



ST. XAVIER'S
CATHOLIC COLLEGE OF ENGINEERING
(Autonomous)

Chunkankadai, Nagercoil - 629003
Kanyakumari District, Tamil Nadu

Approved by AICTE & Affiliated to Anna University, Chennai
Accredited with 'A' Grade by NAAC
UG Programs(ECE, EEE, Mech, Civil, CSE & IT) Accredited by NBA
Recognized under section 2(f) & 12(B) of UGC Act, 1956
UG Programs(ECE, EEE, Mech, Civil, CSE & IT),
MBA & MCA Programs Permanently Affiliated

Department of Humanities and Sciences

Sixth Board of Studies Meeting Minutes

Date: 10/06/2024

Time: 11.00 am – 12.30 pm

Venue: Board Room

The sixth BOS meeting for the Department of Humanities and Sciences, St. Xavier's Catholic College of Engineering, was conducted on June 10, 2024, at 11.00 am in the Board Room. The meeting began with a prayer by Dr.S.Maenu, AP/English. Dr.N.Sheen Kumar A.HoD/H&Sc, delivered the welcome address. Our Principal, Dr. J. Maheswaran, presented an introductory speech. Dr.V.Vijimon Moni, HoD, Department Humanities and Sciences, presented the fifth BoS meeting minutes and explained the activities and choices made by each department. The University nominee Dr. T.V. Siva Subramania Pillai was also present during the meeting and explained the requirements needed for the curriculum R2026. The meeting was attended by all department heads and faculty members from the Humanities and Sciences departments. Finally, Dr. S. Edwin Gladson, HoD / Physics concluded the meeting with a vote of thanks.

Agenda and Notes

- 06.01. Confirmation of Fifth BoS meeting minutes held on 28/11/2024 and Decision/Action Taken report.
- 06.02. Discussion on the Suggestions / Recommendations offered by the members in the V Academic Council meeting and the V Governing Body meeting.
- 06.03. Confirmation of Syllabus of 1 year New UG Course CSE (Cyber Security).
- 06.04. Confirmation of syllabus of Graph Theory and Optimization Techniques for ME - VLSI.
- 06.05. Discussion of Curriculum and Syllabus of 1 year UG for upcoming Regulation
- 06.06. Other matters if any.

University Nominee for BoS

1. Dr. T.V. Siva Subramania Pillai, Farmer Dean, University College of Engineering, Nagrcoil.

Principal Dr.J.Maheswaran launched a discussion for refining the existing I-year UG curriculum for the impending Regulation-2026. Dr. T.V. Siva Subramania Pillai, the University nominee and Dr.A.P. Anto Kumar, an academic Dean and Faculties gave a lot of suggestions. The details are given below.

06.01. Confirmation of Fifth BoS meeting minutes held on 28/11/2024 and Decision/Action Taken report.

Suggestions given by BOS members	Action Taken	Remarks
BoS members advised to avoid the overlapping of higher secondary school syllabus with our syllabus.	It will be incorporated in the upcoming Regulation.	Accepted
They Suggested to include Matlab into the first-year curriculum and Mathematics theory paper can be transformed into a TCP course	In the first semester of the Regulation 2026, Mathematics can be offered as a TCP course.	Accepted
They also recommended to have a separate language lab for Communicative English course.	It will be considered in the upcoming Regulation.	Accepted
First semester Engineering Physics and Engineering Chemistry can be converted to Lab cum theory paper.	It Will be implemented after discussion during the formation of new curriculum R2026	Accepted

06.02. Discussion on the Suggestions / Recommendations offered by the members in the V Academic Council meeting and the V Governing Body meeting.

The Academic Council appreciated the idea of integrating practical components into theory courses and emphasized the need to establish the necessary infrastructure for implementation.

06.03. Confirmation of Syllabus of 1 year New UG Course CSE (Cyber Security).

For 1 year UG CSE (Cyber Security) the syllabus of UG CSE of R2022 will be followed

06.04. Confirmation of syllabus of Graph Theory and Optimization Techniques for ME - VLSI.

MA22109	GRAPH THEORY AND OPTIMIZATION TECHNIQUES	L	T	P	C	
		3	1	0	4	
COURSE OBJECTIVES:						
<ul style="list-style-type: none"> To introduce graph as mathematical model to solve connectivity related problems. To introduce fundamental graph algorithms To familiarize the students with the formulation and construction of a mathematical model for a linear programming problem in a real life situation To understand, develop and solve mathematical model of Transportation and assignment problems To understand the applications of simulation modeling in engineering problems 						
UNIT I	GRAPHS					12
Graphs and graph models – Graph terminology and special types of graphs – Matrix representation of graphs and graph isomorphism- Connectivity (Definitions and examples only)- Euler and Hamilton paths(Definitions and examples only).						
UNIT II	GRAPH ALGORITHM					12
Graph Algorithms–Directed graphs–Some basic algorithms –Shortest path algorithms –Depth- First search on a graph – Theoretic algorithms – Performance of graph theoretic algorithm.						
UNIT III	LINEAR PROGRAMMING					12
Formulation of linear programming problem - Graphical method of solution - Canonical and standard form of linear programming problem - Some important definitions - Simplex Method - Two phase method						
UNIT IV	TRANSPORTATION AND ASSIGNMENT MODELS					12
Definition of the transportation model - Formulation - Basic feasible solution: North- West corner rule - least cost method- Vogel's approximation method - Definition of the assignment Model - Mathematical formulation of assignment models – Hungarian method for solution of the assignment problem						
UNIT V	SIMULATION MODELLING					12
Monte Carlo Simulation – Types of Simulation – Elements of Discrete Event Simulation - Generation of Random Numbers.						
					TOTAL:60 PERIODS	
COURSE OUTCOMES:						
Upon completion of the course, the students will be able to						
CO1:	Apply graph as mathematical model to solve connectivity related problems.					
CO2:	Apply fundamental graph algorithm to solve certain optimization problems					

CO3:	Formulate and construct mathematical models for linear programming problems
CO4:	Apply linear programming problem in transportation and assignment models to find initial and optimal solution
CO5:	Apply simulation modeling techniques to problems drawn from industry management and other engineering fields

REFERENCES:

1.	Taha H.A. "Operation Research: An Introduction", Ninth Edition, Pearson Education, New Delhi, 2010.
2.	Gupta P. K. and Hira D.S., "Operation Research", Revise Edition, S. Chand and Company Ltd., 2012.
3.	Sharma J.K., "Operation Research", Third Edition, Macmillan Publishers India Ltd., 2009.
4.	Douglas B. West, "Introduction to Graph Theory", Pearson Education, New Delhi, 2015.
5.	Balakrishna R., Ranganathan. K., "A text book of Graph Theory", Springer Science and Business Media, New Delhi, 2012.
6.	Narasimha Deo, "Graph Theory with Applications to Engineering and Computer Science", Prentice Hall India, 1997.

Mapping of Course Outcomes to Programme Outcomes

Course Outcomes	Programme Outcomes					
	1	2	3	4	5	6
CO1	2	-	1	1	-	-
CO2	2	-	1	1	-	-
CO3	2	-	1	1	-	-
CO4	2	-	1	1	-	-
CO5	2	-	1	1	-	-
CO	2	-	1	1	-	-

06. 05. Discussion of Curriculum and Syllabus of 1 year UG for upcoming Regulation

The meeting suggested updating the syllabus to match top autonomous institutions, focusing on strong basics and practical learning. Subjects like Engineering Physics and Engineering Chemistry can be made into Theory-cum-Practical (TCP) courses to improve understanding. A separate English Language Lab with 30 students per batch was advised to assist non-English medium students in improving communication skills through the use of audiovisual resources. A bridge course on higher-order thinking for first-year students was also proposed. The importance of creative thinking and better lab facilities was discussed. Flexible timetables and student support were emphasized. The need to check faculty workload and set a common program structure was noted. BOS members have accepted the syllabus 'graph theory and optimization techniques' for M.E VLSI. The new curriculum could include a virtual lab for Engineering Physics and Engineering Chemistry subjects. It was agreed to incorporate Matlab and Scilab into

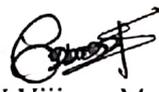
semester Mathematics. The session ended with the goal of making the college a leading autonomous institution with a practical and student-friendly curriculum.

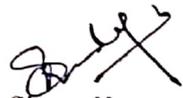
06. Other matters if any.



Principal Dr.J.Maheswaran requested that the HoDs and faculty to devise a strategy for adopting the experts recommendations.


Dr. T. V. Siva Subramanian Pillai
(University Nominee)


Dr. V. Vijimonmoni
Coordinator/H&S


Dr. N. Sheen Kumar
AHOD/H&S


Dr. S. Edwin Gladson
HOD/Physics


Dr. A. Suhasini
HOD/Chemistry


Dr. Davlary Mettalin
HOD/Mathematics


Dr. R. P. Anto Kumar
Academic Dean

Prof. Dr. R. P. ANTO KUMAR, M.E., Ph.D.,
Dean (Academics)
Member Secretary (Academic Council)
St. Xavier's Catholic College of Engineering
Chunkankadai, Nagercoil - 629 003.


Dr. J. Maheswaran
Principal

Dr. J. MAHESWARAN, M.E. Ph.D. FE. MISTE.
PRINCIPAL
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