



BRIGGANTINE

2012 NEW YEAR ISSUE

Dean Elizabeth Simmons, APS Feb. 2012 Woman Physicist of the Month

A MEASURE OF SUCCESS

Each year, I am asked to submit a report to the Provost, the chief academic officer of the university, as an update of the strategic direction of the College. This task provides me with a wonderful opportunity to reflect and assess our progress, relative to our mission and vision statements, and chart the path forward. I'd like to share with you some small sections of my message to Provost Kim Wilcox (himself a former student at Briggs).

I began my report by stating: "Lyman Briggs College is becoming an international model for residential, education-focused science colleges within research universities. We continue to lead and innovate in science education through integrated, interdisciplinary teaching, reinforced through inquiry-based learning designed to develop critical thinking skills in our students. We accomplish this in the context of a dynamic community - one that strives to represent the highest standards of access, inclusion, and social and intellectual development." As I share this with you, I am struck by the breadth of our vision, the worthiness of our goals, the progress we have made, and the work still to be accomplished.

BRIGGS AS AN INTERNATIONAL MODEL

As an example of our continued rise to international prominence in science education, Lyman Briggs was asked to participate in a State Department funded project that aspires to rejuvenate biology education in the war-ravaged Iraqi Kurdistan. Assistant Dean Philip Strong recently returned from his initial assessment visit to the area (details on p. 5). In another such example, Lyman Briggs is organizing a May 2012 conference on interdisciplinary teaching and learning, with support from the Office of the Provost. This event will showcase LBC and MSU's strengths in this area while bringing nationally-renowned scholars to campus.

INNOVATING EXCELLENCE IN SCIENCE EDUCATION

Lyman Briggs faculty are chosen equally for their technical expertise and their ability to communicate the essence of their field to students. The (inter) national reputation of LBC as a home of innovative teaching and research is growing, as shown by media attention, faculty honors, grant awards, high-profile peer-reviewed publications, and consultancies with other institutions. LBC's impact and visibility in the MSU community is reflected in its wide-ranging collaborations on faculty hiring and development, curriculum, inclusion, and research. Many publications, grants, and awards flow from this scholarly engagement in teaching; proven practices are often adopted by other units. Space limits me to only sharing these examples:

- LBC Biology faculty recently reconfigured introductory biology into a seminar-style course with smaller groups and more direct interaction with the faculty during research-focused lab sessions (details on p.5).
- Physics faculty have reframed the introductory physics course around biomedical examples, which engage life science majors while providing rigorous calculus-based coverage of essential concepts and skills (details on p.4).

LEADERS IN RESEARCH

LBC faculty members are steadily increasing the rate and success of proposals to external funding agencies. Grant submissions have doubled since LBC became a college and the average new funding per

year has tripled. Most proposals involve interdisciplinary teams or collaboration across units, and the majority of the funded grants include undergraduate student researchers. This gives the Briggs students access to unprecedented research experience opportunities as undergraduates!

A COMMUNITY OF LEARNING, RELATIONSHIPS & INCLUSION

At Briggs, our community is foundational to our mission. We intentionally strive to build community at all levels of interaction: in the living areas through team building at the hall level; in the classrooms through extensive small group project work; among faculty/staff through collaborative efforts and team teaching; at the faculty/staff-student level through quality personal interactions and mentorship; and between LBC and the larger MSU community.

As an example of our commitment to this core value: in response to racially-charged incidents on campus this fall, the Briggs Multiracial Alliance, with support from LBC Inc. and the Holmes Hall OCAT aides, is leading a 2011-12 "Not in Our Hall" program that urges all members of the Briggs/Holmes community to actively sustain a welcoming, inclusive atmosphere.

LBC is also expanding programs aimed at broadening participation in the sciences, increasing active learning through inquiry and community engagement, and educating students about the impact of inclusion. As examples of our practices: 1) Our NSA (National Security Agency) and NSF REU (Research Experiences for Undergraduates) programs, both in mathematics, continue to afford students from underrepresented populations intensive research experiences that sustain their dreams of completing degrees in mathematics or related fields and; 2) Our successful new curriculum for LBC freshmen with lower math placements provides academic support, a peer cohort, targeted courses, and an on-ramp into the mainstream LBC STEM curriculum.

THE LYMAN BRIGGS FAMILY

LBC Advancement is working with faculty and staff to strengthen alumni engagement and to prepare for a capital campaign that will focus on building endowments supporting student scholarships and other student experiences at Briggs. Milestones in 2011 include the selection of LBC alumnus Dr. Ken Earhart as an MSUAA Grand Award winner and the creation of an amazing lab-based undergraduate research course with funds and scientific collaboration from ConAgra with the support of distinguished alumnus Dr. Al Bolles.

SUMMARY AND OUTLOOK

Lyman Briggs strives to employ its student recruitment strengths, its interdisciplinary faculty with joint appointments in other colleges, its common focus on a scholarly approach to teaching, and its engaged residential community as powerful sources of academic innovation that benefit the entire MSU community.

In closing, as I mentioned at the outset of this report, our vision is expansive and articulates inspiring goals for our work. More than ever, I firmly believe that these are goals worthy of our talented students, faculty, staff and alumni. Where the capacity is great, the expectations must be high. Onward!

Dean Elizabeth H. Simmons

Our Amazing Students!

This Fall I had the honor of attending the G(irls) 20 Summit in Paris, France as a representative of my native country of Mexico. This annual gathering brings together one delegate from each G 20 country, plus a representative from the chair country of the African Union. The participants are girls, aged 18-20.

The delegates generate, discuss and debate innovative ideas centered on empowering girls and women globally. The agenda mirrors the agenda of the G 20 Summit of national leaders and focuses on the most relevant economic issues of the day.

I applied for it early this year by answering questions regarding my commitment to economic and political issues related to girls and women. I was really excited when I learned I had been selected to represent Mexico. However, I was largely unaware of the challenges associated with this role and the amount of work required following the summit.

Traveling to Paris was a wonderful adventure by itself! The first two days of the summit were fun and informative as I connected with like-minded women and girls from around the globe. We attended workshops directed by firms like Edelman and Google, where we learned how to use technology and media of all types to innovate business practices, bring about social change, etc.

We attended and participated in panels that involved successful individuals from companies like: Deloitte, Intel, The Nike Foundation, the World Bank, CBC and Norton Rose among others. We heard from social activists such as Alek Wek, Tony Schiena and Forest Whitaker. They all encouraged us to work hard for what we believe in, become politically active in our communities, to believe in our ability as global change-makers, and to put into practice all the tools and tips we received at the conference.

On Thursday, October 20th, all the 21 delegates gathered for a daylong session to discuss and write a Communiqué declaring the role women need to play in global economic issues. We urged leaders and policymakers to work urgently for the elimination of the obstacles that continue to hinder the participation of girls and women in being part of the solution to the global challenges we face.

Based on our experience at the summit, we put forward four main issues to be addressed to help remove the gender divide. They were: 1) gender-based violence and inequality; 2) education, training and employment; 3) political, economic and social representation; and 4) health. On the final day of the Summit, this Communiqué was handed over to Consuelo Remmert, aid to President Nicolas Sarkozy of France. Consuelo reassured us that the G 20 leaders would receive and consider our recommendations.

As I flew back to East Lansing, I reflected about all the amazing people I met, the global network I had developed, and the commitment to community I had reaffirmed in one short week! I am excited to apply what I have learned to my current efforts to prevent early-life marriages and provide improved sexual education to teenagers in my community – both of which are serious issues in my home town. I believe education for girls (as well as boys) is the key to economic success and the prevention of problems like STDs affecting teenage girls.

I encourage everyone (men as well) to visit the webpage www.girlsandwomen.com, and join the campaign: “3.5 Billion Ways To Change The World” in support of girls and women all over the world! http://www.girlsandwomen.com/blog/wp-content/uploads/2011/11/Girls20Summit_FAQs.pdf

About Daniela: I am from a city called San Luis Potosi, capital city of a state with the same name right in the center of Mexico. My major is environmental engineering and I would like to work on alternatives to use energy in a more efficient way from different sources in order to stop excessive fuel consumption. I am also very interested in the conservation of oceans since scuba diving is what I really enjoy and one of the main reasons why I chose my major.



Daniela Fuentes

Briggs: In Every Corner of the Globe

By: Jessica Cato

Imagine: A crisp peaceful day with the sun bright and a slight breeze. The only sounds audible are that of ocean waves, a humpback whale nearby breathing, or penguins calling from a distance. As the untouched wilderness of the Antarctic Peninsula surrounds you, you grasp how fortunate you are to be one of the very few who get to witness these spectacular surroundings; as indescribable as it might be to express, it feels that you are not only the farthest south, but on another planet.

I felt the above scenario many times on my travels to Antarctica with the MSU Study Abroad. Even though this trip took place in December 2009 and was only three weeks in length, it became a trip of a lifetime with ever-lasting memories: for instance, experiencing the commotion and stench of a penguin colony with thousands of penguins nesting or observing humpback whales feeding so close to your zodiac.

The study abroad first started in Ushuaia, Argentina, the southernmost city in the world. Ushuaia acts as a gateway to Antarctic travelers by ship. Our group docked our expedition-style ship a day after arriving and spent two days at sea, crossing the harshest waters on earth, the Drake Passage. The ten day journey was over 1500 nautical miles; the ship traveled down the Antarctic Peninsula making three landings a day to the ice using zodiac boats.

The amount of wildlife sightings was incredible and included five species of penguins (King, Gentoo, Chinstrap, Adelie, Macaroni), three species of seal (Leopard, Elephant, and Weddell), three species of whale (Humpback, Orca, and Minke), and a multitude of seabird species (Petrels, Albatross, Shearwaters). The wildlife in Antarctica seemed undisturbed by our presence and unaware of our potential to harm or destroy their environment as in other countries. There are strict guidelines protecting the wildlife by the peace treaty that renders the continent to research, discovery, and exploration.

Briggs students study abroad in Europe

The crazy thing about studying abroad – or at least the type of trip I was on – is that you don't realize you're learning anything at all. It is as though somehow all of this information magically implants itself in your brain while you felt like you were on vacation.

Okay, it's not quite like that, but what I'm describing is the difference between reading about, or being told about a topic in a classroom, versus going out and experiencing it first hand. There is no better way to learn about Wolfgang Pauli (famous, of course, for his discovery of the Pauli Effect), than to talk to a professor at the University of Zurich who knew him personally (may I add that the Pauli Effect is a real thing, and you should look it up on Google– it's fascinating!).

Studying abroad, one tends to pick up lots of information by accident – and I'm not talking about things like the fact that tax and tip are factored into prices at most restaurants. There were twelve students on my trip: six physics majors, three chemistry majors, and four students that were not physical science majors at all and were simply taking HPS classes (yes, I can count. My friend Mike is a physics/chemistry double major.) Also, with Dr. Kortemeyer as a physicist, and Dr. Westfall as an historian, the amount of information you could get simply from the minds of the people in the group was pretty remarkable. (I'm in the process of writing an honors option paper about that...).

In addition to that, speaking with Dr. Gary Westfall about particle accelerators, and Dr. Wolfgang Bauer about the current state of quantum theory (as well as farming and sports cars), I got to learn what the real world of particle physics is like today from the two men who wrote my physics textbook. Particularly special for me – as a Briggs Chemistry major – was meeting Dr. David Cantor at the ETH outside Zurich, Switzerland. Dr. Cantor was an undergraduate at Michigan State in Lyman Briggs more years ago than he would like to admit, and is now a distinguished professor at one of the greatest science institutions in the world. I got more out of the conversation with him over lunch that was relevant to me than I did the entire rest of that day combined – as I plan to attend graduate school for a Ph.D. in chemistry myself. At the end of the day, it is impossible to describe the value of study abroad versus normal uni-

I got to learn what the real world of particle physics is like today from the two men who wrote my physics textbook.

versity classes in an essay – or at least the probability of doing so is infinitesimally small if you're a quantum physicist.

Thus, you just have to take my word for it and go see the world for yourself.

-Briggs student, Daniel Little



Briggs students and faculty tour the ETH, Zurich, Switzerland, a world renowned educational research facility led by Dr. David Cantor (LBC '79), a Chemistry faculty member at ETH.



Jessica's picture ("Teamwork" - Porpoising Adelles") won honorable mention for the Study Abroad Photo Contest and was picked by the editors of National Geographic for a Daily Dozen competition they have on their website.

We attended lectures taught by the crew and completed observation activities on Antarctic wildlife and ship passengers. After we came back from Antarctica, we stayed in Ushuaia for another week and completed day trips to study and experience the wildlife and native environment in Tierra del Fuego. In order to afford this study abroad, I relied primarily on financial aid and student loans while also being awarded the MSU Study Abroad Scholarship. After the trip's completion, I used my photos to communicate this experience to help others become interested in promoting awareness to protect the natural world down in the icy south.

Currently, I am a Briggs alumna and first year Master's student in Fisheries and Wildlife studying waterfowl migratory behavior. I hope to possibly return to Antarctica for PhD research work.

The Physics of the Life Sciences

By: Professor Brian O'Shea

I am excited to report that Lyman Briggs College physics has recently implemented an innovative new way of teaching physics. We have replaced the traditional method used for teaching physics with a "physics of the life sciences" curriculum, which stresses the physical principles that most strongly affect the behavior of biological and chemical systems.

Recently, when conducting a post-semester survey of student attitudes about physics, we noted a commonly expressed sentiment that many students struggle to see a direct connection between their major or career path (if not directly related to physics) and the need to have a solid grasp of the principles of physics. Due to this disconnect, they often begrudged the physics requirement at Briggs which, in turn, adversely affected their commitment to learning this discipline.

In addressing this issue, we seized the opportunity to innovate. We have revised our physics curriculum so students are able to clearly discover and appreciate the connections between the principles of physics, the concomitant problem-solving skills developed through inquiry based learning, and their coursework in other disciplines. The resulting curriculum was one where the physical principles discussed in class, along with the hands-on sessions and homework were intentionally illustrated by real-life examples directly gleaned from the professional work of scientists and medical professionals.

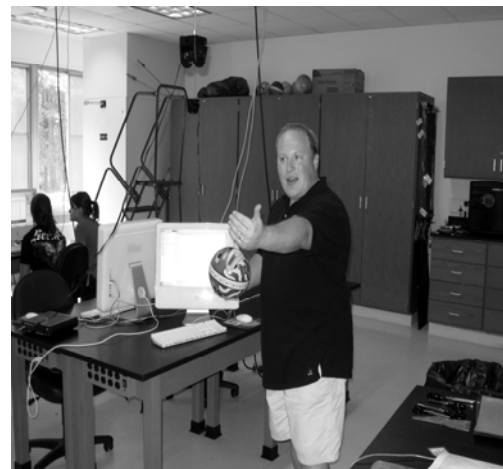
From the perspective of the physics faculty, we feel this curriculum will better prepare Lyman Briggs students for advanced course work in graduate, medical or professional schools. In addition, this curriculum more closely reflects the Lyman Briggs BRAID (Bridging the Disciplines with Authentic Inquiry & Discourse) philosophy of helping students understand the deep connections between different areas of human knowledge.

So far, student responses have been quite favorable. Here are some comments from our recent mid-semester survey:



"The lectures are really engaging and the reading is interesting. It's cool!"

"The concepts are super interesting and I actually stay awake in class. Active learning and good spirits! WOOHOO!"



"The class is very enjoyable. I think it's amazing how the material is presented, especially when it comes to the relationships made between the principles we learn and the other classes we are taking as Briggs students."

"Informative and fun almost every class. Classes are the perfect length, my attention is never lost and I learn a lot. I really like everything about the hands-on sessions. The biological examples are very interesting and help me understand the concepts better."

Professor Brian O'Shea

Dean Elizabeth Simons named AAAS Fellow

EAST LANSING, MI. — A record nine Michigan State University researchers have earned national recognition by being named AAAS Fellows by the American Association for the Advancement of Science. During the last three years, 20 MSU faculty members have been named as AAAS Fellows. The annual awards are peer-driven, so celebrating the most awards in the university's history is a worthy endeavor, said Ian Gray, MSU's vice president for research and graduate studies. "MSU's researchers are solving problems related to food safety, the environment, sustainable energy, health and much more all around the world on a daily basis," he said. "To have so many of our scientists recognized in a single year is particularly satisfying."

Among those receiving this prestigious award was Dr. Elizabeth Simmons. Along with serving as dean of MSU's Lyman Briggs residential undergraduate science college, Simmons is a particle theorist whose research focuses on the origins of the masses of the elementary subatomic particles – particularly the W and Z bosons that transmit the weak nuclear force and the heaviest known particle, the top quark. She investigates theories in which these masses arise from new strong dynamics at energy scales accessible to experiments like those now under way at the Large Hadron Collider in Switzerland.

The winners will be recognized at a forum on Feb. 18, 2012, during the AAAS Annual Meeting in Vancouver, Canada.

Michigan State University has been working to advance the common good in uncommon ways for more than 150 years. One of the top research universities in the world, MSU focuses its vast resources on creating solutions to some of the world's most pressing challenges, while providing life-changing opportunities to a diverse and inclusive academic community through more than 200 programs of study in 17 degree-granting colleges.

The Scale-Down—An Ongoing Teaching Experiment By: Professor Doug Luckie

Why are science courses traditionally big lecture classes while writing courses are kept small? What would happen if you learned introductory science, like cell and molecular biology, in a small seminar room setting where discussion replaced lecture? Years ago, Drs. Elaine Seymour and Nancy Hewitt learned why 50% of our best and brightest students leave science as a major: the big impersonal lecture halls (Seymour and Hewitt, 1997). Students explained to these researchers that their excitement for science was drained from them in the large lecture rooms. They enjoyed the small seminar class in the humanities where they got to have discussions in an intellectually stimulating setting.

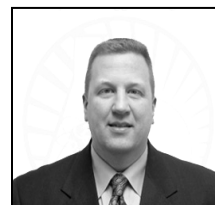
The LBC Biology Group has been implementing innovative and well-tested pedagogies in our courses for many years as well as publishing our findings in the literature. During this same time period MSU has been challenged by regular budget cuts. In the Spring of 2009 a request from the Dean challenged the Biology group to think outside of the box for creative ways to save money and at the same time enhance the student learning/experience. Rather than following the scale-up solution of stuffing more students into the same room to save money, we decided to go the opposite direction, to scale down to both save money and improve the student experience. We proposed to teach our large introductory cell and molecular biology course (LBI45) more like a small seminar course taught in Briggs (LBI33), with a smaller class and small staffing model. Three features of the model are:

1. Saves money by decreasing staffing (just the Professor and two Learning Assistants).
2. Creates smaller class size (20+ years of research suggests this increases learning with no gender imbalance and has the greatest effect for educationally disadvantaged/minority students).
3. Creates a novel/more attractive option for Briggs students to have a chance to learn biology in an environment where they spend much more time interacting with the Professor both in lecture and lab.

So far the early results support the predictions from the literature. In Fall 2010 a twenty-student version of "I45 as I33" yielded promising outcomes. Students who participated in the course universally enjoyed the experience as reported on course evaluations, and, particularly impressive, those students scored slightly higher than any previous class on a standardized end-of semester exam given over the last decade. The fall 2011 course has just ended and we look forward to seeing if the early trends continue. Stay tuned!

Lyman Briggs—Making a World of Difference!

By Philip E. Strong, Assistant Dean, Lyman Briggs College



In mid-October, I was honored to join a team of four senior MSU officials who traveled to the Kurdistan region in Northern Iraq to meet with government officials, university faculty and administrators, and the US Embassy to discuss rebuilding the war-ravaged Kurdistan higher education system.

This initiative, funded by the US State Department, is part of the Iraq University Linkages Program (administered by IREX). This program promotes higher education reform by working with Iraqi faculty and administrators to strengthen curricula, enhance and update teaching methods and technology, and improve career services for students. <http://www.irex.org/project/iraq-university-linkages-program>

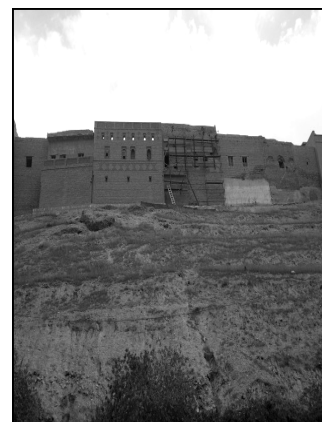
In this program, MSU is partnered with the University of Duhok (UoD) located in the northern Kurdistan Region about 40 km from the border with Turkey. Lyman Briggs College will collaborate with the UoD Department of Biology, the MSU College of Arts & Letters will work with UoD Department of English Language and Linguistics, and the MSU College of Engineering will assist the UoD Electrical and Computer Engineering Department.

LBC's role in this two year project is to help the UoD Department of Biology 1) expand their curriculum beyond a basic bachelor's degree in general biology to include tracks in microbiology, plant biology, and zoology; 2) enhance their capacity to teach biology through development and training in modern instructional methods in the life sciences; and 3) support student learning through the development of content-based instruction modules in the life sciences.

My visit took place in Erbil, Iraq which is the functional capitol of the Kurdistan region and northern Iraq. The city is designed like a series of concentric circles expanding outward. At the center is the famous Erbil Citadel – a mounded community with a series of buildings and homes – in essence, a fortress-like community. Many archaeologists believe the city's earliest inhabitants date back to the middle of the Bronze Age some 3000 years BCE! The Citadel claims to be the longest continually inhabited community on earth for some 5000+ years.

As a U.S. traveler I felt very safe during my short visit, but there is still caution to be had when working around any government agency. There were armed guards at multiple posts throughout the city. On one occasion when we had a free morning, we were able to hire a driver and spent time walking through the downtown bazaar and visiting the small Kurdistan history museum. One MSU colleague commented that the area looked somewhat like Phoenix in the 70's reflecting the expansive urban growth on a largely desert plain. Although the majority of our time was spent in meetings planning the structure of the collaboration, we did travel to the U.S. Consulate (just opened in July 2011) for a dedication ceremony and met the Prime Minister of Iraq, the U.S. Consulate General, the Minister of Education for Kurdistan, and the Minister of Education for Iraq.

This short visit is only the beginning of a long relationship between the LBC and UoD biology faculties. While our Deans are finishing the administrative plan for the grant, the faculty are ready to support the teaching and learning excellence which is a hallmark of a LBC education.



What our students say about your support:

"I cannot express enough how thankful my parents and I are for your help. It means so much that you chose to assist me with finishing school! Thank you so much again; I will always remember how helpful my fellow Briggsies have been to both me and my family."

"Your generosity has inspired me to help others and give back to the community. I hope one day I will be able to help students achieve their goals just as you have helped me."

"This scholarship provides an even stronger motivation to continue doing well in my classes. I look forward to using my studies to help others."

"By providing me with this scholarship, you have helped ease the financial burden of my college tuition, which will allow me to continue focusing on my education. Your kindness has further inspired me to help others and give back to the community. I promise that I will continue working hard, and I will make certain to put your generosity to good use."

"I am truly grateful for your many contributions to Michigan State University and Lyman Briggs College. Your dedication and commitment to this institution have helped numerous students achieve their academic and professional goals by providing them with abundant opportunities."

"The funds from your scholarship will help me to achieve my goals and lessen the financial burden of my educational pursuits in a real, significant way. I would like to thank you for the kindness, compassion and charity you bestow to Lyman Briggs physics students through your scholarship donation. I proudly accept this award and I am very grateful for the opportunity that your scholarship provides for me in pursuing my educational goals."

"Words cannot express my gratitude. I have worked so hard to get where I am today, and money has always been a problem. To be recognized for my hard work and to be rewarded for it so generously promotes a feeling of overwhelming honor and appreciation."

"Tuition is a steadily rising cost, and it is becoming increasingly difficult for parents and their children to pay for college. My parents are lower-middle class, and therefore it is hard for my parents to help with college. The only help I get is from generous people like you, who find their happiness in helping others succeed. Without programs like yours, I would be completely alone in bearing this financial responsibility."

"Each year the cost to attend Michigan State University seems to rise. Even with the increases in tuition, the expensive books for science courses, and the outrageous rent in East Lansing, people like you give students a reason to be optimistic."

"Your generosity is inspiring to me, I feel compelled to pass this act of kindness on to others in any way I am able. I only hope that one day I am able to help students achieve their dreams the way you have done for me."

For more information on Briggsies, or to tell us what you are doing, join the LBC Alumni Online Community at:
www.alumni.lymanbriggs.msu.edu



Want to be nominated, or know a Briggsie who should be nominated for the LBC Distinguished Alumni Award?

Contact the LBC Alumni Office at: (517) 353-4869, or email: markcjoh@msu.edu

Together, Spartans Will

A simple, yet powerful statement that demonstrates the positive impact that nearly 60,000 faculty, staff and students and 500,000 MSU alumni can have in the world through dynamic education, defining research and a commitment to improving lives. In these disruptive economic times, it is also a statement that compels the Spartan nation to deliver as a leader among the nation's top universities. ***Together, Spartans Will*** ensure that our world-class education is accessible to all qualified and deserving students. ***Together, Spartans Will*** assure our university has the resources required to remain competitive with other elite universities in the world.

A Case for Support

In today's challenging and uncertain economic times, the more fortunate among us are being asked to support many worthwhile causes and organizations. It can sometimes be difficult to choose where to invest your philanthropic dollars.

As you weigh various philanthropic opportunities, consider the following:

Do you feel *passionate* about the work of the organization?

Are they *effective* at what they do?

Does their work make a *positive impact* on our society?

Will my support *make a difference*?

We strongly believe that Lyman Briggs College at Michigan State University meets all of these criteria. We ask that you consider supporting our mission of bridging the sciences and humanities through interdisciplinary teaching and research; sustaining an inclusive residential college environment within a major research university; fostering collaboration between students, faculty, and staff; to advance scholarship, teaching innovation and community engagement; and inspiring students to become lifelong learners, engaged citizens, and effective leaders.

Passionate

Dean Simmons frequently states, "At Lyman Briggs College, we are passionate about undergraduate science education and we are among the very best at this endeavor!" Faculty members at Lyman Briggs are chosen not only for their intellectual expertise, but also for their skill and *passion* in teaching. Our students "opt in" for this experience and leave us as highly motivated future scientists.

Effective

One need only observe the quality of our graduates, the success of our alumni and the respect given by highly esteemed organizations such as the National Science Foundation (NSF) to realize that Lyman Briggs is well regarded for our effectiveness. We provide students with a comprehensive education in all natural sciences, help them develop critical thinking and problem-solving skills through inquiry-based learning in an interdisciplinary curriculum, and reinforce their classroom instruction through meaningful research experiences and small group projects. Hopefully, each of your personal experiences reflects this effectiveness as well.

The Lyman Briggs Difference

Our graduates are not only among the smartest scientists but they are grounded with an understanding of how science affects our society. They are critical thinkers capable of connecting the many "dots" required to solve problems in a complex society. Their Lyman Briggs education allows our students to make a positive difference in the world, each and every day.

The Need

Offering a world-class education across a broad spectrum of disciplines and conducting life-altering research are expensive endeavors but well worth the investment. As you are aware, state support for higher education is shrinking and resulting in significant increases in tuition and fees for students. Today's students are graduating with an average debt burden of over \$25,000 while at the same time entering a fiercely competitive global job market. In an effort to address this critical need, Lyman Briggs College is focusing our development efforts over the next several years toward raising funds directly aimed at reducing student debt burden, while also assuring our students are well prepared for a global economy.

How You Can Make a Difference

If you are passionate about undergraduate science education and feel it's an *essential* factor for our national global competitiveness, *and* you feel that Lyman Briggs College accomplishes this at the highest level, we encourage you to support LBC. Ways to help:

If the mission, vision and actions of Lyman Briggs resonate with you, we hope you can find a way to provide some level of annual support to LBC. Please contact us using the enclosed envelope or by sending a contribution to Mark Johnston at the address at the bottom of this page.

If you have been contributing annually and feel you could increase your giving to a multi-year pledge toward an area of need at Briggs, please contact Mark Johnston: Cell: 517-202-0741, Email: markcjoh@msu.edu. You can designate the purpose of the gift, pledges are non-binding and they can be altered should your circumstances change. Pledge gifts allow the College to plan more effectively for the future.

For those who are now in a position to make a leadership-level gift, please consider the possibility of creating an endowed scholarship. As previously noted, while we are educating the science leaders of tomorrow they are graduating with record levels of student loan debt, a tough way to begin their professional lives. An endowed scholarship can bear the benefactor's name (or honor someone important to you) and have a designated purpose or geographic stipulation. Donors are connected with their scholars annually.

Whether you are able to support Briggs at this time or not, please consider naming Briggs as a beneficiary in your estate plans. This is a very simple, non-binding process that *really* helps the College. Writing a simple letter of intention assures your support is used as you intend and is a great way to show your support for Lyman Briggs. Mark Johnston can assist in development of the letter of intent. Some of your assets, such as retirement funds, are best left to non-profit institutions, like Lyman Briggs, due to the tax liability they incur upon transfer. Estimated values of an estate gift are perfectly acceptable and very helpful.

We sincerely hope that you feel positively about your Lyman Briggs experience and believe in the work we are doing with young people. We ask that you support our efforts to continue creating life-changing educational experiences for the next generation of our students. **Please feel free to contact Director of Development Mark Johnston with any questions you may have. Lyman Briggs College, 25C East Holmes Hall, East Lansing, MI 48825-1107, Phone: 517-353-4869, Cell: 517-202-0741, Email: markcjoh@msu.edu**

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UNIVERSITY

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OUR SCIENTISTS
DEFY PHYSICS
BY MAKING A
47,000
STUDENT SCHOOL
SMALL.

Residential Colleges

At the risk of making a huge understatement, the major advantage to being a Spartan is that you're free to make an unbelievable number of choices. In fact, at MSU you can even choose to get the small-college experience. All while studying a specific subject with some of the best minds in the country.

Take, for example, Michigan State's Lyman Briggs College. It's a one-stop shop for the scientifically minded, with living areas, classrooms, labs, dining facilities, and faculty and staff offices located right in Holmes Hall. As a residential college, classes are kept small so you can interact with your professors and classmates as much as possible. It's an intimate, small-college atmosphere—except you have full access to all the resources and experiences that a major research university like MSU can provide.

(excerpt from Office of Admissions recruitment publication)