



Engineering / Engineering Technology Advisory Meeting Minutes

September 19, 2019 | 5:30 | Room 1687

Meeting Minutes

LPC Mission Statement

Las Positas College is an inclusive learning-centered institution providing educational opportunities and support for completion of students' transfer, degree, basic skills, career-technical, and retraining goals.

LPC Planning Priorities

- ❖ Implement the integration of all ACCJC standards throughout campus structure and processes.
- ❖ Establish a knowledge base and an appreciation for equity; create a sense of urgency about moving toward equity; institutionalize equity in decision-making, assessment, and accountability; and build capacity to resolve inequities.
- ❖ Increase student success and completion through change in college practices and processes: coordinating needed academic support, removing barriers, and supporting focused professional development across the campus.

Engineering Advisory Board

Members, present:

Keith Level, LPC
Carlo De La Cruz, Lam
Tri Do, Lam
Andrew Lozano, LPC
Sarah Holtzclaw, Tri Valley Career Ctr.
Nan Ho, LPC
Kristy Woods, LPC
Mark Newton, LPC
Ray Souza, LLNL
Jean O'Neil-Opipari, LPC
Todd Steffan, LPC
Beth McCormick, LLNL
Randy Pico, LLNL
Tamia Brown, Al. Co. Work Force Dev.
Jen Decker, LPC

1. Call to Order 5:35 by Keith Level
2. Review of Agenda
3. Industry Updates
 - Training and Hiring Needs, Emerging Trends
 - Lam needs to hire 100 assemblers in the next two quarters, 30 to be filled by October
 - Full time, 12 hour shifts 3 days/week 5:45 – 6:15 and 6:00 – 6:00
 - Have had internships in the last few years, interns from LPC have worked out well
 - Tesla laying off
 - LLNL design/draft, Electronic/Mechanical Technician shortage, full time, can mentor
 - Need people with good mechanical skills, can take apart and put things back together
 - Operating CAD, Pro E, Solidworks
 - Engineering Technicians jack of all trades, design, strong CAD skills, machining, documentation important, good mechanical skills
 - May have developed CAD skills in high school
 - Mechanical aptitude, improve design by taking things apart
 - Tool and Die maker transitioned well, machinists, transitional areas. Don't have a lot of early career folks with strong mechanical skills
 - Older workforce willing to mentor, specialized design, make mistakes
 - LPC can help with better GD&T
 - Northern CA design hub
 - Leverage auto mechanics program, SNAP, tooling and torque, James Weston runs all those courses (email James)
 - Invite auto program to advisory
 - LLNL has hired students with AA/AS Design/Draft
 - Recommendation to explore Design/Draft, stackable certificates and degrees
 - Campus wide enrollment is down about 4%, but STEM is holding steady

- **Motion to recommend LPC explore Design/Drafting curriculum (Randy Pico)**
 - **Second, Beth McCormick**
 - **Motion Carries**
 - Solidworks or Creole Design (expensive, gold)
 - Keith to talk to industry partners to explore change in curriculum, add a course
 - Create non-credit courses towards a certificate possible
 - Scott Miner may create tools course, input from industry
 - Worn out assemblies at LLNL than can be taken apart and put back together, can LPC get access to these? Learn process with spent assemblies.
 - Courses for math prep now that there is no math placement test are given for credit. May also take classes for non-credit. Still rigorous. State approved curriculum
 - Non-credit course completion indicated that standard has been mastered
 - WIB can support development of certificate program
 - Explanation of credit vs non-credit. Curriculum development/approval just as rigorous for non-credit course
 - Hard for Engineers to find employment if they have not mechanical skills (UC more theoretical)
 - Tooling class can be non-credit
 - Certificate from Community College is meaningful even if it's not for credit
 - Non-credit can only be offered for certain courses (vocational)
 - Develop curriculum for career development/Career advancement
 - Courses need to be held at night for those students
 - LLNL would look favorably at certification regardless of it being non-credit
- **Motion to develop curriculum for Mechanical Aptitude, Assembly and Tools Certificate (credit/non-credit) (Tamia Brown)**
 - **Second, Beth McCormick**
 - **Motion carries**
 - While curriculum is being explored and developed (12 mos)
 - Do a tool box for current students, through community ed?
 - Like to know what skills industry is looking for so that tool box can be developed.
 - Vet experience in motor pool adapts very well to Engineering Tech.
 - Students and workforce benefit from increased knowledge
 - WIB and Academy training designed to help keep up with technology
 - Students take advantage of computer classes, but not mechanics. Students missing out on traditional mechanics, some people are drawn to mechanics

4. Faculty Report

- Keith retiring in about 3 years
 - Review of classes
 - Engineering 50, not part of degree yet, 2 labs and 2 additional hours of lecture, SP20 or F20
 - Financial aid cannot be used for course that is not part of a degree. This may cause low enrollment for Engineering 50 if it is offered in the Spring. Should it be offered?

- Can you take Engr 50 or Engr 37? Would it be considered the same by industry?
- Would LLNL encourage employees to come back and take Engineering 50?
- Graduates of LPC ET program said that wished they had more experience with electro mechanical skills before they started working
- Will taking class impact employee grade, wages?
- Rolling out as separate purely one course, not as part of a degree, offer at night for skill enhancement for working Engineering Techs
- Engineering 50 more hands on not as theoretical
- Fill a gap in knowledge of working Engineering Techs
- If a degree is written for next year, it would be possible to count Engineering 50 taken in the spring toward the degree.
- LLNL employees probably won't send a significant number of students to Engineering 50
- Funding Formula
 - Any certificates or degrees can count towards new funding formula
 - Math does not count toward new funding formula until college level is achieved
 - Only the highest certificate earned count toward the funding formula
 - \$21.35/hour living wage for single adult \$84K/year considered low income in Alameda Co.
- Enrollment
 - Lowest enrolled class Engineering 25, intro classes large. Engineering graphics max out at 24, circuits is weeder class(?)
 - Statics and circuits offered every semester to meet student needs. Circuits being offered in the spring
 - 5 Engineering Degrees that are going to be created (AS Engineering, Civil, Mechanical, Electrical, Computer) transferable
 - Hadn't been a priority because an AS took so long with the major classes and GE
 - Certificate also eventually available for Engineering, Civil, Mechanical, Electrical, Computer
 - Degree will require all the GE, 60 is required for AS, but will be higher for Engineering AS
 - Some courses may need to be created, depending on CSU/UC requirements
 - CSU/UC developed pathways, LPC probably won't have to create too many new courses, but repackage existing courses
 - ET with emphasis in mechanical or electrical. Difference is Engineering 37 or Engineering 50
 - The Lab would not lab consider the AS with a difference of one course for a specialty. LPC needs to develop different courses to compliment Engineering 50 and create a new degree ET, Electrical emphasis.
 - Can you currently swap out course(s) to include Engineering 37 and 50.
 - Not enough exposure in welding in ET degree to be a welder at the lab. Good exposure, but not enough.
 - Lam does not need welding
 - Swap welding for another course.
 - Machining is good
 - Welding low unit so may need to substitute more than one class to replace with Engineering 50
 - Physics needs to stay
 - Electronics in place of welding still call the degree the same thing
 - **Beth McCormick motions to let student choose WLDT 63/79 or Engineering 50**
 - **Tri Do seconds motion**

- **Motion carries**
 - Welding in ET won't make them a welder, but is good exposure. No Engineering Tech grads at the Lab use welding.
 - Batch classes together to create another ET welding certificate.
5. **Adjournment 7:17**
6. **Next Regular Meeting:** Monday, April 20, 5:30 to 7:00