



Mid-Pacific ICT Center Quarterly Newsletter

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2011

Newsletter

Quarter 4

2012 Winter ICT Educator Conference in San Francisco

For the 4th year in a row, MPICT and the National ICT Center NSF Advanced Technological Education Centers are partnering to create a Winter ICT Educator Conference, January 5-6, 2012, in San Francisco.

It is co-hosted by the new California Community College (CCC) ICT Collaborative, created by the CCC State Chancellor's office with Perkins 1B funds to coordinate and improve ICT education at all 112 of California's Community Colleges, and the [BATEC](#) and [CSSIA](#) NSF ATE National Centers.

The conference features an outstanding [agenda](#) of more than 50 presentations from ICT industry and ICT education representatives.



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MPICT Collaborating with BATEC National Center

MPICT has collaborated for several years with the [Boston-area Advanced Technological Education Connections \(BATEC\) Center](#), an NSF ATE Regional Center, like MPICT, in Massachusetts.



BATEC is now a national NSF ATE Center, and MPICT is a sub-awarded partner with the new Center. We are expanding our collaboration to replicate and scale certain BATEC successes for impact in our region over the next few years.

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Spring 2012 ICT Synchronous Online Courses

MPICT has been [championing](#) the use of online collaboration tools, like [Blackboard Collaborate](#), [Cisco Webex](#) and [Adobe Connect](#) to improve community college ICT education.

These tools can be used in a wide variety of ways to positively impact student, instructor and department performance.

Among those is delivering instruction via these platforms. MPICT is currently promoting [19 courses offered in this manner in Spring 2012](#).



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The theme for the 2012 Winter Conference is **“ICT Education for ICT Employment – Even Now”**.

Even in this time of high unemployment and education funding cuts, quality ICT education leads to quality ICT employment, and that positively impacts the economy – at many levels.

Let's share quality ICT education information, resources and practices, improve ICT education, help people find good ICT jobs and help improve this poor economy – now!

U.S. community college educators in ICT-related programs are invited to attend this event free, with the possibility of receiving a stipend or partial expense reimbursement.



The conference will take place Thursday and Friday, January 5-6, 2012. From 8:00 to 10:10 each day, morning coffee and keynote presentations will be held at Microsoft's San Francisco facilities at 835 Market Street, Suite 700, by the Powell Street BART/MUNI stations.

Thursday's keynote "Building the IT Workforce of the Future" by Steven Ruggiero, Director of IT Operations at Facebook, will be followed by "Good But Challenging Times for ICT Educators" by MPICT's James Jones.

Friday, "The Digital Divide: Closing the Gap with Mobile" by the ICT Center's Gordon Snyder will precede a keynote on "Challenges to Teaching and Learning in the 21st Century" by Jim Gaston of the South Orange County Community College District, Office of Information Technology.

Breakout sessions will then be held in San Francisco State University Downtown Campus classrooms in that same building on the 6th Floor.

We will finish around 7:30pm on Thursday, following a hosted networking opportunity in the Educated Palate Restaurant at the City College of San Francisco Downtown campus on the corner of 4th and Mission Streets, and at 4pm on Friday.

For those who are not able to physically attend the event, most sessions will be made available remotely via the Internet in real time via CCC Confer (Blackboard Collaborate). Check the MPICT website at www.mpict.org in the Currently Featuring section for instructions on how to join remotely for free! It works with any computer, using any browser, at any connection speed, from anywhere.

Even if you are able to attend the event in person, it is not possible to attend every session. Most sessions will be recorded and available as CCC Confer archives. ([Archives from the 2011 Winter Conference](#) have been viewed about 2,000 times.) Many sessions will also be converted for viewing on MPICT's YouTube Channel at youtube.com/mpictcenter.

Check the MPICT website in the Currently Featuring section for instructions on how to view presentations later for free!



In 2011, 95.8% of attendees rated the conference excellent or good, and nobody rated it marginal or poor. Attendees always report opportunities to network with peers and industry representatives as among most valuable conference aspects. According to one attendee: "... the sessions were excellent. Helped to motivate me to continue teaching as a CC instructor who was feeling demotivated and demoralized with the petty cuts by our state."

This year, there is a track throughout the conference on topics related to improving diversity in ICT education and workforce, an important issue most programs are struggling with.

Check it out – in person, remotely in real time, or later online!

“Over the past eight years, the Boston Area for Advanced Technological Education Connections, or BATEC, has developed a regionally coordinated system for attracting talented students from diverse demographics and backgrounds to IT careers, promoting lifelong learning of technical skills, and meeting (its) region’s IT workforce needs.

“This success is the result of a dynamic working partnership among industry leaders, IT educators, and community organizers who have a deep understanding of how to achieve the core structural reforms necessary to ensure that education programs keep pace with the rapidly evolving IT field. Now, thanks to its success and a new \$5 million grant from the National Science Foundation, BATEC, started as one of 36 regional Advanced Technological Education (ATE) centers across the nation, has now become a National Center for Broadening Advanced Technological Education Connections.



“As a national center, BATEC will extend its role as a connector, nexus, and catalyst by focusing on computing technologies and their intersections with other technology domains,” says Deborah Boisvert, BATEC’s founding director. To achieve these results, BATEC has set the following goals: extend and strengthen computing discipline pathways and industry connections to produce 21st century IT professionals; adapt and advance BATEC strategies to transform IT education in urban areas; and conduct research to inform IT education and workforce development models.

“Throughout these three over-arching goals, the National Center will extend BATEC’s innovations by creating urban IT laboratories for connecting educators, industry advisors, government officials, and thought leaders. By using this integrated approach, they will in concert advocate, facilitate, and coordinate IT educational reform to address the spectrum of significant challenges to our nation’s future.”

“Technology is an essential enabler of global communication and commerce, or a key driver for innovation across all sectors. IT jobs in the new economy demand technical skills combined with the ability to think and act in an entrepreneurial fashion by using problem-solving techniques, performing computational thinking, and other higher-order skills.

“BATEC has focused on core IT knowledge, skills, and attributes; intensive curriculum adaptation and development; pedagogical transformation; outreach to under-represented and at-risk populations; and substantive dialogue among the key stakeholders of education, industry, and government. The National Center will contribute to the knowledge base of the NSF’s ATE program and contribute significantly to successfully addressing and responding to the challenges of an economy based upon intellectual capital

“BATEC’s all encompassing view of the IT field has guided the well-planned design of its innovations which have had broad impact throughout IT education programs, intersections of IT with other fields, and education pathways. BATEC has grappled with issues that are relevant to most urban environments and thus national in scope—and not just Boston-centric. As a National Center, BATEC will scale its experience, tools, and methodologies to assist IT education programs in urban regions across the country to achieve similar transformative and systematic change.”

“BATEC plans to expand the model of advocating, facilitating, and coordinating IT education reform to serve three more urban populations: Chicago, San Francisco, and Las Vegas.” MPICT is BATEC’s partner for serving San Francisco.

Among its collaborations, MPICT has been working with BATEC on informing a series of national ICT/IT workforce studies, working with [Tech America](#), an association serving “tech” industries. On November 4th, MPICT joined BATEC and Tech America at IBM facilities in Littleton, MA for an “IT Skills Summit”. That well-attended event developed structure and momentum for the effort.



On December 2nd, MPICT held an Advisory Panel meeting in San Francisco, connected remotely with an Advisory group meeting at Truckee Meadows Community College in Reno, NV, focused on developing plain language categorizations of ICT/IT employment and structure for future workforce study.

It is inadequate to just ask local business people what they want in an IT/ICT workforce. The field is too broad and diverse. We need better methods to determine in statistically significant ways exactly what U.S. ICT Workforce demand is.

In late January, MPICT will be working with BATEC on specific implementation plans for this collaboration in San Francisco.

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These online collaboration tools can empower instructors to reach and serve students in multiple ways simultaneously:

- In person, through classroom instruction
- Interactively in real time via the Internet,
- In real time on the phone,
- Anytime via archived classes over the Internet,
- Using ADA compliant, real-time transcription services,
- Anytime via audio or video podcasts on computers
- Anytime via audio/video podcasts on mobile devices
- Integrating remotely accessible real lab equipment
- With remote guest lectures/enrichment experiences
- With interactive online office hours

Delivering a course in this manner can improve student, instructor and department outcomes:

- Improved Student Recruitment, because students can attend in many ways from anywhere any time
- Improved Student Retention, because students have multiple engaging modes of learning and getting help
- Improved Student Completions, because there are many ways to get “unstuck”
- Better Student Performance, because many student learning styles are served at once
- Improved Student Relationships, because students can connect in multiple ways
- More Engaging Classroom Experiences, because it is possible to integrate rich learning experiences, like
 - Remote Guest Lectures
 - Remote Site Visits
 - Voices of Past Students

MPICT has been developing ICT faculty to teach effectively using these tools, through in-person faculty development events, through an online [Toolkit](#) and in other ways. For example, on November 19th, MPICT offered a one-day, hands-on workshop in Honolulu.

If more of us teach in this manner, we can improve ICT education and workforce development by being able to justify, offer and run more advanced and specialized courses – improving the availability, depth and breadth of ICT education offerings everywhere.



This [spring](#), MPICT has been promoting the following community college courses offered in this manner:

- [Cisco CCNA 3&4](#) (Las Positas College)
- [Cisco CCNA Security](#) (Truckee Meadows CC)
- [Cisco CCNA1](#) (Ohlone College)
- [Cisco CCNA2](#) (Ohlone College)
- [Cisco CCNA3](#) (Ohlone College)
- [Cisco CCNA4](#) (Ohlone College)
- [Cisco CCNP1](#) (Ohlone College)
- [Cisco CCNP2](#) (Ohlone College)
- [Cisco CCNP3](#) (Ohlone College)
- [CompTIA Linux+](#) (Coastline Community College)
- [CompTIA Network+](#) (City College of San Francisco)
- [CompTIA Linux+ Network-Security](#) (Coastline CC)
- [Computer Forensics](#) (Las Positas College)
- [Flash Web Animation](#) (Santa Rosa Junior College)
- [Introduction to Dreamweaver](#) (Santa Rosa Junior College)
- [Network Security Sec+](#) (Las Positas College)
- [VMWARE: Install, Configure, and Manage V5.X](#) (Ohlone)
- [Whitehat Hacker Testing](#) (Las Positas College)
- [WIFI/Wireless Networks](#) (Las Positas College)

Please make students aware of the possibility of taking these courses remotely if they do not have competing offerings by your college locally.

If you, or anyone you know who is a community college instructor in the MPICT region, would like to learn how to teach in this manner, or would like to offer courses in this manner, please [contact us](#).

This multi-modal instruction method is powerful, effective and greatly appreciated by students. Use of [CCC Confer](#) for this purpose is **absolutely FREE** to instructors and students at community colleges in California. Use of Blackboard Collaborate licenses are free to faculty in Hawaii, and these platforms are affordable anywhere.

Other Collaboration Platform Uses to Improve ICT Ed:

Even if you are not ready to offer an entire course in a synchronous online format, there are many other great opportunities to use these platforms to improve ICT education, for example:

- Department Meetings
 - Online collaboration tools for department meetings allow faculty to attend, participate and interact with anything on any computer remotely, reducing travel time and costs, and providing archives for later review and documentation.
- Other Meetings
 - In the same way, you can set up remote meetings with anyone. Allowing remote attendance at advisory meetings increases the possibility of participation by busy professionals, for example.
- Content Capture
 - Faculty or others can use these platforms to record presentations and demonstrations for a variety of purposes, including video and learning module creation and sharing.
- Teaching Remotely
 - It isn't just students who can benefit from attending remotely. When the teacher is ill or out of town, it is possible to deliver a class remotely from anywhere using these platforms, without having to physically be in the classroom.
- Online Office Hours
 - Using these platforms during office hours allows students to easily attend who would otherwise have trouble attending.
- Remote Guest Lectures
 - It may be difficult to get a business representative to physically travel to your classroom to address your students with valuable real-world perspectives, but it is relatively easy to have them talk to students from any computer anywhere.
- Mobile Device Content Creation
 - It is possible to convert material recorded via these platforms to be viewed or heard anywhere on mobile devices.
- Expanding the Impact of Events
 - Make conference sessions and other presentations available to remote participants in real time or asynchronously using these platforms, greatly expanding the impact of events beyond the relatively few who can physically be in the room.
- Serving the Disabled
 - Using these platforms can enable participation by people with hearing, visual and other disabilities.
- Serving High School Students in High Schools
 - Create a pipeline of students for your program by offering (dual/concurrent enrollment) courses to students in high schools (many with limited access to ICT courses).



We have been amazed and thrilled to learn of the many clever and impactful ways instructors are using these platforms to improve ICT education.



MPICT is interested in any use of these platforms by anyone to improve ICT education and workforce development.

If you would like to learn more, or if you have stories, techniques or uses of these platforms for ICT education impact, please share them with us at <mailto:info@mpict.org>.

We very much want to encourage **YOU** to use these tools!

CSU Monterey Bay - Unique Transfer Opportunities

In ICT education, traditional Computer Science (CS) programs are probably the oldest and most established. Many CS programs and their content align to Association for Computing Machinery (ACM) standards and curriculum recommendations. CS Faculty is established, and theories and practices are often long-standing. As a result, the most functional ICT articulation and transfer pathways are between traditional CS programs.

More recently, with the rapid emergence and adoption of ICT technologies, like networking and IT, many 2-year schools have programs and/or courses that do not always fall neatly into established Computer Science paradigms. Building transfer and articulation relationships to 4-year schools that accept this coursework is a big challenge.



In the fall of 2008, [California State University, Monterey Bay \(CSUMB\)](#) started an exciting [Computer Science and Information Technology \(CSIT\) Bachelor's degree program](#).

Housed in the department of [Information Technology and Communication Design \(ITCD\)](#), CSIT provides students with a unique blend of theory and application, combining a solid background in theoretical computer science principles with hands-on experience in information technology applications. This innovative program is ideal preparation for students interested in ICT careers. Technology impacts on social, ethical, and global issues, as well as collaboration and communication skills, are infused in the learning experience.

CSIT students take a set of common core courses to establish a strong foundation in the fundamentals of CS and information technology. They then build on that foundation by selecting a concentration:

- software engineering,
- networking and security,
- information systems, or
- game development.



Throughout their education at CSUMB, students gain a strong grounding in fundamentals, with many opportunities to apply what they have learned in real-world situations. This culminates in the senior capstone sequence, which results in a significant project, preferably done for an outside client.

CSUMB is built on a model of outcome-based education. Every course has a set of specified [outcomes](#) which each student must demonstrate competence in to pass the class. While this ensures quality and consistency in a CSUMB education, it also makes CSUMB an ideal transfer school for students from two-year colleges.



Through CSUMB's articulation program, community college courses that meet the right set of outcomes can be used to earn equivalent credit for an upper division course offered at CSUMB with the same outcomes.

Articulation pathways to allow such an equivalent credit are already mapped out for many partner 2-year colleges. For example, the four Cisco CCNA Exploration courses offered in a Community College could get transfer credit equivalent to three upper division networking courses at CSUMB.

This allows students to take not only their general education requirements at a 2-year college, but also a substantial portion of their CSIT courses. This is an excellent opportunity for students who might want to try ICT subjects at a 2-year college and continue on to a bachelor's degree with minimal time and hassle.

For more information on the program, check out:

- [Introduction Video](#)
- [Major Learning Outcomes](#)
- [Individual Learning Plan](#)
- [Learning Pathways](#)
- [CST Course List](#)

We would also encourage you to check out an [MPICT hosted webinar on the program](#).

CSUMB is also committed to enhancing the CSIT program with activities outside the classroom. CSIT faculty member, [Dr. Sathya Narayanan](#), heads the [Monterey Bay Regional Academy of Computing Education \(MBRACE\)](#), an NSF ATE Project. MBRACE is a collaborative effort between CSUMB, Cabrillo College, Monterey Peninsula College, and Hartnell College, to increase the quality of CS and Networking education in the region.



Through MBRACE, students have access to state-of-the-art network simulation software and a wide variety of industry internships, coordinated through a central office. MBRACE also has resources dedicated to recruiting more students into ICT fields and for mentoring students in the program.



Another resource at CSUMB is the Undergraduate Research Opportunities Center (UROC), which arranges for paid research opportunities for undergraduate students, at CSUMB and other institutions. Through UROC, students who perform research not only get paid for their time, but also get the chance to travel to professional conferences to present their work. UROC makes sure students are prepared for their research experiences through a series of professional skills workshops and ongoing mentoring.

This is an exciting time to be a part of CSIT at CSUMB and a great opportunity for students from ICT partner institutions. If you have questions about the program, the articulation process, or would like to visit the CSUMB campus, please visit <http://itcd.csumb.edu/csit> or contact csit@csumb.edu.

National Cyber League (NCL) Spring Pilot

MPICT and 3 other NSF ATE Centers, [CSSIA](#) in Illinois, [Cyberwatch](#) in Maryland and the new [Cyberwatch West](#) at Cal Poly Pomona, are joining forces to make ICT security education more fun and engaging and to give ICT security students more real world, hands-on experiences in securing complex ICT systems through creation of a National Cyber League (NCL).

The NCL is being positioned alongside other security competitions (like [Cyber Patriot](#), optimized for high schools, and the [National Collegiate Cyber Defense Competition \(CCDC\)](#), optimized for 4-year colleges and universities). The NCL is optimized for community colleges and 4-year colleges and universities.

In addition to cyber-competition tournament play, the NCL will have regular season play, with a series of weekly individual and team activities via remote, hosted computer laboratories to prepare teams for end of season and other tournament competitions.



24 teams will participate in the Spring 2012 pilot season, 8 teams from each division. Activities and competitions will be aligned to CompTIA Network+ and CNSS 4011 standards. CyberWatch, CSSIA, and CyberWatch West will each take responsibility for the content of two of the six regular season games, and each will provide a virtual, hosted competition lab environment.

There will be a six week, virtual, regular season (April 11-May 27), followed by a one week virtual playoff and a face-to-face virtual championship game.

Weekly play will be scored. Points and position in each league will be posted on the NCL website at <http://nationalcyberleague.org>.

The top team in each league plus one wild card team will compete in a National Playoff, conducted remotely in a hosted lab environment, May 28–June 3. There will be two head-to-head competitions between two teams.

The two winning teams of the virtual playoff will travel to compete in a virtual championship conducted live from the 2012 Colloquium for Information Systems Security Education (CISSE) Conference in Orlando on June 10, 2012.

MPICT Staff Additions

MPICT is very pleased to announce the addition of two new staff members:

Olivia Herriford, Associate Director

In her successful IT Management and Management Consulting career, Olivia has helped leaders and teams define and implement strategies for continuous improvement and change using skills as a facilitator, coach, and educator/trainer. Dr. Herriford is adjunct faculty at John F Kennedy University and University of Phoenix, teaching graduate and undergraduate business and management courses.



Olivia is an active volunteer on nonprofit boards and has a personal mission to continuously gain and share wisdom to enhance collective work today for an increasingly better tomorrow. It is this purpose that attracted her to the MPICT Center.

We are very pleased to have Olivia working closely with the MPICT team to deliver results to improve ICT education and workforce development!

Elise Staples, Program Assistant

Elise Staples is a student in the Masters of Library and Information Science program at San Jose State University.

She has a Bachelor of Arts degree in Psychology, with honors, from the University of California, Santa Barbara.



She has worked as a project assistant for the Cancer Prevention Institute of California, an Administrative Assistant at the Pathfinders Program at Highland Hospital, a Lab Aide at the Learning Assistance Center at City College of San Francisco, and a Research Assistant at the Education Psychology Lab at UC - Santa Barbara.

Elise is working part-time at MPICT on financial and administrative support, event logistics, office management, program support and a variety of projects. We are very pleased to have Elise on the MPICT team!

Save the Dates!

MPICT and CCC ICT Collaborative Faculty Development Weeks 2012



This summer, MPICT and the new California Community College ICT Collaborative will be offering 4.5 day, in-depth training for qualified faculty in ICT related programs at community colleges in California, northern Nevada, southern Oregon, Hawaii and the Pacific Territories.

These events offer “train the trainer” tracks to prepare faculty to teach new or improve existing courses or programs, and they offer pedagogical tracks to impart teaching and learning skills to improve course delivery.

This summer, two Faculty Development Week events will be offered:

- Southern California – June 11 -15, 2012 at Coastline Community College in Orange County
- Northern California - June 25 - 29, 2012 at Ohlone College in the San Francisco Bay Area

These events provide outstanding opportunities to learn new technologies, stay current with the rapid pace of change in ICT, build relationships with instructor peers, and learn new ways to improve student, instructor and department successes.

Attendance for qualified community college faculty will be subsidized.

Expect more information on these events in early Q2. For now, please save the dates!