

وصف مقرر دراسي Course Description

متطلب مترامن Co-Req.	متطلب سابق Pre-Req	تمارين TU	عملي LB	نظري LT	الساعات CR	اسم المقرر Course Title	رقم ورمز المقرر Course Code
-	203 همد	-	2	2	3	خواص واختبارات الخرسانة	304 همد
-	CE 203					Properties and Testing of Concrete	CE 304

محتويات المقرر:

الأسمنت : التصنيع ، الخواص ، انواع الأسمنت ، الاختبارات . الركام : الأنواع ، الخواص ، التدرج الحبيبي ، الاختبارات . ماء الخلطة .
الخرسانة : تصميم وإنتاج الخلطات ، نسب الخلط، المناولة، صب الخرسانة، الخواص الطرية والصلبة ، الاختبارات ، المعالجة.

Course Contents:

Cement: manufacture, properties, types of cement, tests. Aggregates: types, properties, grading, tests. Mixing water, Concrete: proportions, mixing, handling, placing, fresh and hardened properties, tests, curing.

Course Objectives:

The main objective of the course is to develop an understanding of the properties of concrete as needed in concrete construction, including strength and durability. The students are exposed at length to all the concrete ingredients including cement, water, aggregates, admixtures etc. for their optimal use in designing and proportioning concrete mixtures. The relevant standards viz. ASTM, AASHTO and ACI are extensively referred to. The issues related to the use of concrete from design to batching, mixing, transportation, placing, consolidating, finishing and curing are also addressed.

Evaluation Methods:

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| 1. Midterm exams | 4. Lab. Reports |
| 2. Assignments | 5. Final exam |
| 3. Quizzes | |

Text Book and References:

Design and Control of concrete Mixtures by Portland Cement Association, Fourteenth Edition by Steven H. Kosmatka et al., USA.