“Make the most of your summer and get an internship,” the Center for Career Development advises on its web pages. “An internship is the best way for you to try out a career field and see if it is the right fit for you.”

Gettysburg students are certainly following that advice. This past year more than 100 students participated in internships — both in the summer and throughout the year — in 15 different states. Some students even completed an internship in Nicaragua. Career fields included the health professions, politics, finance and banking, communications, education, scientific research, art and archival research, law, athletics, and other areas.

Gettysburg students are also participating in a wide variety of other programs offered by the College to broaden the opportunities for exploring career options, including collaborative research with faculty members. Such research opportunities have been supported by a $50,000 New Presidents Grant from the Andrew W. Mellon Foundation. “An integrated and strong multidisciplinary student-faculty research program is part of the ‘culture of engagement’ that I identified in my Vision of the Future of Gettysburg College,” President Katherine Haley Will said.

This past summer our own intern for Gettysburg, Sarah Moddel ’08, participated in a second internship in New York with the National Park Service. At the same time she tracked down a few other students taking part in summer internships and asked that they report on what they did — all of which we present here. To round out the portrait of some of the things Gettysburg students are doing to prepare for future jobs, we also profiled some students involved in collaborative research with faculty.

Of course, these few profiles are only the tip of the proverbial iceberg. To read more about Gettysburg students engaged in internships and collaborative research, visit the College’s website at www.gettysburg.edu. Click on Student Life, then Career Development.

Holding down the fort
“I spent my summer as a seasonal park guide for the National Park Service on Governors Island,” Sarah Moddel ’08 wrote. “Governors Island is an old Army (1800–1966) and Coast Guard (1966–1996) base located in the heart of New York Harbor only 800 yards from lower Manhattan.

“I was one of seven ‘seasonals,’ who were college students or recent grads. As a park guide I led two different tours around the historic landmark district of the island, which is currently the only part open. The south side is closed for now, while the state organization in charge of most of the island (the National Park Service only has 22 acres, which include the two historic forts), develops plans for the 40-acre park that is to be developed on that end of the island. On weekends I gave shorter tours of the two fortifications on the island, Fort Jay and Castle Williams. Both forts were built to protect the harbor during the War of 1812. New York Harbor became so well fortified
that it was never actually attacked. The forts became obsolete by the 1830s, but were put to new uses that included a prison for Confederates during the Civil War.

"As guides, we also had to develop our own special program or ‘topical.’ I combined Gettysburg with my work here by focusing on Gen. Winfield Scott Hancock. He was injured at the Battle of Gettysburg, but spent the last eight to ten years of his life on Governors Island as the first commanding officer of the Division of the Atlantic when it relocated to the island. I was also the ‘Tiger queen,’ which meant that I was in charge of creating flyers and other short publications for our special events.

"The summer provided one with a unique opportunity to explore New York City history and be a part of the National Parks Service. I’ve learned a lot more about Governors Island than I ever anticipated, having only seen it from the Staten Island ferry for years. I’ve met great people, and gained new experiences in all areas."

Rolling, rolling, rolling

"I spent my third summer as the summer reading assistant on the Rolling Reader in Harvard County, Md.,” Jason Leister ’08 said. “The Rolling Reader is an outreach vehicle that visits after-school programs around the county during the school year. The program targets at-risk children in grades K-8 and brings the library to children who otherwise don’t get to visit one.

"I’ve worked each year in the Summer Reading Program, visiting YMCAs, Boys and Girls Clubs, APG Child Development Centers, and parks and other day camps in the county. Children who take part in the Summer Reading Program keep track of the books they read throughout the summer, earning prizes along the way. We want to keep kids reading throughout their summer vacation, and the Rolling Reader becomes a fun way of motivating them to keep their minds active.

"This year’s theme was Reading Road Trip. Kids solved clues on the Rolling Reader that related to landmarks around the United States. As an English major and secondary education minor, I enjoyed learning what it takes to motivate kids to read. It was a unique opportunity to spread my passion for reading."

Space weather

"I participated in a summer research program called Research Experience for Undergraduates (REU) at Rensselaer Polytechnic Institute," Brock Russell ’09 said. "The program is supported by the National Science Foundation (NSF). My work involved computational physics research on nanostructures, and I worked with a graduate student to study silicon nanowires in an attempt to create a nanodiode.

"As devices become smaller, conventional methods of construction become infeasible. There is a limit to the size that conventional methods can reach. Therefore, there has been much research interest in nanotechnology, including nanowires. In my REU project, the nanowire was approximately 1.2 nm in diameter — only 8 Si atoms across at its widest point! I worked on optimizing the structure of four cells of this nanowire. I also added dopants (one phosphorus atom and one boron atom) in order to attempt to create a diode. After optimizing this structure, an external electric field was applied to determine if the charge carriers moved in response to it. If the charge carriers move when the field is applied in one direction but not in the other, the device will exhibit diode-like behavior, making it a nanodiode."

Collaborative research

The New Presidents Grant from the Andrew W. Mellon Foundation greatly expanded collaborative summer research opportunities for students and faculty both this year and last.

In one Mellon-funded project this past summer, mathematics and computer science major Megan Knauss ’09 became the first person to compute the best possible end game strategies for an ancient game called ‘duo,’ which mixes bluffing and dice and reaches back to the Incan empire. “This is a significant research accomplishment for an undergraduate, and worth celebrating,” said computer science Prof. Todd Neller, who worked closely with Knauss.

Also funded by the Mellon grant was research in Ireland by sociology and anthropology Prof. Deborah Rapuano and Jessica Fernandez ’08. They spent 30 days in County Clare interviewing tourists and tourism industry workers to compare the two groups’ conceptions of what it means to be Irish. For example, Fernandez said, tourists tend to sit passively and expect to be entertained by pub musicians, while local residents are more likely to sing along and otherwise interact. Rapuano and Fernandez are preparing a paper on their findings for publication.

Other Mellon-funded topics and researchers included:

• George W. Bush’s use of presidential signing statements, senior political science major William Lamb and political science Prof. Shirley Anne Warshaw;

• AIDS and HIV among the elderly, senior sociology and history major Stephanie Bonnes and sociology and anthropology Prof. Voon Chin Phua;

• The history of the Church of the Gesu in Philadelphia, junior history major Leo Vaccaro and history Prof. Magdalena Sanchez.

In addition, several other student-faculty research projects were under way this past summer, including:

• How do we “keep an eye” on something? Psychology major and neuroscience minor James Taylor ’09 and Prof. Kevin Wilson used a functional magnetic resonance imaging scanner to monitor brain activity as volunteers shifted their visual attention rapidly between objects or between areas on a computer screen. The National Science Foundation funded their work, which took place at the University of Pennsylvania in Philadelphia, through the Support of Mentors and Their Students in the Neurosciences program.

• A real-life literary mystery of the high seas was at the heart of senior English major Patrick Holleman’s work with English Prof. Temma Berg. The pair examined documents including letters written by 19th-century author Charlotte Lennox and her circle of acquaintances. Their goal was to determine whether Lennox, as a child, was aboard a ship bound from America to England when it was attacked by Spanish privateers. Berg and Holleman, of Portsmouth, R.I., also examined letters written by Bronte family members and their acquaintances as well as journal entries of Charles Clarke, who sailed around the world in the eighteenth century.

SLAC-er

"This summer I participated in a Science Undergraduate Laboratory Internship (SULI), sponsored by the U.S. Department of Energy,” Christene Lynch ’09 wrote. “I was at the Stanford Linear Accelerator Center (SLAC) in a program meant to encourage students to go into the field of science and do research. It gives students a chance to see what conducting research is like at a large research center like SLAC.

"The first week of the program was filled with talks from other researchers, which gave a general background on research at SLAC. They included a discussion of how accelerators work, the fundamentals of photon science, particle physics, and cosmology.

"We were also taken on tours around SLAC.

"I spent the rest of the summer working at the Kavli Institute for Particle Astrophysics and Cosmology (KIPAC), which is at SLAC. My research involved understanding and visualizing the lives of the first stars of the universe. These stars are important to study because they transformed the universe from the homogeneous structure it was before they formed to the complex structure it is now. I also studied the black holes formed when these stars die to
Understanding AIDS

How do AIDS and poverty interact?

Atlang Mompe ’10 and economics Prof. Eileen Stillwaggon sought answers in Botswana this past summer. Theirs was one of several student-faculty collaborative research projects supported by an Andrew W. Mellon Foundation grant.

“I have a passion to help my nation with this problem,” said Mompe, a citizen of Botswana. Behavior alone cannot explain HIV infection rates that are up to 25 times higher in sub-Saharan Africa than in wealthy nations, Stillwaggon said, especially when North Americans and Europeans exhibit higher rates of most risky sexual behaviors. “For nearly ten years now, I’ve been looking at the HIV epidemic as we would at any other infectious disease,” said Stillwaggon, author of AIDS and the Ecology of Poverty. “Why do poor people have higher rates of every disease? They live with bad water, poor housing, poor medical care, and no sanitation systems. In some areas, 100 percent of children are carrying parasitic worms. That has to have an effect on the immune system.”

Botswana was an excellent site for research because of its long commitment to providing anti-retroviral drugs to all who need them and the resulting wealth of information from some 850 medical facilities across the nation. Mompe played a crucial role in obtaining the data. Stillwaggon said. The political science major initiated contact with and earned the confidence of high health ministry officials, who made sure that the precious computer discs made it into her hands. The process took time, but Stillwaggon said Mompe made the most of it by working as an intern with the Botswana/Harvard Partnership, a program of the Harvard School of Public Health AIDS Initiative for HIV Research and Education.

“This project was a stepping stone for me,” said Mompe, who hopes to become a diplomat. “I made great connections for the future and I got to do something worthwhile for my country.” Mompe, who was active in raising AIDS awareness in high school, said she really connected with Stillwaggon last year in her first-year seminar “Understanding AIDS.” Being able to expand that connection into real research in her homeland “is one of the highlights of my Gettysburg experience so far,” Mompe said. “It was two worlds merging together.”

In addition to the support from the Mellon Foundation, Mompe and University program, which brings undergraduate students to the nation’s capital to study government, gain experience, and have exposure to political, business, and community leaders. In pursuing the internship, Alexander applied to not only Rangel’s office, but also presidential candidate Hilary Clinton’s office and the television station BET. He was accepted by all three.

Alexander chose to work with Rangel, however, as he had written a paper on Rangel when competing for a scholarship in high school. He didn’t win the scholarship, but developed a great admiration for the congressman from New York. The two finally met while Alexander was working in the office of New York City Councilmember Inez E. Dickens the summer after his first year at Gettysburg. Alexander remained impressed. So, when it came time to choose his current internship, “I knew where I wanted to be,” he said. “With him chairing the Ways and Means Committee, I knew this was going to be an exciting and interesting experience.”

Alexander’s days were spent drafting letters to constituents and Rangel’s fellow congressman and answering the phone, among other duties. Then there were the privileges that come with interning in the congressman’s office, including a visit by the ambassador to Haiti, who was accompanied by Haitian-born R&B singer Wyclef Jean. “I was so thrilled by their visit that I came in extra early and wore my best suit,” Alexander said with a grin.

"I made great connections for the future and I got to do something worthwhile for my country. It was two worlds merging together."