



Jessica Selby • Daily Times

Students enrolled in one of the newest electives at Coventry High School — biotechnology — were invited to participate in the Science and Math Initiative for Learning Enhancement (SMILE) program offered through the University of Rhode Island.

# Students all SMILEs over new course

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COVENTRY — While some students at Coventry High School are signing up for art or cooking classes to fill their elective requirements, there are a select few that are opting for a bit more challenging course — biotechnology.

The course is new at Coventry High School and is currently being offered as a half-semester elective. It is open to sophomores, juniors and seniors, but it is predominately a junior and senior course, according to the instructor of the class, Julie Pankowicz.

Pankowicz said students must have taken biology prior to signing up for the biotechnology course, which often makes it nearly impossible for students in their sophomore year to take the course.

**“We don’t need funding, we don’t need materials, we just need more students interested in taking the course.”**

Julie Pankowicz  
CHS biotechnology instructor

The students in the course participate in lab studies and learn about the history of biotech and its current applications.

It is a wonderful new opportunity for students, with great future advancement opportunities as well, Pankowicz said, but unfortunately, it is not receiving the recognition that it deserves.

This year, the class only had 10 students sign up. Pankowicz said there is ample room for more and she would love to see the slots filled

up.

The problem, she said, is that “people just don’t know what biotechnology is” and are often intimidated by the unknown.

“This is such a great opportunity for the kids and for some reason they are not getting on board,” Pankowicz said. “With everything happening these days with vaccinations, with HIV and STDs, this is the stuff that they should be learning about.

“Research shows that 80 percent of jobs in the next 10 years are going to be in biotechnology,” she said. “It is the hottest field right now, CCRI has a program now, but ask anyone in the industry and they will tell you, ‘the only thing we are missing is skilled workers.’ Well this class gives them the background they need.

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# Biotech club at home at SMILE

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“They are learning about embryonic stem cell research, universal healthcare — these are questions that are on the ballots now, these are things that they need to know about,” she said. “I just feel like if they have information about these things at the microscopic level then they will be leaving Coventry High School as better, more productive, educated citizens.”

Pankowicz said the students in the course start out their semester-long course learning about where biotechnology first started.

“The ancient Egyptians making beer, that is how it first started,” she said. “They were using living things like yeast and enzymes to make alcohol and that usually interests them right off the bat, but then we start to learn about the aseptic technique, how to work in a lab and not contaminate utensils and materials.

“They learn how to gown up, glove up and put on goggles,” she said. “They learn about the theory of HIV, how it started and how it spread, because if it weren’t for that, we wouldn’t have to worry about universal protections.

“Remember when dentists never wore gloves, now there are universal protections in place, but before they never existed,” she said. “Then we get into vaccinations and epidemiology, which is really in this day and age very important.

“People are getting the swine flu and often times they don’t

even know why, we talk about that, we also learn about the differences between the nasal spray and the vaccine and why the Amish don’t get vaccinated, the list goes on, but it is all very relevant and current topics that pertain to their everyday lives,” she said.

There are no text books for the course, nor is there a budget to purchase material needed for the class, Pankowicz said. Pankowicz gathers materials like simulated blood and kits provided to them by professional companies like Amgen at no charge.

“There are no text books, but it is so easy to get materials for the course because the topic is so current,” she said. “I keep the students reading. They are just reading whatever I have for resources to go with that particular lesson. Amgen has been wonderful, they give me what ever I want.

“We don’t need funding, we don’t need materials, we just need more students interested in taking the course,” she said. “My hope is that next year we would be able to offer it as a full year course, but I would be happy if we just had a bigger student body taking the course.”

This year, the students in the course were also invited to participate in a program known as SMILE, Science and Math Imitative for Learning Enhancement. The program is offered through the University of Rhode Island and typically targets its opportunities to schools with high minority populations,

Pankowicz said.

This year, however, Pankowicz said, Amgen sponsored the SMILE program so it was opened to more schools.

Pankowicz said she caught wind of the opportunity through the connection that she had previously made with representatives from Amgen and immediately jumped at the opportunity to take part in the program, which this year had a biotechnology theme.

Every year the theme for the SMILE program changes, so with this year’s theme being focused on biotechnology, she said, it just seemed perfect.

She opened the opportunity up to the students in her class and others and formed the Coventry High School Biotechnology club. Eighteen students got on board and they met for several weeks after school and on weekends to prepare for the SMILE event, which took place earlier this month. Amgen provided the students with access to the lab kit that they would be using at the SMILE event so that they could prepare for the event and at each club meeting the students said they worked on the kit to familiarize themselves with the tools, the terminology and the application.

When it came time to attend the program, the students said they were ready. They spent the weekend at URI participating in labs, working with other students and improving their knowledge of biotechnology.

Pankowicz said it was a once in a lifetime opportunity for the students.