Petal High School senior Chondra Jordan spent this past summer working the lab of Southern Miss chemistry Professor Doug Masterson. (Photo by Tara Burcham)

Chondrea Jordan, a senior at Petal High School, never thought she would have the opportunity to get a head start on her future as a biology major while working a summer job.

She expected to spend the summer before her senior year at a dead-end job. Instead, Jordan spent her summer working in the laboratory of Associate Professor Douglas Masterson at The University of Southern Mississippi.

Jordan was one of three area high school students who recently completed a summer research experience in laboratories in the Department of Chemistry and Biochemistry at Southern Miss. Designed as Project SEED, the program partially funded through sponsorship from the American Chemical Society (ACS).

Project SEED falls in line with the university’s community outreach efforts and its ongoing mission to mentor and engage K-12 students.

Masterson says the mentoring project creates a unique one-on-one experience for students. “Local high schoolers get into our labs, learn from our professors, and help progress the research continuing in our university labs,” said Masterson.

Masterson noted that 2011 marked the third summer the program has been offered at Southern Miss, while providing opportunities for students to spend a summer conducting hands-on research with a professor in a laboratory setting.
Jordan says she was able to do things she never would have been able to accomplish without Project SEED. “I was able to work with the more advanced equipment, something I would not have gotten without it,” she said.

“I think that the things I learned about… molecules and enzymes are interesting. The equipment is cool and I worked with a lot of different lab machines,” said Jordan, while explaining that her summer experience included more than working with equipment. “This summer I wrote a lot of essays,” she said.

The ACS grant promotes the study of chemistry at the college level by giving high school students in their junior or senior year the unique opportunity to work alongside professionals for eight weeks in academic, industrial and federal research settings.

SEED students are assigned mentors who take a special interest in teaching their students everything from technical skills, life experiences, and wisdom, while offering continuing concern for the student’s development and education.

Jordan worked with mentor Maureen Smith and Masterson. Oak Grove High School student, Gajin Yoo, worked with mentor Associate Professor Wujian Miao and Oak Grove High School student Dakota Pendergrass was mentored by Associate Professor Paige Buchanan.

SEED students work 40 hours per week for 8-10 weeks as real-world employees in a professor’s laboratory and are awarded a $2,500 fellowship. The program allows continuing high school students who complete their first summer to return for a second summer of research with an additional award.

The ACS designed Project SEED for ambitious, motivated, and hard-working students with an academic record of success in high school science courses. Teacher recommendations were also included in the project criteria.

Masterson said Project SEED makes a difference in these students’ lives allowing them to focus on academics while earning much-needed pay.

“Chondrea is a perfect example of a high school student who needs to work during the summer,” he said. “The ACS SEED program pays them a stipend and allows them to work in a real research lab at Southern Miss before they come to college.”

Yoo, who plans to be a pharmacist, said project SEED allowed him to learn the basics of electrochemistry and learn how to make and test a working electrode.

“I wanted to get some experience in the lab and wanted to have a summer job,” he said. “I thought that working with electrical instruments would be interesting.”

A key component to Project SEED is keeping high school students engaged in the sciences, and the summer internship became Yoo’s first real job.
“Project SEED offered me the lab experience in high school that I probably couldn’t have gotten anywhere else where I live,” he said. “It will also prepare me more for college chemistry, and I learned a little more on college life.”

Pendergrass said she was drawn to the program because she has a strong interest in chemistry and Project SEED put her in a legitimate research environment.

“Project SEED offered me both valuable lab and research experience,” she said. “It also can help with logic skills, because you have to be able to think of why something happened the way it did and learn all the steps in how research in a lab will be done.”

Pendergrass, who is in the distinguished scholar program at Oak Grove, said without project SEED she “probably would be babysitting and hopefully holding a job.”

Like Goo, Pendergrass got her first taste of employment experience. “After project SEED, I hope to get more prepared for college and a future career through this program, as well as attain better people skills through working with lab partners whom I had never met,” she said.

Masterson said he hopes Project SEED will help get more students in to chemistry while increasing enrollment at Southern Miss. “I see it as a recruiting tool while also broadening people’s understanding of chemistry,” he said.

For more information about the Southern Miss SEED program, contact Masterson at 601.266.4714.