

Manufacturing Technology Program Review

2012-2013

1. Program/Department Description

1A. Description

The Manufacturing Technology Department offers the opportunity for students to excel by providing the latest information and technology in both the lecture and laboratory settings. The Manufacturing Technology program has included the most modern software and hardware to provide a good environment for learning. The inclusion of new computer controlled laser technology and continuing the use of general manufacturing process technology gives the students access to industrial tools and technologies found in industry. A comprehensive set of undergraduate courses are offered for students interested in working toward the completion of proficiency awards in CNC Operation and Manufacturing Applications, transfer classes for university credit and general interest courses for the returning student looking for skill improvement and employment in local industry.

Degrees/Certificates

Program's courses are designed to articulate to UC and CSU for transfer students.

Proficiency Award – CNC Machine Operator and/or Manufacturing Applications

1B. 2012-2013 Estimated Costs (Certificate of Achievement ONLY)

Required for Gainful Employment regulations.

	Cost		Cost		Cost		Cost
Enrollment Fees		Enrollment Fees					
Books/Supplies		Books/Supplies					
Total		Total		Total		Total	

1C. Criteria Used for Admission

1D. College Vision

Ventura College will be a model community college known for enhancing the lives and economic futures of its students and the community.

1E. College Mission

Ventura College, one of the oldest comprehensive community colleges in California, provides a positive and accessible learning environment that is responsive to the needs of a highly diverse student body through a varied selection of disciplines, learning approaches and teaching methods including traditional classroom instruction, distance education, experiential learning, and co-curricular activities. It offers courses in basic skills; programs for students seeking an associate degree, certificate or license for job placement and advancement; curricula for

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students planning to transfer; and training programs to meet worker and employee needs. It is a leader in providing instruction and support for students with disabilities. With its commitment to workforce development in support of the State and region's economic viability, Ventura College takes pride in creating transfer, career technical and continuing education opportunities that promote success, develop students to their full potential, create lifelong learners, enhance personal growth and life enrichment and foster positive values for successful living and membership in a multicultural society. The College is committed to continual assessment of learning outcomes in order to maintain high quality courses and programs. Originally landscaped to be an arboretum, the College has a beautiful, park-like campus that serves as a vital community resource.

1F. College Core Commitments

Ventura College is dedicated to following a set of enduring Core Commitments that shall guide it through changing times and give rise to its Vision, Mission and Goals.

- Student Success
- Respect
- Integrity
- Quality
- Collegiality
- Access
- Innovation
- Diversity
- Service
- Collaboration
- Sustainability
- Continuous Improvement

1G. Program/Department Significant Events (Strengths and Successes)

1. The Manufacturing Technology program continues to produce students with basic skills in a variety of technologies including Blueprint Reading, Inspection/Quality, General Machine Technology and Applications, Manufacturing Processes, (CAD/CAM) Computer Aided Design/Computer Aided Manufacturing, (CNC) Computer Numerical Control Programming, (CNC) Computer Numerical Control Machine tool setup and operation and other related technologies.
2. The Program has supported local High School "First Robotics" clubs with expertise and technical support in the design and manufacture of robot parts and assemblies. These high school teams have gone on to compete on a national level.
3. The Manufacturing Technology faculty continues to represent Ventura College on committees such as the Basic Skills subcommittee of the WIB- Ventura County Workforce Investment Board, the Hueneme High School Advisory board for the Engineering and Design Careers Pathway program and other program focused high school advisory boards and local professional groups.
4. This year is the third year of Faculty participation in the NSF National Science Foundation ATE grant "STEM Education through the design and manufacture of solid body electric guitars". This project provides innovative professional development to high school and college faculty in collaborative design and rapid manufacturing.

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5. The Manufacturing program suffered through the 2 years of construction during the remodel of the laboratory and classroom space in the S building, now the WAM building. As the Auto and Welding programs moved off campus the Manufacturing program continued to offer classes in a space where the windows were removed and the sink was replaced with a 5 gallon plastic bucket on the floor. The students and staff deserve to be recognized for their dedication and hard work to offer a top notch program under these conditions.

K. Organizational Structure

President: Robin Calote

Executive Vice President: Ramiro Sanchez

Assistant Dean: Jerry Mortensen

Department Chair:

Instructors and Staff

Name	Rabe, P. Scott
Classification	Professor
Year Hired	1984
Years of Work-Related Experience	
Degrees/Credentials	B.A.

Name	Mike Hoffman
Classification	Part time instructor
Year Hired	1990
Years of Work-Related Experience	
Degrees/Credentials	B.A. M.A.

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2. Performance Expectations

2A. Student Learning Outcomes

2A1. **2012-2013** - Institutional Student Learning Outcomes

1. Communication - written, oral and visual
2. Reasoning - scientific and quantitative
3. Critical thinking and problem solving
4. Information literacy
5. Personal/community awareness and academic/career responsibilities

2A2. **2012-2013** - Program Level Student Learning Outcomes

For programs/departments offering degrees and/or certificates

- 1.
- 2.

2A3. **2012-2013** - Course Level Student Learning Outcomes

Attached to program review (See appendices).

2B. **2012-2013** Student SUCCESS Outcomes

- 1.
- 2.

2C. **2012-2013** Program OPERATING Outcomes

- 1.
- 2.

2D. Mapping of Student Learning Outcomes - Refer to TracDat

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3. Operating Information

3A. Productivity Terminology Table

Sections	A credit or non-credit class. Does not include not-for-credit classes (community education).
Census	Number of students enrolled at census (typically the 4 th week of class for fall and spring).
FTES	Full Time Equivalent Students A student in the classroom 15 hours/week for 35 weeks (or two semesters) = 525 student contact hours. 525 student contact hours = 1 FTES. Example: 400 student contact hours = $400/525 = 0.762$ FTES. The State apportionment process and District allocation model both use FTES as the primary funding criterion.
FTEF	Full Time Equivalent Faculty A faculty member teaching 15 units for two semesters (30 units for the year) = 1 FTE. Example: a 6 unit assignment = $6/30 = 0.20$ FTEF (annual). The college also computes semester FTEF by changing the denominator to 15 units. However, in the program review data, all FTE is annual. FTEF includes both Full-Time Faculty and Part-Time Faculty. FTEF in this program review includes faculty assigned to teach extra large sections (XL Faculty). This deviates from the prior practice of not including these assignments as part of FTEF. However, it is necessary to account for these assignments to properly represent faculty productivity and associated costs.
Cross Listed FTEF	FTEF is assigned to all faculty teaching cross-listed sections. The FTEF assignment is proportional to the number of students enrolled at census. This deviates from the practice of assigning load only to the primary section. It is necessary to account for these cross-listed assignments to properly represent faculty productivity and associated costs.
XL FTE	Extra Large FTE: This is the calculated assignment for faculty assigned to extra large sections (greater than 60 census enrollments). The current practice is not to assign FTE. Example: if census > 60, 50% of the section FTE assignment for each additional group of 25 (additional tiers).
WSCH	Weekly Student Contact Hours The term "WSCH" is used as a total for weekly student contact hours AND as the ratio of the total WSCH divided by assigned FTEF. Example: 20 sections of 40 students at census enrolled for 3 hours per week taught by 4.00 FTEF faculty. $(20 \times 40 \times 3) = 2,400$ WSCH / 4.00 FTEF = 600 WSCH/FTEF.
WSCH to FTES	Using the example above: $2,400$ WSCH x 35 weeks = 84,000 student contact hours = $84,000 / 525 = 160$ FTES (see FTES definition). Simplified Formulas: $FTES = WSCH/15$ or $WSCH = FTES \times 15$
District Goal	Program WSCH ratio goal. WSCH/FTEF The District goal was set in 2006 to recognize the differences in program productivity.

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3B: Student Success Terminology

Census	Number of students enrolled at Census (typically the 4 th week of class for fall and spring). Census enrollment is used to compute WSCH and FTES for funding purposes.
Retain	Students completing the class with any grade other than W or DR divided by Census Example: 40 students enrolled, 5 students dropped prior to census, 35 students were enrolled at census, 25 students completed the class with a grade other than W or DR: Retention Rate = $25/35 = 71\%$
Success	Students completing the class with grades A, B, C, CR or P divided by Census Excludes students with grades D, F, or NC.

Program specific data was provided in Section 3 for all programs last year. This year, please refer to the data sources available

at http://www.venturacollege.edu/faculty_staff/academic_resources/program_review.shtml

In addition, the 2011-2012 program review documents will provide examples of last year's data and interpretations.

3C: **2012 - 2013** Please provide program interpretation for the following:

3C1: Interpretation of the Program Budget Information

3C2: Interpretation of the Program Inventory Information

3C3: Interpretation of the Program Productivity Information

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3C4: Interpretation of the Program Course Productivity Information

3C5: Interpretation of Program Retention, Student Success, and Grade Distribution

3C6: Interpretation of the Program Completion Information

3C7: Interpretation of the Program Demographic Information

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4. Performance Assessment

4A1: 2012-2013 Institutional Level Student Learning Outcomes

Institutional Level Student Learning Outcome 1	Performance Indicators
Communication	
Operating Information	
Analysis – Assessment	

Institutional Level Student Learning Outcome 2	Performance Indicators
Reasoning – Scientific and Quantitative	
Operating Information	
Analysis – Assessment	

Institutional Level Student Learning Outcome 3	Performance Indicators
Critical Thinking and problem solving	
Operating Information	
Analysis – Assessment	

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Institutional Level Student Learning Outcome 4	Performance Indicators
Information Literacy	
Operating Information	
Analysis – Assessment	

Institutional Level Student Learning Outcome 5	Performance Indicators
Personal/community awareness and academic / career responsibilities	
Operating Information	
Analysis – Assessment	

4A2: 2012-2013 **Program Level Student Learning Outcomes - *For programs/departments offering degrees and/or certificates***

Program-Level Student Learning Outcome 1	Performance Indicators
Operating Information	
Analysis – Assessment	

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Program-Level Student Learning Outcome 2	Performance Indicators
Operating Information	
Analysis – Assessment	

Program-Level Student Learning Outcome 3	Performance Indicators
Operating Information	
Analysis – Assessment	

Program-Level Student Learning Outcome 4	Performance Indicators
Operating Information	
Analysis – Assessment	

Program-Level Student Learning Outcome 5	Performance Indicators
Operating Information	
Analysis – Assessment	

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4A3: **2012-2013** Course Level Student Learning Outcomes - Refer to TracDat

4B: **2012-2013** Student Success Outcomes

Student Success Outcome 1	Performance Indicators
Operating Information	
Analysis – Assessment	

Student Success Outcome 2	Performance Indicators
Operating Information	
Analysis – Assessment	

4C. **2012-2013** Program Operating Outcomes

Program Operating Outcome 1	Performance Indicators
Operating Information	
Analysis – Assessment	

Program Operating Outcome 2	Performance Indicators
Operating Information	
Analysis – Assessment	

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4D. Program Review Rubrics for Instructional Programs

Academic Programs

Point Value	Element	Score
Up to 6	Enrollment demand	
Up to 6	Sufficient resources to support the program (ability to find qualified instructors; financial resources; equipment; space)	
Up to 4	Agreed-upon productivity rate	
Up to 4	Retention rate	
Up to 3	Success rate (passing with C or higher)	
Up to 3	Ongoing and active participation in SLO assessment process	
Total Points	Interpretation	
22 – 26	Program is current and vibrant with no further action recommendation	
18 – 21	Recommendation to attempt to strengthen the program	
Below 18	Recommendation to consider discontinuation of the program	

TOTAL

CTE Programs

Point Value	Element	Score
Up to 6	Enrollment demand	
Up to 6	Sufficient resources to support the program (ability to find qualified instructors; financial resources; equipment; space)	
Up to 6	Program success (degree / certificate / proficiency award completion over 4 year period)	
Up to 4	Agreed-upon productivity rate	
Up to 4	Retention rate	
Up to 4	Employment outlook for graduates / job market relevance	
Up to 3	Success rate (passing with C or higher)	
Up to 3	Ongoing and active participation in SLO assessment process	
Total Points	Interpretation	
31 - 36	Program is current and vibrant with no further action recommendation	
25 - 30	Recommendation to attempt to strengthen the program	
Below 25	Recommendation to consider discontinuation of the program	

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5. Findings

2012-2013 - FINDINGS

Finding 1:

Finding 2:

Finding 3:

Finding 4:

Finding 5:

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6. Initiatives

6A: 2011-2012 - Initiatives

Initiative

Curriculum Content and Development

Initiative ID

Links to Finding 1

The department will review carefully the schedule to plan better the progress of students moving through the Certificate . Reviewing and investing in new technologies that reflect the needs of local industry will be a main priority for the program.

Benefits: More students will be receiving the Certificate of Proficiency in the newest possible technologies.

Request for Resources

Funding Sources

No new resources are required (use existing resources)
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X

Initiative Laboratory Maintenance

Initiative ID

Links to Finding 2 Develop better inventory control and review of machine and tooling life cycle. Search for outside funding for new equipment and expansion of equipment offerings.

Benefits Equipment and tools will be in better operation and repair will kept to a minimum.

Request for Resources

Funding Sources

Please check one or more of the following funding sources.

No new resources are required (use existing resources)
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X

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Initiative Research and increase numbers of underrepresented groups

Initiative ID

Links to Finding 3 develop broader opportunities for research and develop planning to increase the number of underrepresented groups especially women.

Benefits More research will broaden the interest level of students and underrepresented groups. Opportunities for women in manufacturing and related fields will be increased.

Request for Resources

Funding Sources

No new resources are required (use existing resources)	X
Requires additional general funds for personnel, supplies or services (includes maintenance contracts)	
Requires computer equipment funds (hardware and software))	
Requires college equipment funds (other than computer related)	
Requires college facilities funds	
Requires other resources (grants, etc.)	

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2011 - 2012 FINAL Program Initiative Priority Ratings

Line Number	Program	Category	Program Priority (0, 1, 2, 3...)	Division Priority (R,H,M,L)	Committee Priority (R, H, M, L)	College Priority (R, H, M, L)	Initiative ID	Initiative Title	Resource Description	Estimated Cost	Adjusted Cost	Accumulated Costs	Full Time or Part Time
1	Manufacturing Technology	None	0	L			MAN1202	Laboratory maintenance	Control and review of machine and tooling life cycle.	-		-	
2	Manufacturing Technology	None	0	L			MAN1203	Evaluation of the degree and certificate requirements	Degrees / certificates are more attainable to all students	-		-	
3	Manufacturing Technology	Grants	0	M			NURS1201	Curriculum content and development	Curriculum changes based on changing industry and educational standards and requirements. Continuous technology updates	5,000		-	

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6B: 2012-2013 INITIATIVES

Initiative ID should be consistent. For example:
2011-2012 identified initiatives - ART1201, ART1202, etc.
2012-2013 identified initiatives - ART1301, ART1302, etc.

Initiative 1

Initiative ID

Links to Finding

Benefits -

Request for Resources

Funding Sources

No new resources are required (use existing resources)	
Requires additional general funds for personnel, supplies or services (includes maintenance contracts)	
Requires computer equipment funds (hardware and software)	
Requires college equipment funds (other than computer related)	
Requires college facilities funds	
Requires other resources (grants, etc.)	

Initiative 2:

Initiative 3:

Initiative 4:

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6D: PRIORITIZATIONS OF INITIATIVES WILL TAKE PLACE AT THE PROGRAM, DIVISION, COMMITTEE, AND COLLEGE LEVELS:

Program/Department Level Initiative Prioritization

All initiatives will first be prioritized by the program/department staff. Prioritize the initiatives using the **RHML** priority levels defined below.

Division Level Initiative Prioritization

The program initiatives within a division will be consolidated into division spreadsheets. The dean may include additional division-wide initiatives. All initiatives will then be prioritized using the **RHML** priority levels defined below.

Committee Level Initiative Prioritization

The division's spreadsheets will be prioritized by the appropriate college-wide committees (staffing, technology, equipment, facilities) using the **RHML** priority levels defined below.

College Level Initiative Prioritization

Dean's will present the consolidated prioritized initiatives to the College Planning Council. The College Planning Council will then prioritize the initiatives using the **RHML** priority levels defined below.

R: Required – mandated or unavoidable needs (litigation, contracts, unsafe to operate conditions, etc.).

H: High – approximately 1/3 of the total program/department/division's initiatives by resource category (personnel, equipment, etc.)

M: Medium – approximately 1/3 of the total program/department/division's initiatives by resource category (personnel, equipment, etc.)

L: Low – approximately 1/3 of the total program/department/division's initiatives by resource category (personnel, equipment, etc.)

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7. Process Assessment and Appeal

7A. Purpose of Process Assessment

The purpose of program review assessment is to evaluate the process for continual improvement. The process is required for accreditation and your input is very important to us as we strive to improve.

7B. 2012 - 2013 ASSESSMENT QUESTIONS

1. Did you complete the program review process last year, and if so, did you identify program initiatives?

- 2a. Were the identified initiatives implemented?

- 2b. Did the initiatives make a difference?

3. If you appealed or presented a minority opinion for the program review process last year, what was the result?

4. How have the changes in the program review process worked for your area?

5. How would you improve the program review process based on this experience?

7C. Appeals

After the program review process is complete, your program has the right to appeal the ranking of initiatives.

If you choose to appeal, please complete the appropriate form that explains and supports your position. Forms are located at the Program Review VC website.

The appeal will be handled at the next higher level of the program review process.