From a Distance

IPFW’s online math classes

As online education has become a more important method for delivering course content, the math department has been working on expanding its offerings. In doing this, we’ve been wrestling with the question: how? What’s the best way to approach teaching math without direct contact?

The department has been offering some of our non-major classes online for quite a few years, particularly MA 168 and STAT 125, but it was David Redett in 2010 who brought Calculus I to the internet, with MA 166 following shortly thereafter. Since then Doug Townsend has started offering online MA 351 (Linear Algebra) and Matt Walsh has been teaching online MA 175 (Intro to Discrete Math); the department’s goal is to eventually allow students to take an entire math minor through online courses.

The largest challenges with online courses are engagement and authentication. When you don’t have frequent direct contact with your students (as you do in a classroom setting) it becomes difficult to tell when students are struggling and might need some extra attention. One way that we try to deal with this is by having periodic quizzes that we can monitor to see when people start to struggle. Many textbooks now offer online homework systems (such as MyMathLab and WebAssign) that can accomplish the same goal, and courseware companies like Desire2Learn and Blackboard are developing tools to automatically predict student success based on partial progress.

Of course, all of these systems only work well if the students are actually doing the work. With online education academic dishonesty becomes much harder to spot; not only do you need to worry about students getting other people to take quizzes on their behalf, but the internet itself is full of resources that students can use to get quick answers (and avoid the work of deriving the solutions themselves, thereby missing the point). One way that we deal with this is by having students take tests in the Math Testing Center, which verifies that the test-takers are who they say they are.

One of the great advantages of online classes is that the students don’t need to be on campus (and nor do the instructors: alumnus Garrett Marshall has taught STAT 125 online from Utah, while Matt Walsh has been based in Canada for over a year). When students are far away, whether studying abroad in South Korea or deployed in Afghanistan, we work with the Division of Continuing Studies (which oversees all distance programs on campus, including online courses) to coordinate alternative proctors.

One advantage that IPFW offers compared to some of the MOOCs (Massive Open Online Courses) that some universities offer for free is the personal attention of faculty. Most MOOCs are configured to be entirely self-guided, with grading completely automated and relatively little feedback from the instructors. With relatively small class sizes, IPFW math gives its online students the same opportunity for direct communication with and guidance from the instructor that our students in a traditional classroom setting have.
Chair’s Perch – Peter Dragnev

After one year at the helm of the Department I have a much better understanding of the enormity of my responsibility. It is not easy following in the footsteps of leaders like David Legg, Ray Pippert and Doug Townsend. But with the unwavering support of colleagues, students, and alumni, I can say we had a pretty good year.

The main focus on the curriculum side this year has been on the recertification by the Indiana Core Transfer Library of our Precalculus and Calculus courses and on the New State-mandated General Education. I am happy to report that all of our applications were approved. Kudos to the Pre-calculus, Calculus, Statistics and Discrete Math Curriculum committees for a job well done and special thanks to Prof. Jim Hersberger for serving on the CTL Math Panel. With more and more sections of college math and statistics courses taught off-campus as part of the school-based program, the department’s teaching mission takes on new dimensions.

I am happy to report that the Department of Mathematical Sciences has initiated a fruitful partnership with Swiss Re on further enhancing the Actuarial Sciences program at IPFW. As a result of this partnership IPFW attracted Joe Francis as its Actuary-in-Residence and will deliver a new course Introduction to Financial Mathematics. A new Actuarial Award was instituted with support from Swiss Re. After a well-attended “Pizza with Alumni” presentation by an alumnus Drew Tindall, Senior Vice President of Swiss Re, the students have initiated the work on constituting an IPFW Actuarial Club. For the first time this year Swiss Re will include IPFW in its fall recruitment drive.

This year department faculty added more teaching excellence accolades to a long list. Our own Betsy Berry was recognized as a Teacher of the Year by the IPFW Sigma Research Society, Chand Chauhan is our newest FACET member, Yvonne Zubovic was the leader of the IU system-wide delegation at 2012 AAC&U Summer Institute for High Practices, and Jim Hersberger delivered nine professional development workshops for teachers in eight states.

On the research side the Department had a great year too. Lowell Beineke had his Topics in Structural Graph Theory book published by Cambridge University Press. Yuan Zhang received an NSF research grant ($75,000) and Peter Dragnev received a Simon’s Collaboration in Mathematics Grant ($35,000). Faculty members were invited to international conferences in Bulgaria, Canada, China, India, Hungary, Germany, and Taiwan. The Center of Excellence for Applied Mathematics and Statistics application was approved and an international research agreement between the Department and the Institute of Mathematics at the Bulgarian Academy of Sciences was signed. Our second Fall analysis symposium in 2012, co-sponsored with ORESP, was a great success, as was the third one this past November.

The service of the Department flourishes as well. Another round of Mathcounts was organized by Linda Wagner and Yvonne Zubovic, this time with sizable participation of graders from Raytheon. Yvonne and I were part of the Science Central Lunch with Scientist program. Adam Coffman had another successful year as an officer of the Indiana section of the Mathematical Association of America. Our alumni dinner was another

All in all, I am happy to report to our alumni that the state of the Department is great! Thank you for your great support.
Actuarial Science Option Grows

The Actuarial Science Option was created as part of the major in mathematics in the fall of 1990. Since then the option has grown to become one of our largest options, and graduates from that option have done well.

This fall the curriculum for this option will be growing, and we expect that the number of majors will be increasing as well. The course Introduction to Financial Mathematics will be offered for the first time in Fall 2013. This is an important addition to the curriculum because this course will help prepare students to take the FM actuarial exam.

We are able to offer this course because Joe Francis, a local actuary, has agreed to teach it. Joe is a Fellow of the Society of Actuaries, and, with another actuary, runs the Fort Wayne based company Actuarial Brew. Joe will be the department’s Actuary in Residence, and his presence brings great credibility to our program.

Internships are also important for actuarial science majors. With that in mind, Peter Dragnev and Joe Francis met with representatives from Swiss Re, an international re-insurance company with an office in Fort Wayne. In the future we hope to work with Swiss Re to place some of our best undergraduates in internships there. Swiss Re has also committed to giving $1000 per year to the department to be used to give partial reimbursements to students who pass an actuarial exam.

To promote the actuarial science option at IPFW, Drew Tindall made a presentation, “Preparing to Become an Actuary”, to interested math majors in February. Drew graduated from IPFW in the actuarial science option in December of 1999. He started his career as an actuary at Lincoln Financial Group, then moved to Swiss Re. He is a Fellow of the Society of Actuaries, and currently is a Senior Vice President at Swiss Re.

New Faces at the Top

In the last year the offices of the chancellor and the vice-chancellor have gotten new occupants. Vicky Carwein became the ninth chancellor of IPFW in 2012, and she recommended that the Trustees appoint Jeffrey Anderson to the role of Vice-Chancellor for Academic Affairs (VCAA) as of this past July.

Carwein is an Indiana native, having grown up in Gwynneville in Shelby County and taken two of her degrees at IU. She started her academic career at the University of Nevada in Las Vegas as an instructor of nursing, working her way up eventually to serve as the Dean of the College of Health Services. This is not her first time as a chancellor, having served in the position at the university of Washington Tacoma, Westfield State College (MA), and most recently Washington State University Tri-Cities. She and her husband (the Deputy Director of Middle East Laboratory Operations at the Battelle Memorial Institute in Columbus, OH) are world travelers who’ve visited all seven continents.

Anderson is not only the new VCAA but a new member of our department, with a Ph.D from Iowa State in applied mathematics. He also has an Indiana connection, having started his academic career as assistant professor of mathematics at Ball State University. From there he moved to Winona State University (MN) where he served in a number of capacities, notably as chair of the Department of Mathematics and Statistics and as interim dean for the College of Science and Engineering. His most recent post was as founding dean of the College of Science, Technology, Engineering, and Mathematics at the University of Wisconsin-Stout.

L: Vicky Carwein; R: Jeff Anderson
Alumni Updates

Jason Barnes (MS, fall 2011) is currently the Associate Director of the Center of Excellence in Systems Engineering, promoting systems research and education in NE Indiana. He works to bring opportunities to IPFW faculty and students and area companies for the development of top-notch products, processes, and engineers.

Joe Bittner is head math teacher at Northside High School in Fort Wayne, where he teaches precalculus and calculus dual credit classes. He is also discovering new math uses on the iPad, and has been attending conferences about math iPad applications.

Kelly Boyd moved south to the Louisville, Kentucky area in July 2012. She is teaching and began her master's this summer in school counseling and guidance. She is now Graduate Student Assistant for the REACH program at University of Louisville - Louisville, KY.

Sam Carolus is at Bowling Green State University for graduate work in pure mathematics on a teaching assistantship.

Kevin Chlebik has started his third year of doctoral work at PRGS. He's successfully completed his qualifying exams and will likely take 2 or 3 more years to complete the remaining coursework and dissertation. He's having a great time out in Santa Monica working on many interesting projects at RAND and meeting some great people. He married a woman that he met while pursuing his MPP degree at Pepperdine; their son, David Samuel Chlebik, was born in December 2012.

Rodney Cole is in his 25th year of teaching mathematics at Southwood Jr-Sr High School in Wabash, Indiana. He currently teaches AP calculus, precalculus, algebra and algebra enrichment. Both calculus and precalculus are IPFW dual credit courses. He is also in his 25th year of coaching varsity girls' tennis. He has a 16 year old son and a 9 year old daughter.

Jamelle R. Godlewski (1995) and her best friend started a not for profit organization in 2011 called Reason 4 Hope. They are a faith based ministry focusing on people who seem to fall between the cracks of normal church ministry, people who are struggling, and people who need encouragement. Their motto is "we write – we speak – we serve". They have developed three outreach problems, mainly focused in NE Indiana. You can find out more about them at www.thereason4hope.com, on Facebook at Reason 4 Hope, and on Twitter @thereason4hope.

Christian MacLeod transitioned from law school to the public affairs (later political science) program at the University of Toledo. He looked into going on for a PhD, but opted to enter the workforce. After doing some lobbying and spending several years as a strategic analyst for BlueCross Blue Shield in western New York, his department was eliminated and he resolved to go back to teaching. Between classes for that and meetings with his pastor, he transitioned into involvement at his church as a liturgist, and from there to a genuine call to ministry. In September 2012, he began study in the pastoral ministry program at Concordia Seminary in St. Catharine’s, Ontario.

Elizabeth McConn is still working at the YMCA doing software training and support; she has been there almost 18 years now. Her older daughters are in high school and starting to look into colleges, and her youngest daughter is now 3 and keeps her and her husband laughing every day! She also volunteers with an amazing local organization based in Bluffton, Indiana called Forgotten Children Worldwide. They assist orphans and victims of child trafficking worldwide through clothing donations, child sponsorships, micro-finance loans, fresh water wells, self-sustainability programs, and orphan home Desolation of Smaug.
construction. She joined their board in January 2012 and organized a fundraising event for them in Fort Wayne in May.

Samantha McGlennen is still teaching at Summit Middle School in SW Allen County. She is also thrilled to maintain ties to IPFW by working with Sue Mau to help preservice math teachers "get their feet wet" in a middle school math classroom.

Deborah Medsker recently took a position in EACS at New Haven High School.

Emily (Dietrich) Miklos is currently a stay-at-home mother of Bello (3 years old) and Oliver (born 8-16-2012).

Dave Moser wrote us on October 14, 2013 in honor of his being 47 years, 47 months, 47 weeks, and 47 days old. Oddly, he had a similar concurrence on his 42nd birthday in 2003, being exactly 38 years/months/weeks/days old!

Paul Richeson reports that things are going very well. Last summer he and his wife bought a house (a fixer-upper!) and have redone nearly everything in every room. Their son Owen was born on August 2nd at 6 pounds, 14 ounces. He continues to take actuarial exams and has been enjoying his work.

Carrie Richards has accepted a Graduate Teaching Assistantship at Eastern Michigan University, studying in their applied statistics program. After a year there she hopes to enter a Ph.D program in statistics, perhaps at the University of Michigan.

Lisa Ferguson Sells tells us that Jaxon Dalton Sells arrived over a year ago. She is back to work, with hopes that things might settle down a little!

Jeremy Swander is currently assistant principal at Prairie Heights High School.

Sara Tang has been working as a metrology engineer at Richard J. Baban, Inc., a calibration laboratory, since June 2010. She is in charge of calculating uncertainties and maintaining statistical records of their equipment.

Alumni, Faculty, and Guests Enjoy Alumni Dinner

The eleventh annual alumni dinner was held on April 13, 2013 in the Alumni Center. Those there ranged from first-time attenders to every-time attenders. Another delicious dinner was catered by Catablu. We suspect that Catablu will cater the next dinner as well! After dinner Yvonne Zubovic gave a presentation on “Mathematics and Magic”. A good time was had by all!

Mark your calendar for Saturday, April 26th 2014. That’s the date for our next alumni dinner, which will feature a retrospective on the first 50 years of the IPFW math department. Hope to see you there!
Pi Mu Epsilon news

The IPFW Indiana Zeta Chapter of the mathematics honor society Pi Mu Epsilon had its annual initiation ceremony on April 28. A presentation was given by IPFW faculty Dan Coroian, “The Transit of Venus and why it was one of the most important events in science history”.

(Left to right: Lowell Beineke, chapter advisor; Sam Carolus, chapter president; Luke Bertsch; Amber Shank; Linh Nguyen; Melissa Guse, chapter vice president; Peter Dragnev, department chair; Dan Coroian, speaker.)

Math Majors Recognized at Honors Banquet

The following awards were presented to math majors at the annual College of Arts and Sciences Honors Banquet:

- **Outstanding Mathematical Sciences Senior Award:** Tony Do, Christopher Garner, and Kevin Villela;
- **Lowell W. Beineke Mathematics Scholarship:** Tara Joyce and Altun Shukurlu;
- **Maynard J. Mansfield Award:** Samuel Carolus;
- **Frank D. Engler Scholarship:** Amanda Bracht and Jessica Sproat.

Left to right: Doug Townsend; Samuel Carolus, Mansfield award winner; Tara Joyce, Beineke scholar; Amanda Bracht, Engler scholar; Christopher Garner, Outstanding Mathematical Sciences Senior; Altun Shukurlu, Beineke scholar.

Credits: *Within Epsilon* is compiled by Doug Townsend and Matt Walsh. Additional photography by Adam Coffman. Feedback and alumni contributions are always welcomed! E-mail us at townsend@ipfw.edu.
Alumni Again Generous in Support of Pieces-of-Pie Campaign

Fall 2012 was the start of the tenth Pieces-of-Pie campaign, and it went very well. Since its inception in the fall of 2003 our math alumni have given generously to the campaign that funds the alumni scholarship, and supports the Beineke scholarships, the math discretionary fund and the IPFW annual fund drive. The amount collected this year was $5445 to date.

As a result of the money contributed, many undergraduate students have received financial assistance to help them achieve their educational goals. Also, the math department has been able to support travel for students to conferences and math competitions.

For the 2013-2014 campaign, alumni will have a chance to support the rapidly growing actuarial science option. The money contributed to this giving option will help defray the costs of taking an actuarial science exam for current students if they successfully pass the exam.

Contributors to the 2012-2013 campaign include: Craig Baker, Michael Barnet, Larry Bieberich, Joseph Bittner, Barbara Bulmahn, Mark Cutshaw, Michael Ehinger, William Frederick, Carol Guse, Terry Harter, Kyle Hickle, Kevin Hoy, Michael Johnson, Stephen Larson, Walter Reiger, Steven Johnson, Theresa Larson, Shelly Nussbaum, Nathan Parker, Glenna Raber, Everett Schurg, Renata Shore, Susan Simler, Mark Soderberg, Chad Strong, Matthew Sutter, Jay Thayer, Todd Thomas, Drew Tindall, Cindy Vanderlaan, Barbara Vaughn, Cathleen Westrick, Christine Zadylak. (If you contributed and your name is not listed, we apologize. Please send an email to townsend@ipfw.edu and we will try to include your name in next year’s alumni newsletter.)

Keep your eye out for information about the 2013-14 campaign!

Keep in Touch!

Please complete and return this form so we can keep our alumni files up to date and relay information about you to other alumni.

Name

Previous name (if used at IPFW)

Year of graduation

Home phone (______)________________________

Address_____________________________________

ZIP __________________________

E-mail______________________________________

Personal and professional news:

_________________________________________________________________

_________________________________________________________________

Return to: Department of Mathematical Sciences 2101 E. Coliseum Blvd. Fort Wayne, IN 46805-1499

Or e-mail: townsend@ipfw.edu
Amanda Hyde: Summit League Scholar-Athlete of the Year

Amanda Hyde is a senior math teaching major with a minor in psychology. Born in Findlay, Ohio, she also plays for the IPFW women’s basketball team. And she was selected as the Women’s Scholar-Athlete of the Year for 2012-13 by The Summit League. This is the most prestigious individual honor given by the league, and Amanda is the first student from IPFW (male or female) to receive the award since the university joined the league in 2007.

This is only one of several honors that the senior received last year. She was also named the Division I-AAA ADA Scholar-Athlete of the year and a Capital One Academic All-American. Within The Summit League she was named to the Academic All-American Team, the Commissioner’s List of Academic Excellence, and the Academic Honor Roll as a league Distinguished Scholar. At IPFW she received the Chancellor’s Merit Award, has been on the Dean’s List, and was inducted into the Phi Kappa Phi honor society.

Amanda was named The Summit League Player of the Year after averaging a league-best 18.6 points per game in the 2012-13 season. She is the all-time career leader for the Mastodons in free-throw percentage at .855, with an 87% success rate last season. She was twice named Player of the Week and scored a league-high 43 points in a game at Southern Illinois on November 29th of last year, which ranked third in the NCAA for the season. She continues to be a leader on this year’s team, and played a key role in the Lady Dons’ upset of then-23rd ranked Michigan State. Well done, Amanda!