Spring 2014

NCMATYC News

Inside This Issue

The President's Message

by Ann S. DeBoever, Catawba Valley CC

Being President of NCMATYC has been a wonderful journey. I have gotten to know many of you personally and have learned about the great work that is being done at all the community colleges across the state. Each NCMATYC member should be proud to belong to an organization that has a strong voice regarding changes in our math curriculum. If you are not a member of NCMATYC, please consider joining. We need you!

I want to give a huge Thank You to Kevin Parsons and his crew at Richmond Community College (RCC) for hosting an outstanding conference. Everything we needed was in place and the staff at RCC was very easy to work with. Our presenters gave motivating presentations. I am so pleased with the number of NCMATYC members who stepped up and shared information that is valuable to all instructors. The speakers from out of state were quite complementary of our conference. They were impressed by the number of speakers and the quality of the presentations. I was not surprised by their statements because I am always impressed. Every NCMATYC Conference is always brimming with information that makes us each better instructors.

I have had the privilege of working with an Executive Board that supported me and always put the good of NCMATYC at the forefront of every decision that was made. I will miss working with those who will leave the board at the end of May. If you get a chance to see these folks, please give them a pat on the back for their diligent work. I am excited to hand the Presidency of NCMATYC over to Glynis Mullins and then continue as your Past-President. She will be an excellent leader and I look forward to continue to work with her and the new Executive Board. Thank you for the opportunity to be the leader of this esteemed group of people for the past two years. Keep up the good work and I look forward to seeing you at our next NCMATYC Conference if not before.

Retiring Executive Board

Nancy Rivers-President and Past President	2010-2014
John Bakken-Treasurer	2010-2014
Valerie Melvin-Secretary	2010-2014
Chris Mansfield-Central Vice-President	2010-2014
Jeannie Hollar-Western Vice-President	2012-2014
Lisa Meads-Eastern Vice-President	2013-2014
Glynis Mullins-Eastern Vice-President and President Elect	2010-2014

NCMATYC 2014-16 Executive Board

From left to right:

Rudy Beharrysingh	Western Region VP	Haywood CC
Luke Walsh	President-Elect	Catawba Valley CC
Lisa Meads	Secretary	College of the Albemarle
Glynis Mullins	President	Pitt CC
Sonya McCook	Central Region VP	Alamance CC
Ann DeBoever	Past President	Catawba Valley CC
Jay Martin	Eastern Region VP	Wake Tech CC
Heather Barker	Treasurer	Piedmont CC

So… a biologist, a chemist, a physicist, and a mathematician were eating lunch in an outdoor café. They observed a man and a woman enter a building across the street and soon reappear together with a third person.

"Oh my," said the biologist. "They've reproduced."

"They've just added a functional group," said the chemist.

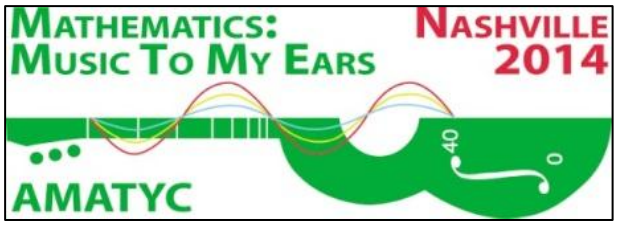
The physicist sighed "No, there was an error in measurement."

And the mathematician concluded, "If exactly one person enters the building now, it will be empty again."

Greetings from Your AMATYC Southeast Vice President

Nancy Rivers, Wake Technical Community College

When someone mentions AMATYC to you, what comes to mind? For most of us our first thought is probably the fantastic conference that the organization puts on every year. And then you probably think about how much it costs to attend that conference when it isn't nearby. While the conference is one of the best you can attend, it was quite pricy to attend the one in Anaheim, CA. But this year the conference will be November 13-16 in Nashville, TN (at the Gaylord Opryland Resort, no less!) – within driving distance for many of us in the



Southeast. That makes it much more affordable. I hope to see many of you there!

But, AMATYC ≠ Fantastic Conferences.

AMATYC > Fantastic Conferences.

There is so much to our organization! AMATYC offers **webinars** throughout the year at no cost and members get the first opportunity to register. We also have high quality **publications** – AMATYC *News* and the *Math*AMATYC *Educator*. The organization puts forth **position statements** on issues facing mathematics education today that can be used in efforts to influence decisions being made more locally. There are nine **academic committees** that focus on aspects of our profession that are near and dear to our hearts. Anyone can join any of these committees and participate in discussions. You can find out more about all of these opportunities and others on our newly designed website http://www.amatyc.org/.

Marilyn Monroe once said "This life is what you make of it." I would paraphrase this to say that "AMATYC is what you make of it." The more involved the membership, the stronger and more effective AMATYC will be. Here are some of the ways you can be involved: join AMATYC and encourage your colleagues to do so as well, serve as a campus representative, join an academic committee, write an article for one or more of our publications, involve your students in the Student Math League Competition, participate in a webinar, give a webinar, attend a traveling workshop, attend the annual conference, serve as a delegate to the Delegate Assembly, be a presider during the conference or even a presenter. Oh, and then there is the ACCCESS program – a mentoring and professional development opportunity for mathematics faculty in their first three years of full time employment at a two year college. Information is available on the website. If you don't qualify, you probably know someone who does.

I would like to give you a "heads up". The cost of membership is going up as of July 1, 2014. Up until that time a 1 year membership in AMATYC is $80. After that time the dues will increase to $85. I know most people renew their membership when they register for the conference. I would suggest you not wait until then and instead renew before the increase.

Perhaps the best way you can be involved is to communicate with the Executive Board. This can be done through the network of campus representatives that we are endeavoring to establish or you can contact me directly (njrivers@waketech.edu). We value your ideas, concerns, suggestions, input and feedback. Won't you join us?

From http://www.amatyc.org/

AMATYC Webinars

Is your school short on professional development funds? Here is a way to get PD hours at NO COST!

	Upcoming Webinar	
Title	**Date/Time**	**Speaker**
"Sure, You're Teaching - But Are They Learning? Assessing Student Learning" is now open to AMATYC Members	6/3/2014 2:00pm EDT / 1:00pm CDT / NOON MDT / 11:00am PDT	Sandee House

AMATYC Guidelines and Position Statements

Through the years, AMATYC has composed three guidelines and eleven position statements relating to mathematics instruction at the level of the first two years of college (and developmental). In addition, the organization has three resolutions, *Crossroads* and *Beyond Crossroads*. Currently under consideration is a revision of the guidelines on "The Academic Preparation of Mathematics Faculty at Two-Year Colleges" and a new position statement "The Appropriate Use of Intermediate Algebra as a Prerequisite Course". These guidelines, position statements and works in progress can be found at http://www.amatyc.org/?GuidelinesPositions

AMATYC Traveling Workshops

Requesting a Workshop | FAQ | Traveling Workshop Home

Workshop Strands

Beyond Crossroads

Developmental Math

Inquiry-Based Teaching

MAC^3

Statistics

Teacher Preparation

Technology

Equip your mathematics faculty with the curricular, pedagogical, and technology tools to ensure that all students will have the mathematics they need to succeed in the 21st century. Bring in a Traveling Workshop for your campus professional development event or for a regional conference.

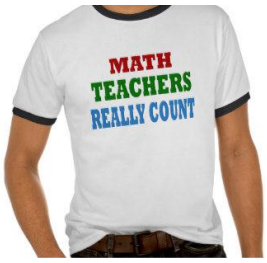
Traveling Workshops are **customized** to fit the needs of your event and audience. Traveling workshops can provide training for up to 30 participants, this is very **cost-efficient** compared to the cost of sending only a few faculty to an off-campus event. Traveling workshops are **convenient** – you choose the date and plan the on-site logistics; the facilitator will plan the learning activities and provide activities and curriculum.

Traveling Workshop facilitators are already available in the following topic areas:

- Developmental Math
- Teacher Preparation
- Statistics
- Technology
- *Beyond Crossroads*
- Math Across the Curriculum
- Inquiry-Based Teaching

If you don't see what you're looking for, please use the *Request a Workshop* form to tell us what you're looking for, and we will see if we can accommodate your needs.

Contact the Traveling Workshop Coordinator.



Editor's note: Angie Ruppard was the winner of the 2014 Travel Award to the NCMATYC Conference at Richmond Community College, March 6 -7.

Loving What We Do!

Angie Ruppard, Caldwell Community College and Technical Institute

For one to purposely choose math education as a career, somewhere deep down there is a love for and an appreciation of the beauty of mathematics. Its fluidity and precision are the weaving and winding of seamless ideas that hold our world together. The language of math has application in every discipline. And for those of us who live it and breathe it every day, math is the language that makes our hearts sing because it makes our minds soar.

So, indeed, it was pure pleasure to be in the company of so many who think like I do at this year's NCMATYC Conference. When our outgoing NCMATYC President, Ann DeBoever, acknowledged me as this year's NCMATYC Travel Award winner, I couldn't help but marvel at how my path had crossed hers some 8 years before. Her confidence in me established my connection with the community college system. Catawba Valley Community College was my first home and although I now hang my hat at Caldwell Community College, the respect, admiration, and enjoyment of my first colleagues remains fully intact. So it was with great anticipation that I traveled to NCMATYC, knowing that I would meet colleagues from all over the state. How refreshing to meet, observe, and listen to all of you who have such rich experiences and depth of knowledge.

With sessions ranging from Michael Boone's "Stirring the Pot" where we all shared our new adventures in DMA and learning experiment, it was evident that our hearts for our students are all the same. We know success in mathematics and we want others to know it as well. Nash Community College's Math Tank Team could not have made this any clearer as they described their implementation of "Blue Love"! Now, that is team work. And then there was Amber Mellon's session on Financial Literacy. Amber shared an amazing compilation of worksheets she has created as she determines to promote a culture of informed students who make informed decisions. Our students have to know that what they are learning from us is for more than the time they spend in our classes. What they learn is for a lifetime. Furthermore, what we learn from each other at NCMATYC is for a lifetime. There is a wealth of support and materials available to us in each other. And every person I had the privilege of meeting was more than happy to share. We, as a math community, are a reflection of how math truly makes the world go round. Weaving and winding its way into every area of life, math is a language that acts as a common thread in all of us. May those of us who learned this language early inspire those around us to take hold of the greatness for which they were created.

Thank you, 2014 NCMATYC, for an amazing trip! Your money was well spent!

Angie Ruppard

The picture of the T-shirt shown above is from www.zazzle.com

Resources for Recording Video Lectures for Online and Hybrid Classes

Heather Barker, Piedmont Community College

With more and more students enrolling in online and hybrid classes, the way that we deliver our online lectures is constantly changing. My first online class used a variety of notes written through a word processor and documents created with Softchalk files. But with technology progressing year after year, I noticed that there are a lot of products available that we as instructors can use to record our own lectures. I have used many technologies, but here I want to present a few that have worked for me.

PowerPoint

It may seem silly, since everyone has used PowerPoint, but the first recorded lecture I did was using the "record narration" option in a PowerPoint presentation that I had created. PowerPoint allowed me to voice over a slide show I had created and save it. I then put that slide show in my LMS for students to watch.

- Price: Free, the "record narration" option comes with PowerPoint
- Pros: This works well with lectures that include a lot of definitions. It is also very easy to do and easy to upload.
- Cons: Not a great way to work out problems, since all of the work would have to be typed.

Echo360

This is a classroom setup that has to be installed by the Echo360 company. Representatives come to campus and install microphones and video recording equipment in a classroom. An instructor then can use Smartboard to present a slideshow lecture and all aspects of the lecture are recorded. This can then be uploaded onto the appropriate LMS.

- Price: $5000 a year for the subscription plus startup fees
- Pros: The presentation of the lecture is absolutely fantastic. It uploads nicely and students really enjoy it.
- Cons: The system is bulky to install. It stays in one classroom on the campus.

Techsmith Software (Jing, SnagIt, Camtasia)

Techsmith creates a variety of systems that allow one to record whatever is on the computer screen. Jing and SnagIt allow you to do screen captures which can be narrated over. Camtasia is a video editor that can use these captures as well as any other media to create very nice documents.

- Prices: Camtasia can run between $100 and $300 and comes bundled with SnagIt. Jing is free.
- Pros: Can be used on your personal computer. Very easy to use, easy installation and startup. Videos can be uploaded in a variety of formats, including YouTube.
- Cons: It is hard to write directly on the screen to work out problems, unless you have another device to hook up to the PC. Editing in Camtasia does take some getting used to.

ShowMe (iPad app)

ShowMe is an iPad app that has an interactive whiteboard to write on and record your voice as you write. The platform allows you to import pictures and write in a variety of colors. Videos are then uploaded to www.showme.com, which is accessible to anyone.

- Price: Free
- Pros: Great for showing students how to work a homework problem. I use it to answer email questions quickly. I can record a video and send them the link to ShowMe in less time than it takes to write a response.
- Cons: A bit difficult to record a whole lecture. The only documents that can be imported are pictures.

ExplainEverything (iPad app)

This app is similar to ShowMe, in that it has an interactive whiteboard, but the whiteboard has so

continued on next page

Resources for Recording Video Lectures

continued from previous page

many more features. This one will also allow you to import documents, such as pdfs, that can then be written on in the whiteboard environment. Videos that are processed go to your cloud accounts or can be published on YouTube.

- Price: Free
- Pros: Great way to import documents. The app can link to your dropbox or gmail account to access those documents from anywhere. It can also link to a variety of other cloud drives.
- Cons: The videos take quite a while to compile. After completing a video I usually have to wait at least 30 minutes for it to finish compiling and compressing before I can share it.

Educreations (iPad app)

This app puts together the best of ShowMe and Explain Everything. Again, this has an interactive whiteboard but has much less options than ExplainEverything. Documents can be uploaded into this as well. Videos are shared to www.educreations.com.

- Price: Free
- Pros: Very user friendly. The easiest of the iPad presentations apps I have used. The videos look very sharp.
- Cons: The videos don't export as MP4 files, but sharing on the Educreations website is quite easy to do.

If you have not yet created lectures using all of the video technology that is available, you really should jump into the pool! The easiest way to get started is to just try something, if this is something you want to do. I have gotten great feedback from students about my lectures so I continue to deliver them. There are countless more resources out there, and if anyone wants to discuss something you have found that works or ask questions, I will be more than glad to help. Feel free to email me any time at heather.barker@piedmontcc.edu.

Everything Seems to Be Changing All @ Once…What Are You Doing?

Lisa Williams Meads, College of the Albemarle

What a great conference we had at Richmond Community College on March 6th and 7th. It was a great time to meet new people, catch up with old colleagues, and share what we are doing at our respective colleges with all the changes that have come about with 2014 CAA, MATH CIP, Multiple Measures and the list goes on. Unfortunately, there is just not enough time to talk to someone from every college.

At the Campus Rep Meeting, a request was made to gather information from each college on what they are doing. So we are trying something new…An email was sent out to the NCMATYC membership in mid-March to gather possible survey questions so that we could learn what other NC Community Colleges are doing. A survey monkey link was sent out to Campus Reps at the end of March with a deadline of April 11th. Results were emailed to the Campus Representatives April 18th to share with their colleagues on campus.

"If in other sciences we should arrive at certainty without doubt and truth without error, it behooves us to place the foundation of knowledge in mathematics." Roger Bacon

Math Competitions

Chris Mansfield, Durham Technical Community College

Wake Tech Tops Field at University of North Georgia Math Tournament

Congratulations to Wake Tech Community College for their first-ever first-place finish in the University of North Georgia Math Tournament, topping a field of a fifteen schools from seven states, including a record seven schools from North Carolina. The 20th annual competition (formerly the Gainesville Math Tournament) was held at UNG-Gainesville in Gainesville, GA on April 5th. Other North Carolina participants included Catawba Valley, Cape Fear, Gaston College, Durham Tech, Mitchell, and Southwest CC.

The UNG Math Competition is held annually in April and attracts over 100 students from across the southeast. The competition consists of a morning calculus exam and an afternoon session in which students work in teams to answer questions pertaining to various branches of math. If you are interested in learning more about the competition, visit http://ung.edu/ mathematics /tournament/index.php.

So… one evening Rene Descartes went to visit at a local tavern. The server approached and said, "Good evening, Monsieur Descartes. Would you like your usual drink?"

"I think not." Descartes replied. And promptly vanished.

Alva Welch Wins 9th Annual Faculty Math League Competition

For the second time in three years, Alva Welch of Lenoir took home honors at the annual Faculty Math League competition, held at the NCMATYC conference at Richmond CC in March. Emma Borynski of Durham Tech reprised her nearly annual role as runner-up, while Nancy Rivers of Wake Tech and Frank Monterisi of Trident Technical College in South Carolina tied for third, the first time either one of them has placed in the top three.

The test was one of the more challenging Faculty Math League tests given, as evidenced by scores being lower than in previous years. Having said that, everyone who took it got at least several questions correct and everyone ultimately ended up with a positive score. This year, we had fourteen people take the test, which is a conference highlight for a small but growing number of faculty members, many of whom lingered after the session to discuss how to approach particular problems. The actual test and answers can be found on the NCMATYC Website. Check it out and consider taking next year's test when you come to NCMATYC 2015.

NCMATYC Website: ncmatyc.matyc.org

Wake Tech Paces North Carolina Schools in Student Math League Competition

Wake Tech returned to the top of the state standings in the Student Math League Competition this year, completing a banner year for the school which also saw them finish second in the NCMATYC Math Competition and win the University of North Georgia Math Tournament. Last year's champions Catawba Valley finished second, with Durham Tech and Forsyth Tech rounding out the top four North Carolina schools, each of which finished in the top six in the Southeastern Region of the United States, an area made up of seven states.

Individually, Prem Shah of Wake Tech bested the rest of the state's students with a score of 41.5, followed closely by teammate Sungwoong Lee with 39.5 points and Catawba Valley's Thomas Beasley with 37 points. These students will receive awards of $300, $200, and $100 respectively from NCMATYC.

Disclaimer: It must be noted that scores will not be official until sometime in May, and so please understand that these results are subject to change in the unlikely event of a scoring error or a particularly outstanding score by one of the few schools who have not yet reported their spring semester results.

Eleven North Carolina schools participated in the Student Math League this year, almost matching the number of schools from the other six Southeastern Region states combined. We should all be proud that there are so many schools from around the state supporting their students by offering them opportunities to hone their math skills, make social connections, and increase their self-esteem by competing in this (and other) competitions. If your school is not involved in the competition, please consider joining—it's easy to administrate and helps foster community in the math discipline. Most importantly, it's just plain fun! Simply send me an email at mansfieldc@durhamtech.edu or visit the AMATYC website for further information.

A Call for Campus Representatives

Lisa Williams Meads, Eastern Vice President, College of The Albemarle

Thank you to everyone that has agreed to serve as a Campus Representative for NCMATYC and AMATYC. The following colleges are still without campus representatives:

Eastern Region	**Central Region**	**Western Region**
Brunswick CC	Gilford CC	Ashe-Buncombe CC
Coastal Carolina CC	Mitchell CC	McDowell CC
Craven CC	Montgomery CC	Tri-County CC
Sampson CC	Randolph CC	
Vance-Granville CC	Rockingham CC	
	South Piedmont CC	
	Surry CC	

If you are interested in serving as a Campus Representative for NCMATYC and/or AMATYC, please contact Eastern Vice President, Lisa Williams Meads at lisa_meads@albemarle.edu. I would love to leave office with a campus representative on EVERY NC Community College Campus. Please help me reach my goal. For a complete list of campus representatives for each college and their email address, please visit the NCMATYC website at http://ncmatyc.matyc.org/about/campus-representatives/.

Editor's Note: This is a follow up to the article by Michael Hanson in the Fall 2013 Newsletter reporting the success rate in developmental math modules at Nash Community College was about 72%.

Observed Positives and Negatives to Success Rates in Developmental Math

Michael Hanson, Nash Community College

Negatives that Nash Community College has discovered to developmental math success rates

a. Attendance Policies – Penalizing students for missing classes does not help.

b. Requiring Students to Start Over – We feel at Nash that students should NOT have to start over if they don't pass their DMA test at the end of the 4 week period. We discovered that many students learn at different paces and sometimes they need a little more time to complete a module. Therefore why punish or frustrate students by making them start over from the beginning of each module. This also delays students from taking certain courses the next semester.

c. On-line Workload – We reduced the work-load for the students in MyMathLab. We decided to remove a mid-term review quiz from each module, along with a few additional questions from different sections. We agreed that one review quiz was enough.

Positives towards better developmental success rates

a. Friday Supplemental Instruction – Every Friday we open up our math tutoring lab from 9:00 a.m. to 4:00 p.m. All math instructors dedicate 3 or more hours of their time to tutor students. We encourage students that are behind in their work, miss class time, or just want a better understanding of the math material to show up every Friday for math help.

b. Paid Student Helpers (6 total)

c. Testing Center – Some students find it better to test in a quiet environment instead of the classroom.

d. Team Work – Our Math Department truly works as a team. There is no such thing as those are Mr. Hanson's students. Each math faculty member at Nash does not mind helping any student, no matter what time of day.

e. Uniform Instruction – All instructors teach each developmental course the same way. This creates less confusion when students get help from another instructor. At the beginning of each semester, we discuss as a department the best way to teach each module to our students. However, if students are still not grasping a certain section in the module, then of course we will try a different approach. We all try to stay consistent as much as possible.

f. Calling/Emailing Absent Students – Every student is asked to fill out a blue information card with their home, cell, and work numbers along with an email address. They then sign the blue card giving us permission to call the numbers on the card. After the first 15 minutes of EVERY CLASS a math instructor collects all the cards from every classroom and calls each. Even if the student can only meet for an hour she encourages them to STILL COME! If students can't make it to class they are then encouraged to show up for our Friday Supplement Instruction to make up the time missed in class.

Treasurer's Report

John Bakken, NCMATYC Treasurer, Wake Technical Community College

All information in the treasurer's report is accurate as of 3/31/2014.

In 2013 the board budgeted $15,705.00 in expenses. Actual Expenses were $9,244.62. In addition, NCMATYC brought in $14,085.00 in dues, conference registration, and vendor registration. The board has been working very hard to make our money stretch and to get the support of sponsors. This work has resulted in a net gain in 2013 of $4,840.38.

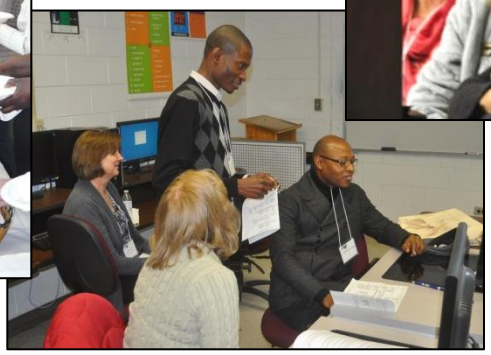
As the treasurer, I'm happy that we have a net gain. But as an NCMATYC member, I'm a little upset. If you look at the budget below, you will see that the Board has approved $1,750.00 for travel awards. In 2013, we only awarded $250 of this money. You might be wondering why this is the case. The reason is because we have not had people applying for the travel awards. Please do not let this continue. The board has worked very hard to tighten our expenses so that we do not have to raise dues while continuing to offer a great conference. Please spend our money.

Our current balance, as of 3/31/14 is $5,656.28 in checking, and $14,383.22 in savings.

A breakdown of expenditures this year is shown at right.

Expenses	Budgeted
Conference Breakfast	$1,700.00
Conference Lunch	$2,500.00
Conference Hospitality	$400.00
Conference Decorations	$250.00
Conference Bags	$550.00
Conference Door Prizes	$300.00
Conference Misc.	$0.00
Conference Printing	$250.00
Faculty Math League	$60.00
President's Speaker	$1,200.00
Board Meetings	$2,500.00
Executive Travel	$1,500.00
AMATYC Travel Award	$1,000.00
NCMATYC Travel Award	$750.00
Excellence Award	$325.00
Calculus Competition	$400.00
SML Awards	$600.00
Spring Newsletter	$700.00
Fall Newsletter	$600.00
Postage	$20.00
Miscellaneous	$150.00

Conference Candids



Transition to MAT 143 at Forsyth Tech

Sharilyn Owens, Forsyth Technical Community College

The Mathematics Faculty at Forsyth Tech is taking the transition to MAT 143 (Quantitative Literacy) very seriously. Two members of the Mathematics Department are piloting seated and online sections of Quantitative Literacy in conjunction with the CIP steering committee so that we may have some insight into the content and classroom culture that provides the best opportunities for students to engage with the new curriculum. Our faculty is dedicated to developing mathematical habits of mind for all members of our community, not just our students who are on a STEM career path. We want our students to leave after the first day of Quantitative Literacy, and every day thereafter, knowing that something is different about this mathematics course. Quantitative Literacy is not a course of definitions, formulas, and steps, but of depth of thought, information processing, and decision making.

Forsyth Tech Mathematics Department recognizes that the faculty cannot provide that opportunity for students if we ourselves are not prepared in advance. We are committed to making meaningful use of the lab sessions that are embedded into the course. In addition to taking advantage of opportunities provided by the NC CIP, and reading suggested materials such as *Math for Life* by Jeffrey Bennett and *The Numbers Game* by Michael Blastland and Andrew Dilnot, we are utilizing our regular department meetings as an in-house professional development opportunity. One or two instructors choose a lab of interest to present to the other members of our team at each of our bi-weekly meetings. The lab is selected from the collection of faculty generated labs including those from the CIP pilots, Forsyth Tech faculty, and retreat facilitator, Eric Gaze.

The presenter provides a 15-20 minute overview of the lab, websites and technology that might be used, the desired mathematical concepts to target, and anticipated student reactions. Our goal is for every member of our mathematics faculty to have an idea of 13 labs that we could possibly use in the fall so we have some familiarity with the logistics and strategies of the lesson plans. Having had some exposure to the lessons, we will be more likely to maximize the embedded lab opportunities and less likely to fall back to a comfortable, traditional, textbook driven course.

Instructors find this opportunity to review labs together meaningful. Some have shared their thoughts about what they have gained from presentations:

- Edward Washington: *I think the entire process has been extremely helpful, especially in seeing how we can incorporate technology into an assignment. Students should have at least some literacy in the Microsoft Office Suite and this gives them not only further practice, but also encourages them to apply mathematical thinking when using the software.*
- Josh Grab: *Presenting this in a safe, collaborative environment before presenting it to students allows us all to benefit from other faculty members' experience, rather than having each faculty member discover and fix it on their own (or worse, not discover it at all).*
- Sharon Ruchala: *I think the overall process has been helpful. It's interesting to be able to experience all these different labs and get ideas before teaching the class so that I can*

Continued on next page

Transition to MAT 143

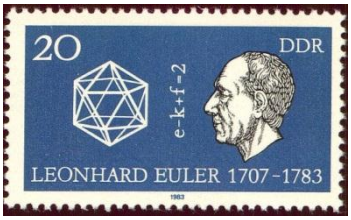
Continued from previous page

adapt these labs to fit the needs of my students as well as the time constraints of the course.

- Wilson Grab: *What I found most helpful was the opportunity to view lab exercises through the eyes of a student. I plan to use this approach and also ask myself, "Where does this lab add value to student learning that will last a lifetime?*

Editor's Tribute

The editor wishes to recognize one of the great mathematicians whose contributions strongly affect our mathematics and instruction to the present day.



Leonhard Euler (April 15, 1707 – September 18, 1783) was born in Switzerland but did most of his work in Russia and Germany. He continued to be productive even after losing sight in both eyes.

Included is a small list of his contributions.

-introduced the concept of functions and the use of the *f*(*x*) notation
-responsible for the treatment of trigonometric functions as numerical ratios rather than geometric lengths
-introduced the letter *e* for the base of a natural logarithm (also known as **Euler's Number**)
-introduced the Greek letter Σ for summations
-introduced the letter *i* to denote the imaginary unit
-introduced the notation of *a*, *b*, and *c* for the sides of a triangle and *A*, *B*, and *C* for the opposite angles
-showed that the orthocenter, circumcenter and centroid of any triangle are collinear (called the **Euler Line**)
-discovered ways to express various logarithmic functions using power series
-defined and proved many power series equations such as $e^x = \sum_{n=0}^{\infty} \frac{x^n}{n!}$ and $\sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi^2}{6}$
-defined logarithms for negative and complex numbers
-defined the exponential function for complex numbers
-discovered the relation between the exponential and trigonometric functions ($e^{i\varphi} = \cos\varphi + i\sin\varphi$)

(A special application of the above equation is $e^{i\pi} + 1 = 0$, called "the Most Beautiful Mathematical Formula Ever" by readers of *Mathematical Intelligencer.*)

-used closed curves to illustrate syllogistic reasoning. (An **Euler diagram** is a means of representing sets and their relationships.)
-helped develop the **Euler–Bernoulli Beam Equation** $\frac{d^2}{dx^2}(EI\frac{d^2w}{dx^2}) = q$ which describes the relationship between a beam's deflection and the applied load

-developed the formula $F = \frac{\pi^2 EI}{(KL)^2}$ the critical buckling load of an ideal strut
-determined with great accuracy the orbits of comets and other celestial bodies
-calculated the parallax of the sun
-developed calculations that contributed to the development of longitude tables

-developed equations for inviscid flow (They are now known as the **Euler equations**.)

$$\frac{\partial\rho}{\partial t} + \nabla\cdot(\rho\vec{u}) = 0, \quad \frac{\partial\rho\vec{u}}{\partial t} + \nabla\cdot(\vec{u}\otimes(\rho\vec{u})) + \nabla p = 0, \text{ and } \frac{\partial E}{\partial t} + \nabla\cdot(\vec{u}(E+p)) = 0$$

NCMATYC Membership Application

North Carolina Mathematics Association of Two-Year Colleges

(Please PRINT CLEARLY or TYPE)

A. Personal Information
- Name:
- Position:
- College name:
- Mailing Address:
- Phone – Including Area Code:
- E-mail Address:

B. Type of Membership

☐ 1 – Year for $10.00
☐ 3 – Years for $25.00

C. I would like information on how I can get involved in the following committees:

☐ Developmental Mathematics
☐ Accessibility
☐ Student Math League

D. Make funds payable to NCMATYC
Mail to: Heather Barker
Piedmont Community College
P.O. Box 1197
Roxboro, NC 27573

CIP: Making Math Meaningful

Amanda Klinger at Davidson County CC

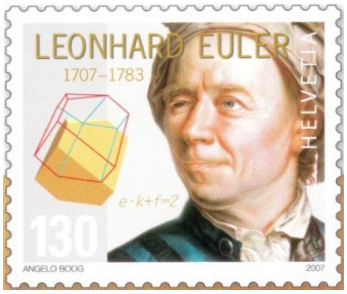
M^3: Making Math Meaningful
Resources Available from the Spring Professional Development in Clemmons, NC

The steering committee for the Math CIP hopes that everyone found something useful and inspiring at the professional development conference in April. The fall semester should be very interesting with all of the upcoming changes starting at a majority of schools. As a committee we wanted to make sure that all NC community college mathematics faculty are aware of the resources that are available for fall preparation.

First, there is a Blackboard site where much of the information about the CIP and resources created through the CIP are stored. The site is located at http://vlcbb.nccommunitycolleges.edu/.
The username is: mathcipguest
The password is: mathcip

It is very important that visitors to this site do not change the password or username. Always use the given username and password stated above. If there are any issues with the site, please email Ron or Suzanne Williams at Central Piedmont Community College, suzanne.williams@cpcc.edu. All of the handouts, powerpoints, workshop materials, and other materials are posted in the Blackboard site after clicking on the **mathcip** course and are posted under the M^3 Conference folder. You must click on Documents to access any downloadable materials and links. There are MAT 143 and MAT 110 documents including labs, course outlines and sample syllabi.

There are two other websites that are posted in the Blackboard site that many instructors have been asking about. The first one is for MAT 152, the statistics course. It is http://nc-stats.weebly.com/. This site contains labs and statistical links to help those schools who will be starting labs in the fall. The other website is for precalculus and beyond. This site is http://nc-precalcandbeyondlabs.weebly.com/. It also contains labs for different courses from precalculus and above. If you have a great lab that you would like to see posted, please email Ron or Suzanne and they will forward it to the appropriate person.
Good luck this fall in making this new Quantitative Literacy course a great step for North Carolina math.



PRESIDENT
Glynis Mullins
Pitt CC
PO Drawer 7007
Greenville, NC 27835
gmullins@email.pittcc.edu

PRESIDENT-ELECT
Luke Walsh
Catawba Valley CC
2550 Hwy. 70 SE
Hickory, NC 28602
lwalsh@cvcc.edu

PAST-PRESIDENT
Ann DeBoever
Catawba Valley CC
2550 Hwy. 70 SE
Hickory, NC 28602
adeboever@cvcc.edu

SECRETARY
Lisa Meads
College of the Albemarle
Elizabeth City Campus
PO BOX 2327
Elizabeth City. NC 27909
Lisa_meads@albemarle.edu

TREASURER
Heather Barker
Piedmont CC
PO BOX 1197
Roxboro. NC 27573
heather.barker@piedmontcc.edu

EASTERN VICE-PRESIDENT
Jay Martin
Wake Technical CC
9101 Fayetteville Road
Raleigh, NC 27603
jemartin@waketech.edu

CENTRAL VICE-PRESIDENT
Sonya McCook
Alamance CC
1247 Jimmie Kerr Road
Graham, NC 27253
Sonya.McCook@alamancecc.edu

WESTERN VICE-PRESIDENT
Rudy Beharrysingh
Haywood CC
185 Freedlander Drive
Clyde, NC 28721
rbeharrysingh@haywood.edu

A Word from Glynis Mullins

Our Annual NCMATYC Spring Conference for 2014 Was a Success…….

I am very pleased to provide the Conference Statistics:
138 attendees, 43 Colleges/Universities, 40 sessions, 8 commercial sessions, and 4 workshops

Overall, the conference sessions provided a variety of topics (CIP, Dev. Math, Technology, Instructional techniques, fun stuff, etc.) which allowed attendees to have choices. I would like to thank everyone that was willing to present for such a great organization. As professionals in our field, we are obligated to share what we do and don't do so well and that is the beauty of NCMATYC.

On a personal note: A warm Good-bye as President- Elect….
I have enjoyed serving as your President-Elect for the past two years. I appreciate all the support and the willingness to take part in the great challenge of sharing OUR great ideas. I am so grateful for the opportunity to have met and interacted with most of you throughout the years. Serving as President- Elect has allowed me the opportunity to get to know such an awesome group of professionals and for that reason alone, I am Thankful.
I look forward to the future of NCMATYC.

Ann DeBoever
Catawba Valley CC
2550 Hwy. 70 SE
Hickory, NC 28602

Mail to: