

ePIE Report - 4 Column

Mt. San Antonio College

Electronics & Computer Technology

Mt. SAC Mission Statement: The mission of Mt. San Antonio College is to welcome all students and to support them in achieving their personal, educational, and career goals in an environment of academic excellence.

- 2009-10 External Conditions:**
1. Economic climate: Economic downturn has brought increased enrollments across the board.
 2. Electrician training: Increased community pressure for electrician trainee and journeyman electrician recertification courses as a result of regular enforcement of state regulations implemented in the late 1990s.
 3. "Green" technologies: Upswing in interest in "green" technologies, partly driven by LA county requirements for installer certification.
 4. Input from advisory committee suggests need for course dedicated to servers and virtualization.

- 2009-10 Internal Conditions:**
1. Result of increased enrollment is an increase in demand for student services, particularly those geared to success and academic preparation.
 2. Unable to fulfill curriculum offerings and staffing for focused electrician training courses.
 3. Direction of program will be determined largely by expertise of faculty, both current and future. A new faculty member with as-yet unknown skill set will be added for the 2010-2011 academic year. This choice will affect future curriculum direction and focus.
 4. More frequent curriculum changes and reviews mandated by Title 5 require departmental determination of focus.
 5. Greater reliance on virtualization (server-based applications) will require faculty to be able to work in that context.
 6. Ongoing expenses for software agreements and other infrastructure items will require new or expanded funding sources.
 7. Inadequate facilities and furniture will impact success of combined lecture-laboratory format implemented in the 2008-2009 academic year.
 8. SLO assessments to date illuminate the need to have directed, hands-on activities and assignments designed to reinforce fundamental skills.

College Goals: 3. Improve Career/Vocational Training

SLO/AUO/SA	Means of Assessment & Criteria / Tasks	Summary of Data	Use of Results & Follow-Up
Electronics & Computer Technology - Develop or Revise curriculum - Develop or revise curriculum and obtain funding for new technologies to be covered in the Elect Systems Technology certificate program. Type(s): SA (Strategic Action) SLO/GEO Start Date: 01/01/2007 Status: SA Complete Equipment Resources Required:		03/19/2010 - See Use of Results Section Summary of Data Type: Criterion Met Summary of Data Status: Closed	03/19/2010 - Dept has hired an adjunct instructor for beginning and advanced troubleshooting courses (EST 62/64); purchased state-of-the-art equipment and instructional materials, including HDTV and LCD displays.

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Laboratory equipment and curriculum materials for high definition television and advanced home theater troubleshooting courses.			
<p>Electronics & Computer Technology - Instructional equipment for CNET program - Provide instructional equipment and infrastructure support for virtual server environment in CNET courses.</p> <p>Type(s): SA (Strategic Action)</p> <p>Status: SA Not Complete</p>	<p>Assessment Method: None</p>	<p>03/19/2010 - See use of results section</p> <p>Summary of Data Type: Criterion Not Met</p> <p>Summary of Data Status: Open</p> <p>notes: See use of results section</p>	<p>03/19/2010 - 1. Instructional server to be used for virtualization environment purchased March, 2010.</p> <p>2. Increased hardware support, specifically computer video card and memory upgrades, needed to permit use of existing equipment in courses requiring ever more powerful hardware. (Approximate cost: \$10,000)</p>
<p>Electronics & Computer Technology - Electrician trainee course offerings - Investigate development of fee-based course offerings geared to electrician trainees through Community Education division.</p> <p>Type(s): SA (Strategic Action)</p>	<p>Assessment Method: None</p>	<p>03/19/2010 - See use of results section</p> <p>Summary of Data Type: Criterion Not Met</p> <p>Summary of Data Status: Open</p>	<p>03/19/2010 - 1. Investigate partnership with private or public entity with established curriculum for electrician trainees (example: California Electrical Training, Inc.)</p> <p>2. Faculty member J. Uranga has identified a possible instructor (currently with IBEW training facility) to become adjunct faculty for some EST/electrician training courses.</p>
<p>Electronics & Computer Technology - "Green" technologies curriculum - Incorporate lessons/assignments related to "green" technologies (wind, solar) in existing ELEC and EST courses; possibly expand curriculum to include complete</p>	<p>Assessment Method: None</p>	<p>03/19/2010 - See use of results section</p> <p>Summary of Data Type: Criterion Met</p> <p>Summary of Data Status: Open</p>	<p>03/19/2010 - Faculty member J. Uranga attended green technologies conference in (location) on (date)</p>

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<p>courses in green technologies.</p> <p>Type(s): SA (Strategic Action)</p> <p>Status: SA Not Complete</p> <p>Training Resources Required: Conference/travel funds for conferences and seminars.</p>			
<p>Electronics & Computer Technology - ***** - *****</p> <p>Type(s): SA (Strategic Action)</p> <p>SLO/GEO Start Date: 04/01/2008</p> <p>Status: SA Complete</p> <p>Staffing Resources Required: .</p> <p>Training Resources Required: http://tracdat.mtsac.edu/tracdat/faces/assessment/assessment_plan/editObjective.jsp#</p> <p>Equipment Resources Required: Home theater equipment for repair courses</p>	<p>Assessment Method: *****</p>	<p>03/19/2010 - *****</p> <p>Summary of Data Type: Criterion Met</p> <p>Summary of Data Status: Closed</p>	<p>03/19/2010 - Adjunct faculty member hired for beginning and advanced troubleshooting courses (EST 62 and 64).</p>
<p>Electronics & Computer Technology - Provide full-time stockroom support and technical assistance - Expand ability of staff technician to support program at multiple locations and during evening hours through use of student assistants and virtual server technologies.</p> <p>Type(s): SA (Strategic Action)</p> <p>SLO/GEO Start Date: 03/25/2009</p> <p>Intended Date to Complete 'Use of Results': 06/30/2013</p> <p>Status: SA Not Complete</p>	<p>Assessment Method: None</p>	<p>03/19/2010 - See use of results section</p> <p>Summary of Data Type: Criterion Not Met</p> <p>Summary of Data Status: Open</p>	<p>03/19/2010 - 1. Instructional aide has proved critical in providing coverage of stockroom during evening hours as well as in providing in-class assistance during evening laboratory sections. 2. Department has made use of Federal Work-Study student support for stockroom support for extended-hour laboratory sections.</p>

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<p>Staffing Resources Required: Part-time classified employee or student assistant for evening stockroom support.</p>			
<p>Electronics & Computer Technology - Instructional aide support - Maintain existing "hourly instructional aide" line item in department budget.</p> <p>Type(s): SA (Strategic Action)</p> <p>Status: SA Not Complete</p> <p>Staffing Resources Required: Qualified instructional aides for laboratory sections.</p>	<p>Assessment Method: None</p>	<p>03/19/2010 - Anecdotal evidence indicates that instructional aide used in ELEC 51 and 53 during Fall 2009 semester has provided crucial one-on-one assistance to three "at-risk" (disabled) students, with at least two of the three students successfully completing both courses. (The third student, while not successful in ELEC 53, has persisted with other courses in the department that do not require successful completion of ELEC 53). Having a knowledgeable aide has allowed instructor to provide assistance to all students more quickly than had been the case previously, an issue that had been raised in student evaluations of the instructor. This issue was addressed through the identification and hiring of an aide with course-level subject-matter expertise.</p> <p>Summary of Data Type: Criterion Met</p> <p>Summary of Data Status: Open</p>	<p>03/19/2010 - Instructional aide has been used for ELEC 50A/B, 53, 54A/B, and 55. Student assistant (VTEA funded) has been used for ELEC 50A/B.</p>
<p>Electronics & Computer Technology - Multidisciplinary course development - Work with faculty from Welding and EDT to identify topics and course structure for entry-level, project-based course designed to orient new students to technical occupations.</p> <p>Type(s): SA (Strategic Action)</p> <p>Status: SA Not Complete</p>			
<p>Electronics & Computer Technology - Student retention/success - Continue to</p>	<p>Assessment Method: Banner tracking data to be obtained</p>	<p>03/19/2010 - Example pass rate for one section of ELEC 50B with combined lecture/lab format:</p>	

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<p>monitor retention and success rates of students in combined lecture/lab sections through Banner tracking data and internally generated surveys.</p> <p>Type(s): SA (Strategic Action)</p> <p>Status: SA Not Complete</p>	<p>through RIE.</p>	<p>80%. This result is comparable to, if not higher than, success rates under previous formats. Elimination of standalone electronics math course and subsequent incorporation of subject matter into theory/lab sections has not adversely affected retention and success.</p> <p>Summary of Data Type: Criterion Met</p> <p>Summary of Data Status: Open</p>	<p>03/19/2010 - Integration of academics with CTE success: Curriculum for ELEC 53 and 55 augmented to demand more written (short-answer essay) type responses from students during exams and as answers to laboratory exercises. Intent is to prepare students to communicate technical concepts effectively in a job interview environment.</p>
<p>Electronics & Computer Technology - Hands-on activities development - Use course SLO data to identify specific instructional topics in need of reinforcement and create specific activities or assignments in response.</p> <p>Type(s): SA (Strategic Action)</p> <p>Status: SA Not Complete</p>	<p>Assessment Method: See course level assessment plan.</p>	<p>03/19/2010 - ELEC50A: 2/4/2010 Fall 2009 sample: Same assessment question used as for Fall 2008 sample to confirm and expand on findings obtained earlier. Results indicate a greater variability in number of correct answers and reasons for errors as compared with Fall 2008 sample. Total number of students across 3 sections: 53. Of these, 20 (38%) answered all questions fully correctly, and 26 (50%) had 7 or more correct answers. Three students (5.6%) did not attempt problem.</p> <p>Fall 2008 sample: 79% of students fully answered 7 of 10 questions correctly. (Fully correct means that answer was complete in all respects: numerical value, units and appropriate prefixes representing the magnitude of the quantity evaluated, and written evidence of the thought process employed to obtain the unknown quantity.) Fifty percent answered all questions completely correctly, and 63% had either 9 or 10 correct responses. Fifteen percent had five or fewer correct answers, and 5% did not attempt the problem at all. N=40. Assessment conducted as a question on the final examination.</p> <p>ELEC 50B: Fall 2009 sample: Final exam question with 9</p>	<p>03/19/2010 - 1. Multiple-part problem sets will be worked in class--class time will be "carved out" to permit students to work problems under direct instructor supervision.</p> <p>2. Laboratory assignments have been rearranged to promote better flow with text material and to emphasize key points of instrument use through continuous reinforcement. Two additional assignments have been added to laboratory curriculum to emphasize oscilloscope operation skills.</p>

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		<p>subparts. Total number of students: 31 across two sections. Twelve students (39%) answered the question completely correctly (defined as correct numeric answer, magnitude, units, and written evidence of thought process employed). An additional seven students (23%) got eight of nine correct responses, and three others (10%) got six or seven of nine responses completely correct. Two students did not attempt problem. One had correct answers but no written evidence of work. Most frequent error was in calculation of impedance; most frequent omission was nonreporting of phase angles.</p> <p>Summary of Data Type: Criterion Met</p> <p>Summary of Data Status: Open</p>	
<p>Electronics & Computer Technology - IPC Cert - Instructor will need to arrange to attend certification course requiring out of state travel</p> <p>Type(s): SA (Strategic Action)</p> <p>Status: SA Not Complete</p> <p>Training Resources Required: Travel costs approx \$2,000.00</p>			