



Module (Course Syllabus) Catalogue

2023-2024

College	Erbil Technical Engineering	
Department	Civil Engineering	
Module Name	Contracts and Specifications	
Module Code	COS501	
Semester	5	
Credits	5	
Module type	Prerequisite <input type="checkbox"/>	Core <input checked="" type="checkbox"/> Assist. <input checked="" type="checkbox"/>
Weekly hours	3	
Weekly hours (Theory)	(3)hr Class	(135)hr Workload
Weekly hours (Practical)		
Lecturer (Theory)	Aksana Jihad Mohammed	
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Lecturer (Practical)		
E-Mail & Mobile NO.		

Course Book

<p>Course Description</p>	<p>This course will start with principles of construction contracts. The students familiar with the principles of construction contracts and their types according to the method of payment and the method of performance. The obligations of the parties involved with the project, employer, contractor, and engineer. He/she will learn the types of documents submitted with the tender and how the contract is awarded to one of the contractors. And will have knowledge and be familiar with the law that organizes the relationship between the contractor and employer. To know how to deal with different theories that gives the right to the contractor to seek compensation or give him the right for seeking contract termination, by knowing the conditions of application and the obstacles that he/ she may face during practical work. Also, the course helps the student to learn the sequence of contracting and solving many problems that he/she may face like variation orders, delays, method of payment, credits and advance payments, and solving claims and disputes during project performance. The students will learn the conditions of administrative contracts and learn how to deal with them in proper way. Also, will learn the conditions of termination of the contract and the methods of finishing the project after work withdrawer. Also, the specification of framework and steel work including preliminary work for them and installing frames, steel linkage, covering and measurement.</p>
<p>Course objectives</p>	<p>Learning the obligations of the employer, contractor, and engineer Learning the type of contracts according to the method of payment and the method of performance Learning how to solve problems and minimize obstacles Have some theoretical experience about how to start the contract to hand it over and how Be able to solve conflicts in the work site Learning the law of contracting and specifications The general conditions of contracts Learning how to calculate variation orders Learning the types of delays and how to insert the delay penalty Temporary and final handover Payment conditions for the contract. The frame work and how to install frames, also the preliminary works</p>
<p>Student's obligation</p>	<p>1-Attendance. 2- Exams. 3- Reports. 4- Quizzes. 5- Seminar. 6- Project</p>

Specific learning outcome:	<p>Students will learn the following:</p> <ol style="list-style-type: none"> 1-Evaluate the circumstances in work field. 2- Analyze tenders and contracts. 3- Apply the standards of contracting and solving claims. 4-Understand the duties and rights of contract parties. 5-Remember types of contracts and general conditions clauses 				
Required Learning Materials	<p>Handbook is given to students which contain all the detailed lectures. Also, data show is used during the lesson and examples are solved on the magi board during the lecture. Every week quiz is made to evaluate the understanding of students for the pervious lecture.</p>				
Evaluation	Task		Weight (Marks)	Due Week	Relevant Learning Outcome
	Paper Review				All
	Assignments	Homework	10%		
		Class Activity	2%		
		Report			
		Seminar	8%		
		Essay			
		Project	8%		
	Quiz		8%		
	Lab.				
	Midterm Exam		24%		
Final Exam		40%			
Total		100%			
Course References :	<p>Other course reading list and references:</p> <ul style="list-style-type: none"> ▪ Key references: <ol style="list-style-type: none"> 1- الشروط العامة للمقاولات 2- د. محمد عبد الحميد, العقود و المواصفات للمنشاءات الهندسية 3 - محمد ابراهيمه جار الله, ادارة المشاريع الانشائي. ▪ Useful references: 				

1- القانون المدني رقم 40 لسنة 15 و تعديلات
 2- ثروت, دز كمال قاسم الوجيز في شرح احكام عقد المقاولة
 3 -وزارة التخطيط , الدائرة القانونية, الغرامات التأخيرية في عقد المقاولات

Magazines and review (internet)

Practical Topics	Week	Learning Outcome
N/A		
Course topics (Theory)	Week	Learning Outcome
<i>Coursebook description and introduction to Contracts The principles of construction contracts, contract specifications and definitions, the items of Contracts, duties and powers of engineer representative, the responsibilities of Employer, Engineer, and contractor</i>	1	4,5
<i>Project management, and factors noted before preparation for any project Administrative and legal conditions for contracts</i>	2	2
<i>Types of tenders and the ways of their performance Construction contracts I which the state is part of, conditions and results of being administrative contract, service of note of contractor and service of note of employer</i>	3	2,3
<i>Law applicable on contracts, forfeiture, valuation, and payment for forfeiture, and completion of contract after withdrawer</i>	4	2, 3
<i>Types of contracts according to the method of payment Types of contracts according to method of performance</i>	5	5
<i>Sub-contractors, their types, responsibilities and rights, The rights of contractor from administration and the three theories</i>	6	2
<i>Entry to tender, excess site and material sources, documents submitted with tender, the prices, and insurance works and percentage of guarantee.</i>	7	2,3
<i>Provisional sums and prime cost items, waver of work, and performance period, delays, their type and delay penalties</i>	8	3,5
<i>Claims, general reasons, and types of claims, Settlement of disputes and arbitration</i>	9	1,3
<i>Samples, tests, and method of measurement and variation orders and their valuation</i>	10	1,3

<i>Day work and suspension of work, and removal of improper work, and payment conditions</i>		
<i>Retrieval advances, performance of works responsibility of contractor and cleaning site after completion Certificate's completion of work, maintenance, night work, watching and lighting, and fossil Contract agreement and tender form</i>	11	3,5
<i>Framework Specifications, preliminary works, installing, and measurement Reinforcing specifications, preliminary works, installing, and measurement.</i>	12	1
ISO, FEDIC	13	5

Questions Example Design

Q1/Answer **(5)** of the following in **full details**:

(40) Marks

- 1- Explain installing frames for framework in details.
- 2- List the specifications and faults of Unite price method.
- 3- List the general reasons of claims.
- 4- Explain in details materials machinery and equipment imported from abroad.
- 5- Explain the arbitration process, how the members of committee are chosen and how arbitration fees will be paid.
- 6- Completion of contract after the withdrawal.
- 7- List documents submitted with the tender.
- 8- The concrete reinforcement must have a concrete cover, explain in details.
- 9- Explain the removal of improper work or materials.

Q2/ Answer **(8)** of the following in short:

(32) Marks

- 1- The fault of lump sum contract.
- 2- Which type of contracts is considered one of the negotiating terms contracts and used in special projects.
- 3- List specifications of contract cost plus a certain percentage of cost as wages for the contractor.
- 4- What the note book of general technical conditions includes?
- 5- List the types of non-permitted delays.
- 6- Explain the classified of delays according to the degree of their impact on a project.
- 7- The right of compensation due to the harm that occur according to three theories, list them only.
- 8- Explain the difference between the nominated sub-contractor and the local sub-contractor.
- 9- Time duration for lifting frames of horizontal roofs or rafters for space less than 3 m.

- 10- The diameter of the reinforcement to be fixed in place by using flexible steel wires.
- 11- A verbal order of the Engineer that Contractor confirm in writing to the Engineer which have not contradicted by the engineer. What is **the time period** to be deemed as an order in writing?
- 12- List the three types of mistakes that the designer engineer may do.

Q3/ According to a contract, the project cost was (20 000, 000) \$, the duration of performance (365) days ,the penalty for each day delay was (25,000) \$. If there was a delay for (90) days for the following reasons.

- 1- The thickness of roof slab in the Bill of quantities doesn't match the drawings (5) days.
- 2- Changing the type of tiles from ceramic to marble (7) days.
- 3- Delay of arriving cement and sand to the site work, (9) days.
- 4- Suspension of work due to employer request. (6) days.
- 5- Law efficiency of the concrete cast team, (12) days.
- 6- Delay because of Government order curfew (lockdown), (20) days.
- 7- A non-expected heavy snow, (4) days.
- 8- Assigning additional worth to the contract (12) days.
- 9- Bad coordination between subcontractors (15) days.

- 1- How many days were permitted to the contractor, so he won't be obligated to pay the penalty for them.
- 2- Calculate the amount of delay penalty that the contractor should pay.
- 3- Adjust the final amount of the contract and the amount to be paid to the contractor after deducting the delay penalty. (14)

Marks

Q4/ A contract cost was (10,000,000) \$. The contractor submitted (5) credits for five months as follows:

(14) Marks

- 1- 1,500,000\$
- 2- 1,200,000\$
- 3- 800,000\$
- 4- 4,000,000\$
- 5- 2,000,000\$

Make a table with monthly credit deduction (جدول باستقطاعات السلف الشهرية) which should include the following:

- 1- **The total allowed amount of deduction, according to payment conditions.**
- 2- **Allowed mount of deduction every month /credit.**

Amount to be paid for the contractor every month after deduction.

Extra notes:

External Evaluator

As a lecturer i have reviewed the Course Book related to the subject of Engineering management and economy for eight semester, Department of Civil Engineering, College of Technology, I found that the course Book is very good describing the aim and objectives of the subject. Moreover, it is covering all the required syllabus and contents of the course and describes satisfactorily the aspects related to the course.



Dr. Bahman Omar Taha
Lecture
Ph.D. in Structural Engineering.