Two local high school students recently wrapped up their summer research experience in laboratories in the Department of Chemistry and Biochemistry at The University of Southern Mississippi with sponsorship from the American Chemical Society.

The grant, titled Project SEED, 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.

Daniel A. Hinton, of Petal, worked with Dr. Sabine Heinhorst, professor of biochemistry. Jonathan Broom of Poplarville, worked with Dr. Karl Wallace, assistant professor of chemistry. Hinton entered the chemistry and biochemistry program at Southern Miss as a freshman this fall and will continue his work with Dr. Heinhorst. Broom is a senior at Poplarville High School this fall.

Hinton and Broom spent their summer in Southern Miss biochemistry labs as part of the summer research program coordinated by Dr. Douglas Masterson, associate professor of chemistry and biochemistry.

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

Masterson said this is the second summer the program has been offered as Southern Miss, providing opportunities for students to spend a summer conducting hands-on research with a professor in their lab.

Administered by the American Chemical Society (ACS), 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 and teacher recommendation and meeting other SEED criteria.

Heinhorst said the program makes a difference in these students’ lives allowing them to focus on academics while earning much-needed pay.
“A number of high school students would normally have to find a job each summer to help pay for their college education. Usually, those jobs have nothing to do with their academic interests. The ACS SEED program, on the other hand, pays them a stipend and allows them to work in a real research lab at USM before they come to college.

Broom said he was drawn to project SEED and working with Dr. Wallace because he liked the idea of seeing what being in a lab is like. “It offered me an exciting paid summer position. I was able to see how chemistry learned in a book can be applied in a lab.

“It has given me a chance to see unique job opportunities in chemistry from working for a patent office to going to law school. It makes me think I am definitely going to enjoy being in college.

Hinton said project SEED allowed him to get more advanced lab experiences. “This is preparing me for my career path of going to graduate school, majoring in biochemistry. I am doing real research rather than just lab procedures. I am not only learning lab technique, but also producing real research results or data.

Of SEED, Wallace said the program gives exposure to high school students preparing them for their undergraduate study. “This gives him hands-on experience with exposure to working in the lab… getting your hand dirty.

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

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

Photographs above show SEED participants working in the chemistry department labs.