

ANNUAL PROGRAM REVIEW SUMMARY for Engineering 07-08

Full Review Due: 13-14

| MISSION: Does program meet the District's mission and established core competencies? YES. Does program reflect the District's diversity? YES. | Status | | | | | |
|--|--------|-------|-------|-------|-------|-------|
| | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 |
| Current Recommendations | | | | | | |
| a) List the Engineering Program Certificates in the College Catalog and update periodically to keep current | I | | | | | |
| b) List appropriate cross referencing in the College Catalog and class schedule | I | | | | | |
| c) Utilize marketing and recruitment techniques to attract students in our district and to ensure that the District's diversity continues to be represented in the Engineering Program. (See Core Indicators, Females only represent 30 to 13% of enrollment). | I | | | | | |
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| New Recommendations | | | | | | |
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| NEED: How is program addressing needs based on labor market data, enrollment, articulation, advisory committee, regional agreements, etc.? | Status | | | | | |
|--|--------|-------|-------|-------|-------|-------|
| | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 |
| Current Recommendations | | | | | | |
| a) Evaluate and revise specific class content in order to better prepare students for employment or transfer | I | | | | | |
| b) Work with Counseling and the Transfer Center to obtain an extensive understanding of the Engineering Program | I | | | | | |
| c) Review offerings during the day and evening as student demand increases | C | | | | | |

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| d) Initiate contact with the local business community and the Advisory Committee to provide input that will enhance the Engineering Program | C | | | | | |
| e) Review and enhance the Engineering major for the Associate of Science degree (AS). Revise Engineering classes to facilitate expansion of the program and meet the demands of the workplace | I | | | | | |
| f) Initiate contact with the local business community and the Advisory Committee to provide input that will enhance the Engineering Program | C | | | | | |
| g) Provide additional promotion of the Engineering Program via engineering student ambassadors. Ambassadors should have the necessary communication skills | I | | | | | |
| New Recommendations | | | | | | |
| Move I.T. into its own discipline and revise the certificate. Write new courses for I.T. Certificate | | | | | | |

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|---|---------------|-------|-------|-------|-------|-------|
| QUALITY: Are lec/lab unit values appropriate? Have the course outlines been reviewed/updated regularly? Are disciplines appropriate? Is faculty development adequate? Does program support State and District emphasis on critical thinking, problem solving and written expression? Does program meet stated objectives in the form of SLOs? Are course pre-requisites and co-requisites validated? | Status | | | | | |
| | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 |
| Current Recommendations | | | | | | |
| a) Maintain and expand the use of the Advisory Committee in setting the direction of the Engineering Program | C | | | | | |
| b) Work with Advisory Committee to establish a wider range of internships and job opportunities | C | | | | | |
| c) Work with the Citrus College Transfer Center to help students who seek to transfer to either public or private universities | I | | | | | |
| d) Develop, revise, and integrate Student Learning Outcomes into each Engineering Program course outline and syllabus according to the schedule stated in this document | I | | | | | |
| e) Engineering Program class descriptions should be reviewed and modified as | C | | | | | |

Status key: C: Completed I: Incomplete N/A: No longer applicable P: Pending (not yet undertaken)

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| needed | | | | | | |
| f) ENGR 100 will be revised and made part of a survey course and be added to CAD Management Certificate in the near future | I | | | | | |
| g) ENGR 104 will be revised with new SLOs. More students are anticipated because of the new CAD Management Certificate. ENGR 104 will be required for 3 certificates | I | | | | | |
| h) ENGR 136 Dynamics will be added to the curriculum | I | | | | | |
| i) Seek expansion of articulation agreements with four year institutions. The major Universities to focus on are Cal Poly, Cal State LA, Cal State Fullerton, Berkley and UCLA | I | | | | | |
| j) Articulate with additional local high schools | C | | | | | |
| k) Review Engineering Program syllabi, course outlines, and course prerequisites, and the long-range plan in respect to State and District requirements | C | | | | | |
| New Recommendations | | | | | | |
| Purchase updated equipment for I.T. courses | | | | | | |

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| FEASIBILITY: Are facilities, equipment, and library resources adequate? Are evening programs and services adequate? Are course offerings frequent enough for students to make adequate progress in both day and evening programs? Does the program have adequate communication with & support from Counseling? | Status | | | | | |
| | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 |

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| Current Recommendations | | | | | | |
| a) Integrate state-of-the-art technology within the curriculum. Both software and hardware must be maintained at or above industry standards | I | | | | | |
| b) Provide access to the Citrus College web site for online student portfolio presentation | I | | | | | |
| c) Increase utilization of technology in Engineering Program courses. Both software and hardware must be maintained at or above industry | C | | | | | |

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standards. The cost per year is approximately \$15,000.00 for software.
However, the costs are shared with Drafting Technology

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| New Recommendations | | | | | | |
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| COMPLIANCE: Do course requisites meet Federal, State & District requirements? Do the course outlines meet state, district & federal regulations for content? Do vocational programs have regular advisory meetings? | Status | | | | | |
|--|--------|-------|-------|-------|-------|-------|
| | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 |
| Current Recommendations | | | | | | |
| Review the Engineering Program by faculty and the Advisory Committee to ensure relevancy to the needs of the business world and articulation with California State University, University of California, and private universities. | C | | | | | |
| New Recommendations | | | | | | |
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| PROGRAM SLOs | Cycle Stage | | | | | |
|--|-------------|-------|-------|-------|-------|-------|
| | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 |
| 1. Communication | | | | | | |
| Engineering students will use proper vocabulary and notation when describing Engineering concepts. They will be able to communicate these concepts to others both verbally and in written form. They will be able to critically analyze Engineering information found in print, visual or online media such as engineering technical and non-technical books, journals, articles, web pages, television, and film. | C | | | | | |
| 2. Computation | | | | | | |
| Engineering students will apply Engineering concepts in mathematical form using the appropriate computational skills for the course. This may include numeric calculation using simple algebra, calculus with analytic geometry, graphical analysis, the evaluation of mathematical expressions and engineering technical drawings. | C | | | | | |

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| 3. Creative, Critical, and Analytical Thinking | | | | | | |
| <p>Engineering students will develop an understanding of and curiosity toward engineering through problem solving, decision making, and critical thinking skills. Engineering students will develop an understanding of interactions in the engineering world as evidenced by successful completion of engineering program courses.</p> | C | | | | | |
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| 4. Community/Global Consciousness and Responsibility | | | | | | |
| <p>Engineering students will think logically and coherently about engineering issues and gain an appreciation for the global social and political impact of engineering endeavors. By working together in lab and/or on projects, students develop interpersonal skills and respect for others. Through team learning, they will acquire an understanding for the need of Lifelong Learning.</p> | C | | | | | |
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|--|-------------|-------|-------|-------|-------|-------|
| | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 |
| 5. Technology/information competency | | | | | | |
| Engineering students will be adept at using computers for word processing, data analysis, tutorials, simulations and/or web-based research as appropriate for each course. For laboratory courses, students will demonstrate fundamental aptitudes in the proper use of mechanical and/or electrical devices. Specific skills such as Networking, AutoCAD and MAYA and other applications will be used in appropriate courses. | C | | | | | |
| 6. Discipline/Subject area specific content material | | | | | | |
| Engineering students will demonstrate an understanding of the fundamental principles of Engineering at levels appropriate to each course. Students will distinguish between engineering technical and non-technical questions and methods and understand Engineering as a process. Students will understand the complex problems involved in valid technology and engineering. | C | | | | | |