

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	University of Anbar / Computer Networks System
3. Course title/code	1 st
4. Programme(s) to which it contributes	Information theory and coding
5. Modes of Attendance offered	The electronic attendance of the theoretical side
6. Semester/Year	2021-2022
7. Number of hours tuition (total)	2 for theoretical in week
8. Date of production/revision of this specification	
9. Aims of the Course	
Providing the student with basic information about the applications of information theory Studying the relationship between probability theory and information theory Studying how to measure the amount of information in the information carrier Studying how to compress the volume of information Studying how to protect information during its transmission Studying the channel capacity calculations that carry information Studying how to distinguish between regular and irregular symbols Studying ways to correct erroneous information during transmission at the receiving end	

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	The relationship of probability to information theory	probability	Theoretical lectures	Daily exams, surprise exams, documented exams, semester exams, final exams, oral questions and discussions during lectures, homework
2	2	Distinguish between types of information sources	Information Sources		
3	2	Learn the best ways to compress information	Encryption methods for information sources		
4	2	Distinguish between the types of information transmission channels	information channels		
5	2	Knowing the channel capacity and how it is calculated	channel capacity		
6	2	Knowing the methods of sending information after changing its codes	Encryption of information channels		
7	2	Knowing the methods of retrieving information through the encryption method	Recover one-mistake information		
8	2	Knowing the methods of retrieving information through the encryption method	Multiple Error Information Recovery		
9	2	Advanced methods for recovering false information	Wrong information recovery		

12. Infrastructure	
Required reading: <ul style="list-style-type: none"> · CORE TEXTS · COURSE MATERIALS · OTHER 	Essential of information theory- P.G. Farrell Modern digital and analog communication systems-B.P. Lathi

Special requirements (include for example workshops, periodicals, IT software, websites)	Error control coding fundamental and applications.
Community-based facilities (include for example, guest Lectures , internship , field studies)	Elements of Information Theory 2nd Edition (Wiley Series) Information Theory and Statistical Mechanics. II http://www.careerride.com/mcq-tag-wise.aspx?Key=Information%20Theory&Id=21 http://www.gatestudy.com/wp-content/uploads/2015/09/Information-Theory-Coding.pdf

13. Admissions	
Pre-requisites	
Minimum number of students	
Maximum number of students	