

SI BRIDGES

NEWSLETTER

SI Bridges is an NIH-funded program that supports STEM students who transfer to SIUC from Community Colleges.



Welcome to Spring 2021

In spite of a challenging year, the SI Bridges to the Baccalaureate program (SI Bridges) has much to boast about. Over the year, we recruited eleven talented students from our partner colleges, J.A. Logan (JALC) and Shawnee Community (SCC) Colleges, to participate in group and individualized enrichment and research activities. The 2020 Summer Research Immersion was a combination of remote learning and hands-on experiences designed to progressively built on professional and research skills. Scholars were trained and tasked to complete a bioinformatics project that focused on the molecular evolution of plant viruses. The virtual learning environment presented challenges that were overcome by web-based communications, individualized learning, weekly checklists, supportive online discussions, and professional development activities. We are thankful for the hard work of our graduate students, Jason Henry and William Browning, for helping to make the summer successful.

For the academic year, scholars were partnered with faculty mentors and have remained active in research. We currently have 7 scholars who are enrolled at SIU and are making progress toward completing the baccalaureate. The remaining four scholars are actively finishing the associate degree and will matriculate to SIU in the upcoming year.

IN THIS ISSUE

WELCOME TO SPRING 2021
FROM THE DIRECTORS
PAGES 1 and 2

MEET THE INCOMING
SCHOLARS
PAGE 2

INTRODUCTION TO SCHOLARS
AND THEIR RESEARCH
PAGE 3-5

OPINION PIECE: SYLLABUS IS
KING by Tamara King
PAGE 6

SCHOLARSHIP
OPPORTUNITIES
PAGE 7

WELCOME INCOMING SCHOLARS

Kelsee Dodd

SIB scholar Kelsee Dodd is from Marion Illinois and graduated from Johnston City High School in 2020. She is currently a sophomore at John A Logan College majoring in Biology. She plans to graduate in Fall 2021 and transfer to SIUC to obtain a bachelor's degree in forestry. She is interested in wildlife conservation and will be working with Dr. Michael Eichholz, Associate Professor in Zoology. Her long-term goal is to become a park ranger.

Jace Moore

SIB scholar Jace Moore graduated from Trico High School in 2019. He then transferred to John A Logan to study computer science. He is also interested in the field of psychology. He plans to transfer to SIUC in Fall 2021 to obtain a degree in computer science or psychology. His research interest is in the psychological effect of video games on young adults, a topic that is especially pertinent now when many are confined to home because of COVID-19.

As we look back on the seven years of SI Bridges, we are proud of all the accomplishments of our current and former students. To date we have served 48 students of which 43 have graduated with Associate Degrees (89%) and 37 transferred to SIUC or other 4-year schools. Over half of our scholars have completed the baccalaureate and 7 are in graduate school. On April 15, 2021, our current scholars will be presenting the results of their research at the SIU Student Research Forum. Join us in celebrating their achievements at <https://vcresearch.siu.edu/student-research/forum.php>.

This year we developed a brochure (https://sibridges.siu.edu/summer-immersion/final_bridges_to_bacc_brochure_21.pdf) and video (<https://www.youtube.com/watch?v=Bssl4V9040s>) to inform students from our partner colleges about what the program offers and how to apply. To view these promotional materials and to learn more about the SI Bridges program, please visit our website sibridges.siu.edu or email us at sibridges@siu.edu

We look to a new year of developing more innovative and engaging activities. Please help us reach out to share our promotional materials and inform your academic community about our program. With your help we will identify the next cohort of high-achieving and dedicated SI Bridges Scholars.

Thank you for your continued support,

*Karen Renzaglia, Laxmi Sagwan-Barkdoll,
and Scott Hamilton-Brehm*



SI BRIDGES SCHOLARS AND THEIR RESEARCH



Ashley Bryant

SIB scholar Ashley Bryant graduated from West Chicago Community High School in 2013. Through perseverance and determination, she decided to go back to school in 2018 at John A. Logan Community College to obtain an Associate of Science degree. At JALC she was inducted into the National Society of Leadership and Success. In Fall 2020, she transferred to SIUC and is majoring in Microbiology. With the guidance of SI Bridges, she has acquired foundational skills and insight pertaining to science, research, and laboratory settings. Aside from school, Ashley enjoys reading books, exploring/hiking, and visiting with family in her spare time.

Ashley's research focuses on genotyping mice that have genetically-modified with a tissue-specific deletion within the pituitary gland of forkhead transcription factor *Foxo1* and *Foxg1-cre*. This research is important for understanding the role of these forkhead transcription factors in pituitary gland development and function. Her research mentor is Dr. Buffy S. Ellsworth, Ph.D. in the SIU Department of Physiology. She is also working in Dr. Scott Hamilton-Brehm, Ph.D. facility in the Microbiology department where she is building on her research skills.



Matthew Claar

SIB scholar Matthew Claar graduated from Miles City, MT High School in 2007 and served in the Army Airborne Infantry from 2008 to 2016. He transferred to SIUC in the fall of 2020 from John A Logan College where he is pursuing a major in Forestry due to his interest in understanding how best to protect and preserve our environment. Matthew enjoys spending time with his wife Amanda and their children Wyattte, Wade, and Wynter.



In the summer, Matthew worked with his mentor Dr. Karla Gage Ph.D. of the College of Agricultural, Life and Physical Sciences. The focus of his research was the effect of herbicide drift on insect diversity. As plants become resistant to herbicides, the need for different or more potent chemicals arises. This can potentially have a seriously detrimental effect on native pollinators because these herbicides can affect their main food sources and habitats. The goal of the study is to better understand how pollinators are affected by herbicide drift.

Emily Duran



SIB scholar Emily Duran graduated from Carterville High School in 2018 with honors. While attending JALC she received an award for Excellence in Biology and was on the Vice President's honors list. She graduated in the summer of 2020 with an Associate of Science. Currently, she is at SIUC majoring in Plant Biology where she made the Dean's list for Fall 2020. She enjoys hiking, reading, and spending time with family.

Emily is currently working with her mentors Drs. Karen Renzaglia and Jason Henry in Plant Biology where she is studying bryophytes, and in particular the cell biology and cell wall constituents in the Southern Illinois moss *Polytrichum commune*. Her project focuses on changes in cell wall polymers as plants are subjected to controlled drying. Her work will provide information on how plants cope with environmental stresses such as desiccation. She is currently training in immunochemistry and microscopy, including fluorescence and transmission electron microscopy.



SI BRIDGES SCHOLARS AND THEIR RESEARCH



Dawn Hale

SIB scholar Dawn Hale is a 1984 graduate of Massac County High School. She currently attends Shawnee community college and plans to graduate with an Associate Degree in Science in Spring 2021. In the SI Bridges program at SIUC she is learning molecular biology techniques and skills in the research laboratory setting. After graduation, she plans to attend SIUC to obtain a Bachelor of Science Degree in Microbiology. She enjoys hiking, kayaking, surfing, and horseback riding. Her professional goal is to work as a researcher at the CDC.

Dawn is currently working with Dr. Bethany Rader Ph.D. of the Department of Microbiology. Dawn is studying beneficial symbiosis in the bioluminescent *Vibrio fischeri*, a Gram-negative bacterium common in marine environments, and the host *Euprymna scolopes*, the Hawaiian bobtail squid. The squid is studied because, like humans, they acquire their microbiome horizontally, or after birth. The main focus of her project is understanding the gene LpxF because it is similar to other bacterial genes known to detoxify lipopolysaccharides and make the bacteria less toxic to the host. This is important for understanding how humans tolerate their microbiome.



Kailee Henderson

SIB scholar Kailee Henderson graduated from Egyptian High School in 2019 with a gold tier scholarship to Shawnee Community College. At SCC she studied arts and sciences to earn both Associate of Arts and Associate of Science degrees in spring 2020. She has since transferred to SIUC where she is studying Radiological Sciences. She enjoys gardening, especially planting and watching flowers bloom.



Kailee Henderson is currently working with Dr. Laxmi Sagwan-Barkdoll on exploring the SARS-CoV2 virus known for causing the COVID-19. The main focus of her study is to investigate the mutation of the S protein which may be linked to the virulence of the virus. Using bioinformatics, she is conducting a comparative analysis of the spike protein sequences in five US states- FL, TX, CA, NY, and NJ and how the mutation in the spike protein can be correlated to the number of deaths in these states.

Tamara Keene



SIB scholar Tamara Keene graduated from Marion High School in 2018. From here she decided to continue her education at John A Logan College the following semester. Upon her graduation from JALC, she transferred to SIUC in hopes of performing research and gaining a wider understanding of the medical field. She is pursuing a degree in Nutrition and Dietetics as she further discovers that our health and wellbeing can be greatly impacted by dietary variables. Her ultimate goal is to allow others to build knowledge about their health and well-being so as to gain confidence in supporting their bodies even in the sight of adversity.

Tamara worked with Dr. Joseph Cheatwood, Ph.D. of the Neuroscience Research Center at SIU. Her research focuses on understanding the connection between the gut and the brain via the GLP-1 receptor. As a Nutrition and Dietetics student, she hopes this study will help evaluate the correlation between dietary variables and neurological disease. She is also studying the effects of the chemotherapy drug, Doxorubicin, on cognition through film and analyses behavioral tasks. Moving forward, she will pursue independent research regarding GLP-1 receptor expression, in both the gut and the brain, of the mice.



SI BRIDGES SCHOLARS AND THEIR RESEARCH

Tehya Payne



SIB scholar Tehya Payne graduated from Goreville Highschool in 2018 with honors. She graduated from Shawnee Community College in the summer of 2020 with two associate degrees. Transferring to Southern Illinois Carbondale in fall 2020 with the interest of the SI Bridges program, she is majoring in psychology with her ultimate goal of obtaining a master's in psychology. In her spare time, she enjoys being outdoors, painting, and playing volleyball.

In Summer 2020, Tehya studied the psychological effects the COVID-19 pandemic has been having on young adults, specifically focused on the stress that leads to lifestyle changes during the pandemic. She found that the changes associated with the pandemic such as classes moving online and social distancing being enforced, stress levels significantly increased measured by lifestyle changes. Her mentor for this project was Dr. Laxmi Sagwan-Barkdoll, Ph.D. Since Fall 2020, she has been working in twin and siblings study lab under the mentorship of Dr. Lisabeth Dilalla, Professor of Clinical Psychology. Her research project focuses on the investigation of physical activity levels in preschool twins.

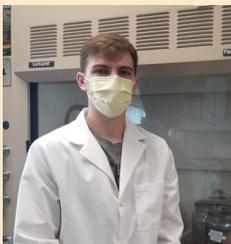
Lauren Troutt



SIB scholar Lauren Troutt graduated from Massac County, Illinois. She joined the SI Bridges program while attending Shawnee Community College and has successfully graduated with an Associates in Applied Science in December of 2020. She is currently attending SIUC majoring in Criminal Justice and Anthropology with a minor in Forensic Science. Her overall goal is to work in a crime lab, working with human remains. During her free time, she loves to watch her children play ball and enjoy the outdoors.

Lauren is currently working with Dr. Ryan Campbell - Associate Director, Center for Archaeological Investigations and Adjunct Assistant Professor in Anthropology. Her research project involves conducting a preliminary examination of historic cemeteries in Pope County, Illinois. She has been visiting and documenting 14 cemeteries including mapping of cemeteries, photographing each site and tombstones, and collecting UTM coordinates. The data collected from each site will be compared to look for patterns that may indicate difference in burial practices and different historical traditions in Pope County.

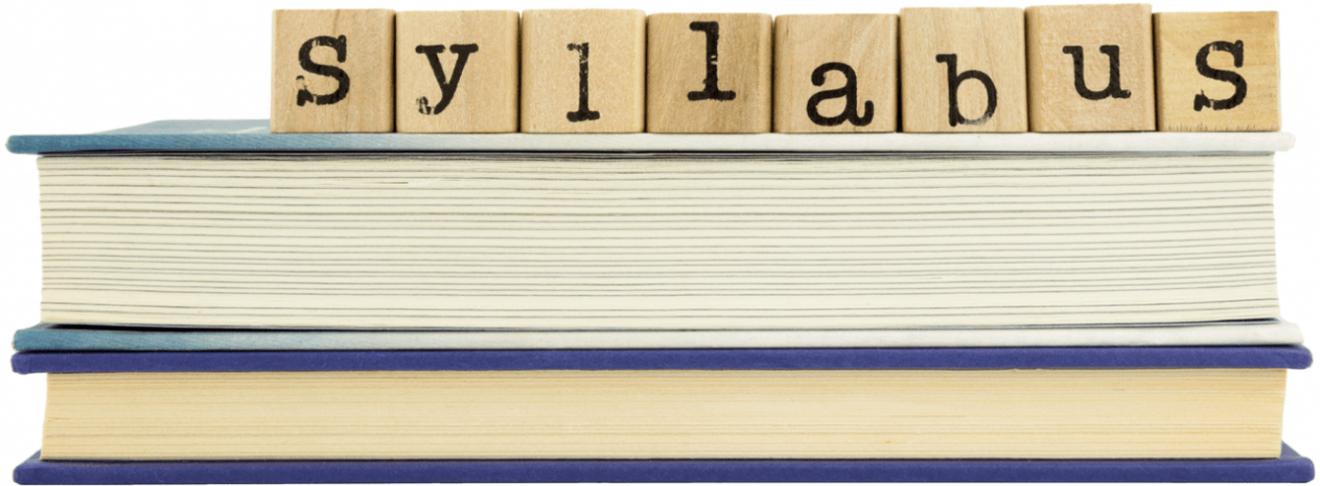
Logyn Frassato



SIB scholar Logyn Frassato graduated Goreville Community High school in 2019 with High-honors. He currently attends Shawnee Community College and has recently been named on the Vice-Presidents list for his academics. Logyn is now in the process of earning an Associates of Arts degree and graduating in the spring of 2021. After achieving his degree, Logyn plans on transferring to Southern Illinois University of Carbondale where he will begin his journey to achieve his Bachelor's degree. Logyn is a proud member of the SI Bridges program where he has the opportunity and privilege of developing skills that are useful within the laboratory setting. In his spare time, Logyn enjoys listening to music, being outdoors, and playing sports.

Logyn's research project concentrated on multi-sensory integration related to tooth extraction. The test subjects used in this project were naked mole rats due to their similar dental cortical representation compared to humans. For the project, naked mole rats were separated into two groups, the sham control group and the group that had a tooth removed. Brain plasticity in cortical regions was observed and compared between the two groups. His mentor on this project is Dr. Diana Sarko Ph.D. of the Department of Anatomy in the SIU School of Medicine.





Syllabus is King

Written by SI Bridges scholar Tamara Keene

Are you a transfer student? Do you find yourself falling behind? Does it feel like weeks at a time can pass by and you have no idea? Me too. When I had started my first semester at Southern Illinois University I had never been busier. Each day was like a marathon waiting to start. Wake up. Drive to school. Run to class. Try not to fall asleep.

Throughout the week, I would scramble to get assignments turned in on time and ask for extensions when I didn't. I relied on coffee to ensure a safe drive to school. I was constantly stressed about all the little things that may go wrong and I overacted when they did. I thought I was prepared for the semester, after all I had already been in college for two years, what could I have forgotten?

The answer is simple, but it was hard to realize at first. Unlike the typical community college, university professors have a lot crowding their plate. They mentor graduate students, conduct research, write grant proposals, recruit students, and the list goes on. All while balancing an enormous number of undergraduate students. You might be thinking, "okay, but do these things actually make a difference?" Absolutely! University professors truly have to be intentional with their time. For this reason, student discussion and open-question-sessions during class are minimized and the teacher does not repeat themselves. For me, this was dangerous. I had been trained from my community college that simply paying attention to the lecture would prepare me for the next class period. As a side effect, I grew dependent on the teachers for reminders of upcoming assignments, without even realizing it! After two years I was left with one lesson: no assignment reminders = no assignments.

So, what is the answer? I suggest, taking a deep dive into your syllabus the day you get it. It is even better if you review it before first day of class. Then, plan each assignment in a calendar or agenda and make it a priority to check that schedule every day. Until my time in a university, I only used the first page of my syllabus that showed teacher office hours and ISBN numbers, but I was sadly mistaken because the value of the syllabus is far greater than any reminder ever could be.

“Review your syllabus the first day of class and plan each assignment in a calendar or agenda”

SCHOLARSHIPS AND OTHER OPPORTUNITIES

SALUKI TRANSFER COMMITMENT

The Saluki Transfer Commitment is our pledge that all new transfer students who meet certain criteria are guaranteed that tuition and mandatory fees will be fully covered for four consecutive semesters at no cost to students or families. In other words, if you qualify for the Saluki Transfer Commitment and your financial aid package does not completely pay for your tuition and mandatory fees, we will close the gap to make sure there are no financial barriers between you and your education.

WHO QUALIFIES

Transfer student enrolling in Fall 2021
 GPA of 2.0 with 26 or more transferable credits
 Low income
 Illinois resident who attended Illinois High School
 Dependent student under age 24
 Eligible for Federal financial aid

If you meet these qualifications, please visit their [website](#)

The application deadline is May 1, 2021

UNIVERSITY HONORS PROGRAM

The University Honors Program (UHP) is a university-wide undergraduate program that models the intellectual excitement and individualized attention of a small college of liberal arts and sciences within a comprehensive research university. It is designed to reward SIU's best students for their high academic achievements and ambition to contribute to society. We mentor each student individually, empowering them to take charge of their education; form enduring relationships, and develop life-long habits of thinking independently and working collaboratively. Through our motto of Learn. Lead. Serve we work with the whole student, introducing them to academic, leadership, and service opportunities on our campus and beyond.

If you are interested in applying to the HONORS program, please visit the [Honors Website](#).

MCNAIR SCHOLARS PROGRAM

The SIU Carbondale McNair Scholars Program helps students realize their full potential by providing enriching educational experiences for low-income, first-generation college students and members of underserved groups in higher education. Beginning with a strong mentoring network, McNair scholars are fully supported and engaged in educational and professional development activities that lay the foundation for stellar research and academic skills.

Our McNair Scholars Program promotes academic excellence, success in graduate school, and the achievement of a PhD – confirming there is no such thing as too much ambition when it comes to educational goals.

Visit <https://mcnair.siu.edu> for application information



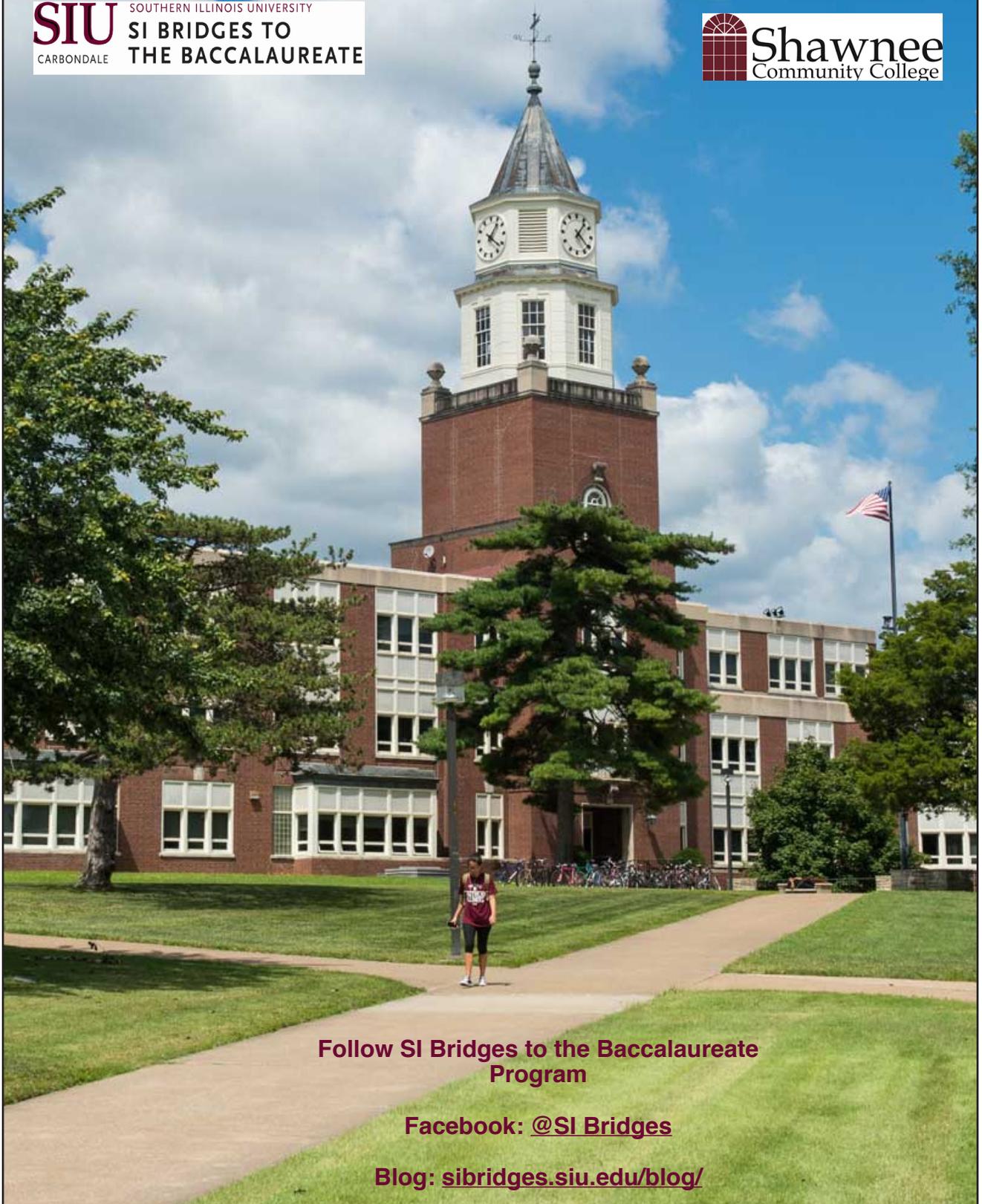
John A. Logan College

SI BRIDGES



A Partnership

SIU SOUTHERN ILLINOIS UNIVERSITY
CARBONDALE **SI BRIDGES TO
THE BACCALAUREATE**



**Follow SI Bridges to the Baccalaureate
Program**

Facebook: [@SI Bridges](#)

Blog: sibridges.siu.edu/blog/