April.

Boston

@Scale

BATEC has been awarded \$86K to build a "Pathway to Address Big Data" under an @Scale Program of the [Massachusetts STEM Pipeline Fund](#). This award will allow BATEC to leverage state funds to address current and near-term workforce gaps for data and analytics through targeted training and education programs in close collaboration with the MA Technology Leadership Council. This project will assist current student populations as well as displaced and/or incumbent workers in four colleges - Bunker Hill Community College (BHCC) as the lead model and at least three additional across the state - that seek to upgrade and/or develop their knowledge, skills and abilities in response to advancements in technology and business practice. Industry and education focus groups are occurring this spring with faculty training to occur during our Summer Institutes in August leading to program implementation scheduled to begin in the fall.

Internships

The BATEC Community College internship program took a major step forward at MassBay Community College in Fall 2012, yielding 13 internships for 13 student participants. We think this is significant. Here's why.

Traditional internship models rely, all too often, on the hope that well-connected instructors, aided by staff from the Career Services Department, can place students using their treasured rolodex (remember those?) of personal contacts. This old-school model is difficult to implement, challenging to sustain and impossible to scale.

BATEC has developed a systematic program for students in Web Design and Development, Computer and Network Support and Database Administration, which supplements the Experiential Education model developed by the Massachusetts Community College system. This program involves four key steps (a) Student Prequalification, (b) Student Preparation, (c) Employer Recruitment, and (d) Introduction and Placement.

In truth, at MassBay this fall, we struggled with too many opportunities and not enough students. That's right, too many paid internship opportunities and not enough students!

If this is the sort of problem that you'd like to work on, we can help. We're all about connections and connecting students and faculty with engaged business partners is perhaps the greatest benefit that we can offer.

We've documented and published the model on our website ([Check it out here!](#)) and next fall we're looking to scale it. Let us prove to you, at your school, on your campus our success can be your success. We look forward to talking with you about it.

Microsoft Achieve 2013: EduTech Family Summit

BATEC partnered with Microsoft to hold the first EduTech Family Summit: Achieve 2013 at UMass Boston on January 26th. This event brought together students, parents, educators, community leaders and local government representatives to explore how together we can best support our students in their quest for academic and career success by using innovative technology to learn and achieve. Discussions focused on how using technologies like Microsoft Windows, Office 365, SkyDrive, Bing, Skype in the Classroom, and Kinect enhance not only what our students learn but how they learn. BATEC also held a workshop on IT Careers and Education Pathways led by Deborah Boisvert, Paula Velluto, Felicia Vargas and Lou Piazza. The highlight of the session was the introduction of our new [NAO Robot "Billy"](#). Needless to say, he was a hit!! The summit also included an invitation-only YouthSpark Connection Luncheon that featured a panel of New England education experts along with targeted discussions about how to better connect to make Boston a leader in technology-driven quality education.



Chicago

Improving Information Technology Programs at Wilbur Wright College

As part of the College to Careers initiative at the City Colleges of Chicago, Wilbur Wright College is creating partnerships with industry leaders in information technology to better align its curricula to meet the demand of this growing field.

In late January, Wright College hosted the second kick-off meeting between administrators, faculty members and industry partners. At this meeting Wright College administrators presented the three pathways it plans to offer - Network Technology & Security, Information Technology (including database and cloud computing), and Computer Science (including software engineering and web development). These pathways were selected based on the feedback it received from partners at the IT Summit in August and market analysis in the Chicago region. The industry partners reviewed the pathways providing a strong foundation to do more work toward finalization. They also provided feedback on what types of classes and skills should be learned along the way.

The next step is revising classes, which has already begun. Faculty from Harold Washington College are helping to develop an IT Problem Solving course (based on work from Bunker Hill Community College) which will be an introductory course for each pathway, as well as a class for non-majors to gain information about the field. Wright College faculty will soon be revising the curriculum in the Network Technology 1 and 2 courses.

Concurrently, Chicago Mayor Rahm Emanuel announced that City Colleges of Chicago (CCC) and Chicago Public Schools (CPS) will be partnering with The Starter League, a Chicago-based startup that teaches beginners how to code, design and ship web applications. Through this partnership, The Starter League will work with officials at CPS and CCC to build tailored web development courses and train six CCC faculty members and 10 CPS teachers over the summer.

Las Vegas

Soft Skills Training

A recent workforce study conducted among Nevada's Technology Education Business Alliance (TEBA), a statewide ICT advisory committee consisting of over 350 ICT business and industry partners, educators, and government representatives, clearly indicates the need for soft skills training for students seeking employment in the ICT workforce. The study was conducted by Terryll Bailey of the Allison Group.



In order to compete in today's job market, TEBA members are making it clear that our students must have soft skills (also known as employability skills, career readiness skills, emotional IQ,

etc.) "We won't hire your students, even if they have a 4.0 GPA or bachelor's degree, unless they have soft skills," according to several major employers in Nevada. To address their needs, Deborah Boisvert, BATEC PI and Executive Director; Lou Piazza, BATEC Director; Terryll Bailey, President and Founder of the Allison Group; Dave Riske, Networking Instructor at Western Nevada College; and Dr. Warren Hioki, BATEC Co-PI and Executive Director for the College of Southern Nevada crafted a series of three, intensive, all-day soft skills workshops for ICT faculty from CSN, Truckee Meadows Community College, and Western Nevada College.

Elevator speeches, role playing, mock interviews, Lego bridge building, and other engaging and exciting workshop activities have been conducted, specifically addressing the soft skills outlined in the Nevada workforce study, the Nevada Department of Education employability and career readiness standards, and the Department of Labor IT Competency Model. The third and final soft skills workshop is scheduled for May 17, 2013. Faculty will present individual poster sessions depicting how they intend to integrate soft skills into their curriculum, corresponding soft skill activities, student learning outcomes, and a rubric for assessing their outcomes. All three workshops are being conducted at the College of Southern Nevada's Cheyenne campus in North Las Vegas, Nevada.

San Francisco

ICT Pathways

The Mid-Pacific ICT (MPICT.org) Center's San Francisco ICT Pathways Project, one of three related projects funded by BATEC, is leveraging its comprehensive assessment of current and potential opportunities, Pathways to ICT Education and Careers in San Francisco, to deliver it year one outcomes.

Completed last summer, the content is now being used to prepare promotional materials about high school and community college ICT education programs for dissemination this spring. The report's research also identified the opportunities for partnerships and joint stakeholder projects that are now going beyond aligning curriculum to include collaborating with industry, workforce development, and community-based organizations to provide supporting elements (such as equitable access and entry, experiential learning, and faculty development). These stakeholder partnerships are proving to be essential to building and sustaining a replicable pathways model. The next project stakeholder summit is scheduled for April 12, 2013, and this summer MPICT is supporting K-12/community college faculty work groups in planning and delivering a broadcasting summer camp for high school students, dual enrollment curriculum for Python programming and digital media arts, and high school faculty development in the Exploring Computer Science curriculum.

MPICT is also working with the San Francisco Office of Economic and Workforce Development's TechSF program which has a similar mission to prepare San Francisco's ICT workforce. Working together, the SF ICT Pathways Project frameworks and outcomes are being repurposed as TechSF's Education Pathways.

Winter ICT Educator Conference

The Mid-Pacific ICT Center co-produced the fifth Winter ICT Educator Conference January 3rd and 4th, and it was the most successful conference to date with respect to the quality and breadth of the sessions and the number of educators in attendance. In a few weeks, the links to the archived keynotes and sessions will be available on the MPICT home page and YouTube channel for anyone curious about a topic on the agenda, or who attended the conference but missed a session they really wanted to attend. There's still an opportunity to learn what it was all about! MPICT and the co-producers - ICT Center, Convergence Technology Center, BATEC, CyberWatch, CyberWatch West, Mid-Wet Center for IT, CCSIA, and the California Community College ICT Collaborative - wish to thank everyone that joined us!

For the second year, the Winter ICT Conference included a diversity track as another means of disseminating best practices for attracting and retaining under-represented students to ICT. The track provided the opportunity to share the quarterly update of MPICT's Diversity toolkit, the initial version introduced at HI-TEC last July. The online Diversity in ICT Community of Practice will soon begin to host quarterly professional development topics as catalysts for dialog and idea exchange. The community is open to all ICT educators. Go to the [group site](#) to join.

Upcoming Events

HI-TEC

HI-TEC is a national conference on advanced technological education where secondary and postsecondary educators, counselors, industry professionals, trade organizations, and technicians can update their knowledge and

skills. Charged with Educating America's Technical Workforce, the event focuses on the preparation needed by the existing and future workforce for companies in the high-tech sectors that drive our nation's economy. For more information, go to <http://www.highimpact-tec.org/>.

Our Sponsors



UMass Boston

UMass Boston is a public research university with a dynamic culture of teaching and learning, and a special commitment to urban and global engagement. We are headquartered in the College of Advancing and Professional Studies (CAPS), offering an opportunity to address the workforce and community needs of our region.



National Science Foundation

This material is based on work supported by the National Science Foundation under Grant Numbers DUE 1104145. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect those of the National Science Foundation.

| info@batec.org | <http://www.batec.org>
University of Massachusetts Boston
100 Morrissey Blvd
Boston, MA 02125