

Strategic Plan Construction Management Technology

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Background and History

Central New Mexico Community College CNM is a community college located in central New Mexico. The school was founded in 1965 as a technical vocational institute. The addition of arts and sciences classes and degree-granting power in 1986 began the evolution of the school into a community college.

The Construction Management Technologies, CMT, program began in 1995 within the Trades Department at the school. To emphasize the emerging technological components of the construction industry the program moved to the Technologies Department in 1997. In 2005 the institution was reorganized and the former Trades and Technologies Departments were merged into the Applied Technologies Division. The CMT program awarded its first degree in 1998. Since its inception, the CMT program has graduated over 100 students who have gone on to careers in the construction industry, advanced their careers, or continued their education.

Mission

The mission of the program is to provide a high quality comprehensive package of educational opportunities that prepare students with the necessary knowledge, skills, and leadership abilities to advance their education, begin their careers or advance their careers in the construction industry.

Vision

Our vision is to be a regionally recognized source of future participants and leaders in the construction industry and to serve as guides for students to achieve their educational goals.

Core Values

Comprehensive, relevant, ethical, and diverse.

Analysis

The programs goals and strategies in this plan are designed to take advantage of the opportunities presented by using its strengths, recognizing and, where possible, addressing its weaknesses, making appropriate use of such opportunities and addressing and minimizing its threats.

Strengths, Weaknesses, Opportunities, and Threats

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| <p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Well-developed program of studies. • Well established program. • Faculty. • Industry support. • Program accreditation. • Employment opportunities are projected to be good. • Pay and benefits for graduates are good. | <p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Program revenue mainly from single source. • Recruitment and retention. • Aging faculty. |
| <p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Diverse student pool. • Under-educated student pool. • Emerging technologies. | <p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> • Declining enrollment. • Economic conditions of industry. • Changing technology and processes. |

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| <ul style="list-style-type: none"> • Articulation with four year universities. • Student costs are low. | |
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Goals

Based on the mission, vision and core values of the program and the analysis under taken for this plan the following have been identified as key goals and strategies of the program:

- Serve students with diverse backgrounds. Students hoping to enter the construction industry, students currently working within industry, and students who have been in industry for several years and wish to advance their career by broadening their knowledge and skills.
 - Strategy: program of study should be broad but also present specific skills and knowledge that are comprehensive and relevant.
 - Metric: compliance and accreditation by national or regional construction industry organization.
 - Metric: satisfaction level from surveys of alumni, employers, and advisory board
- Serve students with diverse educational goals. Students whose educational goals are a certificate, an associate degree, or students wishing to transfer to a four year program.
 - Strategy: program of study should provide pathways to each student's educational goals.
 - Metric: appropriate percentage of students in each category
- Serve students by providing an accessible program of study.
 - Strategy: provide diverse course scheduling including traditional time frame, early evening, short and long term, and distance learning.
 - Metric: appropriate percentage of courses offered in each category.
- Serve students and industry by providing a comprehensive and relevant program of study.

- Strategy: program of study should include program student learning outcomes and course outcomes developed by program faculty and industry.
 - Metric: compliance and accreditation by ACCE.
 - Metric: satisfaction level from surveys of alumni, employers, and advisory
- Strategy: program of study should be evaluated, assessed and revised, by stakeholders.
 - Metric: satisfaction level from surveys of alumni, employers, and advisory
 - Metric: achieve satisfactory levels on CNM Assessment Report
 - Metric: achieve satisfactory levels on course evaluations
- Serve students and the community by facilitating student's achievement of their educational goal and/or finding employment.
 - Strategy: meet institutional requirements, including number of graduates, employment rates, and retention rates.
 - Metric: pass CNM Program Review Process
 - Strategy: facilitate and promote student involvement with industry.
 - Metric: # number of student\industry events (internships, speakers, field trips)

Assessment Plan
Construction Management Technology

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1. Mission

The mission of the program is to provide a high quality comprehensive package of educational opportunities that prepare students with the necessary knowledge, skills, and leadership abilities to advance their education, begin careers or advance their careers in the construction industry.

2. Program Objectives\ Goals

1. Serve students with diverse backgrounds. Students hoping to enter the construction industry, students currently working within industry, and students who have been in industry for several years and wish to advance their career by broadening their knowledge and skills.
 - a. Goal: program of study should be broad but also present specific skills and knowledge that are comprehensive and relevant.
 - i. Metric: compliance and accreditation by national or regional construction industry organization.
 - ii. Metric: satisfaction level from surveys of alumni, employers, and advisory board
2. Serve students with diverse educational goals. Students whose educational goals are a certificate, an associate degree, or students wishing to transfer to a four year program.
 - a. Goal: program of study should provide pathways to each student's educational goal.
 - i. Metric: appropriate percentage of students in each category
3. Serve students by providing an accessible program of study.

- a. Goal: provide diverse course scheduling including traditional time frame, early evening, short and long term, and distance learning.
 - i. Metric: appropriate percentage of courses offered in each category.
- 4. Serve students and industry by providing a comprehensive and relevant program of study.
 - a. Goal: program of study should include program student learning outcomes and course outcomes developed by program faculty and industry.
 - i. Metric: compliance and accreditation by ACCE.
 - ii. Metric: satisfaction level from surveys of alumni, employers, and advisory
 - b. Goal: program of study should be evaluated, assessed and revised, by stakeholders.
 - i. Metric: satisfaction level from surveys of alumni, employers, and advisory
 - ii. Metric: achieve satisfactory levels on CNM Assessment Report
 - iii. Metric: achieve satisfactory levels on course evaluations
- 5. Serve students and the community by facilitating student's achievement of their educational goal and/or finding employment.
 - a. Goal: meet institutional requirements, including number of graduates, employment rates, and retention rates.
 - i. Metric: pass CNM Program Review Process
 - b. Goal: facilitate and promote student involvement with industry.
 - i. Metric: # number of student\industry events (internships, speakers, field trips)

3. Exit Competencies (Program Student Learning Outcomes)

- A. Demonstrate knowledge and skills in basic business management and organization.
- B. Demonstrate a firm understanding of how to read and interpret residential, commercial, and civil drawings and specifications.
- C. Develop a systematic approach to construction cost estimating and project management techniques.
- D. Illustrate proficiency in the use of computers and construction related software for CADD, estimating, project management, and basic office communication.

- E. Apply relevant communication skills, project teamwork, and problem solving techniques in the construction industry work environment.

4. Performance Criteria

Program Objectives\ Assessment Tool\ Criteria

1. Serve students with diverse backgrounds.
 - a. Program accreditation: renewal
 - b. Alumni\ Employer Survey: mean score greater than 3.5
2. Serve students with diverse educational goals.
 - a. First Term Course Data: 30% of students certificate; 40% associate degree; 30% of students transfer
3. Serve students by providing an accessible program of study.
 - a. Program Course Data: 50% courses during traditional; 25% courses early evening; 5% courses offered short term; 20% of courses offered distance learning.
4. Serve students and industry by providing a comprehensive and relevant program of study.
 - a. ACCE accreditation: renewal
 - b. Alumni\ Employer\ Advisory Survey: mean score greater than 3.5
 - c. CNM Assessment Report: mean measurement score > 75%.
 - d. Course Evaluation: mean score greater than 3.0.
5. Serve students and the community by facilitating student's obtainment of their educational goal and finding employment.
 - a. Program Review Process: # of graduates > 5; graduate job placement > 80% ; Retention rate > 75%
 - b. Program Student\ Industry Involvement Report: # of events > 10.

Exit Competencies\Assessment Tool\ Criteria

- A. Demonstrate knowledge and skills in basic business management and organization.
 - o CNM Assessment Report: mean measurement score > 75%
- B. Demonstrate a firm understanding of how to read and interpret residential, commercial, and civil drawings and specifications.
 - o CNM Assessment Report: mean measurement score > 75%
- C. Develop a systematic approach to construction cost estimating and project management techniques.
 - o CNM Assessment Report: mean measurement score > 75%
- D. Illustrate proficiency in the use of computers and construction related software for CADD, estimating, project management, and basic office communication.
 - o CNM Assessment Report: mean measurement score > 75%

- E. Apply relevant communication skills, project teamwork, and problem solving techniques in the construction industry work environment.
 - o CNM Assessment Report: mean measurement score > 75%

5. Evaluation Methodology

This plan is a two level formative evaluation of the Construction Management Technology program. The first and most important level is designed to answer the question of whether the program of study is comprehensive and relevant to the primary stakeholders; students, faculty and industry. The second level of evaluation is intended to answer the question of whether the program is effective and sustainable.

Assessments tools will be implemented and reported as stated in the Assessment Implementation Plan.

Results, findings, and program improvements will be reported and analyzed with a CMT Program Quality Improvement Plan Report. Improvements as a result of this evaluation, to the program of studies and the program, will be made as soon as practical within the constraints of the college.

6. Assessment Tools: Description

- ACCE Program Accreditation: American Council for Construction Education sets standards and requirements for higher education degree granting construction programs. It evaluates and accredits those programs based on those standards and requirements.
- Alumni\ Employer Survey: asks participants to rank, on a 5 point Likert scale, CMT courses and overall program elements
- First Term Course Survey: collects data on first term CMT students regarding construction experience and educational goal.
- Program Course Data: compiles data regarding when and what type of classes are offered by the CMT program
- Alumni\ Employer\ Advisory Survey: asks participants to rank, on a 5 point Likert scale, CMT courses and overall program elements.
- CNM Assessment Report: reports on assessment and evaluation of student learning outcomes and program exit competencies.
- Course Evaluation: student evaluation of course and instructor effectiveness.

- Program Review Process: summative evaluation of program effectiveness as measured by graduation, course fill rates, and employment.
- Program Student\ Industry Involvement Report: tabulation of student and industry engagement.

Assessment Implementation Plan
Construction Management Technology

| Objective | Assessment Tool | When | | CMT QIP Report |
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| Program Objective | | Cycle | Report | Cycle |
| 1. Serve students with diverse backgrounds | ACCE accreditation | 6 year | Self-Evaluation\Progress Reports | 2 year |
| | Alumni\Employer Survey | 2 year | | 2 year |
| 2. Serve students with diverse educational goals. | First Term Course Survey | Fall and Spring Term | With CNM Assessment Report | 1 year |
| 3. Serve students by providing an accessible program of study. | Program Course Data | 1 year | With CNM Assessment Report | 1 year |
| 4. Serve students and industry by providing a comprehensive and relevant program of study. | ACCE accreditation | 6 year | Self-Evaluation\Progress Reports | 2 year |
| | Alumni\Employer\Advisory Survey | 2 year | | 2 year |
| | CNM Assessment Report | 1 year | | 1 year |
| | Course Evaluation | Each Term | With CNM Assessment Report | 1 year |
| 5. Serve students and the community by facilitating | Program Review Process | 1 year | With CNM Assessment Report | 1 year |

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| student's achievement of their educational goal and/or finding employment. | Program Student\Industry Involvement Report | 1 year | With CNM Assessment Report | 1 year |
| Exit Competency | Assessment Tool | When | | CMT QIP Report |
| | | Cycle | Report | Cycle |
| A. Demonstrate knowledge and skills in basic business management and organization. | Various (see CNM Assessment Report) | Varies (see CMT Program Assessment Cycle Plan) | CNM Assessment Report CMT Program-AAS Assessment Cycle Plan | 1 year |
| B. Demonstrate a firm understanding of how to read and interpret residential, commercial, and civil drawings and specifications . | Various (see CNM Assessment Report) | Varies (see CMT Program Assessment Cycle Plan) | CNM Assessment Report CMT Program-AAS Assessment Cycle Plan | 1 year |
| C. Develop a systematic approach to construction cost estimating and | Various (see CNM Assessment Report) | Varies (see CMT Program Assessment Cycle Plan) | CNM Assessment Report CMT Program-AAS Assessment Cycle Plan | 1 year |

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| project management techniques. | | | | |
| D. Illustrate proficiency in the use of computers and construction related software for CADD, estimating, project management, and basic office communication. | Various (see CNM Assessment Report) | Varies (see CMT Program Assessment Cycle Plan) | CNM Assessment Report CMT Program Assessment Cycle Plan | 1 year |
| E. Apply relevant communication skills, project teamwork, and problem solving techniques in the construction industry work environment. | Various (see CNM Assessment Report) | Varies (see CMT Program Assessment Cycle Plan) | CNM Assessment Report CMT Program Assessment Cycle Plan | 1 year |