Chaffey College Program Review
Three Year Review 2011

PROGRAM OVERVIEW

Program Title: Drafting

Program Code: 953 - DRAFTING

Review Type: Instructional

Does this review contain any career technical education (occupational) programs?
Yes

External Regulations:
No

Chaffey College Mission Statement
Chaffey College improves lives within the diverse communities it serves through equal access to quality occupational, transfer, general education, and foundation programs in a learning-centered environment where student success is highly valued, supported, and assessed.

Please describe how your program supports the college's mission and discuss how your program evaluates its effectiveness in meeting the college mission:
The Drafting department at Chaffey College has three parts to its mission. (1) To prepare students with the drafting and engineering skills for transfer to four-year schools; (2) To prepare students to enter the job market as drafting technicians, or CAD operators with a two-year degree, or certificate; (3) and to provide training in CAD to those already working who need and want to upgrade their skills. (1)The Drafting department prepares students to continue their education in Architecture (typically a four or five-year program), Engineering Technology, Manufacturing Technology or Engineering (typically a four-year programs requiring some combination of Draft 20 (beginning CAD), Draft 21, Draft 41 and Draft 43. (2) The Drafting department prepares students for immediate employment in the various phases of Architecture, Design, and Manufacturing. Many students have found employment after completing two or three classes even before completing all of the classes required for the degree or certificate. (3) The Drafting department serves students already working in the field who need to gain the necessary CAD skills to keep their jobs as Draftspersons, Designers, Architects, Engineers, Quality Control and even Management. Also included in this group are self-employed individuals wishing to enhance their skills to make...
them more competitive in their respective business. Others working in other manufacturing areas, such as assembly or inspection, want to upgrade their skills so they can move into the drafting or engineering departments. The night classes are populated with a significant number of these students. To provide an attractive offering for these students we must offer instruction in the latest versions of the software most commonly used in industry (AutoCAD, Inventor, SolidWorks, REVIT, MasterCAM, etc.) so they are competitive in the job market.

**Review Team Response**
Very good explanation of the mission of the Drafting Department and how it supports the College's mission.

**PROGRAM DATA**

**Enrollment**

<table>
<thead>
<tr>
<th></th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>252</td>
<td>224</td>
<td>220</td>
</tr>
<tr>
<td><strong>Day</strong></td>
<td>161</td>
<td>186</td>
<td>194</td>
</tr>
<tr>
<td><strong>Evening</strong></td>
<td>91</td>
<td>38</td>
<td>26</td>
</tr>
<tr>
<td><strong>Online</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Given the data, what changes can be identified in enrollment patterns? Identify any important trends and explain them.
The apparent decline of enrollments can be explained by a combination of the following factors: 1. The addition of the engineering technology program has probably been the most likely contributor to the decline in drafting enrollments. This is due to: a. the substitution of EGTECH10 for DRAFT22 b. the fact that drafting/engineering received no additional sections for a new program and thus the number of drafting sections offered has been
reduced. c. the decline in evening enrollments emphasize this as that is typically when EGTECH courses have been offered displacint drafting courses. 2. The reduction in the number of courses due to budgetary constraints also contributes to this decrease. 3. Recent cancellations of some classes due to staffing issues has also contributed slightly. Overall enrollment when drafting and engineering technology are considered together has increased. Demand continues to exceed supply. Enrollments are limited by the number of sections we offer. This is limited by budget considerations and classroom/lab availability. Most serious long term consequence is that we have not been able to offer classes when students need them or as often as students would like and those students either get discouraged and quit or seek out alternatives such as attending other schools to get the classes they want/need.
Given the data, what changes can be identified in retention patterns? Identify any important trends and explain them.

Retention rate trends show a steady increase for evening classes and a rise and then fall for daytime classes. A number of factors could explain this: 1. The mix of classes offered. Normally the entry level course DRAFT20 has a relatively high fallout rate. If we offer more sections of the entry level classes we can expect a higher fallout rate. 2. The overall shortage of classes and the difficulty of getting into them has resulted in an increase of students enrolling in DRAFT20 because it is the only class they can get in to. Students that do not already have a commitment to a drafting or engineering education pathway fall out at significantly higher rate than those that do. 3. Changes to policies regarding over-enrolling classes at the beginning of the semester and when CENSUS could...
also contributes to a lower retention rate. 4. Evening classes have an almost perfect retention rate because the few drafting courses that have been offered in the evening have been advanced courses which typically have very low fallout. 5. Students taking evening courses include a larger population of students from industry who typically do not quit halfway through. 6. Anecdotally, the number of students with very low levels of skill in working with technology seems to be increasing. Implications: The process used over the last several semesters has led to classes being filled earlier and students truly serious about the program (which would typically stick with it) such as incoming tech prep students being unable to get into the classes they need. Possible Remedies: 1. Scheduling and sequencing of classes is something we continue to work on. 2. Some form of 'technology bootcamp' to upgrade the basic competency using technology might be useful.

### Success

<table>
<thead>
<tr>
<th></th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>70.16</td>
<td>72.77</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Day</td>
<td>68.13</td>
<td>72.58</td>
<td>66.49</td>
<td></td>
</tr>
<tr>
<td>Evening</td>
<td>73.86</td>
<td>73.68</td>
<td>96.15</td>
<td></td>
</tr>
<tr>
<td>Online</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arranged</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Given the data, what changes can be identified in student success patterns? Identify any important trends and explain them.

Students that are not successful in drafting courses usually have one or more of the following things in common: 1. Didn't really want to take drafting in the first place. Just getting units to fill up their schedule (athletes?) 2. Very low level of skill using technology coming in. 3. Lack of access outside of the classroom to a computer running the CAD program used in a particular class. 4. Poor study and attendance habits. Not showing up to class regularly, not doing homework, etc. Based on this data we should offer all of our classes at night! The creation of a 'technology success center' would be quite helpful to the students who do not, for whatever reason, have access to computers running the CAD software they need to use outside of regular class hours. We have made significant efforts to
make the CAD lab available to students for regular open lab hours as a short term solution.

**Review Team Response**
Data and trends are interpreted properly. Implications for the program are included. The Review Team agrees with the assessment that it makes sense to offer night classes due to the significantly higher retention and success rates. We also agree that students should have access to CAD software outside of class time.

**DEGREE/CERTIFICATE DATA**

<table>
<thead>
<tr>
<th>Term</th>
<th>Degrees</th>
<th>Certificates</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/08</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>08/09</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>09/10</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Given the data, is the number of majors and certificates what you would expect? Please comment. Has the number of majors and certificates increased or decreased over time? Why?

A concerted effort was made during 08/09 to get students through their certificates and/or degrees. A number of students had been struggling to get this done due to the lack of necessary course being offered as well as specific guidance from faculty. The falloff in 09/10 was to be expected as a new cohort of students started through. The number should increase again for the 11/12 year.

<table>
<thead>
<tr>
<th>Term</th>
<th>Degrees</th>
<th>Certificates</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/08</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>08/09</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>09/10</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

Given the data, is the number of majors and certificates what you would expect? Please comment. Has the number of majors and certificates increased or decreased over time? Why?

A concerted effort was made during 08/09 to get students through their certificates and/or degrees. A number of students had been struggling to get this done due to the lack of necessary course being offered as well as specific guidance from faculty. The falloff in 09/10 was to be expected as a new cohort of students started through. The number should increase again for the 11/12 year. In addition, many
students who are now pursuing degrees in Engineering Technology are also pursuing certificates in Mechanical Drafting. There are also a number of students who have completed the requirements for the CAD Technician Certificate however that is still awaiting approval in curriculum.

<table>
<thead>
<tr>
<th>Drafting Tech: Architectural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term</td>
</tr>
<tr>
<td>07/08</td>
</tr>
<tr>
<td>08/09</td>
</tr>
<tr>
<td>09/10</td>
</tr>
</tbody>
</table>

Given the data, is the number of majors and certificates what you would expect? Please comment. Has the number of majors and certificates increased or decreased over time? Why?

A concerted effort was made during 08/09 to get students through their certificates and/or degrees. A number of students had been struggling to get this done due to the lack of necessary course being offered as well as specific guidance from faculty. This number will be impacted this year by the reduction of course offerings due to budget and course cancellations due to staffing issues and lack of headcount.

<table>
<thead>
<tr>
<th>Drafting Tech: Architectural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term</td>
</tr>
<tr>
<td>07/08</td>
</tr>
<tr>
<td>08/09</td>
</tr>
<tr>
<td>09/10</td>
</tr>
</tbody>
</table>

Given the data, is the number of majors and certificates what you would expect? Please comment. Has the number of majors and certificates increased or decreased over time? Why?

A concerted effort was made during 08-10 to get students through their certificates and/or degrees. A number of students had been struggling to get this done due to the lack of necessary course being offered as well as specific guidance from faculty. This number will be impacted this year by the reduction of course offerings due to budget and course cancellations due to staffing issues and lack of headcount.
Review Team Response
The Review Team hopes the degrees/certificates increase in the near future.

STUDENT LEARNING OUTCOMES
Students who successfully complete courses in the drafting program will be able to demonstrate the ability to effectively express information regarding drafting/design activities and topics through sp...

Students who successfully complete courses in the drafting program will be able to demonstrate knowledge and technical competency in applied drafting practice in their chosen discipline.

Students who successfully complete courses in the drafting program will be able to demonstrate mastery of the application of modern CAD software tools in the production of technical documents.

Students who successfully complete courses in the drafting program will be able to produce technical documents that comply with current industry accepted drafting standards and practices.

Students who successfully complete courses in the drafting program will be able to demonstrate an understanding of and a commitment to address professional and ethical responsibilities including a res...

Students who successfully complete courses in the drafting program will be able to demonstrate an understanding of the need for and an ability to engage in self-directed life-long learning, especially...

Students who successfully complete courses in the drafting program will be able to be able to work effectively in teams.

Discuss how the number, type, depth, and breadth of the courses support program SLO's.
Drafting is split into two different plans of study. One for mechanical and one for architectural. While many aspects of the fundamentals of these are common there are vast differences in the application, standards, practices and software used. At the advanced end of the applications some aspects merge again such as when analysis or complex shapes are used in architecture typically mechanical software such as SolidWorks may be used. The drafting programs provide enough courses for students to acquire the essential knowledge needed to gain employment in these two disciplines and adequate time to practice them during their coursework. The only way to achieve mastery of the practice and in use of the software applications is by applying them. Lab work on real work types of projects is a critical aspect of all of the drafting courses due to this facet. The entry level class DRAFT20 introduces students to drafting fundamentals common to both disciplines as well as some of the ways the two differ using 2D CAD software. As the students progress through the program they are required to move beyond simple knowledge and understanding to application. In the more advanced courses students additionally get create,
analyze and evaluate designs. In some classes students are also required to work on team projects, do industry and employment research. Additionally students are exposed to how ethical, legal and moral factors are integral to the design process.

**Discuss how courses in the program articulate with or complement each other.**
All of the students start out with courses that are primarily introductory in scope. As they progress through the courses additional concepts and practices are added. At the same time, in the more advanced courses, students get continued opportunities to practice the use of the software applications necessary to develop mastery of those programs.

**Discuss how courses in the program interact with other programs on campus (for example: cross-listing, overlapping content, or shared resources).**
Courses in drafting are required for certificates or degrees in Engineering Technology are an option for Engineering. Both drafting disciplines require students to take EGTECH10 and the mechanical drafting track requires EGTECH16. Both disciplines require students to take PHYSICS 5/6 and the architecture students must also take classes from ART and Interior Design. The lab used for drafting is also shared with engineering technology and engineering for certain courses.

**How and when has your department assessed Program SLO's' and how have you responded to the results?**
An update and revision of both program and course SLO was done during 2010-2011 school year and is in process now as all of the course CORs are being updated.

**What program or course changes have been made based on the result of the assessed outcome?**
At the end of each semester full-time and part-time faculty meet to review student performance during that semester. As a result of these meetings in the past we have changed textbooks, focus of coursework, types and rigor of assignments. One result of this has been to raise the level of rigor and demands on the students in DRAFT20. Another change as a result of this has been to include more demands on students with respect to assignments outside of class in the form of reading, research and reports.

**Review Team Response**
Overall Program Level Implementation of SLOs is Awareness: There is preliminary, investigative dialog about SLOs. There is recognition of existing practices such as courses objectives and how they relate to SLOs. The program has discussed how to define SLOs in their discipline. You, your coordinator and your dean will receive a detailed letter outlining the areas that need to be addressed for SLOs.

**Discuss how your services help maintain a high level of student satisfaction.**

**Discuss how you evaluate your effectiveness in meeting students' needs.**

**How and when has your service reviewed or revised SLO?s and/or AUO?s.**

**How has your program utilized SLO/AUO assessment results for program improvement?**

**Review Team Response**
## CURRICULUM UPDATE

<table>
<thead>
<tr>
<th>Courses</th>
<th>Last Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAFT 41 Computer-Aided Drafting and Design: Mechanical - Active</td>
<td>04/27/2005</td>
</tr>
<tr>
<td>DRAFT 50 Architectural Design I - Active</td>
<td>04/26/2006</td>
</tr>
<tr>
<td>DRAFT 20 Computer-Aided Drafting and Design - Active</td>
<td>04/26/2006</td>
</tr>
<tr>
<td>DRAFT 21 Mechanical Design I - Active</td>
<td>04/27/2005</td>
</tr>
<tr>
<td>DRAFT 78 Advanced Design Applications - Active</td>
<td>10/20/1999</td>
</tr>
<tr>
<td>DRAFT 452 Light Commercial Construction Design - Active</td>
<td>02/25/2004</td>
</tr>
<tr>
<td>DRAFT 51 Architectural Design II - Active</td>
<td>02/25/2004</td>
</tr>
<tr>
<td>DRAFT 53 Architectural Applications of CAD - Active</td>
<td>01/24/2001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Programs</th>
<th>Last Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAFT Drafting Technician: Mechanical - Active</td>
<td>10/18/2009</td>
</tr>
<tr>
<td>DRAFT CAD/CAM Operator - Launched</td>
<td></td>
</tr>
<tr>
<td>DRAFT Drafting Technician: Architectural - Active</td>
<td>06/03/2009</td>
</tr>
<tr>
<td>DRAFT Drafting Technician: Architectural - Active</td>
<td>06/03/2009</td>
</tr>
<tr>
<td>DRAFT Drafting Technician: Mechanical - Active</td>
<td>06/03/2009</td>
</tr>
</tbody>
</table>

**Courses should be updated every six years; if course updates are due, please describe your plan and timeline for updating courses:**

All of the active drafting courses were updated in 2009 although this is not reflected here. Because the faculty member that entered all of those updates was new to using Curricunet and the curriculum approval process it is possible that these changes never got launched and were subsequently deleted. All of the DRAFT courses to be offered in 2012-2013 will be updated and be launched before the end of SP12 semester. Drafting courses are highly dependant upon technology. Because of the rapidly evolving nature of these technologies the way design drafting is done in the workplace also changes constantly. The addition of the Engineering Technology program also plays a role in this as some courses are shared between the two programs. The modifications to the courses will attempt to: 1. Bring the CORs up to date with current industry practices and needs. 2. Make the CORs as 'software-independent' as possible. 3. Update the prerequisites to match the desired plans of study which includes Engineering Technology courses. 4. Modify the lecture/lab hours to more accurately reflect what is done in the
classroom and facilitate scheduling. 5. Update the resources to reflect current texts in use.

**What steps has your program taken to proactively respond to changing and emerging student and community needs?**

*Advisory Committees*
- Labor Market Studies/Projections
- Develop New Courses/Programs
- Other

**Briefly explain:**
The common findings of academic and industry research indicates that designers and engineers coming out of most educational programs in those areas are woefully ignorant of manufacturing processes. Feedback from industry advisory councils agreed with these findings. In response to this EGTECH16, which is an introduction to manufacturing course has been inserted into the Mechanical Drafting program as a required core course. The way companies use CAD systems and which CAD system and modeling technology is also rapidly evolving. In response to this overall trend we have shifted the emphasis in most of the DRAFT courses from using a 2D system as essentially an 'electronic drafting board' to using 3D modeling programs to 'virtually prototype' designs. This shift has been in progress and continues for both mechanical and architectural drafting courses.

**Review Team Response**
Courses that were updated in 2009 need to be reflected in Curricunet.

**ADVISORY COMMITTEE INFORMATION**

An occupational program is required to have an active advisory board. Describe the advisory board membership, how often it meets, its role and involvement with the program, and how the program responds to advisory board recommendations (give examples).

1. Our Industry advisory board is composed of representatives from local industry, professional organizations and engineering faculty from higher education institutes. We also have advisory meetings that include drafting and engineering tech instructors and administrators from local secondary schools and ROP programs. In addition we also conduct on-line surveys of the group to get detailed feedback on specific topics. 2. Typically these groups meet a minimum of once per years. The two groups normally meet separately. 3. The Industry council provides input regarding course and program directions, hardware and software use, their needs, opportunities for collaboration and the possibility of hiring students as interns/trainees or full-time employees. The also provide insight into trends they see in their particular industry which helps us choose how we might improve our program to help our graduates better match up with the jobs of the future. 4. Examples of how we have responded to this feedback in the past include: a. Transitioning away from 2D CAD to 3D modeling technologies; Specifically SolidWorks and REVIT. b. Modifying the mechanical drafting program to include a manufacturing class (EGTECH16) c. Adding a mini-certificate for CAD Operator. d. Specific course content such as emphasizing measurement(all mech), use of standard components (DRAFT43, DRAFT78) and exchanging graphics files between different application programs (DRAFT41,43, 51,53, EGTECH16.) Another addition made in response to committee recommendations has been to include industry certifications as part of our course objectives whenever possible. An example of this is
our preparing student for the SolidWorks Certified Associate (CSWA) exam. This is done in DRAFT43. Because we are provided with free credits for this exam we are able to make it a required part of the coursework. In DRAFT78 we have prepared the students for the SolidWorks Certified Professional exam however students must pay a fee to SolidWorks to take this exam so the preparation is included in the coursework but the exam is not.

Review Team Response
The Review Team commends the program for staying current with advisory meetings and including minutes from these meetings.

Review Team Response

NON-INSTRUCTIONAL PROGRAM INFORMATION

How does your program improve, expand, or support student learning? How do you know?

Describe staff functions and services (these can include diversity, specialties, staff preparation and training, professional activities and committee participation, accomplishments, grants, new programs etc.)

How does your program evaluate its effectiveness?

Review Team Response

STUDENT SUPPORT - ACCESS

How do the services you provide to students facilitate access to learning? (e.g. - admissions applications, payment processing, pre-requisite clearances, assessment testing, adaptive technology, program applications, healthcare, student activities, and other specialized services.)

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>Description of Service</th>
<th>How many students received this service?</th>
<th>Measured with?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>08-09</td>
<td>09-10</td>
</tr>
</tbody>
</table>

Additional information:

Review Team Response

STUDENT SUPPORT - SUPPORT

How do the services you provide to students support student learning? (e.g. 'counseling, orientations, workshops, financial assistance (scholarships, grants, etc'), career assessments, health education, service learning, advisory committees, and other specialized services.)

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>What knowledge, skills, and/or abilities are learned?</th>
<th>How many students received this service?</th>
<th>Measured with?</th>
</tr>
</thead>
</table>
STUDENT SUPPORT - OTHER

How do the services you provide to students promote transfer, completion, specialized services, and/or future success? (e.g. graduation ceremony, CSU/IGETC certifications, university transfer, securing employment, transcript requests, enrollment verification, conferring of degrees/certificates, scanning/imaging documents, phone calls received, face-to-face contacts, refunds granted, and other specialized services.)

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>How does this contribute to student success?</th>
<th>How many students received this service?</th>
<th>Measured with?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>08-09 09-10 10-11</td>
<td></td>
</tr>
</tbody>
</table>

Additional information:

Review Team Response

VISIONARY IMPROVEMENT PLAN(VIP)

Please identify 1-3 program improvement goals for the next three years. Goals should state 'what' you plan to achieve and the rationale 'why' for doing so. 'How' you achieve your goals will be entered under Steps to Success. Keep in mind that your VIP should be SMART:

- Specific
- Measurable
- Action-oriented
- Realistic
- Time-bound

All plans should improve or expand student learning.

Year Three Goal:
Curriculum and SLO for drafting courses are in line with current industry practices and student needs.

To which planning direction does this goal apply?
Excellence in teaching and learning
Flexible and continuous student support
CTE pathway development
Year 1 Steps to Success (activities) and VIP Assessment:
Update COR for all drafting courses not updated within the last year to reflect current curriculum and industry needs/practices.
1. COR for all drafting courses updated in Curricunet by the end of year 1. 2. All updates/modifications submitted to Curriculum Committee by end of year 1.

Year 2 Steps to Success (activities) and VIP Assessment:
Update program and course SLOs in year 2.
1. SLOs updated in curricunet.

Year Three Goal:
Schedule drafting courses in a clear, logical and timely sequence to make it possible for students to progress through the drafting program and increase the number of certificates/degrees completed.

To which planning direction does this goal apply?
Excellence in teaching and learning
Flexible and continuous student support
CTE pathway development

Year 1 Steps to Success (activities) and VIP Assessment:
Map out course preferred sequence for students to take drafting courses for certificates/degrees to use in schedule planning for future semesters.
1. Create a 'roadmap' for each drafting track showing course sequences over a 2-year period. 2. Create a 4 year plan using above roadmap that schedules courses in 2-year blocks. 3. Use that plan plan for scheduling for the following year.

Year 2 Steps to Success (activities) and VIP Assessment:
Review and revise plan and collect attendance and completion data for use in future planning.
1. Collect attendance data in a useable form. 2. Review and update plan created during year 1. 3. Use updated plan for scheduling for the following year.

Year Three Goal:
Track student success in achieving SLOs in order to make assessment and review useful and meaningful.

To which planning direction does this goal apply?
Excellence in teaching and learning
Flexible and continuous student support
CTE pathway development

Year 1 Steps to Success (activities) and VIP Assessment:
Create, administer and record results of standardized assessments for all drafting classes.
1. Completion of standardized assessments for courses offered during year 1. 2. Use of those assessments during SP semester of year 1. 3. Compilation of assessment results for SP semester of year 1 on paper or in spreadsheets. 4. Completion of assessments for courses to be offered during Fall semester year 2.

Year 2 Steps to Success (activities) and VIP Assessment:
Use standardized assessments for all drafting courses and collect data in an easily managed and useful form.
1. Use of assessments by all drafting faculty during year 2. 2. Completion of assessments for any courses offered during SP semester of year 2. 3. Compilation of assessment data for year 2. 4. Complete a database for this data using MS Access. 5. Enter all of the assessment results from year 1 and 2 into that database.

Review Team Response
The goal is unclear and not fully developed.
Need to add assessments.

PROFESSIONAL DEVELOPMENT ACTIVITIES THAT SUPPORT STUDENT LEARNING OR IMPROVE YOUR PROGRAM

List Recent departmental professional development activities connected to student learning.

<table>
<thead>
<tr>
<th>Recent activities</th>
<th>Recent workshops/courses taken</th>
<th>Recent conferences/training</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PLTW Orientation/Confence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLTW CIM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSR Workshop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moodle Training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SolidWorks World</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WESTEC SHOW/CONFERENCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PacDesign Show/Conference</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How are student learning outcomes affected by these professional activities? What steps are recommended for improvement?
Attending conferences SolidWorks World provides insight into how the most successful and progressive companies are using and applying CAD/CAM tools in the real-world. Industry events such as Westec and PacDesign provide an opportunity to see the latest technologies applicable to design and manufacturing. The PLTW program provides curriculum and other information useful to shape our courses which is based on thoroughly tested pedagogies with an emphasis on learner center strategies such as project based
Discuss departmental engagement on campus in connection to student learning.

<table>
<thead>
<tr>
<th>Governance committees</th>
<th>Other college-related committees</th>
<th>Other campus participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes &amp; Assessment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How does your program benefit from your campus engagement?
First committee meeting is in two weeks so it has had no impact as of yet. Would like to participate in committees that more obviously impact drafting/engineering tech such as Technology, Curriculum or PERKINS.

### Teaching/Years of Service

<table>
<thead>
<tr>
<th>Drafting</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 years</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

Given the data how has your program been impacted?
Not. The one full time faculty member has over 30 years experience in engineering with an emphasis on automation software such as CAD. Job responsibilities during a majority of that time in included designing and conducting training in the use of CAD/CAM and related automation software.

Does your program anticipate retirements within the next 3 years?
No.

Review Team Response

### PROJECTED NEEDS

Is any part of the program funded by sources other than the instructional budget (such as grants, partnerships, or other means)? If yes, please identify the source, amount, and length of funding.
Currently the only potential source of funding outside of the instructional budget is PERKINS. Each year this amount varies. For the 2011-2012 school year we have received no PERKINS funds.

After reviewing and analyzing the data and assessment results in this report, please describe and provide rationale for any projected resource needs required to accomplish your Visionary Improvement Plan using the boxes below. Your requests should be based on student need.

FT Faculty:

Year 1:

Hiring Criteria:
Year 2:

Hiring Criteria:

Year 3:

Hiring Criteria:

STAFF

Year 1

Year 2

Year 3

EQUIPMENT

Year 1

Year 2

Upgrade computers in VSS103 lab. Costs are very time dependent and thus are difficult to predict at this point. Keeping the software and computers up to date with current industry standards is essential to implementing the curriculum as specified in VIP 1. The software and computers in the VSS-103 were purchased during 2008 and the maintenance contracts will expire soon. These computers are now nearing 5 years old and will be right at limits of their usable lifespan by this time. As the software progresses it places higher demands on the computers and we are already beginning to see the effects of that.

Year 3

TECHNOLOGY

Year 1

Year 2

Year 3

SOFTWARE

Year 1

Renewal of any software maintenance contracts that may expire to maintain current versions of AutoCad, SolidWorks, MasterCAM. Don't know exact cost because this is maintained by IT. Keeping the software and computers up to date with current industry standards is essential to implementing the curriculum as specified in VIP 1. The software and computers in the VSS-103 were purchased during 2008 and the maintenance contracts that provide us with software updates will expire soon.

Year 2
Review Team Response
Good explanations and aligning needs with VIPs. Please obtain cost estimates from IT and include in PSR.

Review Team Response
The program contains excellent information and analysis to be useful for planning, supporting and improving student achievement and SLO’s. The review contains clear, measurable goals and resource requests. Very thorough review containing thoughtful information that is valuable in planning purposes for the Drafting Program.