



INGENIUM

noun: from Latin meaning natural talent or disposition (think “ingenious”)

Benedictine College - Engineering Alumni Newsletter

Vol 2, Issue 1 — August 2018

*Chemical Engineering * Civil Engineering * Electrical Engineering * Mechanical Engineering*

Young Engineering Alum Honored

Article courtesy of Benedictine College website.

Benedictine College honored James Nistler '16 with the Young Alumni Award during the Senior Champagne Brunch on May 11, 2018. The award recognizes alumni younger than 35 years old who have distinguished them-

selves in their community and profession and who support the values promoted at Benedictine College

Each year the honoree returns to address the graduating seniors at the Senior Brunch the day before Commencement.

*After graduation ...
find something you love ...
support that, and, if you can,
bring someone with you.*

“When President Minnis called me about this I immediately began asking what I could possibly say that would mean anything to you,” Nistler said. “But the more I thought about it, the more I became excited to share with you the love I have for this place and for the people — the community built here.” Nistler told the graduating seniors to find something to support and never forget it.

“My challenge to all of you now, after graduation, is to find something you love — whether that is something you are grateful for and want to share or something you are passionate about,” he said. “Support that, and, if you can, bring someone with you.”

Read the full article [here](#).



James Nistler '16 receives Benedictine's Young Alumni Award.
Photo Courtesy of Benedictine College

A Look Inside

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A Message from the Chair

Dr. Darrin Muggli



Hello, and welcome to the second edition of our departmental newsletter. Again this year, the department has changed a lot. Here is a summary of some of our major recent developments:

ABET Accreditation –

We have been quite busy this year preparing for our upcoming ABET site visit, which is scheduled to occur this September. We have requested that ABET review and accredit

both our chemical and civil engineering programs in this visit. If we are successful, we plan to request an ABET site visit for electrical engineering in 2021.

Westerman Addition and Renovation –

We started the fall 2017 semester with our department shrunk down to a few temporary offices, most of a shop, storage pods, and of course, trailers. By April 2018, we were moving into parts of the new addition. We aren't settled in yet, but we are steadily getting equipment put in place for the fall semester. We are also sharing some of our new lab space with the chemistry, physics, and biology departments as they undergo the pain of renovation this year. By next spring, we should have access to all of our space.

New Faculty and Staff –

Mike Berry (civil engineering) just completed his first year as a faculty member and we hired Dr. Peter Merkle (civil engineering), who will join the department in a couple of months. Next semester, we will have 10 engineering faculty and two staff members. We plan to initiate faculty searches for two more electrical engineers (one in fall 2018 and another in fall 2019).

Students –

In May we had 33 students participate in commencement; it was exciting to see so many engineering graduates. We are also looking forward to welcoming a large class of incoming freshman (we had to create a third section of Introduction to Engineering to accommodate all of them). We love to see the department grow, particularly because Benedictine, and especially our department, is a wonderful place to receive a great education and grow in an understanding of and appreciation for the Catholic Faith.

Please Stop By –

Finally, if you are ever around Atchison, please stop by and visit us! It is always great to visit with our graduates and see how you are doing. If you can't make a trip to Benedictine, I would love to hear from you via email (DMuggli@Benedictine.edu) or telephone (913-360-7961).

Upcoming Events

Aug. 22 First day of Fall Semester

Oct. 27 Homecoming

Apr. 11, 2019 Discovery Day

Apr. 18-20, 2019 .. Concrete Canoe
Competition

Stay tuned! Look for concrete canoe
pour dates, mission trip dates, and
engineering presentation day in
January's issue.

Calling All Alums! Stay Involved!

- Send us your story and get featured in an upcoming newsletter! If interested, reply [here](#).
- Refer a prospective student! Share how Benedictine College has impacted your life and send him or her over to the [Admissions page](#).
- Come back and visit! We'd love to see you. Contact Engineering Club president [Brett Burke](#) if you'd like to be a guest speaker.
- Join us on a mission! Contact [Kienan McIntee](#) to find out how you can participate. Your prayers and financial support are much appreciated. See page 5 for an update on our most recent mission.
- Maggie Kempf, Danika Shimkus, and Morgan Hoffman have organized an Engineering Alumni Association (EAA). See what they're up to or lend a hand! Contact [Morgan](#) to get involved.

Stay tuned for our next issue in January 2019! Look for more details on the upcoming mission trip as well as dates for the concrete canoe pour, senior presentations, and more.



Katharine Hirl '18 receives her honor cord from President Minnis.



Michael Salemi '18 receives his diploma from President Minnis.




Jack Herbic '18 and Von Huber '18 celebrate their graduation together.



Matthew Johll '18 awaits his turn on the stage.

Congratulations to Our 2018 Graduating Class

Chemical	Civil	Electrical	Mechanical	
Mary Carpenter	Samuel Denning	John Corkum	Samuel Anderson	Daniel Hayes
Katharine Hirl	Kyle Deters	Jack Herbic	John Aumen	Matthew Johll
Alexander Huber		Thomas Hogan	Keegan Bell	Michael Klein
Elizabeth Intfen		William Kayser	Derek Bretey	John Krishnan-Myjak
Michael Salemi			Nicholas Brouillette	Nathan McMahon
Ryan Spellman			Adam Burke	Kaleb Mitchell
Evan Sutherland			Andrew Buss	Derek Rodgers
Samantha Turner			Matthew Corbett	Thomas Shearer
			Joanclaire Flynn	Zachary Siwec
			Michael Francois	Mario Skertchly
			Chris Goodwin	Heling Wang
			Augustine Harmon	Paul Wessel
			William Hawkins	Austin Windsor
			Paul Heuser	



All photos on this page courtesy of Benedictine College



All photos on this page courtesy of Benedictine College

Westoration Nears Completion

by Anthony Olimpio and Kate Caughron



Westerman Hall as the Westoration nears completion.

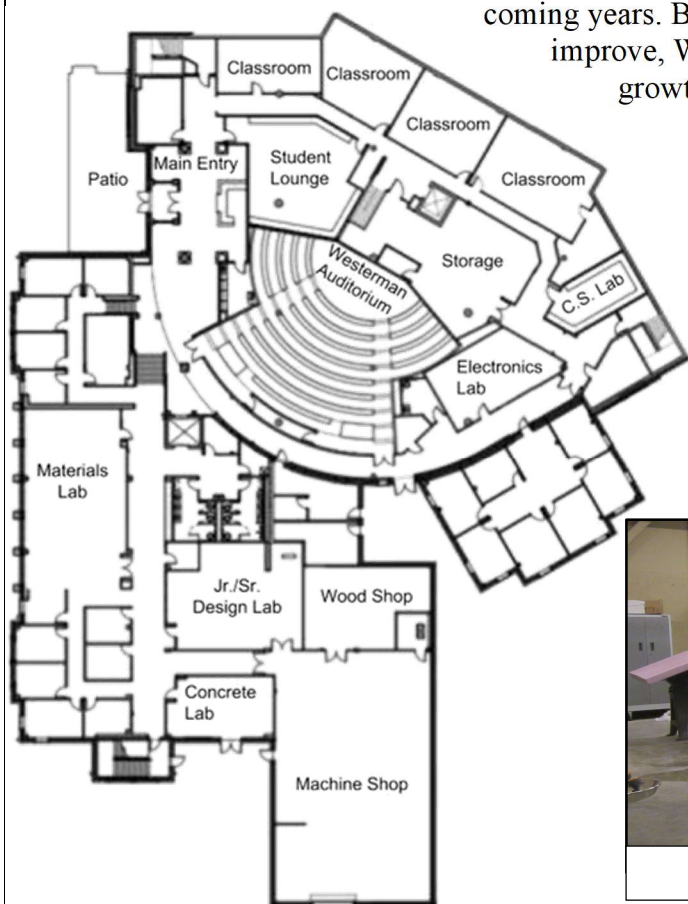
Ladies and Gentlemen, the long-anticipated day has finally come when we bid farewell to the old engineering trailers! The Westoration is well on its way to completion, and the engineering floor is nearly done with several notable accomplishments. A new, expansive, and even well-lit shop has already been put to great use. The new addition to Westerman also features a Junior-Senior Design Lab and a Materials Lab, both roomy and shiny-new. In May, the professors moved into two new office suites along the hall, and

the trek to the trailers has been stored away with other anecdotes of department history.

A beautiful new lower entrance facing the Murphy Recreation Center opened shortly before spring finals and has become a popular spot for engineering students to study and occasionally relax. Students will return to find a newly finished student lounge, complete with study tables and computers, as well as a coffee maker, 'fridge, and several couches for those midnight naps we always needed.

Meanwhile, for those nostalgic about the maze that characterized old Westerman, there is no cause for alarm. The floor plan for the basement of the original portion of Westerman remains largely intact. Still circuitous and confusing, this layout ensures that any wandering souls who venture down to the engineering floor will not leave without exercising considerable navigation skills.

All joking aside, the engineering department not only has ample space, but it also has room to grow in the coming years. Blessed with the faith and culture required to expand and improve, Westerman now has abundant facilities to sustain the growth.



New 3-D Printer Lab in Westerman Hall.



New machine shop in Westerman Hall.

Remember When...

A brief look back at the engineering program — a time of vision, growth, & commitment

10 Years Ago (2008)

The engineering program at Benedictine began as a part of Physics with the only degree available being “Engineering Physics.” We started the fall semester with five engineering students.

9 Years Ago (2009)

Dr. Muggli joins the program as the department head. Through his vision and hard work, he establishes an engineering program that associates Benedictine with the University of North Dakota (UND). Students can get a dual degree: one from Benedictine (Physics, Math, or Chemistry) and an engineering degree from UND.

6 Years Ago (2012)

Benedictine graduates their first set of five engineering students.

Peter Hegarty	Dave Kramer
Brian Hoytal	Dominic Reuter
Dominic Gaudio	

5 Years Ago (2013)

Benedictine graduates seven engineering students.

TJ Anderson	Michael Rowland
Nat Finken	Dan Schley
Michael Green	Will Sonnek
Ben Lafser	

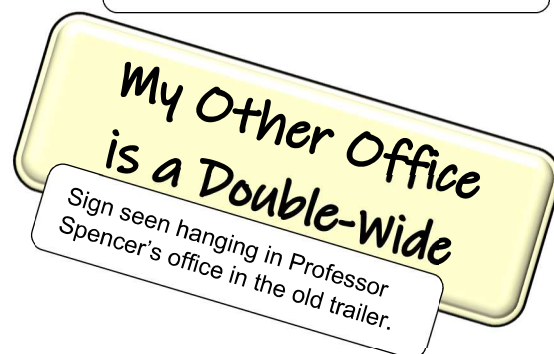
- We had 145 engineering students enrolled in the program. Everyone is a dual major, with an engineering degree from UND and a complimentary degree from Benedictine.
- On staff we had Darrin Muggli, Sean Bauer, Myron Fanton, Scott Newbolds, Pat O’Malley, and Steve Spencer.
- The first trailer gets moved in to house some of the engineering professors. The trailer is deemed “temporary” until the Westerman expansion is completed. Because the trailer lacked running water, the professors’ coffee drinking habits changed because the “facilities” were now a brisk and sometimes rainy walk from their offices!
- As renovations to the engineering floor start, this is the final year for the “cages” that housed the old machine shop.

Current Year (2018)

- Benedictine graduates 33 engineering students
- More than 200 students are enrolled for the fall semester.
- Faculty move out of trailers into their new permanent offices in Westerman Hall. Coffee drinkers rejoice.
- New woodshop and machine shops available.
- Staff has expanded to 10 full-time instructors and 2 permanent staff members.



The old “cages” that used to contain the engineering machine shop.



The new woodshop in the renovated Westerman Hall, complete with a dust handling system.

2018 Showcase of Senior Design Projects

In the spring of 2018, we saw the completion of some great junior and senior design projects, like we always do. For the second year, we set aside one day for the official presentation of all the design projects. We were very pleased by the number of industrial representatives, students, faculty, and family members who attended.



This team of senior chemical engineers took top honors at both Benedictine and UND for ChE Senior Design Project of the Year. Sharing the well-earned honor are (from left) Von Huber, Katie Hirl, and Michael Salemi.

Chemical Engineering...

Senior Design Project of the Year

This year our “Senior Project of the Year” was awarded to a Chemical Engineering process design project entitled

Oxychlorination of Methane to Methyl Chloride Process

This design team not only took the top Benedictine honors, but they also took top honors at UND. This is a first for Benedictine! Congratulations to this hardworking team of young engineers: Katie Hirl, Von Huber, and Michael Salemi.

A second ChE process design project presented on our special *Design Day* was entitled

Design of a Salicylic Acid Production Facility

Civil Engineering...

Amelia Earhart Airport Study

A team of civil engineering seniors presented the results of their design project on “**Terminal Sitework for the Amelia Earhart Memorial Airport.**” This was a paper study on a new terminal for the Amelia Earhart Memorial Airport in Atchison. The project encompassed the site’s civil design work including pavement, storm sewer, sanitary sewer, and grading. Job well done!



Mechanical Engineering...

Physical Therapy Sit-to-Stand Device

A team of mechanical engineering seniors presented the results of their project for designing and fabricating a sit-to-stand device for the physical therapy department at Atchison Hospital. The device is designed to assist patients to safely rebuild the strength and coordination needed to stand when they cannot yet do so on their own.



Sitting Position

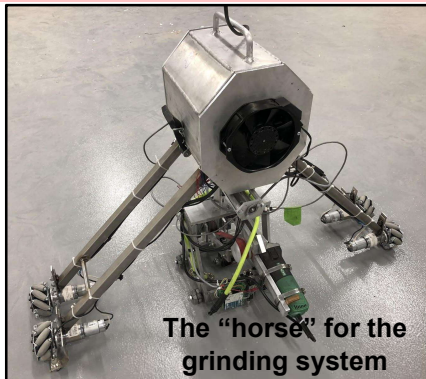


Standing Position

2018 Showcase of Senior Design Projects *(continued)*

Electrical & Mechanical Engineering...

Wabash Industries Robotic Grinding System



The "horse" for the grinding system

Electrical and mechanical engineering students worked together on a project sponsored by Wabash Industries. This was a project that Caleb Schmitz, a Benedictine engineering alumnus, came up with and was our primary contact. The project involved the development of a robotic grinding system.



The "carriage" for the grinding system



Concrete Crusher

Mechanical Engineering...

Concrete Crusher

One team of mechanical engineering seniors designed and built a concrete crusher for use by Benedictine's civil engineering department. This machine is capable of generating 300,000 lbf, and it will be used in the concrete lab.



TIG Cart

Mechanical Engineering...

Benedictine Special Projects

For Benedictine's engineering department, two different teams of ME seniors worked on essential projects needed for our program. One team built a TIG cart, and another reworked the CAM tester so that it now works. Their work will be greatly appreciated in the semesters ahead!

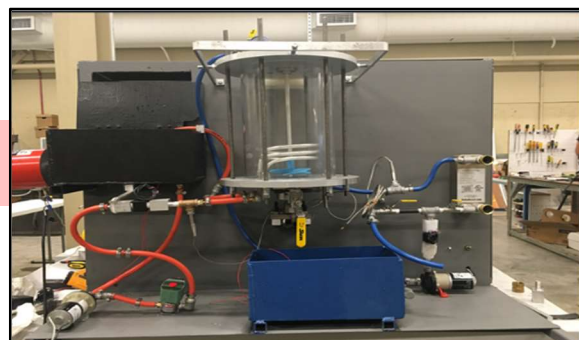


CAM Tester

Mechanical Engineering...

Process Trainer

Another team of mechanical engineering seniors got started on a new process trainer, which will be completed next year.



Process Trainer



Giving Tykes Vroom to Move!

by Prof. Myron Fanton

In the fall semester of 2017, Circuit Analysis student teams completed six projects that converted commercial battery-operated toy ride-on cars so they could be used independently by children with mobility needs.

Like all of us, children with limited mobility want the chance to play, explore, and socialize independently. These modified ride-on cars give them that fun-filled opportunity.



A young driver with mobility limits receives the encouragement he needs to "enjoy the ride" in his customized red sports car!



The *Go Baby Go!* project involved collaboration between physical therapy students from St Mary's and engineering students from Benedictine.

The project belongs to a larger research effort from the University of Delaware called "GoBabyGo!" Benedictine's special mobility project included collaboration with physical therapy students from the University of St. Mary's in Leavenworth.

To make the cars usable for our group of children, the standard foot pedal accelerators were replaced with easily reached "Big Red Buttons" on the steering wheel. The children also needed additional support to stay in the driver's seat, so other features were added, such as five-point harnesses and tall, back-supporting cushions.

Civil Engineering Dept Welcomes New Faculty

by Hannah Thomazin

Following the trend of expansion, the engineering department recently hired Dr. Peter Merkle as a civil engineering professor. After graduating from Massachusetts Institute of Technology in 1984 with B.S. degrees in chemical engineering and management, Dr. Merkle worked in the chemical industry.

He then pursued graduate study in environmental science at SUNY Stony Brook. His research included atmospheric deposition of pollutants to marine ecosystems. He earned his doctorate in Civil Engineering from Virginia Tech, specializing in catalytic filtration of drinking water.

Dr. Merkle joined Sandia National Laboratories in 1995; he was assigned to the Department of Defense from 1998 to 2002. Returning to Sandia, he worked for the next 10 years in domestic and international security technology programs.

In 2012, Dr. Merkle joined the Embry Riddle Aeronautical University as Associate Professor of Civil Engineering. He conducted research on aquaponics technology. Dr. Merkle also holds two patents and is a Professional Engineer in the Commonwealth of Virginia.



Welcome to Dr. Peter Merkle, civil engineering professor

Concrete Canoe Team Takes Fifth at Regionals

by Hannah Thomazin

On April 19th, ten engineering students packed up their bags and traveled to the Regional Concrete Canoe competition hosted by Southern Illinois University-Carbondale. The competition has two main components: academic and racing. Of particular note, the Benedictine College team placed third in both the Oral Presentation and the Men's Slalom/Endurance Race.

In the fall semester, the team started designing the



Brrrrr ... Barefoot Paddlers: Benedictine's 2018 Concrete Canoe Team included (from left) Nathan Kabat, Joshua Sullivan, Brett Burke, Jeanne-Marie Potthast, Juliana Lassiter, Hannah Hoekman, Kristy Nixon, Ben Suhr, Adam Burke, & Nicholas Olache.

canoe, and they continued working on the canoe throughout the year until the competition date.

"I remember piecing together the mold, sanding down the canoe, and adding the finishing touches to it before we left for the race. All of this hard work made the competition even more enjoyable, as we finally got to see the fruit of our labors," Julianna Lassiter commented. Julianna not only competed on race day, she also participated in the construction of the canoe.

Adam Burke lead the team in design and construction in his role this year as Team Captain. He has been part of the Benedictine concrete canoe team in all previous years, and in 2017, he was the Hull Design and Co-Captain. Burke noted, "The ability of the Benedictine College Concrete Canoe Team to compete with large public universities exemplifies the quality of both the Benedictine Engineering Department and the college as a whole."



Alum Update

Eric Newton '15

"I'm working at Architectural Systems Inc in Granby, Missouri. I am the Plant Engineer for my plant (1 of 4 locations). I mostly do programming for CNC machines, but as the engineer, most of my projects require out-of-the-box thinking to get them done. From cutting out impossible shapes to cutting steel on machines meant for wood, my area of focus at the company is doing the impossible jobs. I also work with the machinists to determine the contraptions and machines they need and then get them ordered or built."

"Since graduating, I have continued to be part of BC's Concrete Canoe Program by bringing the models they send to me into reality through my access to the machines. In 2015-2016, I cut out a male mold for the canoe using closed cell Styrofoam, and for the 2016-2017 and 2017-2018 seasons, I was able to cut out a female mold from open cell foam."



Eric Newton '15 (front left) works with classmates to build a previous year's concrete canoe. Eric continues to be a highly involved alumnus with the concrete canoe program.

MISSIONARY REFLECTIONS

A Simple House – Nicaragua

by Kienan McIntee '19

The Benedictine College Engineering Mission Team was blessed with the opportunity to work with *A Simple House – Nicaragua* this past academic year. The nonprofit strives to live with the poor, empowering them with Christian friendship while educating them for a means of economic growth. Prior to the 2018 spring break mission trip, the engineering students assisted *A Simple House* with design suggestions and



Engineering Mission Team in Nicaragua, Spring 2018: (back row from left) Dr. Scott Newbolds, Lindsey Bottom, Lauren Holm, Matthew Johll, host child, Kienan McIntee, Daniel Hayes, Paul Wessel, Ian Daly, Rachelle Regli. (front row from left) Sophie Holm, Grace Rembold, Lillian Hoover, Sarah Jo Schwinn, Resident Director Christina Gonzalez, Joshua Caasi

calculations for various aspects of the workshop, road, and mission land projects. The primary goal of the Engineering Mission Team was to work on the development of the grounds and infrastructure. The mission land and workshop will provide an area for the locals to work and train in various trades, such as carpentry, welding, and farming practices.

With the financial support of many generous donors, the team of 13 students and two faculty members traveled to Nicaragua for the 10-day spring break. While in Nicaragua, the team was able to survey the newly acquired land for *A Simple House*. Upon returning to Benedictine, these data were analyzed to create a topographic map of the area. Using the map of elevation changes, *A Simple House* hopes to work on construction, irrigation, and other projects, such as rainwater collection (many citizens are rationed water once every four days).

Along with surveying, the team worked on the land by moving topsoil, concrete, and trees to build a

road for the mission land. For a full day, the team worked at a nearby school to replace broken water supply pipes, install an additional water storage tank, paint classrooms, and play with the school kids. The mission team also worked in the community by preparing a meal with the Carmelite Sisters for the children of the area, visiting two nearby orphanages, playing soccer with the neighborhood kids, participating in a young adult group, and much more. Immersed in a vibrant and faith-filled culture, the team witnessed the extreme material poverty of the locals. However, these materially impoverished men and women often demonstrated an immense spiritual wealth rarely seen in our highly developed society.

Sadly, the past few months have proven to be a difficult time for our friends in Nicaragua. While the team was serving in Nicaragua, the country claimed to be one of the safest Latin American countries. Now, just 3 months later,



Putting their muscles & faith to work, the Engineering Mission Team helped clear the land for construction of a road for *A Simple House* in Nicaragua.

(continued on next page)

news reports claim that >200 people have been killed with >1000 more injured (as of June 23, 2018) due to political unrest, an oppressive government, and riots. The violence inflicted on the people of Nicaragua and the rapid decline of the country only illustrates the importance of the mission implanted on each human's heart: to love and serve each other as Christ would. I ask for your prayers and support for those suffering in Nicaragua, the continuation of *A Simple House's* mission, and the success of the Benedictine College Engineering Mission in upcoming years.



Lauren Holm holds a Nicaraguan child during time set aside for playing with and getting to know the local children.

This mission trip was a very powerful experience that even I am still trying to comprehend, and I have been so blessed by it.

- Grace Rembold '21,
Mechanical Engineering

From our work on the land to our play with the children, God blessed every moment of our trip with open hearts, willing hands, and many laughs.

- Paul Wessel '18,
Mechanical Engineering

The Lord gave our group in particular an ability to physically help those in need through our engineering education. Being able to use our skills for the good of others left a lasting impact on me, fulfilling a call to come out of myself and give myself in service.

- Daniel Hayes '18,
Mechanical Engineering

Although I was a non-engineer (just a simple business student...) I can confidently say that the dynamic of the trip was awesome; having a bunch of students who are comfortable with (and, if I may, proud of) the title, "nerd," mixed with a handful of extroverts?

- Lauren Holm '18,
Business



Support Our Engineering Missionaries

Thanks to the generosity of alum James Nistler and a few friends, a fully funded engineering mission trip has been established. The endowment was named in honor of Dr. Scott Newbolds, in recognition for his tireless work in organizing and leading engineering missions. Donations for future mission trips would be much appreciated.

To donate:

Online: Visit www.benedictine.edu and click "Give" in the top right corner. Indicate the Designation: "Engineering Mission" and enter the remaining necessary information.

Check: Write "Dr. Scott Newbolds Engineering Missions Endowment" on the memo line of a check and mail to Benedictine College, Attn: James Kew, Office of Advancement, 1020 N Second St., Atchison, KS 66002.

Phone: Call 1.800.766.0078 and provide your credit card information. Be sure to specify that you are donating to the Engineering Mission trip fund.

Questions: If you have any questions, email Tim Andrews from Advancement or call him at 913.360.7363.

Keep in mind: your company may have a donation matching program. You can double the good!

Bueno! Thank you for joining us on the mission.

2018 Discovery Day Projects

On April 11, students and faculty from all over campus gathered to present their Discovery Day projects and to learn about each other's work. Once again, the students of the Benedictine College Engineering Department put forth significant efforts to produce an interesting variety of projects.

Bike Rack Design for Atchison Bike Share



Several students show off the bike rack that they constructed. Led by Skyler Valdez, these students worked to design a functional, economical, distinctive, and aesthetically pleasing bike rack for the Atchison County Bike Share initiative.

Vortex Chiller Tubes



Daniel Hayes (*left top*) shows off the vortex chiller tube, as Professor Spencer tinkers with an air compressor. The project's goal was to improve the performance of last year's vortex chiller.

Automated Concrete Curing Chamber

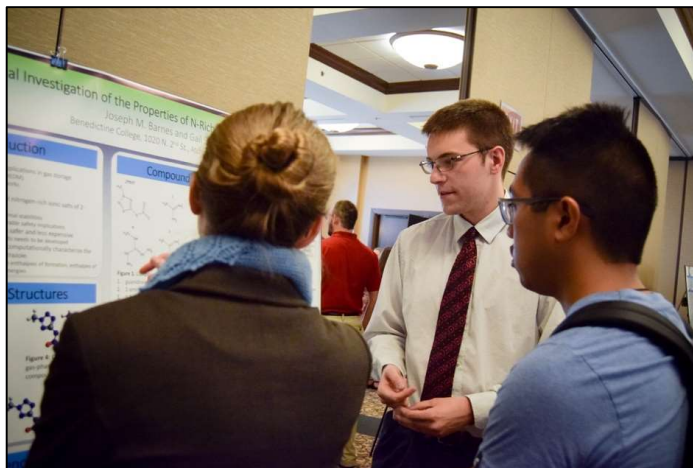
Brett Burke (*below*) presents a project on making an Automated Concrete Curing Chamber. He and others



worked to make a functional concrete curing chamber with automated humidity control and improved water efficiency for future classes and student projects.

A Computational Investigation of the Properties of N-Rich Salts of 2-Methyl-5-Nitraminotetrazole

Chemical Engineering major Joseph Barnes (*below*) describes his chemistry research to two fellow majors. For these complexes, he determined the optimized gas-phase geometries, complexation energies, enthalpies of formation, and enthalpies of combustion.



Battle Bots

An excited audience watches the Bots battle it out. Students taking Introduction to Engineering Design Laboratory constructed these robots as one of their hands-on projects. The Bots have become a regular and eagerly awaited feature at Discovery Day.



Ergonomics of Paddling

Adam Burke (*left*) demonstrates his ergonomic canoe seat. His goal was to design a more comfortable and ergonomic canoe seat that enforced good posture while allowing a full range of motion.





**NO KID SLEEPS
ON THE FLOOR
IN OUR TOWN!**

Sleep in Heavenly Peace Chapter Starts at Benedictine

by Hannah Thomazin

In the spring of 2018, Dr. Patrick O'Malley (mechanical engineering professor) and Saige Baalman (senior ME student) started a "Sleep in Heavenly Peace" (SHP) chapter at Benedictine. SHP is a nonprofit corporation with the mission of building and delivering beds, either bunk beds or twin beds, for children in need. SHP is an all-volunteer organization that currently has 68 chapters nationally. These dedicated volunteers identify needy children in their communities and furnish them with beds, complete with mattresses and bedding.

On campus, the SHP team organizes "build dates" when bunk beds and/or single beds are constructed to meet the demand. For example, they organized a construction workshop for seniors who had extra time between finals and graduation. Construction of beds is completed in the engineering department's new woodshop. When the beds are completed, they are delivered to the homes of children in need and assembled.

Students are using their technical drawing skills to develop a complete, professional set of plans that will be shared and benefit every SHP chapter nationally. Later this summer, the group may take his show on the road and travel to Wichita where a company that is considering getting involved in an SHP workshop has



Students and faculty members involved in the first bed-building workshop at Benedictine College held in early May 2018. Back row (left to right): Canaan Knigge, Dr. Jeremy Sienkiewicz, Adam Burke, Riley Thielke, Dr. Patrick O'Malley, Rachelle Regli, Dr. Charles Sprouse, Kienan McIntee. Front row (left to right): Megan Schuberg, Frank Paolucci, Lauren Holm, Saige Baalman.



The Stuff Dreams Are Made Of: A young recipient of one of the first beds built at Benedictine jumps for joy onto her new ballerina-themed bed.

requested their leadership and use of their equipment/jigs.

If you are interested in participating in a bed-building workshop at Benedictine or hosting a workshop at your company, please contact Dr. O'Malley (913-360-7960 or POMalley@benedictine.edu). Please consider donating a new set of twin-sized sheets, pillows with pillowcases, and a twin-sized comforter when you attend a workshop.

Help Us Reach More Kids in Need

If you'd like to help Benedictine reach more children needing a bed, here are a few great options:

- Like and share our Facebook page and posts to spread the word: facebook.com/SHPBenedictineCollege.
- Donate new bedding (twin-sized sheet sets, comforters, pillows, and pillowcases) ... send to BC Engineering Dept, c/o Dr Patrick O'Malley, 1020 N Second St, Atchison, KS 66002.
- Donate new twin-sized mattresses ... contact Dr. O'Malley for purchasing/delivery options.
- Make a monetary donation by either (1) donating online via our Facebook page or (2) sending a check (payable to "Sleep in Heavenly Peace") to BC Engineering Dept, c/o Dr Patrick O'Malley, 1020 N Second St, Atchison, KS 66002.
- Attend a building workshop or organize one for your company or group. Contact Dr. O'Malley (913-360-7960 or POMalley@benedictine.edu).

New AIChE Student Chapter Receives Official Recognition

The American Institute of Chemical Engineers (AIChE) student chapter at Benedictine College recently received its official charter from the American Institute of Chemical Engineers. Alumni are encouraged to assist the recently founded chapter as financial sponsors, enabling students to attend national and regional conferences. They are also welcomed to return to Benedictine College as guest speakers. If interested, email Joseph Barnes (Barn1944@ravens.benedictine.edu).

ChemE Car Competition

Among other activities of the chapter, several ChemE's under the leadership of the dauntless Alissa Muggli have begun working on a ChemE Car. They hope to enter AIChE's annual Chem-E-Car Competition at the 2019 Mid-America Regional Student Conference to be held at Missouri University of Science and Technology. This competition engages college students in designing and constructing a car powered by a chemical energy source that will safely carry a specified load over a given distance and stop.



Benedictine College's current AIChE chapter president Joseph Barnes (left) with past president Michael Salemi (right) at the 2017 National AIChE conference in Minneapolis.

Photo Courtesy of Joseph Barnes

Did You Catch This?

Team Awarded Design Project of Year ... Twice!



This chemical engineering senior design team was recognized as having the Senior Design Project of the Year by both Benedictine and UND. This dual recognition is unprecedented for our students. Our congratulations to these industrious students who put a great deal of time and elbow grease into their project entitled **Oxychlorination of Methane to Methyl Chloride Process.**

Dr. Darrin Muggli, engineering department chair, presents the awards for Senior Design Project of the Year to Katie Hirl, Michael Salemi, and Von Huber.



Alum Update Will Sonnek '13

After graduating from Benedictine in the fall of 2013, Will attended graduate school at South Dakota State University from Spring 2014 to Spring 2015, where he graduated with a Masters in Mechanical Engineering. His thesis was entitled "Investigation and Optimization of Bio-Oil from Fast Pyrolysis of Brassica Carinata Meal." His findings were published in the 2015 ASME Power and Energy Conference.

From 2015 thru 2017, Will worked at Dakota Tube, Inc in Watertown, SD, which is a hydraulic tube bending and manufacturing plant that serves John Deere, Kubota, Bobcat, Caterpillar, etc. Will now works at IntegroEnergy Group, Inc, which is a power and processing consulting firm. He took and passed the PE exam in April 2018 and is now a professional engineer in the state of Minnesota. He plans to pursue his PE license in other states, as well.

On a personal note, Will earned his third-degree black belt in Taekwondo in June 2018. He is also in the process of publishing a novel. Wow! Go, Will, Go!

HELP WANTED - MECHANICAL ENGINEERS

Needed: Mechanical engineering senior design reviewers (volunteer).

Duties: Review final designs for Benedictine College mechanical engineering senior projects.

Commitment: Review reports and/or be part of the Web presence for their presentations on November 9, 2018. This requires a few hours per report (we will have 4 reports this year) and 2 hours for all 4 presentations. Just reviewing one report and/or one presentation would be appreciated.

Reward: This is an opportunity to make a direct hands-on difference in these senior design projects. As you know, these are all mechanical devices that will be used in the real world. Your insights are invaluable and greatly appreciated.

Interested? Contact Steve Spencer (913-360-7121; SSpencer@Benedictine.edu)

HELP WANTED - ALL ENGINEERS

Needed: Sleep in Heavenly Peace ... need volunteers to help with workshops and bed deliveries. Contact Patrick O'Malley (POMalley@benedictine.edu)

Needed: Engineering Missions Team ... we can always use another hand on our team. Contact Scott Newbolds (SNewbolds@benedictine.edu)

Needed: Concrete Canoe Team ... please join us for the construction and/or come to the regional competition. Contact Scott Newbolds (SNewbolds@benedictine.edu)

HELP WANTED - FINANCIAL SUPPORT

Needed: Engineering Missions Endowment
...see page 11

Needed: Sleep in Heavenly Peace
...see page 13

Needed: Engineering Club
...make check payable to Benedictine Engineering Club and send to Benedictine College Advancement, 1020 N Second St, Atchison, KS 66002

Parting Shots

We leave you with a few parting shots of our Engineering Mission Team volunteering their time, energy, and talents at *A Simple House* in Nicaragua during spring break 2018.



INGENIUM

Benedictine College - Engineering Alumni Newsletter



Ingenium signifies intelligence, character, genius, all of which describe Benedictine College engineers. The use of the Latin language shows solidarity with the Church, whose official language is Latin, and with the scientific community, which for many years communicated primarily through Latin.

Ingenium is a proud testament to our history and character as engineers and as members of the Benedictine College community.



Westerman Hall, Benedictine College, July 2018

Benedictine College Department of Engineering

1020 N Second St, Atchison, KS 66002

<https://www.benedictine.edu/academics/departments/engineering/index>

Next issue coming your way January 2019!

*Our very special thanks to the invaluable help of our Student Assistant Editors
Kate Caughron, Anthony Olimpio, and Hannah Thomazin.*