

2/20/2023 DATE

☐ REQUIRED COURSE
☐ ELECTIVE COURSE

Technology

 DIVISION
☐ NEW COURSE
☐ REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	CET-039	TITLE: (30 Characters Max)		Level III Portland Cement Concrete							
SEM CR HRS:	1	Lecture:	1	Lab:	0	SOE/ Internship:	0	ECH:	1		
Course Level:	<input type="checkbox"/> Gen Ed / IAI <input type="checkbox"/> Baccalaureate /Non-IAI		<input type="checkbox"/> Career/Technical <input checked="" type="checkbox"/> Dev Ed/ Not in Degree Audit		Clinical Practicum:	0	SOE/ Internship:	0	SOE ECH:	0	
COURSE PCS #	16 - 46.0403		IAI Code				Contact Hours (Minutes Per Week)				
Repeatable (Y/N):	N	Pass/Fail (Y/N):	N	Variable Credit (Y/N):		Min:	Max:	16 Wks	50	8 wks	100
Prerequisites:	CET-020 or CET-021, CET-030 and CET-024										
Catalog Description: (40 Word Limit)	An advanced course covering concrete mix design for I.D.O.T. QC/QA projects.										

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Non-Clinical Internship/ SOE
Volumetric Mix Design & Various Mix Design Methods	1			
Concrete Mix Design Development Using IDOT Method	6			
Concrete Mix Design Software	2			
High Early-Strength Concrete Mixtures	1			
Mix Design Trial Batch	1			
Cement Aggregate Mixture (CAM) II Mix Design Development	1			
Controlled Low-Strength Material (CSLM) Mix Design Develop.	1			
IDOT Specifications and Special Provisions	1			
Blending Aggregates	1			
TOTAL	15	0	0	0

EVALUATION

QUIZZES	<input type="checkbox"/>	EXAMS	<input checked="" type="checkbox"/>	ORAL PRES	<input type="checkbox"/>	PAPERS	<input type="checkbox"/>
LAB WORK	<input type="checkbox"/>	PROJECTS	<input type="checkbox"/>	COMP FINAL	<input type="checkbox"/>	OTHER	<input type="checkbox"/>

COURSE MATERIALS

TITLE:	I.D.O.T. PCC Level III Technician Manual
AUTHOR:	I.D.O.T.
PUBLISHER:	
VOLUME/EDITION/URL:	
COPYRIGHT DATE:	

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Concrete mix design	9	Formulate concrete mix design based on IDOT method, and understand basic concept of software designed for use in developing IDOT Concrete Mix Designs.
Development of different types of concrete mixtures	4	Modify designs based on different types of concrete mixtures.
IDOT Standard Specifications and Special Provisions	1	Apply IDOT specifications to QC/QA jobs.
Blending Aggregate	1	Calculate percent retained, coarseness factor, workability factor and usage of the 0.45 power curve.
	15	

COURSE OUTCOMES*	At the successful completion of this course, students will be able to:
	<ul style="list-style-type: none">• List applicable IDOT specifications and special provisions, which relate to the design of Portland Cement Concrete products.
	<ul style="list-style-type: none">• Demonstrate proper methods of aggregate blending in the process of batching and design of concrete mixtures.
	<ul style="list-style-type: none">• Analyze and modify mix designs based on different types of concrete mixtures.

* Course Outcomes will be used in the Assessment Software for Outcomes Assessment. Limit to 3 - 5.