

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

ERODE - 638 107

B.Sc (Mathematics)



(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

ERODE - 638 107

2021-2022



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SYLLABUS

Sem	Course Code	Core I PROFESSIONAL ENGLISH - I	Total Ma	arks: 100	Hours Per Week	Credits
I	21UANCT101		CIA: 50	ESE: 50	4	4

Course Objectives:

- 1. To develop the language skills of students.
- 2. To enhance the lexical, grammatical, socio-linguistic and communicative competence.
- To focus on developing students' knowledge in domain specific registers and the required language skills.

Course Outcomes (CO): On completion of the course, students should be able to

CO 1	Identify the correct usage of vocabulary and grammar in speaking and writing.	K1 - K4
CO 2	Apply the language for speaking efficiently and confidently.	K1 - K4
CO 3	Build the reading skill by using unfamiliar texts with comprehension.	K1 - K4
CO 4	Demonstrate the language skills through academic writing.	K1 - K4
CO 5	Develop the leadership quality and team building through linguistic competence.	K1 - K4

K1: Remember; K2: Understand; K3: Apply; K4; Analyze; K5: Evaluate; K6: Create.

Unit - I

Communication

Listening: Listening to audio text and answering questions - Listening to Instructions.

Speaking: Pair work and small group work.

Reading: Comprehension passages - Differentiate between facts and opinion.

Writing: Developing a story with pictures.

Vocabulary: Register specific - Incorporated into the LSRW tasks.

Unit - II

Description

Listening: Listening to process description - Drawing a flow chart.

Speaking: Role play (formal context).

Reading: Skimming/Scanning - Reading passages on products, equipment and gadgets.

Writing: Process Description - Compare and Contrast Paragraph - Sentence Definition and Extended

definition - Free Writing.

Vocabulary: Register specific meorporated into the LSRW tasks.

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PRINCIPAL.

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Negotiation Strategies Unit - III Listening: Listening to interviews of specialists / Inventors in fields (Subject Specific). Speaking: Brainstorming (Mind Mapping) - Small group discussions (Subject Specific). Reading: Longer Reading text. Writing: Essay Writing (250 words). Vocabulary: Register specific - Incorporated into the LSRW tasks. Presentation Skills Unit - IV Listening: Listening to lectures. Speaking: Short talks. Reading: Reading Comprehension passages. Writing: Writing Recommendations - Interpreting Visuals inputs. Vocabulary: Register specific - Incorporated into the LSRW tasks. Critical Thinking Skills Unit - V Listening: Listening comprehension - Listening for information. Speaking: Making presentations (with PPT-practice). Reading: Comprehension passages - Note making. (Comprehension: Motivational article on Professional Competence, Professional Ethics and Life Skills). Writing: Problem and Solution essay - Creative writing - Summary writing. Vocabulary: Register specific - Incorporated into the LSRW tasks. SKILL DEVELOPMENT ACTIVITIES Listening and Answering 1. Speaking Activities through Role Play 2. Reading and Answering 3. Resume Preparation 4. Vocabulary Enhancement Activities - Definitions, Synonyms, Antonyms, Keywords etc. 5. TEXT BOOK Professional English for Physical Sciences-I - TANSCHE. 1. REFERENCE BOOKS Simon Sweeney, English for Business Communication, Student's Book, Second Edition, 1. Cambridge University Press, 2003. Michael McCarthy Felicity O'Dell, English Vocabulary in Use: Adva AFirst South 2. dition, Cambridge University Press, 2003. TS'AND SCIENCE COLLEGE KONGU AT

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		WEB	RESOURCES		
1.	https://nptel.ac.in/cou	rses/109/10	04/109104030/		
2.	https://www.edubull.dilets/basic-courses/pro			king-courses-video-english/tofel-	
Cours	e Designed By	Ve	erified By	Approved By HOD	
Mr. S.MU	RUGANANTHAM	())() Ms.C.R	ADHAMANI	S. Dr.S.NAGARAJAN	
	Q	UESTION	PAPER PATTERN		
SECTI	ON - A (10 X 1 = 10 Ma	ırks)	SECTION	I - B (4 X 10 = 40 Marks)	
(MCQ, Inf	(Vocabulary) o-gap questions - domain vocabulary)	specific	(Reading: Two long domain-specific comprehension passages with questions pertaining to understanding and analysis - 20 Marks) (Writing: Descriptive/narrative/persuasive writing questions pertaining to domain-specific vocabulary 20 Marks)		

				Mapp	ing of	COs v	vith Po	Os and I	PSOs			
PO/PSO CO			*	PO						PSO		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	S	S	S	S	S	M	M	S	M	M	S	S
CO 2	S	s	S	S	S	M	M	S	S	M	S	M
CO 3	S	S	M	M	M	M	S	S	S	M	S	M
CO 4	S	S	M	M	M	M	M	S	S	M	S	M
CO 5	S	S	S	S	M	S	S	S	S	S	S	S



Sem	Course Code	Core III PROFESSIONAL	Total Ma	arks: 100	Hours Per Week	Credits	
II	21UANCT201	ENGLISH - II	CIA: 50	ESE: 50	4	4	

Course Objectives:

- 1. To develop their competence in the use of English with particular reference to the workplace situation.
- 2. To enhance the creativity of the students which will enable them to think of innovative ways to solve issues in the workplace.
- 3. To develop their competence and competitiveness and thereby improve their employability skills.

Course Outcomes (CO): On completion of the course, students should be able to

	ou total and total and total and	K1 - K4
CO 1	Identify the importance of linguistic competence in workplace situations	
CO 2	Develop LSRW skills for academic and career purposes	K1 - K4
CO 3	Build the employability skills through various speaking and writing tasks	K1 - K4
CO 4	Relate the communication skills suitable for employability	K1 - K4
CO 5	Illustrate the digital competence with innovation and imagination	K1 - K4

K1: Remember; K2: Understand; K3: Apply; K4; Analyze; K5: Evaluate; K6: Create.

Unit - I

Communicative Competence

Listening: Listening to two talks/lectures by specialists on selected subject specific topics - (TED Talks) and answering comprehension exercises (inferential questions).

Speaking: Small group discussions (the discussions could be based on the listening and reading passages - open ended questions).

Reading: Two subject-based reading texts followed by comprehension activities/exercises.

Writing: Summary writing based on the reading passages.

Unit - II

Persuasive Communication

Listening: Listening to a product launch- sensitizing learners to the nuances of persuasive communication.

Speaking: Debates - Just A Minute Activities

Reading: Reading texts on advertisements (on products relevant to the subject areas) and answering KONGU ARTS AND SCIENCE COLLEGE

inferential questions 638 10

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Writing: Dialogue watting- Writing an argumentative / persuasive essay. FRODE - 638 107

Unit - III

Digital Competence

Listening: Listening to interviews (subject related).

Speaking: Interviews with subject specialists (using video conferencing skills) - Creating Vlogs (How to become a vlogger and use vlogging to nurture interests – subject related).

Reading: Selected sample of Web Page (subject area).

Writing: Creating Web Pages.

Reading Comprehension: Essay on Digital Competence for Academic and Professional Life.

The essay will address all aspects of digital competence in relation to MS Office and how they can be utilized in relation to work in the subject area.

Unit - IV

Creativity and Imagination

Listening: Listening to short (2 to 5 minutes) academic videos (prepared by EMRC/ other MOOC videos on Indian academic sites - E.g. https://www.youtube.com/watch?v=tpvicScuDy0).

Speaking: Making oral presentations through short films - subject based.

Reading: Essay on Creativity and Imagination (subject based).

Writing - Basic Script Writing for short films (subject based) - Creating blogs, flyers and brochures (subject based) - Poster making - writing slogans/captions (subject based).

Unit - V

Workplace Communication and Basics of Academic Writing

Speaking: Short academic presentation using PowerPoint.

Reading & Writing: Product Profiles, Circulars, Minutes of Meeting.

Writing an introduction, Paraphrasing, Punctuation (period, question mark, exclamation point, comma, semicolon, colon, dash, hyphen, parentheses, brackets, braces, apostrophe, quotation marks, and ellipsis), Capitalization (use of upper case).

SKILL DEVELOPMENT ACTIVITIES

1.	Group Discussion
2.	Persuasive Speaking - Conversation
3.	Listening Activities – Watching Videos and answering questions and summarizing the content
4.	Creative Writing - Flyers, Brochures, Slogans, Captions
5.	Power Soint Presentation
	TEXT BOOK Dr. N. RAMAN
1.	Brofessional English for Physical Sciences-II - TANSCHEL ARTS AND SCIENCE COLLEGE
	NANJANAPURAM, ERODE - 638 107.

1.	Alice Oshima & Ann Hogue, Writing Academic English, Second Edition, Addison Wesley Publishing Company, 1991.			
Lyn R. Clark, Kenneth Zimmer, Joseph Tinervia, Business English and Comp. 2. Seventh Edition, MacMillan / McGraw-Hill, Imprint 1991.				
	WEB RESOURCES			
1.	https://www.coursera.org/learn/speak-english-professionally			
2.	https://www.ted.com/talks/pranav_rajan_computer_science_education			

Course Designed By		Verified By	Approved By HOD			
J. M. Mang		WOL	S. / lu			
Mr. S.MURUGANANTHAM	M	s.C.RADHAMANI	Dr.S.NAGARAJAN			
	THE	TION PAPER PATTE	DN			
SECTION - A (10 X 1 = 10 Mar	-		- B (4 X 10 = 40 Marks)			
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specific vocabulary)		(Writing: Descriptive/narrative/persuasive writing questions				
		pertaining to domai	in-specific vocabulary - 20 Marks)			





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ACTIVITIES

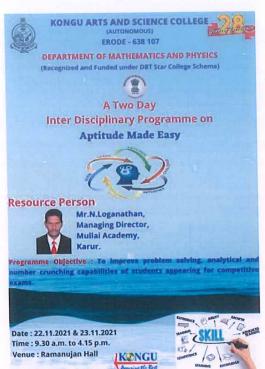


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DEPARTMENT OF MATHEMATICS AND PHYSICS

A Two Day Inter Disciplinary Programme on "Aptitude Made Easy" - 22.11.2021 & 23.11.2021



A Two Day Inter Disciplinary Programme on "Aptitude Made Easy" was organized under DBT Star College Scheme with Mr.N.Loganathan, Managing Director, Mullai Academy, Karur, for our I B. Sc., Mathematics and I & II B. Sc., Physics students. During the training, the trainer addressed the gathering on aptitude. Students were taught about problem solving, analytical and number crunching capabilities. Further, students were motivated to attend competitive exams by solving problems in an easy manner. 72 students (Physics-40 & Mathematics-32) gained the knowledge on problem solving skills.



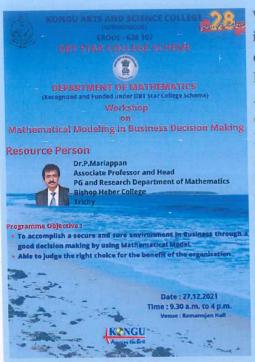
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DEPARTMENT OF MATHEMATICS

WORKSHOP -27.12.2021



Workshop on Mathematical Modelling in Business Decision Making was and organized by PG Department of Mathematics of Kongu Arts and Science College (Autonomous) on 27.12.2021. Students were trained by Dr.P.Mariappan, Associate Professor Research Head, PG and Department of Mathematics, Bishop Heber College, Trichy. This workshop was organized for students to have better Knowledge in Business through a making by using good decision Mathematical Model. Dr.P.Mariappan interacted with students to students area of interest.

Beneficiaries: 202





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DEPARTMENT OF MATHEMATICS

National Level Online E-Quiz(29.06.2021-03.07.2021)



National Level Online E-Quiz was organized by PG and Research Department of Mathematics of Kongu Arts and Science College (Autonomous) from June 29,2021 to July 03,2021 on the birth anniversary of late Professor Prasanta Chandra Mahalanobis, Often referred to as the 'Father of Indian statistics'. This quiz was organized to bring out awareness on Statistics and to know about contributions by Professor Prasanta Chandra Mahalanobis to the Mathematics.

Participants: 860



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DBT STAR COLLEGE SCHEME



Faculty Development Programme-27.01.2022 "IMPLEMENTATION OF OUTCOME BASED CURRICULUM FRAME WORK"



Development One Day Faculty **Programme** cum Workshop "Implementation of Outcome Based Work" Curriculum Frame was organized by DBT Star Departments in Association with OBE Monitoring 27.01.2022. Faculty Committee members were trained by Principal, PPG Dr.N.Muthumani, and Science of Arts College .Coimbatore. This programme was organized to guide the implementation of OBE. Faculty members interacted with the resource person and raised many queries regarding OBE.

Beneficiaries: 170





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DEPARTMENT OF MATHEMATICS

Personality Development Programme-03.12.2021



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DBT STAR COLLEGE SCHEME



DEPARTMENT OF MATHEMATICS ecognized and Funded under DBT Star College Scheme) **Personality Development Programme**

Professional Ethics and Career Guidance

Resource Persons







Programme Objective :

- To improve and develop a specific skill
- · To change the behaviour
- To cultivate strong teamwork and productivity.

Date: 03.12.2021 Time: 9.30 a.m. to 4.15 p.m. Venue: Ramanujan Hall





KONGU ARTS AND SCIENCE COLLEGE Personality Development Programme on Professional Ethics and Career Guidance was organized by PG and Research Department of Mathematics of Kongu Arts and Science College (Autonomous) on 03.12.2021. Students were trained by Dr.V.Umarani and Ms. **Trainers** Freelance Hemalatha, (Technical and Life Skills), Coimbatore. This programme was organized for first and second year students to improve and develop their specific skill, to change their behaviour and to teamwork cultivate strong them. Trainers were interacted with various students conducted and activities to bring out skills of the students.

Beneficiaries: 86





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National Mathematics Day-22.12.2021



National Mathematics Day celebrated on 22.12.2021 by PG and Department Research Mathematics of Kongu Arts and Science College (Autonomous) to the 134th commemorate anniversary of great Mathematician Srinivas Ramanujan . A given by lecture was Assistant Dr.S.Jagatheswari, Professor of Mathematics, School of Advanced Sciences, Vellore Institute This of Technology, Vellore. organized programme was students to Know about Ramanujan's contributions to Mathematics and to bring out Knowledge on recent advancements in Mathematics.



To know the recent advancements in Mathematics

ogramme Objective : To know about Ramanujan's Contribution







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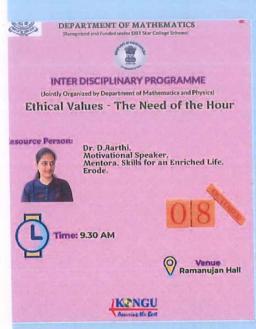


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DEPARTMENT OF MATHEMATICS

INTER DISCIPLINARY PROGRAMME - 8 OCTOBER 2021



An Inter Disciplinary programme on "Ethical Values- The Need of the Hour" was organized by the Departments of Mathematics and Physics on 08.10.2021. The aim of the programme was to made students to get self motivated and to get aware of Moral values. She motivated the students to achieve and to get aware on ISR(Individual Responsibilities). Social Dr.D.Aarthi answered the queries raised by the participants.



Beneficiaries:



64 Students



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DEPARTMENT OF MATHEMATICS

WORKSHOP -04.04.2022 & 05.04.2022



Workshop on Python with Math was Research organized by PG and Department of Mathematics of Kongu Arts and Science College (Autonomous) on 04.04.2022 & 05.04.2022. Students Dr.V.Parthiban, trained by were Assistant Professor, Grade 2, PG and Research Department of Mathematics, VIT University , Chennai. workshop was organized for students to have better practice for using the Python Programming Language. More techniques were learned by students on Python Programming.

Beneficiaries: 48





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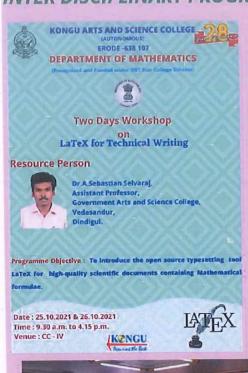


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DEPARTMENT OF MATHEMATICS

INTER DISCIPLINARY PROGRAMME - 25&26 OCTOBER 2021



A Two Day Workshop on "Latex for Technical Writing" was organized by the Department of Mathematics on 25.10.2021 and 26.10.2021. The main objective of the programme was to make students to use the open source typesetting tool Latex for the future use. Dr.A.Sebastian Selvaraj trained the students on LaTex and asked them to improve their Mathematical Software skills.







Beneficiaries: 150 Students

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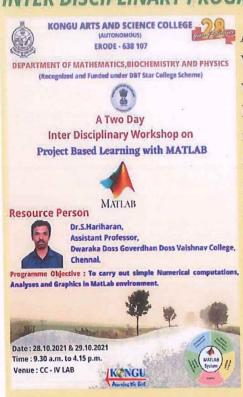


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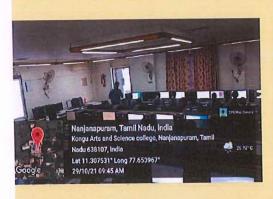
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DEPARTMENT OF MATHEMATICS

INTER DISCIPLINARY PROGRAMME - 28&29 OCTOBER 2021



Inter Disciplinary Two Day Workshop on "Project Based Learning with MATLAB" was organized by the **Mathematics** Department of 28.10.2021 and 29.10.2021.Final year students of Mathematics, Bio Chemistry and Physics were participated. The main objective of the programme was to make students to use the open source typesetting tool MATLAB for future Dr.S.Hariharan, their use. Assistant Professor from Chennai trained the students on MATLAB and them to improve their asked Mathematical Software skills.







Beneficiaries: 200 Students

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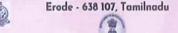
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DEPARTMENT OF MATHEMATICS

INDUCTION PROGRAMME - 8 SEPTEMBER 2021

Kongu Arts and Science College

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DBT STAR COLLEGE SCHEME
STUDENTS INDUCTION PROGRAMME

08.09.2021 10.00 am

Technology & Science
- A Boon or a Bane

Resource Person



Dr. V.P.Moula Devi
Dean of B.Ed Colleges
Vivekanandha Institutions
Principal
Vivekanandha Vidya Bhavan Matriculation
Higher Secondary School, Tiruchengode.

Asserting the Best

Induction programme "Technology and Science - A Boon or a Bane" was organized by the Departments of Bio Chemistry, Bio Technology, Mathematics, Physics, Psychology and CDF on The aim of the 08.09.2021. programme was to made students to get aware of Science and Technology field. She motivated the students to make new inventions and to improve their knowledge on Science concepts. Dr.V.P.Moula Devi answered the queries raised by the participants.

Beneficiaries



82 Students



100 Students



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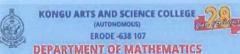


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DEPARTMENT OF MATHEMATICS

INTER DISCIPLINARY PROGRAMME - 12&13 OCTOBER 2021



INTER DISCIPLINARY PROGRAMME

Workshop on

Biostatistical Design and Data Analysis Using R





Resource Person Dr.V.Parthiban ASSISTANT PROFESSOR, GRADE 2 VIT UNIVERSITY **CHENNAI**

rogramme Objective : To Introduce the Open Source Software R or analysing and applying statistical concepts in Biology

Date: 12.10.2021 & 13.10.2021 Time: 9.30 a.m. to 4.15 p.m. Venue: CC - IV

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An Inter Disciplinary programme on "Biostatistical Design and Data Analysis Using R" was organized Department of the by on 12.10.2021 and Mathematics The aim of the 13.10.2021. programme was to made students to gain knowledge on R Software in the field of Data Analysis Dr.V.Parthiban motivated the students to improve their Mathematical Software skills. He answered the queries raised by the participants.

Beneficiaries:



120 Students

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