Environmental Engineering Technology Certificate of Achievement Program - CTE

1. **Program Requirements**

**Certificate of Achievement: *Environmental Engineering Technology***

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| **Requirements** | **Dept. #** | **Name** | **Units** | **Sequence** | |
| Required Core (20 units) | CHEM M12  GIS M01  ENGR M04  ENGR M33  ENGR M33L  ENGR M35  WS VSS | Introductory Chemistry I  Introduction to Mapping and Geographic Information Systems (GIS)  Engineering Design/CAD  Intro. to Environmental Engineering  Intro. to Environmental Engineering Lab  Solid and Hazardous Waste Management  Stormwater Pollution Prevention | 4  3  3  3  1  3  3 | | Yr. 1, Fall/Spring  Yr. 1, Fall/ Spring  Yr. 1, Fall/Spring  Yr. 2, Fall/Spring  Yr. 2, Fall/Spring  Yr. 2, Fall/Spring  Yr. 2, Fall/Spring |

REQUIRED CORE UNITS: 20 Units

TOTAL UNITS: 20 Units

1. **Master Planning**

Since the mission of Moorpark College is to empower its diverse community of learners to complete their goals for academic transfer, basic skills, and career technical education, this certificate program fits into the mission of the college. Furthermore, one of the strategic directions of Moorpark College is to be responsive to the marketplace through career technical education, so once again this certificate program fits into the curriculum and master planning of the college. In addition, the Public Policy Institute of CA in its April 2016 report highlighted the need for college educated workers in CA as it stated that college graduates in CA's workforce need to grow by about 38% by 2030 in order to meet the economic demands of CA. It stated a skills gap between the CA's workforce and the needs of the workplace which can only be narrowed if CA produced more college graduates. Although the Mater Plan for Higher Education in CA has not been updated since 1960, the need for greater education in CA's workforce cannot be ignored. (http://www.ppic.org/content/pubs/report/R\_0416HEBKR.pdf)

Community colleges serve a vital role in educating the future workforce of CA as they are in most cases the first and the only choice of higher education for some if not most CA residents. Therefore, offering a Career Technical Education which is certified by a State approved Degree is definitely a step in the right direction.

1. **Enrollment and Completer Projections**

According to the advisory committee assertions about the need for this degree and the projections made by both Bureau of Labor and Statistics (BLS) and the Labor Market Data for job availability and growth, we project a healthy number of 50 enrollments and 25 completers annually for this program.  (See Attachments 3, 4, 5, 6)

1. **Place of Program in Curriculum/Similar Programs**

Moorpark College currently has an Engineering program and an Environmental Science program which can work together to promote this new Environmental Engineering Technology Program on campus and in the community.

1. **Similar Programs at Other Colleges in Service Area** – justification of need for program in the region

Currently, there are only 2 colleges in CA which offer a Certificate and/or an Associate’s Degree in Environmental Engineering Technology (see Attachments 7, 8):

i) Allan Hancock College

ii) Rio Hondo College

Ventura College has a Water Science Program that prepares students for a career in potable water treatment or wastewater treatment. This program is more specifically tailored to water issues whereas the Moorpark Program is aimed towards studying environmental pollution problems and engineering solutions.

1. **Career Technical Education Certificates-Additional Documentation**

In addition to a narrative, all new and substantially changed CTE programs must include:

* Labor Market Information and Analysis –

According to Bureau of Labor and Statistics (BLS) Environmental Engineering Technician jobs are projected to grow by 10% nationally from 2014 to 2024, faster than the average of all occupations. Additionally, according to Projection Central these jobs are expected to grow by 20% for the same time period for the State of CA. Furthermore, labor market analytics EMSI projects a positive upward trend of 4.1% in Ventura and LA counties, 5.8% in CA, and 8.2% in the Nation for Environmental Engineering Technician jobs in the time period of 2017 to 2027. The median hourly earnings are $29.72/hr ranging from a low of $23.85/hr to a high of $43.06/hr. Most of these jobs are held by a workforce of high school diploma or equivalent (22.4%), some college education but no degree (31.0%), and Associate's Degree (22.6%). (See Attachments 3, 4, 5, 6)

* Advisory Committee Recommendation – includes advisory committee membership, minutes and summary of recommendations. (See Attachments 9,10,11)

The feasibility of this career pathway and also its development was discussed at the environmental engineering advisory committee meeting on February 28, 2017 where the committee was very supportive of the idea of offering an Environmental Engineering Certificate Program at Moorpark College. The committee members independently corroborated the job projections reported by the BLS and Projections Central stating that in 2020 to 2021 there is going to be a wave of retirees within the environmental industry and this will create a great need for a workforce which is properly trained in environmental engineering technology related services. The committee was also very specific in its recommendation of the curriculum for this certificate program.