



ANTELOPE VALLEY COLLEGE

Engineering and Drafting Advisory Meeting

Date & Time: 24 January 2012; 5:00 pm

Location: Antelope Valley College, Lancaster Campus, LH 106

Participants/Attendees:

Name	Title	Affiliation
Buddy Bocoek	Drafting Instructor	AVC
Michael Willett, MSME, PE	Engineer; Drafting Instructor	Rio Tinto Minerals; AVC
Ken Santarelli	Director CSULB-AV, Engineering	CSULB
Steve Brown	Operations Manager, Engineering Instructor	Edwards AFB; AVC
Jose Alvarado	Operations Manager, Engineering Instructor	Edwards AFB; AVC
Ismail Ismail	Engineering and Chemistry Instructor	AVC
Les Uhazy	Dean Math, Science, Engineering Division	AVC
Christos Valiotis	Director STEM grant; Physics and Engineering Instructor	AVC
Victor Laxamana	Drafting Instructor	AVC
Jessica Harper	Science Department Chair; Chemistry Instructor	AVC
*(Larry Jernigan, PLS		All Valley Surveying)
*(David Larson	Vice President	CCL Engineering)

\*Were scheduled to attend, but did not

Recommended Topics:

**Program Updates:** The certificates and degrees in Drafting and Engineering need revision.

- Should a class in hand drafting (ENGR 115, Basic Engineering Drawing) still be required? (Consensus: No longer used in industry. However, incorporating 3-4 modules of hand-drawing into a CAD class would be beneficial to students as they are learning perspective. )
- 2-D AutoCAD is also no longer needed EXCEPT for architecture. While Rivet (3-D CAD program) is gaining some acceptance in architecture, plan approval offices and construction crews require and rely on the 2-D drawings.
- DRFT 250, Introduction to 3D CAD Drafting, is listed as a 2-unit class. Perhaps this could be increased to 3-units and incorporate modules of hand drawing or 2D AutoCAD if the other courses are removed from the program.
- ENGR 220 (Strength of Materials) was obsoleted because it did not transfer to most four-year institutions. However, this course was a requirement for AVC’s Associate Degree in Engineering. The degree program needs to be changed. Could we revise the degree to require ENGR 185 (Digital Logic and Design) instead of ENGR 220? Need to find out how that would transfer. Need to compare to Transfer Model Curriculum.



Program Outcomes: For example, enrollment, completers, % passing licensure/credentialing exams

**Curriculum Updates and Input from Industry:**

- When ENGR 230 is offered in the summer, there is not enough time to cover all of the topics, AC gets especially shorted. But because, differential equations must be taken as a prerequisite or concurrently, it may be hard to get enough students during a fall or spring semester. Why not try it?
- Intermediate 2-D AutoCAD is DRFT 150, but Intro to 2-D AutoCAD is ENGR 120. Consider renumbering to DRFT number.
- Topics in ENGR 110 could be more flexible. As “Engineering Orientation and Basic Skills”, it should be able to include robotics, biomed, other areas. Proposed: why not do a survey of student interest?
- Solidworks and Inventor are the two main 3-D CAD programs used in industry. Which should AVC teach? Solidworks is more likely to be used in industry, but Inventor is much less expensive for students. Both are similar enough that someone familiar with one program could quickly learn the other. A Solidworks site license is currently available at AVC. Decision made to use this program.

Comments from Industry Participants/Open Forum:

Suggested Topics:

**Future plans:**

- Transfer Model Curriculum (per SB 1440) for Engineering still being discussed. Kate Disney is state lead. A number of models have been proposed with units ranging from 128 to 134. This program will most likely require exemption from the limit of 120 units. TMC concept does not allow for this right now. It was noted that students in lower division of 4-year degree institutions only need 3-D classes. Transfer students would not get credit for Intro to 2-D and Intermediate 2-D AutoCAD.
- Use of CAD is growing in fields such as GIS, Interior design, and theater. Having received inquiries about course offerings, pertinent to these fields, the Dean recommends exploring the idea of a “Survey of AutoCAD” class that would be applicable to these other areas as well as engineering.
- AVC was recently awarded two grants that pertain to engineering curriculum. Outreach, such as “Pathways to Engineering” open house events with CSULB-AV, are one of the funded activities in the grant.

**Request for ideas for additional resources:**

What opportunities are there for student Interns? Successful program with Tybrin is example for other companies and community partners.

Other items that are required by accrediting/approval/regulatory bodies: