Lyman Briggs College

Lyman Briggs College is an undergraduate, residential college founded in 1967 by dedicated individuals hoping to bridge the widening gap between sciences and humanities. The first of its kind, the college has become known as the institution students go to for an excellent foundation in science and mathematics with additional focus on history, philosophy and sociology of science.

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Top: Dr. Robert Shelton teaches an HPS course; Middle: Students hike at San Juan Island; Bottom: Carolyn Wendeln presents her research at UURAF;
Message from the Dean

What a whirlwind these last weeks have been: The UURAF featuring over 100 Lyman Briggs students in early April. A magnificent LBC Research Symposium in late April, complete with prizes sponsored by the MSUFCU. Final papers and exams extending into early May...

And now congratulations to the 254 Lyman Briggs graduates who became our newest alumni on May 3rd! A truly amazing class, with 6 earning MSU Board of Trustees Awards, 4 named MSU Outstanding Seniors, dozens serving as Learning Assistants and Resident Mentors, and scores engaged in Honors work, international studies, experiential learning, and faculty-mentored research.

In this Briggantine, we reflect particularly on how our HPS faculty and curriculum impact the Lyman Briggs Experience. The retrospective look at Robert Shelton’s career reminds us of the central role he and his colleagues play in helping Briggs students appreciate the societal context of science. The report from the Friday Harbor study away shows students putting those 3rd Culture connections into practice as they examine the workings of a research station in the company of LBC faculty Mark Largent and Georgina Montgomery. Similarly, the Rainforests and Reality program in Nicaragua immerses students in diverse cultures, as well as ecosystems, under the guidance of LBC faculty Maxine Davis and Gerald Urquhart. The musings of HPS major Rachel Paran sum up the student perspective on why HPS is essential to Briggs students during college and beyond.

Finally, those of us in Holmes Hall are most grateful to all alumni who keep in touch with the college! Alumni who have offered to speak with students about careers and graduate school via FaceTime and Skype are having a tremendous impact. Our current students are clearly eager for more such opportunities to connect with you. Similarly the career highlights submitted for this issue of the Briggantine make current students aware of the diverse pathways taken by those who preceded them in Briggs. As the 50th Anniversary approaches, we'll be in touch about further opportunities for supporting the newest Briggs generation.

Have a wonderful summer!

Sincerely,

Elizabeth Simmons
Dean, Lyman Briggs College

Elizabeth Simmons came to Lyman Briggs School as Director in 2003 and became Dean of Lyman Briggs College in 2007. Among other accomplishments, she is credited with leading efforts to increase the student body by 25 percent and renovate the teaching laboratories.

Dr. Simmons is a world-renowned particle theorist, whose research focuses on the origins of mass. She has received numerous prestigious awards in her career, and continues to conduct research in the physics department.

Similar to her dedication to research, Dr. Simmons enjoys teaching physics courses at all levels, and presently teaches a junior level course in mathematical physics.

A central part of her mission as an educator is encouraging more students (especially those from under-represented groups) to consider studies in the physical sciences.

She has been an American Council on Education Fellow at Yale University during 2013-14.
When Dr. Robert Shelton first began teaching at MSU in 1989, Lyman Briggs College was part of the College of Natural Science. There were only 500 students (today we have over 1,900) and 12 professors. “And I was lucky number 13,” says Dr. Shelton.

Dr. Shelton says that Briggs was the perfect place for him. He had come from a “peculiar place at a peculiar time”—UC Berkeley in the early 1980s. At Berkeley, Dr. Shelton had studied English with a focus on science fiction. “This made me an oddball in the traditional world of English Ph.Ds.,” says Dr. Shelton, but his interests in science and literature helped him fit in well at Lyman Briggs College.

After 25 years of research and teaching at Lyman Briggs, Dr. Shelton is retiring this May. He has had an interesting and successful career here and we are looking forward to hearing about what he does next.

Science and Literature

Dr. Shelton has published articles on science fiction authors such as H.G. Wells, Olaf Stapledon, Arthur C. Clarke and Edward Bellamy and has written about works such as The Handmaid’s Tale and The War of the Worlds. He has also published articles on film studies and the history of hysteria. He was recently asked to write an encyclopedia entry for the terms “Utopia and Dystopia” for the Encyclopedia of Science, Technology, and Ethics.

When asked what one of his favorite articles to write was, he replied, “That’s like choosing your favorite child, no?” He went on to answer that he most enjoyed writing the article that allowed him to play with both novels and movies: “Genre and Closure in the Seven Versions of Invasion of the Body Snatchers.”

Dr. Shelton is currently working on a book about Robert Louis Stevenson’s Strange Case of Dr. Jekyll and Mr. Hyde and four recent retellings of this story. He is looking at what happens in these retellings to notions of transcendental medicine and to “Stevenson’s remarkably unstable and subversive pronouns.”

Evidence, Evidence, Evidence!

During his time at Lyman Briggs College, Dr. Shelton has taught a variety of History, Philosophy, and the Sociology of Science (HPS) courses on topics ranging from Science Fiction Short Stories to Contemporary Science and Nature Writings. He has also taught introductory HPS courses and taken Lyman Briggs students to London for study abroad programs.

Dr. Shelton says his favorite teaching moments are when he’s about to “make a leap” in an argument. But instead, he pauses for a few seconds while his “students’ light bulbs go on.” He loves these moments when students surprise themselves with their own answers. “And often,” he says, “they surprise me too.”

He also enjoys the moments when his students stop doing paper thinking and start doing essay thinking. The difference? In essays, they stop worrying about getting the right answer. Instead, they explore the texts for themselves and provide more complicated answers. He constantly asks his students to move beyond asking “What do I know?” and “What do I feel?” and to instead ask, “Why do I know what I know?” and “Why do I feel what I feel?” He encourages his students to take risks in their answers—but he always requires that they provide evidence for their arguments.

Through these teaching strategies, Dr. Shelton improves student critical thinking and analytical reasoning skills. He teaches his students to be better writers—and in many cases, to enjoy writing. “I’ve often heard him patiently coaching yet
History, Philosophy, and Sociology of Science
By Rachel Paran

When I took my first History, Philosophy, and Sociology of Science (HPS) introductory course during my freshman year at Lyman Briggs College, I was unsure of what to expect. Not knowing what HPS was before coming to Briggs, I was skeptical about what the course would entail and did not realize that I would be doing much more than “just writing about science.”

I was so fascinated by the topics and discussions in this course that I decided to declare my major as History, Philosophy, and Sociology of Science. I have gone on to take courses such as Philosophy of Technology, Science and Sexuality, and History of Medicine in which we have looked at topics ranging from artificial intelligence and what it means to be human, to the influence of Darwin’s female correspondents on his research.

History, Philosophy, and Sociology of Science courses give all Lyman Briggs students an edge. No matter our major or career aspiration, HPS gives us the tools to question the why and how behind the scientific issues and practices we will encounter in our future. Through HPS courses, we are also learning to write clearly, make critical analyses, develop arguments, and support our arguments with evidence. These skills will be invaluable as we become effective scientists and professionals in whatever fields we choose.

Rachel Paran graduated this Spring 2014 with degrees in HPS and French. She is the President of the History, Philosophy, and Sociology Student Association. Rachel will be an English teaching assistant in an elementary school in Bordeaux, France starting this fall.
Friday Harbor Laboratories is one of the oldest marine laboratories in the United States. Located north of Seattle in the San Juan Islands, Friday Harbor has been an important setting for research on marine biology, oceanography, and fisheries. Its surrounding waters are clean, there is little boat traffic, and it boasts an impressive variety of terrestrial and aquatic organisms. Historically and still today, Friday Harbor Laboratories has been a place where scientists and their families have lived and learned together in community.

During Spring Break 2014, I joined 15 other MSU students on a living and learning experience of our own at the Friday Harbor Laboratories. We signed up for a weeklong Study Away course titled “Science and the Culture of Field Stations,” led by Lyman Briggs faculty members Dr. Mark Largent and Dr. Georgina Montgomery.

I didn’t know what to expect from this course, but I signed up knowing it would be a unique and rewarding experience. Although I am not a marine biologist, I was very interested to see the work of marine biologists up close. I knew that the procedures and lab protocols would be somewhat similar to my research of plants at MSU. I was also excited for the opportunity to visit the west coast for the first time and to hike throughout the San Juan Islands.

During the week, we talked with various researchers about their work and career paths. I found the talk given by Dr. Montgomery’s husband, Dr. Bob Montgomery, to be especially influential. He outlined his research like most researchers do, but it was his past that I was most interested in hearing. Dr. Montgomery’s recounting of his own education and early career demonstrated the importance of seizing every opportunity. He emphasized the importance of hard work and remaining open to all experiences, but most importantly to never be afraid to ask questions and to try something new. His talk directly correlated with my reasoning to join this trip and matched my own mentality that hard work and dedication can take you far, you just cannot be afraid to take risks.

Our class tied these activities together through group discussions and course readings on the history and culture of marine biological stations. We read articles about the history of sites such as Friday Harbor where scientists blended work, friendship, family, and recreation. My favorite article that we read was called “Why American Marine Stations?: The Teaching Argument,” by Keith Benson. This article focused on the important philosophy of “the study of
nature from nature” on which marine biological stations in the United States were developed. I was able to witness this philosophy at work firsthand during our week at the Friday Harbor Laboratories.

Through this Study Away experience, I also witnessed the many ways in which marine biological stations function as sites for interdisciplinary research and networking, which are increasingly important in scientific fields. Marine biological stations make it easy for researchers to come together with their knowledge in a fun and welcoming atmosphere. One scientist explained to us that the Friday Harbor Laboratories have historically been more of a community rather than simply a place of work. Researchers of various disciplines brought their families to Friday Harbor and were able to create a diverse, scientific community.

We observed a slightly different type of community by attending the Columbia History of Science Group Conference, which is held each year at Friday Harbor. At this conference, historians and philosophers of science from around the country gather for a weekend to share their research with colleagues in a comfortable and informal setting. As a spectator and student participant at the conference, I sensed the passion researchers had for their work as well their camaraderie they share with each other. I enjoyed learning about their research topics, which ranged from the history of the Jet Propulsion Laboratory at NASA to the history of groundwater research in the Middle East. I also enjoyed asking the historians about their career paths and hearing their own stories about Friday Harbor (continued on next page).
Lyman Briggs College

Friday Harbor Continued:

Through my adventure at the Friday Harbor Laboratories, I had the opportunity to not only read and hear about marine biological stations, but to live and learn at one. I gained a better idea of the history and culture of marine biological stations and talked to scientists about their experience living and learning at the Friday Harbor Laboratories. And lastly, I experienced the importance of “learning nature from nature.” I plan to apply this mentality to other aspects of my life and career and to continue to seize learning experiences such as this course at Friday Harbor.

Kayla Hoppe is a Junior in Lyman Briggs College studying Biomedical Laboratory Science. She adapted this story from an essay she wrote for the Study Away course.

Friday Harbor Continued:

Kayla Hoppe is a Junior in Lyman Briggs College studying Biomedical Laboratory Science. She adapted this story from an essay she wrote for the Study Away course.

The class on a whale watching tour (we didn’t see any whales, but we did see several seals and bald eagles).

LBC Students Study Abroad in Nicaragua

Drs. Maxine Davis and Jerry Urquhart took another LBC class to Nicaragua for spring break. This course exposed students to the diverse ecosystems and cultures of Nicaragua’s Caribbean coast.

Throughout the study abroad course, the students hiked up Volcan Masaya, an active volcano, and took a night boating trip to look for nocturnal animals. They also visited Mount Mombacho National Reserve where they learned about the reserve’s endemic species and went on a canopy tour.

In the top photo, the students are preparing to plant seedlings as part of a restoration project. Each student planted a “Guanacaste tree,” (Enterolobium cyclocarpum), helping to restore a species that has become increasingly rare on the Caribbean coast of Nicaragua. In the bottom left photo, LBC student Lauren Powell holds a Spectacled Caiman.
Over 100 Lyman Briggs students participated in the 16th annual University Undergraduate Research and Arts Forum (UURAF) on Friday, April 4th at the MSU Union. Our students presented poster and oral presentations that they have worked on with faculty members on topics ranging from the “History of Medieval Neuroscience in Spain” to “Using Magnetic Nanoparticles to Extract Pathogenic Bacteria.” While most of our students presented research in the sciences, many students also presented research on topics in communications, social sciences and the humanities.

We are proud that LBC students made up nearly 1/6 of the more than 660 students from 13 colleges who participated in the 2014 UURAF. Since only about 5% of all MSU undergraduates are in Lyman Briggs, this exceptional research participation rate shows just how special Briggs students are.

14 LBC students received the top prize in their category for their oral or poster presentation. Winners received $100 for their achievement and were honored in an awards ceremony following the research presentations.

Faculty News

**Dr. Rich Bellon**, Assistant Professor of HPS, has received the Derek Price/Rod Webster prize for his article, “Inspiration in the Harness of Daily Labor: Darwin, Botany, and the Triumph of Evolution, 1859-1868.”

**Drs. Samantha Cass, Maxine Davis, and Jerry Urquhart** received a MSU Excellence in Diversity Award for creating and implementing the INQUIRE program at LBC.

**Dr. Dan Menchik**, Assistant Professor of HPS, received the 2013 American Sociological Association award for his dissertation, “The Practices of Medicine: Knowledge Application and Authority Acquisition in Professional Work.”

**Dr. Cheryl Murphy**, Assistant Professor of Biology, was interviewed on Michigan radio for a story titled “Can sewage treatment plans protect fish from chemicals in the water?”

**Dean Elizabeth Simmons** was appointed to the Association of American Colleges and Universities Board of Directors. Dr. Simmons was also named as an American Council on Education Fellow for the 2013-14 academic year.

**Dr. Ryan Sweeder**, Associate Professor of Chemistry, received the 2014 MSU Alumni Club of Mid-Michigan Quality in Undergraduate Teaching Award.

**Dr. Sean Valles**, Associate Professor of HPS, is part of a research team that received a grant from the National Science Foundation to create ethics education materials for interdisciplinary environmental science programs.

**Dr. Kendra Cheruvelli**, Associate Professor of Biology, is on a yearlong sabbatical at Queen’s University Belfast.

**University Undergraduate Research and Arts Forum 2014**

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**LBC student, Brian Batayeh** presented research on “The Effect of Ethiny Estradiol Sulfate on the Endocrine System of Male Fathead Minnow.”

**LBC student, Rachel Sullivan** presented research on “Life History Trait Trade Offs in Experimentally Evolved Phage Lambda.”
DAVID W. CHAPMAN (‘71 LBC Biology) teaches at Okemos High School. He was recently selected to present a workshop for teachers at the Annual Meeting of the American Meteorological Society in Atlanta. His workshop session will focus on teaching about flood risk factors, particularly as it relates to the built environment. This fall, he chaired the Annual Conference of the Michigan Earth Science Teachers Association, which was held in Detroit. He designed a 3-D model of a flood plain, which allows for experimentation, changing different variables to see how they affect the risk of flooding. The model has proven to be an effective teaching tool, not only with formal education classes but also with the general public.

KAREN C. PARKER, Ph.D (‘73 LBC Physics) received her Ph.D. in Physics from Ohio State University in 1980. She worked for Bell Labs in New Jersey for nearly 27 years. She is retired now and lives outside Columbus, OH where on the side, she designs railroad history books and studies railroad history.

CLAIRES LEVESQUE (‘75 LBC Biology) is the Medical Director of Medical Management and Payment Policy at Tufts Health Plan working with commercial and senior products. Recently, she was also the Interim Senior Medical Director for their Medicaid Product, Network Health.

MARK KAY, PH.D. (‘80 LBC Physical Sciences) is currently the Head of the Division of Human Gene Therapy and the Dennis Farrey Family Professor in the Departments of Pediatrics and Genetics at Stanford University. He has published over 200 scientific papers and had over 50 trainees. The focus of his laboratory is to establish the scientific principles required for gene and nucleic acid transfer for the treatment of genetic and acquired diseases.

ANDRE B. DANDRIDGE (‘95 LBS Medical Technology) is a Project Coordinator for the MSU College of Law Small Business & Non-profit Clinic.

CHRISTA H. CHATFIELD, PH.D. (‘99 LBS Microbiology) is currently working as an Assistant Professor at a primarily undergraduate college of the SUNY system in Cortland, NY. She has taught microbiology there for 3 years.

JAMES ROEDE, Ph.D. (‘01 LBS Physiology) obtained his Ph.D. from the University of Colorado School of Pharmacy in 2009. From 2009-13 he was a postdoctoral fellow at Emory University in Atlanta, GA. In August 2013, James began his academic career as a tenure-track Assistant Professor at the University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences.

JAMES P. REINHART, M.D. (‘06 LBS Microbiology) will complete his combined Internal Medicine/Pediatrics residency at the University of Michigan this year. He will serve as Chief Pediatric Resident next year before starting a Pediatric Cardiology fellowship.

AMANDA L. SEGUIN (GNAU) (‘08 LBS Human Biology) worked as an academic specialist/instructor and lab coordinator at Lyman Briggs College from 2008-2011. She has recently moved back to East Lansing with her husband, Colin Seguin, who is also a Briggs graduate (they met in Briggs chemistry). Amanda works as a nurse and Colin works as an Emergency Medicine Resident at Sparrow hospital.

KRYSTIN A. KOHLS (‘09 LBC Zoology) joined the National Guard in 2009 and with their assistance, received a sign language degree. She is now an Interpreter in Southeastern Michigan.

JUSTIN G. THOMAS (‘09 LBC Physiology) is finishing up his last year of medical school at the MSU College of Osteopathic Medicine. He is currently interviewing for residency positions across the country and is planning on pursuing the field of neurosurgery with a special interest in skull base and endovascular neurosurgery.

JULIA SMITH (‘09 LBC Zoology) received her M.S. in Zoology in 2013 from Southern Illinois University Carbondale. She wrote her thesis on the recolonization of large carnivores in the Midwest. After grad school, Julia worked on Mexican wolf recovery in Arizona and New Mexico and then on ocelot recovery in Texas. She is now working on a long-term turkey research project with the Missouri Department of Conservation and University of Missouri.

RICHARD A. HANLEY (‘11 LBC Human Biology) is currently a medical student at Ross University of Medicine.

KRYSAL KRECJIK (‘12 LBC Fisheries and Wildlife) is serving as a Natural Resources Conservation Volunteer with the Peace Corps in Ecuador.
Alumni News Continued:

AARON HARDY ('12 LBC Physics) is a project engineer for Fraunhofer USA (located in the Engineering Research Complex on campus). He works on carbon vapor deposition (CVD) synthesis of single and poly-crystalline diamonds.

WILLIAM B. DARDEN ('13 LBC Human Biology) joined the Mississippi Teacher Corps in 2013 and is now a certified secondary biology teacher. He is teaching 9th grade in Greenville, MS.

TORI MILLER ('13 LBC Zoology) finished off her time at MSU by participating in an internship at the Houston Zoo, which led to her current job. She not only takes care of animals at the zoo, but also teaches visitors about the animals and what they can do to practice conservation at home. She also has become more involved in conservation efforts through the zoo to save endangered species native to Texas.

HANNAH E. NELSON ('13 LBC Human Biology) is working for AmeriCorps NCC. She is the team leader for 10 corps members and currently serves at the Arkansas Children’s Hospital in Little Rock.

BRIANNA BOURGOIN ('13 LBC Physiology) is currently working as a scribe in the ER at Allegiance Health Hospital in Jackson, MI. She will be attending the MSU College of Osteopathic Medicine this June.

CAITLIN K. KIRBY ('13 LBC Environmental Biology/Microbiology) is traveling and volunteering on organic farms through the WWOOF (Worldwide Opportunities on Organic Farms). She spent October in Thailand, November in Bali, December in Australia, and January in New Zealand. She will spend the next few months in Argentina, Ecuador, and Peru.

In Memoriam

BARBARA EIKENBURG (FLES) ('74 LBS Biology)
DONALD GRIFFIN ('73 LBS Zoology)
MARK LEMEN ('78 LBS Biochemistry)
CAROL BRISTOW ('81 LBS Environmental Science)
MICHAEL KAISER ('82 LBS Medical Technology)
AGNES REESE (RASCHKE), PH.D. ('82 LBS Biochemistry)
TIMOTHY SUSZKO, PH.D. ('94 LBS Physiology)
MEGHAN ARNOLD ('04 LBS Human Biology)

GERALDINE (GERRY) SMITH passed away on March 6, 2014 at the age of 66. Gerry worked for many years as assistant to the director of Lyman Briggs School. Gerry and her husband, Dudley Smith, were long-time residents of the Bailey neighborhood of East Lansing.

PAUL PARKER, PH.D. passed away on March 4, 2013 at the age of 84. Dr. Parker was a Michigan State University Distinguished Professor and a longtime faculty member in Lyman Briggs College. He designed the college’s original physics curriculum, which created opportunities for Briggs students to be introduced to topics not usually covered in freshman courses. Dr. Parker established the Paul and Gertrude Parker Endowed Scholarship in 2008 to encourage and reward Briggs students who have been successful in the required physics classes.

Carol Bristow Scholarship

The Carol E. Bristow Memorial Scholarship Fund was recently established in memory of Lyman Briggs alumna Carol Bristow ('81 LBS Environmental Science). The college will begin awarding students the Carol E. Bristow Memorial Scholarship this spring for fall semester of 2014. The scholarship will benefit LBC students of at least junior status, with a minimum cumulative GPA of 3.0.

Edgar C. Bristow, M.D., FAAFP established this fund as a memorial to his daughter Carol, who was an outstanding student during her time at Lyman Briggs College. She subsequently had a career as a systems analyst with the Washington, D.C. office of DPRA, a company providing various services to Federal agencies, including the EPA and FDA.
On May 3rd, 2014, Lyman Briggs College celebrated its largest graduating class. The college granted Bachelor of Science degrees to 254 students in a ceremony held in the MSU Auditorium. Among these graduates were 4 Outstanding Senior Awardees, 6 MSU Board of Trustees Awardees, and 1 winner of a National Science Foundation Graduate Research Fellowship. Our students also received individual awards from LBC and from other science departments across campus. We can’t wait to see what our graduates do next!