WMU Civil and Construction Engineering Department: Another step forward to prepare career-ready graduates

Founded in 2002, the Civil Engineering program at Western Michigan University has become the third largest such program in the state of Michigan. The Civil and Construction Engineering (CCE) department mission is to provide students the opportunity to obtain stat-of-the-art engineering knowledge and skills through student-centered education whereas the College of Engineering and Applied Science (CEAS) mission is to prepare career-ready graduates. Looking at both the CCE and CEAS missions, Dr. Upul Attanayake, Assistant Professor of Civil and Construction Engineering, established a process in collaboration with the Michigan Concrete Association (MCA) to provide WMU CCE students to obtain the American Concrete Institute (ACI) Concrete Field Testing Technician - Grade I certification. ACI defines the Grade I technician as “an individual who has demonstrated the knowledge and ability to properly perform and record the results of seven basic field tests on freshly mixed concrete.” These tests are performed as per the American Society for Testing and Materials (ASTM) standards. The Grade I certification process involves two written exams and a performance exam. Written exams cover fundamentals of concrete and seven ASTM test methods and practices while the performance exam requires examinees performing seven basic field tests on fresh concrete as per the ASTMs.

“As future engineers, our students learn much more than what this certification examination is evaluated in my Civil Engineering Materials course”, stated Dr. Attanayake. ACI certificates are worldwide accepted. Having this certificate provides a competitive edge to our graduates to secure co-op/internships because they finish the coursework and certification during their junior year. Our students will likely not do field testing during their career but need to know how these field test are performed. State Highway Agencies, Contractors, and Testing Labs prefer students with certification because they can get our students directly walking to a construction site and performing productively. The experience our students gain as certified technicians and the contacts they develop with the industry will help our students secure jobs much easier than the students from other institutes, stated Attanayake. “By the time our students leave the college they are career-ready graduates”, stated Attanayake.

As the first step, 11 students took the Grade I certification exam on May 24. Mr. David Hollingsworth, Director-Technical Services/Training, Michigan Concrete Association, proctored the entire examination while several other certified technicians helped with proctoring individual practice tests and written examinations. With the help of MCA, this examination will be conducted annually at the end of the spring semester at Parkview campus facilities.
Mr. Hollingsworth explaining the practical examination procedures

A student preparing slump test
A student preparing to test air content using pressure meter

Students taking a written exam