The companies that the Department of Engineering and Technology Management has worked with over the last 19 years have, through their participation in the Advisory Board, aided the Department’s efforts to improve and modernize curricula and facilities. The Advisory Board members have also helped develop the STEM focused Engineering Management (EM) program. To support the EM program, the Advisory Board has established a merit-based scholarship with funds now approximately $60,000.

The ATMAE Board of Accreditation accredited the MSETM program and re-accredited MSU’s Engineering Technology programs (Civil and Construction Management, Design and Manufacturing, and Electronics and Computer) until 2020.

In 2016, through the transformation of the existing College of Business and Public Affairs into the new College of Business and Technology, the university has made a strategic investment in the future of its technology, engineering, and business programs. Specifically, the new School of Engineering and Information Systems, which includes the Departments of Engineering and Technology Management (formerly AET) and Computer Science and Information Systems (CSIS), has been directed to elevate the ETM, Computer Science, and Computer Information Systems programs by strategically grouping these programs to meet the demand of contemporary industries for advanced engineering and technological skills.

As we welcome the CSIS representatives to the board, it is our hope that with the Advisory Board companies’ support, the School of Engineering and Information Systems will be able to modify and strengthen the existing programs’ curricula and develop new program opportunities in Computer Science, Information Systems, Design, Robotics Engineering, Informatics, Advanced Manufacturing, and Mechatronics.

In collaboration between ETM and CSIS faculty and the Advisory Board, a proposal has been submitted to provide two concentrations for the MSETM Program: Engineering & Technology Management and Information Systems & Analytics. Also, an additional track in Information Systems has been added to the BSTM degree program in order to serve students who complete an AS/AAS degree in Information Systems, Computer Information Technology, Computer Science and other related disciplines.

Student success, a high job placement rate, and employers’ demand for advanced skills as well as MSETM graduates success in pursuing doctoral degrees has resulted in a significant increase in student enrollment in our programs from 217 in 2011 to 390 in fall 2015. Major accomplishments have become possible with the Advisory Board’s dedication of time and expertise as well as strong financial support for the department. ETM graduates are prepared to fill positions such as engineering manager, quality engineer, and production engineer, among others, which require strong quantitative and analytical skills to solve complex problems within the engineering workplace.

Dr. Ahmad Zargari, SEIS

Dr. Nilesh Joshi and Matt Watson receiving the Best Conference Proceedings Paper Award at the 2015 ATMAE Conference in Pittsburgh, PA.

The 21st Century Center for Manufacturing Systems, in collaboration with the Advisory Board Companies, will provide opportunities for students to work with state-of-the-art technology, provide companies with workshops, technical training and technology transfer opportunities, and aid the economic development of our region. The faculty are now planning to offer workshops in design and animation, virtual robotics labs, OSHA certification, and Fanuc certification for Advisory Board member employees and KCTCS faculty.
Joyce Stubbs

Dr. Joyce (Wogoman) Stubbs and Dr. Steven Stubbs have submitted a proposal to KACTE to present “CCR Strategies Used to Enable High School CTE Programs to be High Performing in Kentucky” at their Summer Conference in Louisville, KY, July 2016. Joyce presented at Greenup County’s “Ready, Set, Goal!: College or Career?” on March 8, 2016. Joyce is the chairperson for the Kentucky HOSA Ann Vescio Scholarship Committee which meets March 18, 2016 in Louisville to determine this year’s recipients. Joyce is also serving on the Agricultural Sciences Department Chair search committee.

Hans Chapman

Dr. Hans Chapman, Associate Professor of the School of Engineering and Information Systems (SEIS) will be serving as an engineering faculty at the 2016 Governor’s Scholars Program (GSP), on the Northern Kentucky University (NKU) Campus this summer.

Dr. Chapman and Undergraduate Research Fellow, Robbie Rowlett are working on the research topic “Mechanical to Electrical Energy Converter” in which they are investigating small-scale energy harvesting electrical energy through magnetic induction. Dr. Chapman and Robbie Rowlett presented at the 2016 Posters-at-the-Capitol Conference at the State Capitol, Frankfort, on Thursday, Feb. 25.

Dr. Chapman collaborated with Dr. Steve Hunt, Professor of Computer Information Systems (CIS) to develop and submit a proposal to provide two concentrations for the MSETM Program: Engineering & Technology Management and Information Systems & Analytics, which also provides opportunity for coursework in Healthcare IT and Data Mining.

Dr. Chapman will be a member of the ATMAE Accreditation Team to visit Middle Tennessee State University in April 2016.

Sanjeev Adhikari

Dr. Sanjeev Adhikari is interested in conducting research in six areas: 1) construction material quality testing and modeling of soil, concrete, asphalt, 2) use of recyclable materials in concrete and asphalt, 3) low cost energy efficiency home design including LEED, renewable energy, and HVAC, 4) carbon footprint calculations, 5) information technology applications in construction management and 6) 3D Modeling using BIM software.

Dr. Adhikari is mentoring undergraduate student Steve Easterling on the Impact of Schedule Delays and Methods of Analysis, and LEED Green Building initiative research for prospective use in MSU buildings. The amount of the grant received for their research is $1,500. The funding is available from the College of Science and Technology at Morehead State University (MSU). Dr. Adhikari is also advising undergraduate student Jake Day to complete research related to the environmental impact of fracking for oil and gas.

Dr. Adhikari’s paper titled “Review of Mechanistic Empirical Design Approach for Asphalt Pavements” has been accepted for presentation at the 4th International CEW event on Functional Pavement Design, for Pavement Engineering, Delft University of Technology Netherlands, June 29th to July 1st 2016. His co-author is Ankit Gupta of IIT Varanasi, India. He is planning to attend the annual conference of the Association of Technology, Management, and Applied Engineering (ATMAE) at Orlando, FL in November 2016 to present a paper related to Solar Home and Construction Technology. Dr. Adhikari is a faculty senate member of Morehead State University.

Nilesh Joshi

Dr. Nilesh Joshi and his student, Matt Watson’s coauthored paper titled, “Design Refinement by Iterative Virtual Experimentation (DRIVE) for Analysis of Steering Column Mounting Bracket Design of an On-Highway Construction Vehicle” received the Best Conference Proceedings Paper award from ATMAE. They presented their research at the ATMAE 2015 conference in Pittsburgh in November.

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Fariborz Tavangarian

Dr. Fariborz Tavangarian joined the department of Engineering and Technology Management in August 2015. He has authored more than 30 peer-reviewed articles, 2 book chapters and 3 international conference papers.

Dr. Tavangarian’s paper, “A modified method to synthesize single-phase forsterite nanoparticles at low temperature”, was accepted for publication in the journal of Ceramics International.

He was selected as a national genius by Iran’s National Elite Foundation in 2011. He was recognized as the 7th Best Young Specialists of Nanotechnology and 44th among Scholars of Nanotechnology in the 6th Nano Award Festival in Iran determined by Iran Nanotechnology Initiative Council. Dr. Tavangarian has made technical contributions in several areas, including self-healing materials, smart materials, biomaterials, nanomaterials, nanocomposite, tissue engineering, and ceramic materials. He currently serves as the advisor of the Society of Manufacturing Engineers (SME) student chapter.
SEIS Student Robbie Rowlett Presents at the 2016 Posters at the Capitol Conference

SEIS undergraduate student, Robbie Rowlett was among a number of MSU students who collaborated with faculty to present posters at the 2016 Posters-at-the-Capitol Conference at the State Capitol, Frankfort, on Thursday, Feb. 25. Morehead State University Director of Graduate Programs, Dr. Michael Henson, led the MSU contingent at this year’s event.

“These student projects, completed in collaboration with faculty members outside the traditional classroom setting, represent the personal, value added educational opportunities available at Morehead State University,” said President Andrews.

Robbie worked with Dr. Hans Chapman, Associate Professor of Design and Manufacturing on his research titled “Mechanical to Hydroelectric Energy Converter”.

BSTM Revised to Include New CIS Track

The Technology Management degree, offered through the Department of Engineering and Technology Management is designed to meet the expanding need to fill challenging jobs in technology and engineering management. The Technology Management program targets Kentucky Community and Technical College System (KCTCS) or other accredited community college associate degree graduates with technical/engineering related backgrounds. The Bachelor of Science in Technology Management program is a 2+2 completer degree that is offered completely online. Upon completion of an AS/AAS degree these students will have completed a minimum of 60 hours of coursework and they will complete 60 hours at MSU in order to achieve the 120 hours required for graduation from a BS degree program.

The School of Engineering and Information Systems has recently added an additional track in Information Systems to the BSTM degree program in order to serve students who complete an AS/AAS degree in Information Systems, Computer Information Technology, Computer Science and other related disciplines. The new BSTM-IS track graduates will serve their respective companies in roles within production/management and manufacturing organizations.

IEQ Grant Funded

Krista Pack Barton and Rachel Blackwell, co-principal investigators, have announced that their Improving Educator Quality (IEQ) grant “MSU’s 21st Century STEM Camp” has been funded through the Kentucky Council on Postsecondary Education (CPE).

MSU’s 21st Century STEM Camp will provide a LEGO robotics experience for teachers and students in six counties in eastern Kentucky. Instructors from MSU’s Department of Engineering & Technology, Management from the Kentucky Department of Education, and UK’s See Blue STEM Camp will engage with STEM teachers in a professional development system that begins with data focus groups followed by a three day institute during summer 2016 using student growth goals, STEM Action Plans, and ongoing professional learning experiences.

Carlson Software donates Precision 3D

On December 1, 2015, Bruce Carlson and Tyler Faulkner of Carlson Software visited the Department of Engineering and Technology to showcase a new software developed by Carlson Software. Carlson Precision 3D is a new program for 3D editing of digital terrain models (DTMs) that offers many benefits including the ability to load and review the two most common formats for surfaces: LandXML and DXF, overlay other LandXML file types such as points, alignments, parcels, storm and sanitary sewers, culvert pipes and other piping systems, view the 3D Surface with user-controlled textures to quickly spot errors in the DTM, and the ability to fix the errors in the DTM for re-saving and use in CAD programs, or for direct output for machine control and survey stakeout.

After previewing the software for the Department, Mr. Carlson offered to give the University licensing for the software as a teaching tool for students in the Construction Management and Civil Engineering program.
ETM Hosts 19th Annual TSA Regional Competition

Morehead State University’s Department of Engineering and Technology Management was the host of the 19th annual TSA competition on March 11, 2016. Thirteen regional high schools and one middle school, 129 students, and 13 faculty advisors from Morgan County High School, Rowan County Senior High School, Lewis County High School, Raceland-Worthington High School, Raceland-Worthington Middle School, Mason County High School, Henry County High School, Ashland Paul Blazer High School, Highland High School, Owen County High School, Campbell County High School and Graves County High School TSA chapters participated in different events. Most of these events were based on the concepts which were covered in the students’ courses in Engineering Technology Education. The purpose of this regional event is to prepare and evaluate the participating student’s projects before going to the state competition. The Regional competition allows the students to improve their projects for state competition based on the feedback they receive from MSU faculty and staff.

The event started with the EKTSA student officers conducting the TSA opening ceremonies. After the opening ceremony, students dispersed to the Lloyd Cassity Building and Reed Hall to compete in different events. During these competitions, students mingled with their friends and had interaction with the ETM faculty.

The Morgan County chapter had an excellent performance with 17 different awards including 11 first place, 4 second place, and 2 third place. The Lewis County chapter received 1 first place award. Students from Rowan County received 2 awards: 1 first place and 1 second place. Owen County students received 6 awards: 3 first place, 2 second place and 1 third place. Raceland-Worthington High School and Middle School combined to garner 11 awards including 5 first place, 4 second place and 2 third place. Highlands High School received 4 awards including 2 first place, 1 second place and 1 third place and Ashland Paul Blazer received 2 awards including 1 first place and 1 third place. Graves County High School, whose students had to travel 5 hours to compete in the MSU hosted regional competition, received 2 awards including 1 first place award and 1 second place award.

Special thanks to Sam Mason, Jason Stepp, Jami Hornbuckle (Communication and Marketing Staff), Holly Pollock (Enrollment Services), Liz Kilsheimer (Aramark), the faculty of the School of Engineering and Information Systems, Ethan Rowley and student volunteers (Evan Berkshire, Kyle Moore, Hayden Hatfield, Dustin Kirby and Nathan Sames) for making this event possible.
Barry Phelps
Barry Phelps, the MS-MIS Outstanding Graduate Student Awardee in the SEIS, is an Assistant professor of Computer and Information Technology (CIT) at Henderson Community College where he is also the Program Coordinator for Computing & Information Technologies (CIT). Prior to this appointment, he was the Network Administrator, managing the servers, switches, routers, and phone system at Henderson Community College. Barry will soon be completing his second master’s degree—an MS in Management Information Systems at Morehead State. Last year he completed the Masters in Adult Education at Western Kentucky University and is currently exploring ideas and future plans for entering the Doctorate in Education at one of the regional universities in Kentucky.

Other professional achievements include the recent completion of Quality Matters (QM) workshops and is now a QM Certified Peer Reviewer of online courses. Barry holds several Industry Certifications related to Information Technology -- A+, Microsoft Certified Professional (MCP), Microsoft Certified Systems Administrator (MCSA), and Microsoft Certified Systems Engineer (MCSE).

Christopher Smith
Christopher Smith a native of Paintsville, KY, attended Morehead State University from 1990 to 1994. He graduated in 1994 with a Bachelors of Science in Industrial Technology with an option in Supervision and Management. During his studies he did his co-op at Sonoco Plastic Drum in Mt. Sterling, KY working in the production department. He recently graduated in May of 2015 with his Master of Science degree in Engineering and Technology Management.

He is currently employed at Cooper standard Automotive as Quality Manager in Mt. Sterling, KY. Christopher has held positions in Quality Engineering, Supervision, and Management over the last 20 years. He has helped start up and implement QS-9000, TS 16946 and ISO 9001 Quality systems throughout his career. He has also helped reduce Customer complaints throughout his career by using the 8-step and 5-why problem solving methodologies that utilize error proofing techniques and design changes.

In his current position he is focusing on Driving Customer Fast Response that focuses on error proofing methods and answering all customer concerns within 10 days. He has recently implemented 3 Televisions in production throughout the plant to help communicate all Quality Concerns to the operators. In addition he is driving departmental discipline to improve their 6S (Includes Safety) standardization. To date it has improved the Quality Department rating by 10% within the first 2 months. Cooper Standard has also adopted a more direct approach in working with our customers proactively to reach out to them if any problem is identified in house that could potentially have a negative impact. He has visited critical customers on site to help improve customer relations. This way you get to see up close where Cooper Standard can help meet their quality and productivity needs.

Christopher currently lives in Winchester, KY and is married to Carrie Smith and they have 2 children Kyle and Justin ages 17, and 20. Kyle is a junior at Morehead State and Justin is a junior at GRC in Winchester.

Malcolm McCarty
Malcolm McCarty received his business degree with an option in information systems from Tennessee State University in Nashville. Later he completed the MBA online at Morehead State with an emphasis in Information Systems. Other professional accomplishments include obtaining the Project Management Certification through the Project Management Institute, IBM Center of Excellence (COE) Sr. Project Management Certification, as well as Microsoft MCP Certification.

Malcolm has been employed in a number of roles with varying responsibilities within IT. He started out as an Image System Administrator, transitioned to a System Analyst, then to a Project Manager, an IT Project Management Auditor and finally into IT Management and Account Management.

Mr. McCarty managed numerous high profile projects mainly in the manufacturing market segment and also worked as an IT PM Auditor to ensure several projects attained and maintained SEI CMMI Level 3 certification. Currently, he manages a team of Technical Consultants who manage the technical integration implementations in order for customers to connect their Applicant Tracking Systems (ATS) to his company’s background screening application.
Roy Gentry
Roy Gentry earned his Master of Science degree in Industrial Technology from Morehead State University in 2006. He also earned his Bachelor of Science in Industrial Technology with Electrical/Electronic Technology Area of Concentration from MSU. Mr. Gentry has been employed by the Mazak Corporation since his graduation. Mr. Gentry was recently placed in charge of the National Training Department at Mazak.

His previous position at Mazak was National Training Instructor. The job included providing maintenance classes to customers as well as Mazak employees. The responsibilities of the position included developing the curriculum for various classes and creating training videos for Mazak Service Engineers on various machine models. Before taking the position of Training Instructor, he was a Field Service Engineer and was mainly responsible for E-Machine installations. E-Machines are a line of Mazak’s most complicated machines. They allow a customer to do a combination of milling and turning in the same setup.

Mr. Gentry graduated with honors from George Rogers Clark High School in Winchester, KY in 1999. He was also on the OVC Commissioner’s Honor Roll, and was a four-year letterman on the MSU Baseball team.

Steve Defazio
Steve Defazio is currently the President and Chief Operations Officer for Takumi Stamping, Inc. headquartered in Fairfield, OH. He has held many positions in executive management for automotive tier 1 suppliers. He is a two time graduate from MSU (BS – ’96, MS – ’01).

In 2013, Steve received the ATMAE Industry Innovation Award at its National Conference in New Orleans, LA. He received this award due to his demonstrated leadership in minimizing losses while contributing to productivity enhancement through process improvement based on TPS principles.

Steve has also made many contributions outside of industry as Advisory Board Chair for the MSU AET advisory board. He is also an ASQ Certified Quality Engineer (CQE) and a Design for Six Sigma Black Belt.

Steve was invited to speak on Leadership in Business and Industry at the MSU College of Business and Technology’s 3rd Annual “Business and Technology: Beyond the Classroom” Conference on October 15th, 2015. He was also invited to sit on the Manufacturing Pioneer Panel at the 21st Century Manufacturing Collabrium on October 22, 2015 in Louisville, KY.

AGC Student Chapter Update
This semester, the AGC student organization, (Association of General Contractors of America) has again been busy continually promoting the group as well as planning events for the spring semester. In February 2016, the AGC Student Chapter held a new member day event in Reed Hall 105 where the members played corn-hole, enjoyed pizza and drinks, and played card games.

In the first week of November 2015, the AGC student chapter offered a 10 hour OSHA Construction Safety class. This workshop was generously offered through the AGC of Kentucky, and was instructed by Mr. Ronnie Perkins, AGC of Kentucky Safety and Education Director. The class consisted of two days of mandatory lectures and presentations about construction safety. Seven members attended the class, and two received a 1926 OSHA construction manual. The class was taught in Reed Hall.
Feng Gao

Feng Gao, an MSU student hailing from China, is a Graduate Assistant in the Department of Engineering and Technology Management pursuing her MSETM degree. She graduated with a Bachelor degree in Thai language from University Burapha in Thailand and spent two years there after graduating. She is very excited to have had the opportunity to study at MSU. She enjoys collaborating with her classmates and professors, and learning from each of them.

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Ethan Rowley

Ethan Rowley, from Lynchburg, Ohio, is a Graduate Assistant in the Department of Engineering and Technology Management. Ethan is assisting multiple professors in their classes this semester. His professional goals and interests are materials handling, design, lean manufacturing, product supply, and he looks forward to becoming a plant manager. His hobbies include hunting, fishing, boating, and helping with various projects around the family farm.

Zhenpeng Liu

Zhenpeng Liu is a Graduate Assistant in the Department of Engineering and Technology Management working toward his Master of Science in Engineering and Technology Management degree. He received a BS in Safety Engineering from Guangxi University in China where he performed research on campus safety. He was a 2012 exchange student at MSU.

Caiwu Ding

Caiwu Ding is a Graduate Assistant in the ETM Department and student advisor for the Robotics Team. He is a teaching assistant in Computer Aided Design and Drafting I, 3D Design, Modeling and Animation and Engineering Design. Caiwu is also completing his research on Model Based Optimization and MDB in SolidWorks. He has been admitted to the Ph.D. program in Mechanical Engineering at the New Jersey Institute of Technology.

Saihiranmitra Mudiki

Saihiranmitra Mudiki, from India, is a Graduate Assistant in the Department of Engineering and Technology Management. He received his Bachelor of Technology in Electronics and Communication Engineering (with honors) from Lovely Professional University in India. He is currently studying his first semester of graduate coursework while also working as a GA. His tentative thesis topic is the Advanced Encryption Standard Algorithm (AES algorithm).

Fatemeh Davoudi Kakhki

Fatemeh Davoudi Kakhki is an MSETM graduate student working as a Graduate Assistant in the Craft Academy. She holds a bachelors degree in Mathematics. Fatemeh worked for five years in an engineering company as Manager of International Marketing before being admitted to MSU. Her research interests include applying quality control techniques in the energy and manufacturing sectors. She has been admitted to the Ph.D. program in Agricultural and Industrial Technology at Iowa State University with a Research Assistant position.

Armin Maragehmoghaddam

Armin Maragehmoghaddam is an MSETM student and a Graduate Assistant in Business working under three professors. He has a bachelor degree in Electrical Engineering and worked for five years before being admitted to the program. He has three years experience working for MUSROC (a subway metro company) in his hometown, one year experience in manufacturing industrial machinery, and one year in telemetry systems. His main research interest is renewable energy. Armin has been admitted to the PhD in Electrical Engineering program at Clemson University.
The ETM Department hosted the 2016 TSA Regional Competition on March 11, 2016.

The revised MSTEM Proposal (administrative approval pending) will allow for two technical concentrations - Engineering and Technology Management and Information Systems and Analytics.

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The annual conference of the Association of Technology, Management and Applied Engineering will take place November 2-5, 2016 at the Double Tree by Hilton in Orlando, Florida.

For Your Information

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