Construction Management (CM)

2024-2025 Comprehensive Program Review

Presented to:

Kimberly Mathews

Dean, Career Technical Education

By:

Roberto R. Loya

Instruction

Section 1: Program Information

Today's construction industry utilizes construction management best practices to oversee, manage and control the scope, schedule, budget, quality, safety and risk during all stages of a project's life cycle namely planning, design, preconstruction, construction and closeout. Successful completion of construction management courses prepares students for construction management entry-level opportunities in one of many functions and/or postilions that support the construction project management team. For students who already have prior construction industry experience, this program will prepare them for potential promotional opportunities.

Full Time Faculty		
Roberto Loya	38 Years	Construction management
Part Time Faculty		
Elhami Nasr	37 Years	Construction management
Tariq Shehab	15 Years	Construction management
Pamela Santos	18 Years	Construction management
Tarek Nasr	16 Years	Construction management
Jason Townsell	20 Years	Construction Safety

Faculty competence is also partially gauged by student responses to surveys that are conducted at the end of each semester. Students are asked to evaluate their professors and provide commentary on the classroom experience.

Quality teaching is achieved through:

1. Grounding on the CM Program Teaching Philosophy & Approach
2. Selecting technically qualified professors with construction industry experience
3. Using student feedback to identify potential areas for teaching improvement
4. Using professional development to improve both technical and teaching capability

The selection of full-time faculty for the program is rigorous. This is especially true for tenure-track positions. Faculty are expected to have a bachelor's degree or above in Construction Management or a related discipline. Higher educational degrees are preferred. The other major consideration is project/construction management experience. Our combined full-time and part-time faculty have over 92 years of combined professional experience in project / construction management. A third major consideration is teaching experience.

Part-time faculty usually teach one course that is directly related to their education and professional qualifications. For example, *CM 120 - Construction Contract Documents* is being

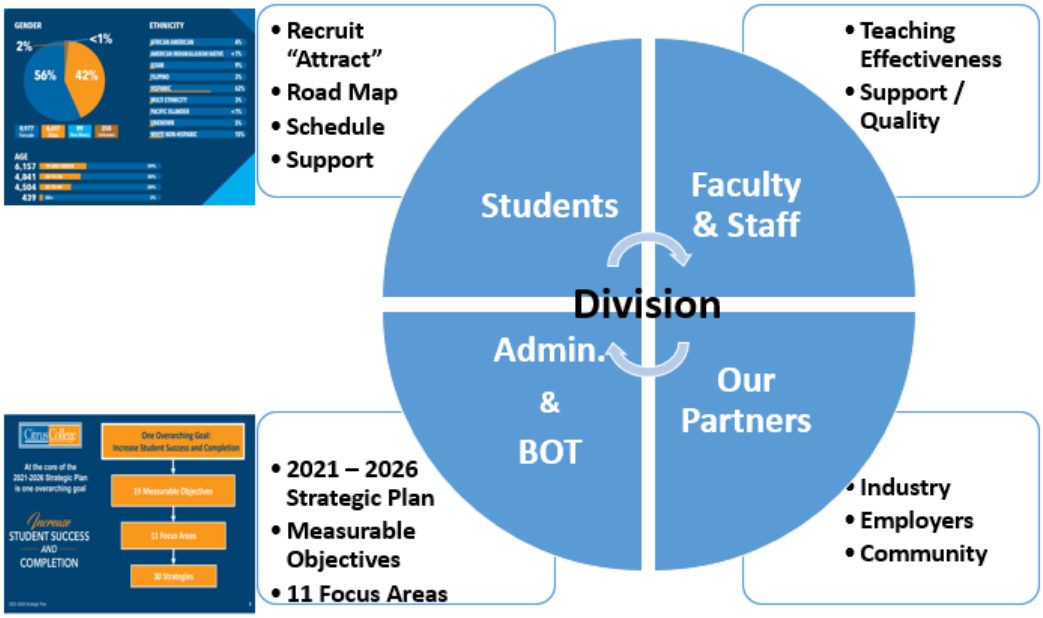
taught by a construction a practicing senior construction manager. Another example is *CM 210 Construction Project Safety* it is taught by a safety professional and Vice President of Safety & Health for a major construction enterprise.

Career Technical Education (CTE) Team

CTE Division	
CTE Dean	Kimberly Mathews
Dean's Office Administrative Assistant	Angie Alvares
Grants Supervisor	Therese Adams
Receptionist	Student Worker
Career Pathways Specialist	Alicia Lopez
Counselors	Maria LeDuc / Dr. Lucinda Over

Section 2: Mission:

In alignment with the Citrus College Strategic Plan, Our CM program educates and prepares work-ready students for careers in the construction industry.



The Programs' mission, vision and goals are as follows:

CM Program Mission –

Citrus College Construction Management (CM) Program equips students with the foundational knowledge and practical skills needed for entry-level construction careers. Through an industry-aligned curriculum, hands-on experiences, and strategic partnerships, we cultivate a safe, accessible, and equitable environment that empower our diverse student population to achieve long-term success.

Vision -

We envision Citrus College as a hub of excellence in construction management education—one that delivers responsive, high-quality learning opportunities. Our goal is to empower students to overcome challenges, embrace innovation, and emerge as active contributors to the future of the construction industry.

Program Core Values -

- **Student Success and Completion**: Meeting student needs by creating an educational environment in which students can attain a variety of goals.

- **Excellence**: Maintaining a high standard of integrity and performance leading to the achievement of academic and career goals.
- **Collaboration**: Seeking input from all sectors of the college and the community.
- **Diversity**: Fostering a learning community in which the diverse values, goals, and learning styles of all students are recognized and supported.
- **Life-Long Learning**: Encouraging enthusiastic, independent thinkers and learners striving for personal growth.
- **Integrity**: Behaving ethically in all interactions at all levels.
- **Technological Advancement**: Implementing cutting-edge technology that enhances instruction and prepares students for life-long success

CM Program Objectives -

1. **Deliver a Comprehensive Two-Year Program**
   Provide a robust educational experience that builds the essential knowledge and skills for thriving in modern construction project environments.
   - **Industry Engagement:** Maintain active collaboration with the Industry Advisory Board (IAB) to ensure curriculum relevance.
   - **Benchmarking Excellence:** Participate in industry conferences and professional events to benchmark academic standards.
   - **Continuous Improvement:** Implement and regularly update a comprehensive continuous improvement plan.
2. **Facilitate Pathways to Gainful Employment**
   Expose students to diverse entry-level opportunities and support their transition into the workforce.
   - **Career Exploration:** Facilitate internships, apprenticeships, and job advancement opportunities.
   - **Industry Partnerships:** Develop strategic alliances with industry leaders to enrich the learning experience.
   - **Real-World Insights:** Bring industry experts into the classroom.
   - **Collaborative Support:** Foster strong working relationships among students, faculty, and career counselors.
   - **Employment Services:** Provide dedicated support in resume building, interview preparation, and networking.
3. **Ensure Curriculum Relevance and Continuous Improvement**
   Align the program with regional industry needs through ongoing review and refinement.
   - **Annual Reviews:** Evaluate and update program goals and objectives yearly to stay in sync with institutional and industry strategies.
   - **Regular Evaluations:** Conduct recurring program and curriculum assessments.
   - **Feedback-Driven Enhancements:** Implement improvements based on input from industry partners and alumni.
   - **Outcome Assessments:** Administer annual Student Learning Outcomes (SLO) and Course Learning Outcomes (CLO) assessments.

- **Advisory Leverage:** Utilize insights from the Construction Management IAB to guide improvements.
- **Administrative Support:** Secure continuous backing and funding from Citrus College Administration.

4. **Achieve ACCE Accreditation**
   Pursue accreditation from the American Council for Construction Education (ACCE) to affirm the program's quality and industry relevance.
   - **Mentor Engagement:** Work closely with an assigned ACCE mentor for ongoing guidance.
   - **Professional Development:** Attend ACCE conferences to stay current with training and accreditation standards.
   - **Active Participation:** Contribute to ACCE initiatives and participate as a valued member of the ACCE VT community.
5. **Adopt a Win-Win Instructional Approach**
   Foster an educational environment where both students and educators benefit through mutual success.
   - **Instructional Philosophy:** Develop and implement a comprehensive CM instructional framework that emphasizes partnership.
   - **Interpersonal Skills:** Integrate the development of communication and collaboration skills throughout the curriculum.
   - **Professional Integrity:** Deliver courses grounded in professionalism, ethical standards, teamwork, and sustained professional trust.
6. **Prepare Students for the CMIT Credential**
   Equip students to earn the Construction Manager-in-Training (CMIT) credential from the Construction Management Association of America.
   - **Professional Association:** Establish and operate the Citrus College Construction Management Association (CC-CMA) to foster leadership and professional growth.
   - **Leadership Opportunities:** Integrate student participation in leadership roles and support functions within the CMA framework.

Degrees and Certificates –

Associate Degrees

- A.S. in Construction Management

Certificates of Achievement

- Construction Inspection
- Construction Management
- Construction Health and Safety Specialist
- Special Inspection - Reinforced Concrete

Teaching Philosophy –

Our teaching philosophy is built on the combined expertise of construction industry practitioners and academic professionals, with the student at the center of our mission. We believe that education is a collaborative, two-way process where instructors act as mentors, coaches, and advisors—dedicated to ensuring every student's success.

- **Student-Centered Learning:**
  We prioritize personalized instruction that meets each student's unique needs and leverages their individual experiences.
- **Communication and Collaboration:**
  By fostering open dialogue and active listening, we create a classroom environment that values two-way communication and mutual trust.
- **Adaptability and Inclusivity:**
  Recognizing that no two students are alike, we strive to be flexible, accessible, and inclusive—welcoming diverse perspectives as a catalyst for richer learning experiences.
- **Win-Win Philosophy:**
  We operate on a Win-Win principle: a student's success directly reflects our success. Our commitment is to be the best mentors, coaches, and supporters, guiding students toward lifelong learning and career achievement.
- **Diversity in Construction:**
  We acknowledge that diversity enhances integrated construction teams, driving innovation and improved project outcomes. Our classroom mirrors the global industry by welcoming a variety of backgrounds and experiences, thereby enriching the learning process for everyone.

Professional track programs like Construction Management must be justified by industry needs and demands. The college maintains access to Labor Market Information (LMI) data that is obtained through several data sources including the Bureau of Labor Statistics (BLS), the State of California Employment Development Department (EDD) and the Center for a Competitive Workforce (CCW), which provides construction workforce jobs data specific to the Los Angeles Region where Citrus Collage is located. Since its inception, the construction management program has been undergoing continuous improvements which each time require updated LMI data.

Program/Curriculum Alignment

Our program maintains the effort to ensure the program and curriculum are in the best alignment with the industry's best practices. To that end, we work with our partners from industry, our Industry Advisory Board (IAB), and our local and regional curriculum review members to help us achieve the best alignment. In so doing, we are ensuring that our students are well prepared and on the cutting edge of meeting the requirements for entry-level employment, based on the needs of the construction industry's employers within the region.

Construction Management (CM) Associate of Science Degree Required Courses (33 Semes ter Core Units). The following reflect matching CM courses to ACCE requirements:

Program SLOs	CM Courses
1. Apply effective communication, both orally and in writing.	CM 295 Construction Project Management Capstone, CM 110, CM 270 and CM 210
2. Apply the skills to estimate quantities and costs for the bidding process in a construction project.	CM 275 – Construction Estimating
3. Apply the aptitude to schedule a basic construction project.	CM 290 – Const. Plan., Scheduling & Con- trol
4. Apply current technology related to the construction process.	CM 150 – Current Technology App. in Con- struction
5. Apply the interpretation of construction documents (contracts, specifications, and drawings) used in man- aging a construction project.	CM 120 – Plans Reading; CM 121 – Const. Contracts Docs., Codes & Specs
6. Apply basic principles of construction accounting.	CM 110 – Introduction & Fundamentals of Construction Management
7. Apply basic surveying techniques used in building layout.	CM 130 – Const. Survey Methods and Appli- cations
8. Understand basic principles of ethics in the construc- tion industry.	CM 110 – Introduction & Fundamentals of Construction Management
9. Understand the fundamentals of contracts, codes, and regulations that govern a construction project.	CM 121 – Const. Contracts Docs., Codes & Specs
10. Understand basic construction methods, materials and equipment.	CM 270 – Const. Means, Methods, and Equip.
11. Understand basic safety hazards on a construction site and standard prevention measures.	CM 210 – Construction Project Safety
12. Understand the basic principles of structural design.	CM 282 – Principles of Structural Design
13. Understand the basic principles of mechanical, electrical and piping systems.	CM 281 – Principles of Mech., Elect. and Pip- ing Syst.

Syllabi for the courses taught by the program shall include the following:

- CLOs in relation to the Program's SLOs,
- Instructional methods,
- Topical outline,
- Method(s) of assessment of CLOs, and
- Grade performance criteria.

Interpersonal communication skills is addressed as part of the number 1 Program SLO. This is a critical skill that the program endeavors to incorporate across the curriculum. The skill is formally assessed as part of two key courses namely CM 210 and CM 295.

Section 3: Course Curriculum

Curriculum Table

Code	Title	Units
Required courses:		
CM 110	Introduction and Fundamentals of Construction Management	3
CM 120	Plans Reading	2
CM 121	Construction Contract Documents, Codes and Specifications	2
CM 130	Surveying Methods and Applications	3
CM 140	Construction Materials, Methods and Assembly	2
CM 150	Current Technology Applications in Construction	2
CM 210	Construction Project Safety	3
CM 270	Construction Equipment and Methods	3
CM 275	Construction Estimating	3
CM 281	Principles of Mechanical, Electrical and Piping Systems	2
CM 282	Principles of Structural Design	2
CM 290	Construction Planning, Scheduling and Control	3
CM 295	Construction Project Management Capstone	3
	Total Units	**33**

As part of an multi-year industry accreditation effort and in line with the program's ongoing quality improvement plan, the CM program has undergone three substantial program/course modifications.

- CORs have been reviewed by the curriculum committee in line with the 6-year cycles.
- Pre and Co requisite requirements are currently under review and pending an update in 2025.
- All program/course content has been reviewed by the Construction Management Industry Advisory Board (IAB).
- Our program maintains the effort to ensure the program and curriculum are in the best alignment with the industry's best practices. To that end, we work with our partners from industry, our Industry Advisory Board (IAB), and our local and regional curriculum review members to help us achieve the best alignment. In so doing, we are ensuring that our students are well prepared and on the cutting edge of meeting the requirements for entry-level employment, based on the needs of the construction industry's employers within the region.

All Construction Management courses were modified to be offered as either face-to-face or online synchronous. Accessibility to online deliveries is met in the course through ensuring all documents/pages are properly formatted (headings and tables), all videos have captions, all images have alt tags, all audio files have a transcript, color contrast is compliant, and descriptive text is used.

The program employs the use of the CANVAS, the learning Management System (LMS), which is used for all classes face-to-face as well as online. The only difference between the two deliveries is that the Confer ZOOM platform is used to facilitate online synchronous class sessions.

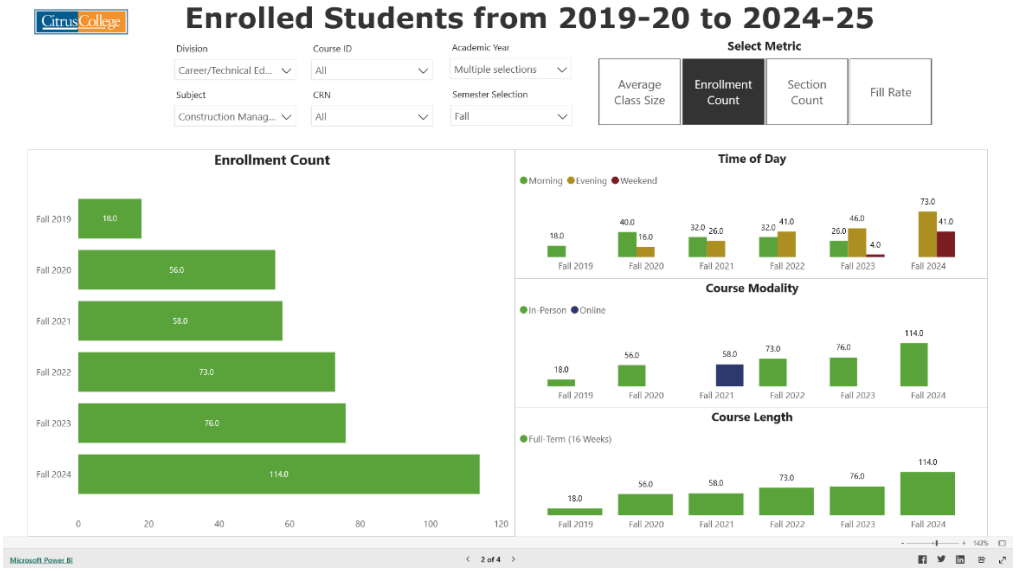
CM students are predominantly full-time working adults who need the flexibility of late afternoon, weekends and/or evening classes. To facilitate access and inclusiveness, the program is largely an evening only program. Courses are a mix of 2- and 3-unit classes.

At the request of students, we are exploring hybrid formats wherein the course is delivered 70% online and 30% in person.

Section 4: Student Success Data

Student Enrollment –

Because Construction Management is a relatively new program that has been undergoing extensive improvements to meet industry accreditation requirements, one very important statistic is the student enrollment. The figure below indicates the program has benefitted from a steady increase from its initial course offering in 2019.



Student Retention and Success –

Based on a one-year cycle, and since its initial launch in 2019, the program has maintained an average of 93% student retention and a student success rate of 77%. This is trending slightly higher by comparison to the college-wide data.

Degrees and Certificates –

The construction management graduation rate appears to be consistent with a newly established program. To date we have only a few graduates, however, numbers are expected to rise from the anticipated 2025 and 2026 graduations. See Graph below.

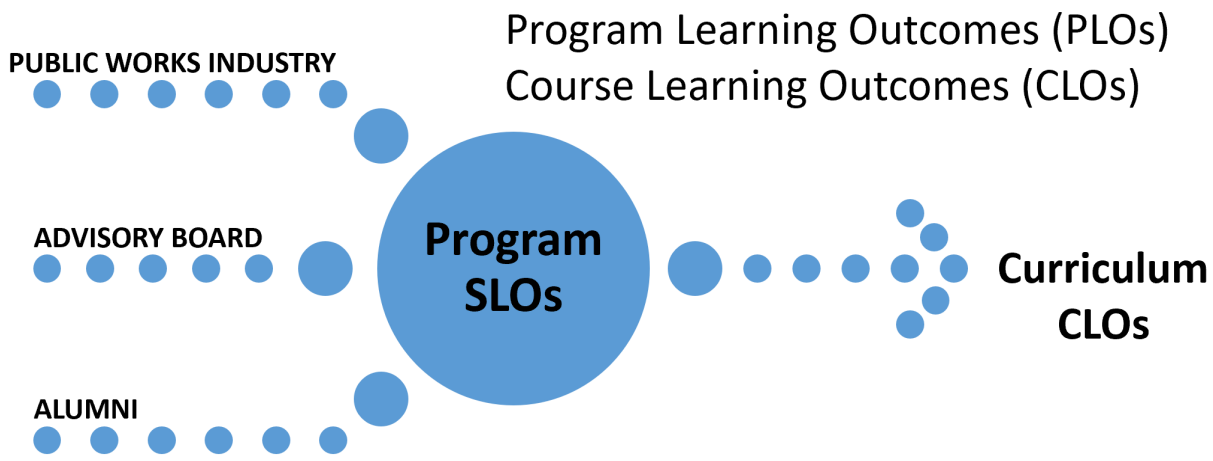
Program Review Data Packet C: Program-Level Degree Awards

PROGRAM	2020-21	2021-22	2022-23	2023-24
CM	**6**	**5**	**9**	**2**
AS	**1**	**1**	**3**	**2**
AS in Construction Management	1	1	3	2
CERT	**5**	**4**	**6**	
Cert in Construction Inspect			1	
Cert in Construction Management	5	2	5	
Cert in Construction Quality Control		2		
Total	**6**	**5**	**9**	**2**

Section 5: Program-Level Student Learning Outcome Assessment

Our approach to Program-level student learning outcome assessment is five-fold:

1. Working with the CM Industry Advisory Board to achieve Alignment
   - Identifying Knowledge, Skills, Competencies based on industry needs/demands.
   - Identification and Development of Program SLOs
2. Initiate the Program/Curriculum modification.
3. Secure review and approval by the Curriculum Committee.
4. Maintain Continuous Improvement
5. Update the course Syllabi to include the following:
   - CLOs in relation to the Program's SLOs,
   - Instructional methods,
   - Topical outline,
   - Method(s) of assessment of CLOs, and
   - Grade performance criteria.



Section 6: Assessment and Planning

The CM program strengths and weaknesses –

Overall Strengths –

- As a new program, the CM program has been on a positive trend in terms of student enrollment, success and retention.
- The program is on track to become the first Community College in the state to receive ACCE Industry accreditation.
- Program has had an increase in women participation.
- Program supports an industry that anticipates very high employment demands through 2030.
- Strong faculty with dual industry and academic experience
- Students are predominantly full-time working adults.

Overall Weaknesses –

- Lead CM faculty position does not have release time and thus is overwhelmed with the administration of two programs (CM and PUB), both which have tremendous potential for program expansion, increased enrollment, with increased demands from industry, all resulting in unleveraged opportunities.
- Lacking technology hardware/software resources to support on-line deliveries
- Need for construction surveying and materials labs – still pending development and implementation
- Classes are currently available on-line due to the construction of new facilities.
- Currently no construction-related student clubs to enhance student/industry engagement.

Opportunities –

- Capitalize on the benefits of achieving industry accreditation.
- Take a proactive approach to industry outreach and engagement
- Engagement with regional industry employers
- Plan and organize Industry-Student engagements
- Proactive marketing and recruitment efforts
- Attendance of Construction industry conference events
- Conduct more construction industry field trips

Supporting DEIA Initiatives –

From an instructors' perspective, we recognize that students are faced with many challenges. Our CM students are largely a diverse group of working adult students, though a few are recent high school graduates. Challenges stem from both personal and professional perspectives. These include but are not limited issues with understanding college processes, technology, scheduling, finances, lack of support systems, lack of counseling, and in major way having to balance personal, work, and college priorities. Each student is different with unique needs. As instructors, one immediate response is to clearly understand the students' needs and assist by offering coaching to the extent practical, responsible, and ethical. But most importantly, making the students aware of the available resources within the college that can assist them in addressing and overcoming their challenges.

In line with the Citrus College Diversity, Equity, Inclusion, and Accessibility (DBIA) initiatives, we are strong believers in the values of Diversity, Equity, and Inclusion (DEI) as a critical way of addressing and helping students overcome their challenges and imperative to the success of all students. In the context of a Construction Management education, the instructor must fulfill all three to truly support an optimally welcoming diverse, fair, and equitable, and inclusive learning environment. This is my philosophy and approach.

With these challenges in mind, college students within the Los Angeles region are diverse and we must ensure that the learning environment is also diverse. It is our responsibility, as faculty, is to make sure we provide a welcoming educational environment that truly represents the diverse community of faculty, staff, students, and stakeholders. We can accomplish this by fostering a culture of respect, support, sharing and collaboration, free of discrimination against any academic, socioeconomic, ethnic, religious, cultural background, disability, and sexual orientation. It is my firm belief that diversity fosters a healthy learning environment with innovation and critical thinking. We have seen first-hand how diversity in the classroom, particularly construction management classroom, adds tremendous value seeing students engaged and learning in integrated, diverse, collaborative, and multi-cultural classroom environment. Such is the modern construction management environment.

Equity and Inclusion are critical because a student's path to success is unique and each of them represents a unique way of learning. The instructor must understand the diversity within the classroom and be readily capable of identifying students' needs in terms of resources, support; and be able to readily adjust the instruction delivery to support successful learning for all students. Special needs students will require an instructor to conduct special one-on-one interaction, if necessary, to support the student to completing the class successfully.

Construction management is all about people working together, collaboratively as a team. Inclusion, therefore, is a must for the classroom environment. No one student should be feeling excluded from the learning process. I am a strong advocate for inclusivity and collectivity in all that we do within the classroom, especially as it relates to in-class discussions as well as group assignments.

That said, we must continue to better understand how we, as CM faculty, can contribute to the efforts towards eliminating any discrimination and bias in our educational environment.

But also, to help students understand the various excellent resources that are available to assist them in addressing and overcoming their respective challenges.

Recommendations and Goals –

This program has been under implementation and development as it seeks to become the first ACCE industry-accredited construction program in the state. It has been increasingly improving its program/course content to align with both regional industry demands and ACCE accreditation requirements. Although there are a significant number of goals, reported as achieved in previous annual reports, there are some very important goals that remain as work in progress.

These include:

- Marketing of Program / Outreach to support Programs Visibility & Student Recruitment
- Developing an industry engagement plan industry and IAB, obtaining their guidance in the pursuit of program/course improvements that ensure continued alignment with Industry's Best Practices.
- Completing the ACCE accreditation of the CM Program – currently in progress.
- Launching of the Construction Management Association Club to enhance student engagement and feedback.
- Continue efforts to explore and pursue expansion of alternative CM programs through emphasis options in Heavy civil and/or Residential construction
- Enhance program/courses w/Industry Recognized Credentials
- Explore Registered and non-Registered Apprenticeships
- K-14 -- Dual Enrollment and Articulation
- Seek release time for the CM lead faculty to provide the needed, industry outreach of Construction industry programs, namely Construction Management and Public Works.
- Pursue grant opportunities.
- Optimize incorporation and use of technology (AI)
- Maintain continuous quality improvement.

Budget Priorities –

Currently we are in the final stages of achieving Industry Accreditation, with the formal accreditation visiting team arriving in October 2025. There are tremendous opportunities that will stem from becoming accredited. It is therefore important to ensure that all accreditation fees are a priority this year.

Accreditation Fees

VT Initial Travel Expense Fee Associates Degree Programs …… $7,000

Future Annual Total Accreditation Fees…… $4,000