

Thesis Learning — Experience of a Lifetime

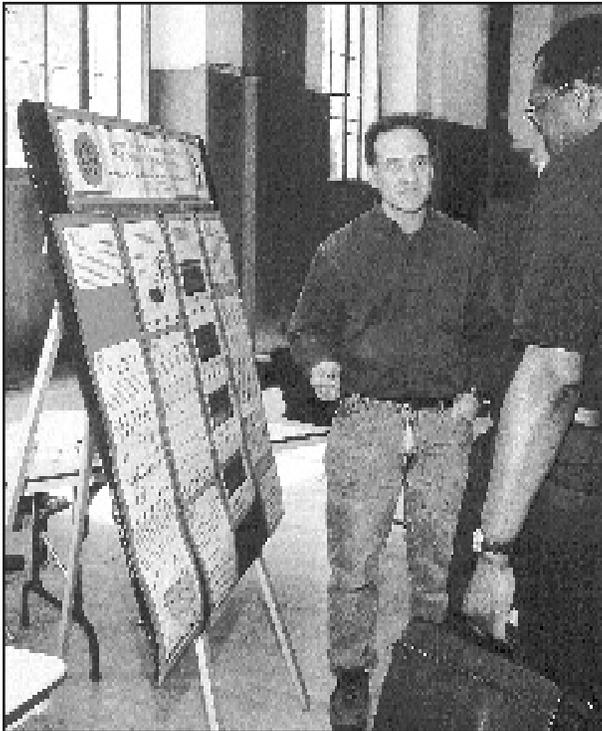
Digging a little deeper literally and figuratively is what the Honors thesis is all about. Deeper in terms of finding funding for the projects and deeper in terms of pushing the envelope of what we know.

Students report that the thesis is a pretty amazing experience, certainly something many thought beyond their reach. Amazing may be the most apt description of what producing an Honors thesis is all about. How else could you characterize the rewards of conceiving and discovering something that may lead to new knowledge? In all cases, the sky is the limit,

provided financing can be found. Unfortunately students are frequently on their own, or rely on the kindness of faculty or families.

Honors students are ingenuous and innovative as they conceive and produce thesis research on subjects that cover the waterfront. A random selection of this year's topics included math education in Russia, developing shared values in the banking industry, annealing systems for extruded titanium tubing, and the digestive tracts of scallops — to name but a few. When they are in the midst of it all, UHC students speak in terms best described as "modified rapture," as the ramifications can seem

overwhelming. Once finished there is consensus that the thesis project is among the most meaningful experiences of their undergraduate careers. That is what education ought to be, and is for UHC students at OSU.



It should not be too surprising that Honors students react the way they do considering the initiative and long-term concentration required for a successful thesis. With guidance from a faculty mentor and two additional experts, students develop their ideas from the ground up. They are faced with having to conceive, execute and write up their findings according to professional standards and the entire process culminates in an oral presentation and defense of their effort. There is every reason in the world for them to be proud of the result.

When Kinsey McManus went to Mexico as part of her work on her International Degree (ID), little did she expect that the staff of the Unidad Pichilingue of Universidad Autonoma de Baja California Sur, in La Paz would become such an integral part of her life. In meeting the thesis requirements in both UHC and ID, Kinsey and her thesis advisor, Dr. Virginia Weis, concluded the experience was a major milestone of Kinsey's collegiate adventure. Dr. Weis also worked with another Honors student, Alena Pribyl, who conducted her investigation of sea anemones at the Hatfield Marine Science Center in Newport. It, too, was the experience of a lifetime and Alena noted that Dr. Weis' guidance and

the skills she acquired paved the way to the graduate school of her choice. Simply mastering the Nemarsky compound microscope to photograph infected anemone larvae was itself an accomplishment. One of the most heartening aspects of Alena's work lies in the realm of the practical implications of her findings.

The list of fascinating thesis topics goes on and on as nearly 100 students have already earned Honors Baccalaureates since the UHC opened in 1995. For example, Eleissa Miller sought to discover how insurance companies react to consumer demand for treatment by

Thesis Learning, con't from page 1

alternative medicine regimes. Working with her mentor from Health Care Administration, Dr. Leonard Friedman, Miller analyzed how reimbursement policies are codified for alternative medical treatment in a variety of health plans. Jennifer Engels was not content to conduct her UHC/ID thesis work on campus; she traveled to Vietnam for a comparative study of migration. She examined the effect on Vietnamese families of the relocation of a fishing village and contrasted the results with Vietnamese who had migrated to Portland. Engels lived among the villagers and faced considerable acculturation herself during her time in Vietnam. During an OSU Over Lunch presentation in Portland, she likened the entire process to one of the most exciting adventures she could imagine.

Whether it is at the nether reaches of the world or downtown Corvallis, meaningful experiences abound. Bryce Payne obtained not only permission but full cooperation from a local bank to study value coherence and performance of employees. Interestingly, the results not only identified a kind of "cultural cohesion" model central to the implementation of new procedures, but yielded a reliable scale that may have applicability in a wide variety of organizational contexts.

Not all the projects are solo ventures. In the College of Engineering (COE) team projects are common, and in some of the Engineering disciplines they are required. Rick Osburn's work typifies the ways in which COE team projects can be combined with the Honors thesis to pay major dividends. Under the direction of Dr. Goran Jovanovic, who seemingly does double duty as mentor and avuncular figure for a great many COE and UHC students, Osburn was part of a team of students who participated in the Waste Education and Research Consortium (WERC) International Design Competition. The task facing each team is to design and model a solution to a real life problem stipulated by the WERC judges. In the year Osburn's team competed, Jovanovic led twenty students, including a group of first-year Honors students from OSU's College of Engineering who worked on five of six

problem areas set forth by experts from the Department of Energy, Los Alamos National Laboratories and from industry.

During the fall students brainstormed on their particular problem and then during the winter created scale models of the solution they proposed. Osburn and his team focused on the quandary of how to stabilize soil contaminated by heavy metals leached out of mine tailings. Once stabilization was achieved, an additional task was to design removal techniques suitable for use at an elevation of 9,000 feet. WERC insures that all competition problems are actual situations faced by engineers and the teams work to design and present innovative solutions that are then judged by practicing professionals.



Osburn's team proposed a solution that took advantage of ambient climatic conditions and passive refrigeration technology they adapted for deployment at the site. Pooling their respective competencies, the team suggested a ground freezing technique that both stabilized the contaminants and created an ice barrier blocking further contamination of ground water. Once the team had identified a cutting-edge solution, Osburn began calling probable companies nationwide. He finally reached a firm in New Jersey which not only had the requisite equipment but agreed to share technical specifications with the OSU team to determine if their solution was economically viable based on resources available in the field.

Beginning with calculations of the cost and time required to freeze the ground to specified conditions at the 9,000 ft. elevation, Osburn and his colleagues drew up

plans for a system that depended on ambient air temperature, heat transfer piping and horizontal boring to create an ice chamber that could do the job. Then they canted the entire process at an angle that would channel ground water to an ion-exchange reactor system to remove heavy metals and return the water to a natural channel downstream. Finally, they designed an underground viaduct to restore the original stream to its natural course without incurring any further contamination.

The team faced formidable challenges, including the chore of preparing an appropriate audio-visual presentation of their solution, an explanatory script and a scale model, all to be used at the competition in New Mexico. But they persevered. Not only did Osburn's team win the most innovative technology award, but one other OSU team placed first in another category and Dr. Jovanovich received the Outstanding Faculty Award for his efforts. It is hard to imagine part of one's education being any more rewarding.

While Jovanovic was able to rustle up funding for his teams, most students are not so lucky. Faculty mentors and families are often able to help, but a new effort is underway to endow a **UHC Excellence Fund** that will one day be available to all students working on their projects and will help defray the costs involved. Because of the generosity of a UHC parent who prefers to remain anonymous, an annual challenge gift is in place to help build an endowment that will provide the necessary support — it will be an ongoing priority until fully funded. The ideal is to have an endowment sufficient to provide every student with a stipend they can use to fund legitimate expenses associated with conducting their research projects. By doing so, students are helped to realize their full potential.

If you share in this ideal and are able to help, please consider a charitable donation to the UHC Excellence Fund. (See The Challenge of Excellence, pg. 3.)

FUNDRAISING

Making a Difference: The Challenge of Excellence

Can we rise to a challenge?

An anonymous donor, the parent of an Honors student, has issued a challenge to friends and supporters of OSU's University Honors College. If those who share his interest in seeing students excel and who see the value of a high quality undergrad research experience will join him, he will make an annual contribution to the **UHC Excellence Fund** that will underwrite the students' senior projects and simultaneously create an endowment for future students. In this way every dollar will have double the effect and should a donor work for a company which makes its own matching contribution, triple the impact. Talk about an opportunity!

Providing matching monies are acquired, the donor will make annual contributions for years to come, building a fund that could eventually reach six figures and support all Honors students working on their senior thesis. It is the quality of those projects, and the desire to provide direct support to UHC students that prompted the donor's generosity.

Advancing the frontiers of knowledge by exploring new areas and new questions is the loftiest of aspirations. As Bill Keith from Speech Communications put it, "The quality of senior projects produced by University Honors College students really is indicative of a world-class university."

With the help of the OSU community via charitable donations to the OSU Foundation, earmarked for the **UHC Excellence Fund**, there is a real prospect of making a genuine difference.

For more information, contact:

Joe Hendricks at 737-6400 or email Honors.College@orst.edu.

Mail donations to:

OSU Foundation/UHC Excellence Fund

Honors students enrich entire campus

College students expect an academic challenge when they enter a classroom but when University Honors College students at Oregon State University enter a classroom, it's the faculty that often must rise to the occasion.

"These students are not shy—they will question other students to ask why they hold their opinions or feel that specific issues are important, and force their classmates to be able to defend, and thus understand, their own beliefs," said Kate Lathja, associate professor of botany and plant pathology, who has taught an honors course a couple of times. "But they'll put faculty to the same test, and force us to reassess our approaches and views on the subjects we teach. For all of us, this is an important intellectual and personal exercise."

Profiles of University Honors College students are comparable to those of highly selective private schools in the Northwest and on the West Coast. As has been the case from the outset, the UHC attracts valedictorians, salutatorians and other top-ranked students from across the state.

In the early round of admissions, students accepted to the UHC in 1998-99 had an average grade point average of 3.98 with SAT scores in the 1330 range.

The majority of the more than 400 students enrolled in the UHC are studying engineering or science at OSU. While they take specific classes with the Honors College, they also take courses in other colleges around the campus, interacting regularly with the university student body.

"We challenge each of our students to a higher level of performance," said Joe Hendricks, dean of the UHC. "We tell them they have a responsibility to pay back the citizenry of this state and that begins in the next class. They need to raise the level of discussion and motivate other students in their classes."

Bruce Rettig, professor of agriculture and resource economics, and Joe Kerkvliet, associate professor of economics, co-taught a UHC course that left both with a better understanding of how challenging it can be to work with UHC students.

"It was one of the most valuable teaching experiences either of us has had in a very long time," Rettig said.

One of the biggest hurdles facing UHC students and OSU faculty is the senior thesis project required of all UHC students. Students and faculty work together to find answers to the academic questions puzzling some of the brightest minds on campus. At the same time, they also work together to find funds to pay for the projects.

"At some universities there is a significant lag in time between the creation of knowledge and dissemination of knowledge," Hendricks said. "At OSU, that's not the case. Our students and faculty work together on research and to analyze their findings."

As a Carnegie I institution, OSU's students all benefit as new knowledge finds its way into the classroom in record time, Hendricks said.

William Winner, director of the Environmental Sciences Graduate Program, said OSU is fortunate to have the UHC students on campus.

"The Honors students have a way of bettering themselves, as well as the other students at OSU," he said. "The UHC students have a sense of identity that is built upon interactions within the Honors College, and that collegiality elevates their academic development. The beauty is that UHC students are also knit within the fabric of the OSU student body, and raise the level of academic development for all."

story courtesy Robert Hood, OSU This Week (May 27, 1999)

Writing Outside the Box



Photo courtesy University Publications

UHC student Jodi Hendrix meets her Adams School writing pal.

By Carole Ann Crateau
UHC Writing Instructor

This spring term's Honors Writing class became "writing pals" with third through fifth grade students at nearby Adams Elementary School. As a service learning project, they initiated the contact with introductory letters to students who were selected by their teachers. Through letters, e-mail exchanges, and visits to the school, they interacted throughout

the term. As a pilot program, the Honors students were also evaluating ways to develop the idea of "writing pals" for future HC199 classes.

The Honors students enjoyed a variety of connections with their pals. Kelly Knox enjoyed his visit to Adams. The teachers welcomed him "and gave me a free lunch while I sat and talked with Jesse and all his

friends. The kids were awesome. I had a blast talking to them all." Melissa Edwards found "how special and unique each child is" and liked "the opportunity to interact with someone outside of my own peer group."

Brook Wegner found her pen pal not so different from herself. "Jordan actually has a similar problem that I have with my own writing: he writes many thoughts about many different subjects in one paper." While sharing writing techniques, she was impressed with his attentiveness. "He really listened to me and tried to put my advice to work." Grace Kanemitsu noted that "just like Jennifer, I am extremely shy around people I don't know." Amanda Waterman commented that Hannah is a very bright student with a spelling problem. "I also used to be a very 'creative' speller when I was younger."

All students agreed that the writing pal program was worthwhile, and several are planning to continue their contact with Adams School next fall as volunteers. Angela Wykes reported, "My pen pal's teacher even invited me to help out in her classroom as part of the internship credits I need for my major!" The UHC students liked the opportunity to learn "outside the box" and recognized the potential to enhance younger students' efforts and boost their self-esteem.

UHC Well Represented at All-University Student Recognition and Awards Banquet

Forty-five UHC students were recognized at the campus-wide ceremony on May 26th. Many received multiple awards.

A dozen UHC thesis posters were requested for lobby display at the event.



Photo by Carol Ann Crateau

Members of Carole Ann Crateau's HC199 Honors Writing class at Finley Wildlife Preserve pose between nature writing assignments.

Student Tutors: Collaborating for Success in the UHC

Near the end of Fall Term, 1998, students new to the UHC and to OSU began to feel the pressure of final exams. The first term can be extremely stressful for new students, and UHC students are no exception. So, as students began to clamor for tutors and help sessions and relief from their stress, the UHC Student Steering Committee decided to help. (The UHC Steering Committee is a recognized OSU student organization that gives UHC students an opportunity to provide input on the activities and direction of the UHC.)

The Steering Committee asked UHC Head Advisor Jane Siebler to put out a call in her weekly email message to all UHC students asking for tutors, especially in beginning level math and science courses. Twenty UHC students immediately responded, and many were not interested in payment, they just wanted to volunteer to help their colleagues in the UHC.

Then, the tutor list was organized by class and class level, with tutor's name and email address. The list was posted in the Student Learning Center, and students connected with available tutors as needed. Arrangements were private — between tutor and student.

Finally, the Steering Committee decided that merely providing a list of tutors wasn't enough. The student leaders organized special tutoring sessions during Final Exam week. These sessions were held in the UHC Student Learning Center (fondly known as the "SLUG") and they were timed to coincide with the final exam schedules for Honors Chemistry and General Chemistry. Chemistry is required for many UHC majors, and there is often a need for assistance beyond what the Chemistry department provides in its special learning laboratory.

Members of the Steering Committee and other UHC student tutors staffed these special final week help sessions, and the UHC Staff kept the SLUG open longer hours for the first three days of final exam week, just for the tutoring sessions. Professor Jim Krueger, Chemistry, and his teaching assistant also hosted one of the help sessions held in the UHC Student Learning Center. The combination of faculty, staff and student assistance at the end of Fall Term provided a helping and supportive environment for new students as they faced their first OSU final exams.

All reports were that the special tutoring availability and help sessions, along with extended SLUG hours, were very beneficial to the participating students. At each session there were approximately seven to ten students receiving help from three to five UHC student tutors. Homework problems were reviewed; old tests were analyzed; and strategies for completing the exams discussed.

Although UHC students are competitive, they are also supportive and friendly. Everyone wants to do well in their classes, and they want to succeed. Moreover, they want their colleagues to succeed. They willingly and openly help each other when the need arises, and they do it cheerfully and for the good of the whole UHC. The tutor volunteers and the special help sessions are only one example of this mindset. In McNary Hall and other residences, UHC students organize help sessions and informa-

tion fairs and many different activities to help their peers. This supportive atmosphere permeates the UHC—it's in the classes, the student activities, the SLUG and the UHC Offices. Students helping students succeed — it's the UHC Way.

Honors Living

Cooperation comes in many forms. Working with Housing and Dining to create an Honors residence in McNary Hall has provided a model of collaboration. As the first of the current round of remodels, McNary came back on line in 1996 as the University Honors College Residence Hall. Under the supervision of Tom Scheuermann, Director of University Housing and Dining Services, planning began to create an Honors environment not only worthy of the intent of the students, but likely to enhance success. From the outset the plan was to blur the line between social life and scholastic life as a way to leverage both.

During the planning phase students met to discuss their likes and dislikes about dormitory life. They were involved in a number of decisions and voted their preference for one of over half a dozen sets of model furniture then on display in a public area. McNary is now configured close to the way the Honors students requested.

Since it reopened McNary has proven an unqualified success and the spirit of cooperation has continued. McNary staff is hand-picked for their jobs. Hall Director David

Craig oversees the entire complex for 1999-2000, including coordination of the student run Hall Council, and the various forms of programming that occur. The UHC maintains conference room space, offices for advisors and the writing instructor and makes its facilities available for ancillary usage.

The three primary goals of Housing and Dining — graduation, a sense of community and participation in hall

activities — are exactly those of the UHC. It is proving to be a very good match.

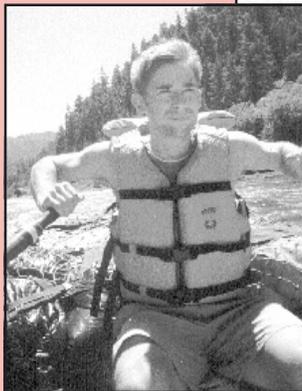


UHC Photo Gallery

Students in Bill Bogley's Math 253H Infinite Series and Sequences class, show that UHC Math classes are not only challenging, but fun.



Photo by Linda Wallace



Photos by Melissa Wick



Jay Well, inset photo, navigates the rapids on the student organized UHC raft trip on the Umpqua River on Memorial weekend.

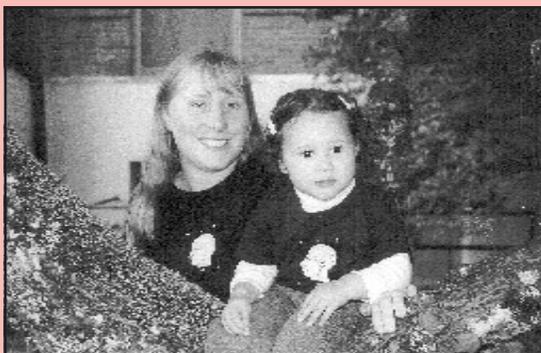


Photo by Linda Wallace

Beth Tilgner and her daughter Andrea show off the 1998 UHC T-shirt.

Words from the Past...

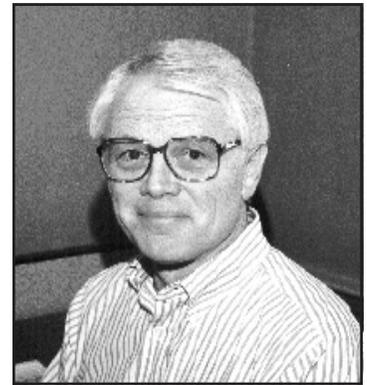


Photo by Linda Wallace

I had taught many courses in the Honors Program before the redoubtable Margaret Meehan retired and I became Director, and I loved the vitality and expanse of its offerings: more than five hundred students per year took courses ranging from bulimia to Beethoven and Chekhov to constitutional theory. Gilfillan Auditorium was SRO for a lecture series on AIDS. Engineering students and others with few elective hours got maximum variety from the one-credit lists. The Honors Program T-shirts were so appealing that one night the Bexell Hall display case was smashed open and the entire display stolen. Honors was a busy place!

When the program was closed, I lamented the absence at OSU of a special interdepartmental meeting place for high academic achievers. To walk into the Honors College now is to see that something superior is being accomplished. And word is getting out: recently, at the International High School graduation ceremony in Eugene, I was happy to hear that a good number of the students have chosen OSU Honors as their next stop.

Kerry Ahearn,

University Honors College Staff — 1998-99

Jon Hendricks, *Dean*

Jane Siebler, *Head Advisor*

Tammy Henderson, *Adm. Office Mgr.*

Linda Wallace, *Office Specialist, Newsletter Design*

Stacy Williams, *Office Assistant*

Carole Ann Crateau, *Writing Instructor*

Bob Burton, *Visiting Faculty (Math)*

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Family Ties

Word of mouth is important in bringing the UHC to the attention of honors-caliber students. Little did we anticipate siblings might share their impression of the UHC and encourage one another to attend.

But that is exactly what is happening. Currently there are 11 sets of siblings in the University Honors College, and that number will increase to 14 when school starts in the fall of 1999 — including two sets of twins!

UHC siblings support each other, with the older sibling often influencing the younger student's choice to attend both OSU and the UHC. If verbal recommendations are indeed an indicator of success, then our 14 sets of sibs are a pretty sound gauge of Honors. Siblings are enrolled in science, forestry, agriculture, engineering, business and liberal arts. Like other UHC students, they elect to live in the Honors residence hall, McNary, and in coops and even together in off-campus housing. We recently asked some of the siblings what it is like to have their sister or brother in the UHC.

Joshin Luiz said, "Having my sister (Jessina) as a resource to answer questions and tell me the bonuses about OSU and



Photo by Linda Wallace

Current UHC student Brooke Struck, (second from left), poses with her family in the UHC computer lab on Dad's Weekend, '99. Her sister, Heather (second from right) will enter the UHC in the fall.

the UHC really helped me in making the decision (to attend)."

Kari Zyp came back with a comment that pretty much applies to all students in the UHC, "The best thing about being together at Oregon State is having a companion who loves to sit and discuss and argue and analyze things as much as I do. There is a lot of mutual respect between us...and a lot of pretty heated arguments

about anything and everything!"

Kari added, "We also have a pair of pretty incredibly proud parents." The same is true for the parents of all Honors students and for faculty and staff as well.

Students recommending the UHC to other students is wonderful; referrals from siblings is something special.

Dawn Wright — One Outstanding UHC Professor



Photo by Linda Wallace

Dawn Wright, associate professor in Geosciences, poses with her canine companion, Lydia.

Dawn Wright won an Outstanding UHC Professor Award, given at the UHC Spring Picnic to top instructors chosen by the UHC student body. Other winners were **Jim Krueger**, Chemistry; **Joey Spatafora**, Botany and Plant Pathology; **Lani Roberts**, Philosophy; and **Carole Ann Crateau**, UHC Writing Instructor.

Wright's work in Geosciences was also recently selected to become a permanent addition to OMSI's 'Faces of Science' exhibit.

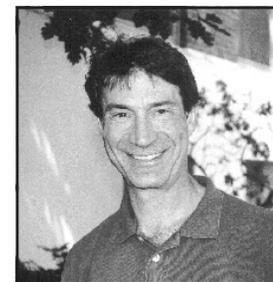


Photo by Linda Wallace

Jim Liburdy, Chair
University Honors College
Council — 1999-2000

Jim Liburdy (James R. Welty Professor of Mechanical Engineering) is the incoming Chair of the University Honors College Council. He follows Mary Alice Seville (Accounting), Jim Krueger (Chemistry), and Ken Krane (Physics).

University Honors College

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The Texts of Life*

by Tova Johnson

I remember warm summer days when my younger sister Kelva and I watched ants that were making their homes in small holes in the cement behind our house. We watched in awe as the little brown scavengers emerged from dark underground holes to meet the sunlight and to collect bits of grass and leaves that completely covered their backs as they returned to their holes to deposit their new found treasures.

My sister and I wanted desperately to enter their homes with them, to view their magnificent microdens, but our size prevented us. And so, our studies would end at their "doors."

My sister and I also found dried up earthworms, hard as sticks, in our backyard and attempted to hydrate them by putting them into small buckets full of water. Of course, we did not realize that the earthworms were already dead or that once they were dead, they could not be brought back to life. What we had realized, however, was that earthworms need moisture to survive, and we were attempting to satisfy that need for a few unfortunate crawlers. Our experiences with earthworms, along with our experiences with ants and other creatures that roamed the terrain of our yard was, I believe, my first introduction to Biology — the study of life.

Of course, we did not have texts, typically defined as books, but we had texts nonetheless. The texts were the plants, bugs, worms, and other forms of life that we observed and, although not apparent to us at the time, studied. The life that we observed, that we "read," were our texts. This is the beauty of biology — that we can wake up everyday and be surrounded by texts waiting to be read, dissected, and engaged into our natural inclinations to attempt to figure out one of life's greatest mysteries — life itself. What life is, what life consists of, what life exists in our universe, and how our own lives are situated in relation to these other forms of life are all issues that we can explore through biology. Indeed, by studying other forms of life, we grow to better understand ourselves.

The more I engage in biology, the more mysteries of life I uncover. And, like a young child looking into an ant hole, the deeper I want to probe. Majoring in biology works for me not just because of the background working knowledge I will gain that will help me should I decide to pursue a career in medicine, but because I satisfy the awe-driven curiosity that began enveloping my being as a child. Majoring in biology works for me because occasionally I find the golden key to one of life's mysteries. I learn more about myself and the world around me in the process, making me a more informed and whole individual.

"Reading" the texts of life that could only have been written with such beauty and perfection by the Divine Creator is a treasure, a gift, an honor, and a privilege. Through biology, I grab hold of this privilege everyday.

Occasionally, I will stop once again to watch a little brown ant scouring the landscape for small pieces of grass and leaves to build its home. I will stop to watch a squirrel on the sidewalk flicking its tail like a big flagellum and then suddenly tense up and run up a tree as another squirrel comes along to chase it. I will stop to admire a tree that has fuzzy bell-shaped knobs extending from its branches. Sometimes, I will even stop to watch people like me, running on sneakered feet to make it to the next class, or laughing and teasing each other in the sunshine. I watch, I read, and I study. This is biology.



**This essay was submitted as part of a writing assignment for HC199, Honors Writing.*