

Spring 2018 Program Advisory Meeting Minutes

Program: Biotechnology

April 5, 2018

Location of Meeting: Main Dining Area & Room D010 at Essex Technical High School

Guest Attendees:

Arllyssa LaPorte - Essex Tech (Facilitator, Instructor)

Deb O'Reilly - Essex Tech (Instructor)

Attendees:

Laura Rubin - NSCC (Chair)

Gene Wong - Endicott College

Brianne Hantzis - Industry Rep. Curis Inc.

Kalomira Kalaitzis - VWR Sales Rep

Jacob Alden - Salem State (soon to be grad) Essex Tech Alum - New Member

Alana Arangio - Industry Rep. Sanofi

Anna Miller - Student, Essex Tech (class of 2018)

Laisha Guity - Student, Essex Tech (class of 2020)

Agenda Items:

- **Attendance sign in sheet** - was circulated and signed by all.
- **Fall 2017 PAC Meeting Minutes** - were read and accepted.
- **Spreadsheet form of contact information** - was circulated and corrections were made.
- **Quality Assessment Tool** - was circulated and discussed, members checked off what applied to the best of their knowledge. Sheets were collected in red folder
- **Review Program Budget & Equipment Needs** - We discussed that one area that our program is lacking is in chromatography resources, we only do the small gravity labs to introduce the students to each method (size exclusion, HIC, Ion exchange, affinity). In biotech industry for most pipelines some type of protein purification is an end step, so it is a big portion of the industry. An HPLC unit may be greater than our need, and having one instrument with 17 students wouldn't be very effective as a teaching tool, however an inexpensive or used FPLC would be a nice addition to building our curriculum and skill sets. There could even be the possibility of borrowing one, if it is not cost effective. Another possible useful piece of equipment would be an automated cell counter, for students to learn to use to perform cell counts and determine cell density for seeding. The manual counting method is rarely used anymore - and a counter could also be useful for students to check their manual counts for accuracy. Brianne had some suggested examples and found some pricing data - new without discount they range from \$2700 - 5,000. Kalomira suggested that we could apply for equipment grants through them - there is a Toshiba grant (May 1) for 10,000.

- **Update Program Curriculum** - Discussed skill sets that would be beneficial or advantageous in the current industry. Biostatistics and bioinformatics knowledge would be a big advantage. Having the sequencer (or smaller newer model) to generate data that can be manipulated by students would be a good start. Some knowledge of basic programming macros may also be a benefit. Much of the software is custom or out of box, so being able to use software effectively is a good skill to have. Sometimes training in industry doesn't happen - some working knowledge would be helpful. Might be a good idea to see what local companies or software developers are nearby to establish connections with. Learning programming language like Python as an elective could be useful. Other programs that are frequently used like study log or study director would be good to learn. Could only benefit if it could be fit in. Adding animal care and animal handling would also be wise to add to curriculum as there is a lot of need for animal technicians and RAs with animal handling experience, age limitations would not be an issue. Many animal techs need only have a high school diploma.
- **Discuss and continue to develop internships, co-op placement, and collaborative industry partnerships** - MSMR is having a lab animal symposium on April 27. Can contact Lynne Walsh from MSMR to have an instructor and 2-3 students attend at park plaza in Boston. MSMR may be able to open door to connections for internships and coops. Laura Rubin forwarded information for a seminar for increasing internship placement for students. We did plan and invite companies for an open house day at Essex tech but no one showed up for it. Members suggested we may get better turnout at an evening event. We did connect with Novartis's outreach program and after speaking with them it seemed their program was too simple for our students and they wouldn't get much out of it. We have attended trips at Cell signalling and our students have applied for internships there. We also are working with a rep from Charles river, in stages of planning a trip. We are having discussions with Maine Marine about a possible 2 night trip. Jacklyn Brooks from Harvard would like to come and speak to our classes about GMOs (papaya). NSIV (North shore innovations) may do better with internship placement

Donations

The committee was informed that Empire Auto Parts has agreed to donate any damaged sheet metal parts on a regular basis. This will help give our students additional metal straightening experiences without the need for as many customer vehicles which require such a fast turnover. The committee was also informed about the upcoming Essex tech Auto Expo scheduled for May 19th. All committee members took home flyers to help distribute to their contacts.

Adjournment

There being no other items on the agenda or any others items presented to the board to be discussed all members were in favor of the meeting adjournment at 8:30 pm.

Respectfully Submitted,

Ron Trottier

Keith Nieberle

