

Clean Energy Technology & Entrepreneurship
Advisory Committee Meeting Minutes
Shoreline Community College
Cedar Building, 6000, Room #6204 and Zoom
10:30am-12:00pm
6/14/2024

In Attendance:

Will MacArthur – A & R Solar
David Gordon – PSEJACT
Gus Williams – City of Seattle
Julie Wilcox – Puget Sound Solar
Lindsey Virdeh – Shoreline Instructor (CET)
Lauren Hadley – Shoreline Director of Workforce
Marina Espinozza-Tello – Shoreline STEM Navigator
Amber Avery-Graff – Shoreline Instructor (Automotive)
Kelly Griffin – Shoreline STEM Secretary (Notetaker)

Lindsey welcomed everybody and said she would be running the meeting and welcomes a committee chair for future meetings. She went over the agenda and said a follow up email would go out to get a quorum on approving previous minutes from 3/8/24.

Program updates from Lindsey: Four graduates are anticipated; Sarah Ali will start as Solar instructor (fall quarter); some curriculum has been purchased; City of Seattle grant was not awarded to Shoreline but now work is being done on an NSF grant; the “tools library” did not go through due to lack of CET budget to cover insurance; plan now is to only purchase tools needed for the NRG 162 and 163 (Large Building Assessment, and Large Building Energy Methods & Measurements); work is being done on recruitment and a social media platform over the summer as well as course work with Krishnan (Perkins funded); Lindsey is excited the college will host the Solar Washington Summit in October; Lindsey put out an “ask” for volunteers to help on a panel for mock interviews in her NRG 202 (Career Seminar) class. If you are willing, please email her. For fall quarter she’s continuing to update Sketchup to include Helioscope.

A couple of “action” items regarding changes to NRG 104 (Buildings in Context) were discussed to help remove barriers students might have for entering the program. Items were tabled for additional review and a vote early next year after Lindsey talks with the Dean and Curriculum Committee. Three committee members were supportive of NRG 120 (Solar Electric Design and Applications) having an additional hour to the existing five-hour contact portion so that it includes a total of six hours of contact time.

Following up on discussion from a previous meeting, Lindsey walked through details about stackable certificates:

Solar Design – 25 credits

NRG 101 Intro to Renewable NRG (5 units)
NRG 103 Intro to Battery Technology (5 units), also Auto

NRG 120 Solar Electric Design and Applications (5 units)
NRG 223 Battery Based PV System Design (5 units)
Elective choice: 104 Buildings in Context (5 units); 180 Blueprint Reading (5 units); or
225 Intro to SketchUp (5 units)
Note: NRG 105 Electricity and Jobsite Safety (5 units) will be removed from the program
Planning Guide within Curriculog since it is no longer taught.

Julie – suggested 225 as a requirement, not an elective (or 104 or something showing 3-D world).

Will – gave idea of a module on 1-line, maybe in 120 class.

Dave – asked about 220 (Advanced PV Design) – Lindsey said 220 is sunseting to favor 223 (Battery Based PV System Design) which is better aligned with curriculum.

Energy Modeling – 32 credits (Market to companies whose employees need to upskill.)

NRG 101 Intro to Renewable Energy (5 units)
NRG 102 Calculations for Energy Technologies (4 units)
NRG 180 Building Systems and Blueprint Reading (5 units)
NRG 162 Large Building Assessment: Building Technology (4 units)
NRG 163 Large Building Energy: Methods & Measurements (4 units)
NRG 200 Zero Energy Building Design (5 units)
Elective choice NRG 181 Virtual Design for Energy Technologies (5 units)
or new Energy Codes class (that is being created)

Discussion:

Some of the thoughts and discussion included the length of time to get through program (maybe a year to a year and a half depending on course sequencing); options regarding math and possibility to test out but with math needs met for the math heavy 162 class; ideas around Friday/Saturday offerings of classes (similar to South Seattle model) to be accessible to those who are within industry (start at 3:30pm Friday) or offerings online with option to come to campus once a month. Lindsey will email other committee members and bring it up for discussion again in the fall.

NSF Grant Proposal

Lindsey and Amber Avery-Graff (Automotive Department) are working on an NSF Grant proposal (see the emailed handout). The project goal of the grant is to grow the collaboration between the Clean Energy and Entrepreneurship and Automotive programs to address the integration of energy storage in both industries. There is a need for industry partners to help. Amber mentioned collaboration but also growing both sides in each industry. There would be some overlap in programs and then students can split off into their specialty. Lindsey talked with the STEM Dean Dalila Paredes about the Clean Energy program and ideas of adding something flashy to the program were brought up like drones as part of the demonstrations lab in alignment of EV stations. The committee gave input about curriculum being hands on; demo or a roof on the ground (no electrical); output rates built in (just to look at); if batteries can be off grid; difficulty of off grid in losing charge; and licensing requirements for hook up.

Lindsey mentioned the need for letters of industry support and asked if there are other industry partners with technology expertise that could be on an advisory panel for the grant. Three expressed interest and Lindsey will reach out for letters of support. During the discussion Julie mentioned recently hiring a 2018 graduate of the Shoreline CET program.

Changes to CET Planning Guide (discussion)

Within the CET Planning Guide the requirements section (40 or 45 credits), had a certificate offering called Sustainable Business through the Business Division to include three courses that are now sunsetting (Business 217, 218, 219). Lindsey pulled up the Business Division information page on the Shoreline website and asked for input on the idea of adding in sales and marketing classes as replacement classes. None of the classes are solar specific or clean energy specific but the idea is that the skills that students gain would be applicable to working for a solar company after getting their CET certificate or degree. Classes discussed:

- BUS 120 Principles of Marketing
- BUS 220 Advertising and Sales Promotion
- BUS 225 Relationship Marketing

Julie – expressed an interest in BUS 180, Project Management as one of the classes (since the other three seem similar).

Lauren – mentioned that the Business Program offers a 3-course series in which the third course is applied. An idea could be to mirror it with another class and possibly test for the certificate for industry specific project management.

Lindsey – will structure an email with options and get the approval over email.

Lindsey thanked everybody for their comments and conversation, mentioned the need for a committee chair, and the meeting adjourned at noon.