



# THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

## *Department of Quantity Surveying*

### QSV 508 – Construction Management II

#### COURSE PARTICULARS

**Course Code:** QSV 508

**Course Title:** Construction Management II

**No. of Units:** 3

**Course Duration:** Two hours of lectur and One hour of tutorial per week for 15 weeks.

**Status:** Compulsory

**Course Email Address:** qsv508@futa.edu.ng

**Course Webpage:** <http://www.qsv.futa.edu.ng/courseschedule.php?coursecode=QSV%50508>

**Prerequisite:** NIL

#### COURSE INSTRUCTORS

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and

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#### COURSE DESCRIPTION

This course is meant to expose students to one of the popular arms of practice in the construction industry. The course focuses on imparting skills on the students in order to improve their management abilities in respect of the construction process. It has both theoretical and practical training classes. The course will equip students with the skills needed to confront the challenges of resources management in the construction industry. It will therefore assist in ensuring a more productive construction industry. Among the topics to be taught are production planning and coordination, control and supervision of project sites, construction management procedure, productivity studies, budgetary control and personnel management.

## COURSE OBJECTIVES

The objectives of this course are to:

- introduce students to the management of construction process,
- equip students with the skills of production planning and control, coordination of project sites, financial and personnel administration; and
- provide students with the skills for productivity improvement.

## COURSE LEARNING OUTCOMES / COMPETENCIES

Upon successful completion of this course, the student will be able to:

*(Knowledge based)*

- explain the meaning of production planning and control;
- clearly differentiate between the methods of project planning and control, suggest suitable methods for specific task/situation, and tackle simple problems using each method as appropriate;
- explain the principles and ideologies for laying out a construction site;
- understand the practice of site management;
- make suggestions for improved productivity, based on productivity studies and incentives administration;
- compute basic financial ratios; and
- explain the principles of employee hiring and development in the construction industry.

*(Skills)*

- construct a Line of Balance, Draw a network for PERT, and CPM methods of project planning and control
- calculate earliest finish and latest event finish time, project duration, extract critical activities and path, prepare a programme of work, monitor and control project resources using the planning methods
- layout a construction site;
- prepare a standard site report;
- conduct method study, time study;
- compute basic financial ratios;
- advise on cash management; and
- assist in staff recruitment process, advise on development choices for employees, and also give advise towards improved employee commitment and productivity.

## GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Attendance	5%
Assignments	15%
Test(s)	20%
<u>Final Examination</u>	<u>60%</u>

**TOTAL                      100%**

## **GENERAL INSTRUCTIONS**

**Attendance:** It is expected that every student will be in class for lectures and also participate in all practical exercises. Attendance records will be kept and used to determine each person's qualification to sit for the final examination. Students must meet 70% attendance to qualify to sit for the examination. In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with any of the instructors, indicating the reason for the absence.

**Academic Integrity:** Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances are prohibited. You are not allowed to make copies of another person's work and submit it as your own; that is plagiarism. All cases of academic dishonesty will be reported to the University Management for appropriate sanctions in accordance with the guidelines for handling students' misconduct as spelt out in the Students' Handbook.

**Assignments and Group Work:** Students are expected to submit assignments as scheduled. Failure to submit an assignment as at when due will earn you zero for that assignment. Only under extenuating circumstances, for which a student has notified any of the instructors in advance, will late submission of assignments be permitted.

**Code of Conduct in Lecture Rooms and Laboratories:** Students should turn off their cell phones during lectures or better still put it in silent mode. Students are prohibited from engaging in other activities (such as texting, watching videos, chatting, gisting *etc.*) during lectures. Food and drinks are not permitted during lectures except otherwise approved by the tutor.

## **READING LIST**

- <sup>2</sup> Barry, F. (1990). The practice of Construction Management , BSP Professional Books, London, UK.
- <sup>2</sup> Geoff, R. (2001). Project Management Demystified: Today's tools and Techniques. Spon, London.
- <sup>2</sup> Hernes Tor (1994). Construction Management Programme, interactive contractor training: Site Productivity. International Labour Office, Switzerland.
- <sup>2</sup> Oxley, R. And Poskitt, J. (1996). Management Techniques applied to the Construction Industry, Blackwell, Oxford, UK.
- <sup>4</sup> Lewis, J. P. (2007). Fundamentals of Construction Management. Amacon, New York, USA. 177p.

<sup>4</sup>Windapo, A. (2013). Fundamentals of Construction Management, Ventus Publishing ApS  
Capetown, South Africa.

**Legend**

- 1- Available in the University Library
- 2- Available in Departmental/School Libraries
- 3- Available on the Internet.
- 4- Available as Personal Collection
- 5- Available in local bookshops.

## COURSE OUTLINE

Week	Topic	Remarks
1	Production planning and control, Methods of Production planning and control <ul style="list-style-type: none"> <li>• Bar chart,</li> <li>• Line of Balance (LOB).</li> </ul>	Expectations of students from the course will be documented. Typical programme of work will be used to explain how bar chart is used in planning and control. Sample line of balance will also be constructed.
2 & 3	Methods of Production planning and control <ul style="list-style-type: none"> <li>• Critical Path Method               <ul style="list-style-type: none"> <li>○ Definition</li> <li>○ Advantages</li> <li>○ Steps in constructing a network</li> <li>○ Definition of terms</li> <li>○ Use of dummies</li> <li>○ Floats</li> <li>○ Sample applications</li> </ul> </li> </ul>	Sample networks will be drawn; adequate attention will be placed on practical implication of information derivable from the network.
4 & 5	Methods of Production planning and control <ul style="list-style-type: none"> <li>• Performance Evaluation and Review Technique (PERT)               <ul style="list-style-type: none"> <li>○ Definition</li> <li>○ Differences between CPM and PERT</li> <li>○ Sample applications</li> </ul> </li> </ul> Coordination, control and supervision of project sites <ul style="list-style-type: none"> <li>• Site layout</li> <li>• Site management practices</li> <li>• Site reporting</li> </ul>	Short discussion on other methods of planning and control will be done at the end of the lecture on PERT.  <b>Assignment</b> will be given.  Students will be asked to share industrial experiences relating to Coordination, control and supervision of project sites. Theoretical principles will be discussed and will then be related to personal and shared experiences.
6	<ul style="list-style-type: none"> <li>• Construction Management procedure from inception to completion of work.</li> <li>• Productivity Studies</li> </ul>	Detailed discussion will be done. Lines will be drawn between Construction Management and Management contracting methods of procurement. On site management of projects will also be discussed.
7 & 8	Productivity Studies (continued)	

	<ul style="list-style-type: none"> <li>• Method Study</li> <li>• Time Study</li> <li>• Activity Sampling</li> <li>• Incentives</li> </ul>	<p>Students will be encouraged to begin to think of improving the productivity level of employees even as they prepare to join the labour force.</p>
		MID-SEMESTER TEST
9 & 10	<p>Working capital and flow of fund</p> <ul style="list-style-type: none"> <li>• Budgetary control</li> <li>• Cashflow</li> <li>• Financial ratios</li> </ul>	<p>Adequate discussion on working capital management will be done. Computation of basic financial ratios will be done by tutor and classwork will be given.</p>
11 & 12	<p>Working capital and flow of fund (cntd.)</p> <ul style="list-style-type: none"> <li>• Financial ratios and statements for the construction industry</li> </ul> <p>Production planning and control ( <b>Revisited</b>)</p>	<p>Computation of basic financial ratios will be done by tutor and classwork will be given.</p> <p>Special sessions on the use of softwares for production planning and control will be held.</p>
13 & 14	<p>Personnel administration in the construction industry</p>	<p>Principles of personnel administration will be discussed.</p> <p>The discussion will be done from the perspectives of both employers and potential employees. Prevalent issues in the Nigerian system will be discussed.</p>
		QUIZ
15	REVISION	<p>This is the week preceding the final examination. At this time, evaluation will be done to assess how far the students' expectations for the course have been met. All outstanding clarifications in respect of previously taught topics will be done.</p>