

St. Louis Community College  
Center for Plant and Life Sciences (CPLS)  
Satellite campus at **Bio**Research and **De**velopment **G**rowth (BRDG) Park

CPLS might only occupy a small amount of space in the industry building that is BRDG Park, but it has a big mission! There are numerous activities happening from classes to high school interactions to industry partnerships, all with a modest full-time staff within 10,500 square feet of space. By being centrally located within the 39 North Innovation district, there is always something going on!

The primary focus has always been the Biotechnology program. This program was originally designed with input from industry as to which technical skills are essential for a bench technician. Industry involvement continues in the form of an advisory board, which meets several times per year and provides feedback and recommendations on curriculum and approves any changes to the program. Currently, the largest challenge is building recruitment into the program, as workforce is desperately needed within the St. Louis region, and our students are so well trained they are snatched up, many times before all their program requirements have been completed! There is also support for the Life Sciences Laboratory Assistant (LSLA) certificate, which has a growing high school dual credit involvement using the EMBARK (<https://stlcc.edu/admissions/college-credit-in-high-school/program-pathways.aspx>) pathway. EMBARK enables high school students to take college classes while they are still in high school, with the potential to graduate high school with a diploma and the LSLA certificate. The Parkway SPARK! Bioscience Program holds their meetings every day on site at CPLS throughout the normal school year.

Most of the professional staff members at CPLS have become certified Bioscience Core Skill Institute (BCSI) micro credential evaluators and testers! With the increased need for trained bioscience technicians in the area, this move was made to show competency even if a program certificate has not been completed. A second evaluator training will take place this month (February 13 and 14, 2024!) on site at CPLS and next door at the Danforth Center! In addition to our program students, there is much interest in this micro credential testing capabilities with many of the high school students completing the LSLA program, or with other external groups to which we provide training!



St. Louis Community College's Horticulture program is also supported at CPLS by providing laboratory spaces for a micropropagation course, with the instructor for this class from the Danforth Center, right next door! Also taught at CPLS is cannabis extraction within the new Certificate of Specialization in Cannabis and Hemp Production.

Outreach to local community school districts is another important piece of the CPLS mission. With a dedicated outreach specialist, science activities can take place at the school during students' normal class meeting time, or in the form of a workshop on site at CPLS. There are diverse options for these science activities, as well as the length of time required to complete them. Typically, our outreach during the school year is focused on the high school level, but there are always exceptions to every rule! We are also happy to host some high school interns in the spring semester for 2024!

Summer is always an active time on the outreach schedule. Plans are well underway for our weeklong workshops. These lab-based activities include middle school, high school, and teacher trainings that all take place for one week and all are free to participants. While we work with local area schools to provide high school internship opportunities in our laboratory spaces, summer is especially exciting with Rockwood school district Project Interface students. These high school juniors and seniors will spend 6-8 weeks on site performing actual research on several ongoing projects and will present the results of their work at the end of the summer.

Another unusual aspect to our CPLS campus is the BioBench Contract Research portion. Our campus has over two million dollars in high-end, highly technical equipment to support the biotechnology training program. This list continuously shifts and grows. It just makes sense that students should be trained on equipment they will see in an industry laboratory space. By establishing BioBench, this very atypical community college arrangement can allow legal contracts such that local industry and start up companies can use our laboratory spaces and our equipment when not in use for classes. This provides much needed support for companies, and for those with only 1 or 2 people, having access to equipment means they do not have to purchase it themselves when on a very tight budget. This also provides subtle industry interactions with our students, showing them how industry interacts with each other, and demonstrating professional behavior and dress.

The newest activities taking place at CPLS is our customized training programs. The first of these, **Biomanufacturing, Research and Technical Training (B.R.a.T.T.)**, was established initially in 2019. Since that time, we have worked closely with ThermoFisher training more than 200 of its existing and new employees. This program involves internal collaboration with our STLCC Workforce Solutions Group and CPLS full-time staff members. This non-credit weeklong 40-hour training was developed with CPLS, ThermoFisher, and BioSTL. Initially, the goal was to provide some basic laboratory skills training and a high-level overview of the entire manufacturing process to existing ThermoFisher employees. This has evolved over the last year to more basic training as part of ThermoFisher's onboarding of new employees and is scheduled based on the new employee orientation schedule at ThermoFisher. The time is divided between classroom lecture and laboratory activities with plenty of informal interaction promoting questions and solidifying understanding of the detailed material. This interactive course will prepare industry employees with knowledge of methodologies needed to develop and manufacture biological products. Topics include upstream bioprocessing, downstream processing, GMP practices, lab equipment like chromatography columns and bioreactors, and functional roles in the company. B.R.a.T.T. is currently offered about once a month exclusively with ThermoFisher, but we are expanding this highly sought after training to other companies in the second quarter of 2024! We are excited to engage with other industry partners of our region and to share our STLCC district wide ***Innovation of the Year 2023*** (see page here for more information! <https://stlcc.edu/news/2023/innovation.aspx>)!!

Video about B.R.a.T.T.

<https://www.youtube.com/watch?v=4YgeNo0xHKU>

BIOSTL is an economic development entity with which we regularly engage! Late in 2023, we agreed to pilot some short bootcamps targeting the five essential BCSI skills. Initially we agreed to 12-15 participants, with a total of three bootcamps, each being a ½ day. The response from the group externing with BioSTL was overwhelming, with all 50 of their externs interested in the bootcamps and in pursuing micro credentials! We expanded the pilot to include all these enthusiastic learners, with the final bootcamps happening next month! Then in April, we hope to have a large wave of micro credentials individuals, ready to seek employment and provide support to our robust industry of the region!

We are exploring other types of customized training to include a variety of laboratory topics to serve other industry and perhaps some of the start up community as professional development. If you think you might be interested in a discussion around customized training for your company, or if you might be willing to complete a survey around training topics, please just reach out to the Director of CPLS, Elizabeth Boedeker ([eboedeker@stlcc.edu](mailto:eboedeker@stlcc.edu)).

Video about B.R.a.T.T.

<https://www.youtube.com/watch?v=4YgeNo0xHKU>

For any questions related to Center for Plant and Life Sciences activities, please email Elizabeth Boedeker ([eboedeker@stlcc.edu](mailto:eboedeker@stlcc.edu))

For more information regarding opportunities for outreach with our outreach specialist, please contact Leanne Hesley ([lgrant22@stlcc.edu](mailto:lgrant22@stlcc.edu))

For more information on the Center for Plant and Life Sciences campus, please follow this link:

<https://stlcc.edu/CPLS>

For more information on the biotechnology program, please follow this link:

<https://stlcc.edu/biotechnology>

For more information on the Horticulture program, please follow this link:

<https://stlcc.edu/horticulture>

For more information on the LSLA certificate, please follow this link:

<https://stlcc.edu/LSLA>