The ABET (Accredited Board for Engineering and Technologies) accreditation is not the only thing keeping students engaged in Shippensburg University’s computer science and engineering programs. Despite requiring a high level of mathematic proficiency, the well-designed major courses, in addition to projects outside of the classroom, usher in successful engineers at the end of the four-year program.

Rather than declining students or making them enter college as an undeclared major because they do not meet the mathematic requirements, the computer science and engineering faculty believes that “it is important for them to be a part of the department from the start,” said Dr. Carol Wellington, department chair. While students work to bring up their mathematic scores, the department has put in place a computer science and engineering course for them to take, focusing on the basics of the major, as well as college learning techniques.

“We’ve figured out how to identify a population that was struggling and then intervene with a program that appears to make them as successful as the rest of the students at the university,” Wellington said.

After first-year students reach math standards for the major, the department switches its focus to prepare them for work in the engineering field after graduation. Unlike other colleges, Shippensburg requires the different disciplines of engineering to interact by taking on projects that require an interdisciplinary team of engineers. This includes the software, electrical, and computer engineering programs, as well as the new mechanical engineering program, which begins in the fall of 2018.

The engineering program was initiated at Shippensburg five years ago. It continues to grow, having added new disciplines to the program each year. Because the information taught in each concentration overlaps, students have the opportunity to interact with each other in projects outside of the classroom.

One such project is underway at a research facility at the Chincoteague Bay Field Station. Each discipline of the engineering program has a specific role in designing water sensors that will collect data in the marsh. This is just one example of how Shippensburg’s engineering program is based on the idea of “doing,” Wellington said.

Theory is driven by practice in the program, according to Wellington. “We understand that our students engage more thoroughly when they are doing something, rather than given a textbook.” This is why a kanban, a large glass board filled with engineering ideas and plans, engulfs the wall of the classroom. This type of system, along with mobile computer stations and a standing table for discussions, give students a feel for the environment they will work in after receiving their degree.

Shippensburg is one of the few schools that give its students these real-life, interdisciplinary skills and is the first within Pennsylvania’s State System of Higher Education to offer a mechanical engineering degree. The connection among disciplines and expanding programs allow computer science and engineering students to flourish at Shippensburg University.
The College of Arts and Sciences continues to actively pursue its mission of providing educational excellence under the leadership of President Laurie Carter. This summer 2018 issue of our newsletter is focused on one of the most important aspects of educational excellence—the continuing success of our students. The ultimate indicator of student success is, of course, graduating with a Shippensburg University degree (and from this dean’s perspective, preferably a degree arising from one of the programs in the College of Arts and Sciences!). To graduate, however, students must persist at the university and in their programs from semester to semester and from year to year.

The faculty and staff of the College of Arts and Sciences are intensely focused on providing engaging academic experiences and foundational learning to encourage the necessary motivations for our students to be academically successful and to persist. Our desire is that our students will want to stay at Ship, to fully embrace the relevance of their programs of study, and to be the best they can be.

Within these pages you will find stories about various strategies used by several of our departments (Computer Science and Engineering, Mathematics, History and Philosophy, and English) to help students find their way to success. These are not the only departments who utilize such strategies, but they provide wonderful examples of the work happening across our college.

You will also find highlighted our newly revised General Education program that features an innovative new First-Year Experience course, UNIV 101. This revision and new course come after years of intensive study and work, and both are focused on providing relevant experiences that support student success.

The function of an academic degree or program is largely a result of its structure—and there is considerable structure to an academic degree. Most undergraduate degrees are comprised of a major, a minor, a foundations program (general education), and free electives.

• The major allows for deep study within a disciplinary area to develop expertise.
• The minor is intended to allow moderate exploration into one or more areas that can add breadth to the major program of study.
• Electives are used to explore specific interests or to deepen expertise.
• General Education provides breadth and fosters skills such as inquiry, critical thinking, design thinking, problem solving, and so forth.

It is interesting to note that very often, the largest single component of an undergraduate degree is the foundational, or general education, component of the curriculum. Nearly 40 percent of a student’s degree work is comprised of this important program of study, and this is key to success beyond graduation. Alongside the major, minor, and electives, the general education program reinforces those skills that employers tell us they value the most—communication skills (oral and written), problem solving, critical thinking, the synthesis of new knowledge, and the ability to work in teams.

The College of Arts and Sciences exists for our students. We wholeheartedly embrace the concept that our success is founded upon the success of our students. All that we do is aimed at helping our students realize their fullest potential and complete their program of study with a Shippensburg University degree!

James H. Mike, Ph.D.
Dean, College of Arts and Sciences
The Celebration of Student Research Conference was held in the Ceddia Union Building on Tuesday, April 24, 2018—a day dedicated to showcasing, celebrating, and sharing Shippensburg University students’ academic excellence from all disciplines. All students from honors freshman to advanced graduate students were welcome to present their research. Students showcased their research through poster and oral presentations, performances, and panel discussions.

The skills acquired during the research process are ones that will serve students well intellectually and professionally as they pursue graduate school or work in their chosen industry or profession. For the faculty, the mentoring process offers a wonderful opportunity to share their passion, impart their wisdom, and watch the transition from student to scholar.

At other institutions, this type of hands-on learning occurs most often at the graduate level. What sets Shippensburg University apart is that this activity is occurring at the undergraduate level, giving students tremendous advantage over the competition. This is the margin of excellence that brings Shippensburg University students to the forefront of academic and professional achievement and success.

Without private sector support, the CAS cannot have that extra margin that will allow it to continue to improve and serve the region through its academic programs in its seventeen different academic departments. Much of our excellence has come from the support of alumni, parents of students, friends of the university, businesses, and foundations. A special thank you is extended to the donors who have established Joint Undergraduate Student/Faculty Research endowments that will fund, in perpetuity, this valuable Ship student experience. If you are interested in supporting the Joint Undergraduate Student/Faculty Research Program or would like to explore establishing an endowment to support other needs within the College of Arts and Sciences, please contact Cindy Yeiser at (717) 477-1377 or at clyeis@sufoundation.org.

Poetry is the type of writing that calls you back to it again and again, according to Dr. Nicole Santalucia, assistant professor of English. It is the gravitational pull and desire to serve her community that motivates her to conduct poetry projects.

This year, Santalucia worked with Joe Smith, a senior recipient of the Student Undergraduate Research Experience Grant (SURE), who wanted to learn more about poetry, community outreach, and writing communities. Together, they arranged poetry writing workshops for teens and senior citizens.

This summer, they brought poetry to over thirty teenagers at the Boys & Girls Club, and in May, they taught different styles of poetry to senior citizens at The Episcopal Home. During the five-week programs, participants read and discussed poems written by published poets as well as wrote their own poems. After writing with each group, Santalucia and Smith discovered that their creative work was influenced in a wondrous way.

Smith said that he was inspired by the strength and emotion in the writing of the Episcopal Home project; while the teenagers at the Boys & Girls Club taught him to embrace his creativity and to never be afraid to go unfiltered.

Santalucia said she focuses her volunteer work on underserved communities and groups. For instance, she has led poetry projects for women in The Cumberland County Prison. When comparing the participants from the Episcopal Home and prison poetry program, she said they both are hungry for life and are willing to learn. The participants new knowledge on poetry is featured in an anthology of their written poems.

She is honored to be a channel to help people shape and own their own voice. Whether it be in prisons, nursing homes or local libraries, Santalucia said that with poetry at the center of the table “there is an opportunity to share our voices together.”

Poetry outreach at Boys & Girls Club.
Subtracting Anxiety From Math
Preparing Students for Advanced Mathematics

Mathematics is considered the most significant barrier to finishing a degree in any field,” according to the recent report “Common Vision” from the Mathematical Association of America.

Dr. Kimberly Presser, professor and chair of the Mathematics Department, is breaking down the mathematic barrier for thirty-three students at a time. Presser began this quest fourteen years ago by attending conferences on developmental education rather than mathematics. The goal was to develop a class to provide students an alternative to placement tests, help them overcome their fears of math, and learn the necessary skills to successfully navigate their way through college.

The class, Math 050, focuses on coping strategies for difficult problems and preparing students for future classes. Presser encourages the use of visualization tools and requires students to think outside of the box to find a solution. She realizes that not everyone is a great test taker and that is part of the reason math holds so many students back.

In her class, students are given a two-week period after each test to retake different versions of the test multiple times until they receive a grade with which they are satisfied. “This focuses on mastery to really focus on those skills you need and ultimately helps with test anxiety.”

Presser said she has seen students pass the class simply by retaking every test multiple times throughout the two-week period.

Students must obtain a C to pass the class, but she pushes students to strive for an A with the incentive of letting those who receive an 80 or higher on each test be exempt from the final exam.

“This really gets people who hate math to say, ‘Oh wait, I can be an A or B student,’” by providing that incentive.”

Presser has a daily quiz consisting of two or three questions about what they learned in the last class mixed with questions about how the previous test went, which teaches students the skill of always staying on top of things. It reminds them that everything they learn is important to commit to memory. This becomes a comfortable line of communication for students.

Presser witnesses amazing results not only in students’ scores, but in their overall attitude toward math. She provided one student in particular, who came to her in a panic because the class does not allow calculators during the first section, with the strategies to obtain a perfect score on the first exam.

Presser is passionate about student success, and it shows in more than just test scores. “We have more students getting to where they need to be and completing the math that they need for their program than we used to, and that’s success.”

The program provides students with the ability to pre-schedule one required math class for the following semester to ensure that students are flowing directly into what they need to be successful throughout their years at Shippensburg.

A class focused on developmental math helps students get comfortable with math skills and improve their test taking abilities.

History Peer Tutoring

Bridging the Gap Between Upperclassmen and Freshman

While some students can walk into college and be successful, many need additional support to foster their education. To support this transition, upperclassmen history majors have stepped up to create a welcoming environment for new college students.

The goal of the History Department is to have every first-year student enrolled in History 105 and History 106 to learn the subject and develop college-level learning skills, however some students struggle with the transition from high school to college. As a result, the department has designed a tutoring program for first-year students.

Dr. Steven Burg, professor and chair of the History and Philosophy Department, explained that the history peer tutoring program is a well-established program that has assisted students in their history general education courses for over fifteen years.

“We get several hundred students a year going through the program, and that’s really the reason why we’ve continued it,” Burg said.
Through the tutoring that the English Department does with the Learning Center and the History Department’s peer tutoring program, Shippensburg works to help its first-year students be successful, Burg said.

There is data to support the rising success of history students. At the beginning of each session, the tutor interviews the student to get an understanding of what they want to accomplish. The tutor also determines what teaching methods they want to use for that specific lesson and student. Following the session, the student’s understanding of the topic is re-evaluated. These assessments inform the department of the program’s progress.

Another factor contributing to the program’s success is its tutors. Because most of the tutors are history majors, they are qualified well above the general education level courses. Many tutors also are a part of the social studies education program. As a result, the tutee receives the extra help they need while the tutor gains teaching experience.

Becca Justinus, a graduate assistant who oversees the program, said tutors acquire important communication and instructional skills. “Communicating with students and tutors has been completely invaluable and will be something that I will need no matter where I end up,” she said.

The peer tutoring aspect of the program also has led to its triumph, “because sometimes it’s intimidating for students to talk to their professors one-on-one,” Burg said.

Although the program is designed to assist first-year students, tutors can help students with any level of history. The tutoring program is open every Tuesday and Thursday for students to drop in for assistance.
Meeting Fellow Writers Through English Palooza

New student orientation assists students fresh out of high school with the transition into college. For students in the English Department, there also is English Palooza.

English Palooza is an event that the English Department has been hosting for the last four years. It provides new English majors with their first exposure to the department, helps them meet fellow students, and introduces them to opportunities to get involved in their major.

Last year’s English Palooza was held in the Dauphin Humanities Center’s Fishbowl during the first week that freshmen arrive on campus. During the event’s inaugural year, it caught the attention of Fall Welcome Week staff, who loved the idea and wanted to coordinate the dates of orientation and English Palooza moving forward, according to Dr. Shari Horner, department chair.

“English Palooza is a really casual meet-and-greet,” Horner said. “We planned it as a welcome week for incoming English majors. It’s a big celebration of all English things.”

Horner said in the past, the department has hosted activities such as literary and faculty trivia, quizzes, contests, and book giveaways.

In addition to being a celebration of the department, Horner said English Palooza is a great way for English students to meet one another and share their common interests.

“I think we are a close-knit group within the department, and I really appreciate the English Palooza as a way of coming together and sharing in good times,” said junior Tyler Rock on the English Department’s webpage.

In addition to English Palooza, the English Department has hosted Holiday Cookie Week before fall semester finals. At the beginning of the week, English majors are provided with bags to take home cookies that are baked for them by the English professors. In addition to free cookies, English students are invited to attend an open mic night, poetry readings, and several other literary activities that are provided to give students a chance to relax and take a break from studying.
The Summer Undergraduate Research Experience (SURE) program just finished its sixth year this past summer. Over its existence, there have been projects from eighteen different departments within the university. The grant that makes this program possible provides students with free on-campus housing and a stipend.

This program provides students with the opportunity to do real career research and establish close connections with faculty at Shippensburg University. Dr. Marc Renault, professor of mathematics, credits Dr. Allen Dieterich-Ward, associate professor of history, for getting the program started.

Adriana Townsend did a project this past summer with Dr. Heather Sahli in the Biology Department. She collected data in hopes of reintroducing the bobwhite quail into a population in Chambersburg.

Townsend explained her experience with the SURE program as “pure experience working with people who are in the field I want to work with after school. I was able to get lab experience in biology as well as talk to experts and gain knowledge.” She said, “By the end of the program, we felt like a family. It was really interesting for all of us to present together.”

Caleb Ancharski participated in SURE through the Chemistry Department with Dr. Dan Predecki. He explained that chemistry research consists of a lot of trial and error. “I wanted to do it to get exposed to an actual chemistry research setting. SURE is an experience that you just can’t get as a regular undergraduate student. The experience was very self-motivating and being able to figure out the research by myself will better me in the chemistry field,” he said.

Ancharski plans to continue his research next summer. “Start early in your college career. Jump on the opportunity because you can do more in your college career if you start early. It’s a resume builder and an overall good experience,” he said.

Gabrielle Binando, a psychology major, participated in the program through the English Department with Dr. Laurie Cella. She conducted her research during the summer lunch program at James Burd Elementary School in Shippensburg. The purpose of the research was to show the importance of community and social capital. She found herself learning a lot about her major through this project because it opened her eyes to what research entails and how to apply it to her field.

Binando’s experience created many opportunities. She applied for a grant to travel to and present at a research conference in Las Vegas in February. The National Society of Leadership and Success (NSLS) reached out to her to join their organization. She hopes that the research she did for SURE gets published in the near future. “It was a great opportunity, and I’m really happy I did it, because I think it opened a lot of doors for me.”

and he used many skills he learned last summer to complete the internship. “The SURE program has started a ball rolling that has been a huge success for me that has kept going.” He expressed the importance of student/faculty relationships and the fact that the SURE program has made him feel like he can do more as an undergraduate student than he had previously thought.

He added, “SURE enabled me to do the research I need to further use my skills in mathematics.”

Conner Chapman is a mathematics major that participated in the SURE program with Dr. Ben Galluzzo. They researched models of solar panels for the Chambersburg municipality. They determined the municipality should wait until 2019 to purchase and install solar panels.

Chapman believes that he got an internship with the Pennsylvania Farm Bureau because of his experience with SURE,
The College of Arts and Sciences Advisory Board is composed of alumni, friends of Shippensburg University, and faculty emeriti of the college. Its purpose is to share professional and personal perspective on matters relating to academic philosophy and practice, internships and cooperative learning opportunities, and professional development for faculty; to provide financial assistance; and to become involved in the curricular and extracurricular programs of the college. With thanks, we recognize the current members of the board:

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