

(Abstract)

University Teaching Departments and Centres - Syllabi of Value Added Courses 2022- '23 --
Approved and Implemented - Orders Issued.

ACADEMIC C SECTION

ACAD C/ACAD C3/2497/2023

Dated: 16.03.2023

- Read:-1. Minutes of the meeting of the Committee constituted to scrutinise and finalise the proposals of Skill Development/Value Added/Add On Courses received from various Departments and also to allot the fund for Courses, held on 27/01/2023
2. Circular No ACAD C/ACD C3/2497/2023 dated 02/02/2023
3. UO No Acad/A4/828/Add-On/2022 dated 13/07/2022
4. Emails/Letters received from Heads of Teaching Depts /Centres forwarding the Syllabus of respective Value Added Courses

ORDER

1. The committee constituted to scrutinise and finalise the proposals of Skill Development/Value Added/Add On Courses received from various Teaching Departments/Centres and also to allot the fund for Courses, as per paper read (1) above, resolved to invite proposals from Teaching Depts. / Centres for the conduct of Skill development/Value Added/ Add On Courses.
2. Accordingly, as per paper read (2) above, Heads of the Teaching Depts/Centres were requested to submit the Syllabus for Value Added Course 2022-'23 to be offered in the respective Departments, in tune with the Guidelines issued as per paper read (3) above.
3. The Heads of 27 Teaching Departments/Centres submitted syllabus for Value Added Courses as detailed below, as per paper read (4) above.

SI No	Department /Centre	Course Code	Name of Value Added Course
1	School of Behavioural Sciences	SBS22VA01	Personal Growth through Social Orientation
2	Dept. of Molecular Biology	MOB22VA01	One Week Workshop on Academic Scientific Writing
3	Centre for Management Studies, Mangattuparamba	CMS22VA01	Advanced Excel & Introduction to Business Analytics
4	Dept. of Geography	GEO22VA01	Certificate Course in GIS
5	Dr Herman Gundert Central Library	GCL22VA01	Research Ethics and Content Writing
6	Dept. of English	ENG22VA01	Spoken English
7	Dept. of Chemistry	CHE22VA01	Sophisticated Instrumentation Techniques
8	Dept. of Hindi	HIN22VA01	Certificate Course in Functional Hindi and Translation
9	ITEC , Palayad	ITE22VA01	Introduction to Software Development Tools

10	Dept. of Physics	PHY22VA01	Industry Linked Optical Fiber Technology
11	Dept. of Malayalam	MAL22VA01	Malayalam Data Entry
12	Dept. of Journalism and Media Studies	JMS22VA01	Creative Writing
13	Dept. of Biotechnology & Microbiology	BIO22VA01	Basic Genomics and Proteomics Data Analysis Tools
14	Dept. of Music	MUS22VA01	Revival of Traditional Bhajana Sampradaya in Kerala
15	School of Wood Science & Technology	WST22VA01	Adhesive Manufacturing Technology for Wood Based Products
16	Dept. of Library & Information Science	LIS22VA01	Technical Writing
17	Dept. of Tribal & Rural Studies	TRS22VA01	Certificate Course in Tribal Development
18	Dept. of History	HIS22VA01	Academic Writing Skills for Social Sciences
19	Dept. of Botany	BOT22VA01	Biology – Ethics and Philosophy
20	Dept. of Zoology	ZOO22VA01	Certificate Course on Biodiversity Conservation
21	Dept. of Environmental Studies	EVS22VA01	Water Quality Monitoring
22	Dept. of I.T	INT22VA01	IoT Bootcamp : From Fundamentals to Practical Applications
23	Dept. of Mathematical Sciences	MAT22VA01	An Introduction to Python Programming
24	Dept. of Management Studies	MGS22VA01	Certificate Course in Advanced Excel
25	School of Pedagogical Sciences	SPS22VA01	Instructional Design for Technology Enabled Education
26	Dept. of Applied Economics	ECO22VA01	Certificate Course in Data Analysis Software
27	Dept. of Statistical Science	STA22VA01	Base SAS Certification Course

4. The Vice Chancellor, after considering the matter in detail and in exercise of the powers of the Academic Council conferred under Section 11(1), Chapter III of Kannur University Act 1996 and all other enabling provisions read together with, accorded sanction to implement the syllabus for various Value Added Course 2022- '23, along with the respective Course Codes, as detailed in para 3 above, and to report the same before the Academic Council.

5. Syllabi of Value Added Course 2022- '23 offered in University Teaching Depts./Centres are uploaded on the University Web site (www.kannuruniversity.ac.in).

6. Orders are issued accordingly.

Sd/-

Narayanadas K
DEPUTY REGISTRAR (ACAD)

For REGISTRAR

- To:
1. Members of the committee constituted to scrutinise and finalise the proposals of Skill Development/Value Added/Add On Courses received from various Departments.
 2. Heads of the 27 Teaching Depts/Centres

- Copy To:
1. PS to VC/PA to PVC/ PA to R/ PA to FO/PA to CE
 2. To Examination Branch (through PA to CE)
 3. EP IV Section
 4. DR/ AR I & AR II (Academic)
 5. Computer Programmer, Web manger(To upload in University web Site)
 6. SF/DF/FC

Forwarded / By Order


SECTION OFFICER





VALUE ADDED COURSES

Name of the Department	School of Behavioural Sciences
Course Name	Personal Growth through Social Orientation
Course Code	(will be given by University)
Duration	30 h
About the course:	Encircled by its place in science and by current world events, social behaviour has never been more relevant or more important. People used to think of social behaviour as a discipline that is slow to change. As in other sciences, researchers thought, knowledge accumulates in small increments, one step at a time. Social behaviour has no “critical” experiments, no single study can “prove” a theory, and no single theory can fully explain the complexities of human social behavior. While this remains true, the process of learning this course helps students to understand how complex, dynamic, and responsive this field can be. As the world rapidly changes- socially, politically and technologically, discipline of social behaviour also transcends this change. The acquisition and accumulation of knowledge in the field is very significant in the ever changing journey of human species.
Course Objectives:	• To contribute students to the promotion of excellence in scientific education, strengthen their personal growth process and to serve as a valuable resource for the society. • To help students to be competent observers of the social world and to develop the skills to impart this knowledge for personal development. • To provide opportunities for personal strength enhancement and to build the necessary structures of knowledge regarding social orientation. • To provide an opportunity for the students to develop their inter-disciplinary skills which would



	improve employability.
Course Outcomes:	● The ability to appreciate the richness, variety and interconnectedness of human social behaviour in a meaningful, unified and logical way ● The competence to interpret and connect what is learned about social orientation and apply it for personal and professional growth
Course Content	Module 1: ATTITUDE AND ATTRIBUTION. (20 hours) Attitude: Definition and concept. How Attitudes Are Formed. The Link Between Attitudes and Behavior. Persuasion. Persuasion by Communication; The Source, The Message, The Audience. The Elements of Social Perception. Attribution: Definition and Concepts. Perceiving person: 'Judging book by its cover'. Attribution Biases: Cognitive Heuristics, Fundamental Attribution Error. Motivational Bias. Confirmation Bias. Module 2: STEREOTYPE, PREJUDICE AND DISCRIMINATION. (10 hours) The Nature of the Problem: Persistence and Change. Defining the Terms. Racism: Current Forms and Challenges. Sexism: Ambivalence and Double Standards. Causes of the Problem: Intergroup and Motivational Factors, Cognitive and Cultural Factors. How to reduce stereotypes, prejudice and discrimination. REFERENCES



	1. Crisp, R.J & Turner, R. N. (2007). Essential Social psychology. New Delhi: Sage publications 2. Kassin, S., Fein, S. & Markus, H.R. (2011). Social Psychology (8th ed.). USA: Wadsworth 3. Schneider, F.W., Gruman, J A., & Coutts, L.M. (2017). Applied Social Psychology (3rd ed.). California: Sage publications. 4. Smith, E.R., Mackie, D.M. & Claypool, H.M. (2015). Social Psychology (4th ed.). New York: Psychology Press. 5.. Weiten, W. (2008). Psychology themes and variations (8th ed.). USA: Wadsworth
Tentative list of resource persons:	• Ms. Thaniya K Leela, <i>Consultant Psychologist</i>. Contact No.: 9447604627. Mail: thaniya.k.leela@gmail.com • Dr. Vinod Kumar S. Professor, SBS, MG University. Contact No.: 9447451466. Mail: drsvinodkumar@gmail.com • Mr. Subair. M. Assistant Professor. WIRAS. Contact No.: 9751997993. Mail: subairibrahim@gmail.com • Ms.Nimitha. K. V. Assistant Professor. WIRAS. Contact No.:9447517925. Mail: nimithakuku@gmail.com • Dr.Kuriakkose Augustine. Assistant Professor. DonBosco Arts and Science College.Contact No.:9496003338. Mail: kpallikunnel61@gmail.com



VALUE ADDED COURSE

(2022-2023)

Name of the Department	MOLECULAR BIOLOGY
Course Name	One week workshop on Academic-Scientific writing
Course Code	(will be given by University)
Duration	30 h
About the course:	This course is envisioned to help students to develop their skills of academic scientific writing in English. The 5-day workshop consists of both theory and practical sessions, evaluation will be conducted through examination and certificate will be issued to those students who successfully complete the course.
Course Objectives:	The main objective of this course is to guide students through the writing process itself and to help them to produce clear, well-written and well-organised scientific essays and reports.
Course Outcomes:	On successful completion of this course, the students will i) improve their communication and questioning skills ii) enhance their reading speed and comprehension iii) boost their critical thinking capabilities iv) be able to prepare good scientific reports
Course Content	Module 1: The writing process, the academic scientific styles, sentence structure and paragraph development, textual development and the structure of scientific works, Module 2: writing essays, dissertation and research articles, references and scientific conventions, science, technology and Innovation Policy.
Tentative list of resource persons:	1. Prof. M. Chandrasekaran, Emeritus Professor, CUSAT, Kochi 2. Dr. Ramachandran Kotharamabath, Assistant Professor, Department of Zoology, Central University of Kerala 3. Dr. Sreeja Chellappan, Assistant Professor, Department of Molecular Biology, Kannur University 4. Dr. Smitha KV, Assistant Professor, Department of Molecular Biology, Kannur University 5. Dr. Dhanya AT, Assistant Professor, Department of Molecular Biology, Kannur University



VALUE ADDED COURSES

Name of the Department	Centre for Management Studies, Mangattuparamba Campus
Course Name	Advanced Excel & Introduction to Business Analytics
Course Code	(will be given by University)
Duration	30 h
About the course:	This course will ensure that every participant gets maximum exposure in Excel spreadsheet through the specially designed training modules with practical examples, which give 100% employment perspectives. The training program develops through 3 stages; beginner, intermediary and advanced level.
Course Objectives:	To achieve 90% proficiency level to work on any complicated spreadsheet data.
Course Outcomes:	To ensures every student understands the concepts and usage of all the functions, formulas and applications perfectly and can work on it independently. At the end of the session, students get the work out file and sample database so that they can practice frequently
Course Content	Basic formatting, Text formatting techniques, Absolute reference, sorting & filtering, running total and running balance, ranking removing duplicates in different ways, IF, SUM IF, SUM IFS, NESTED IF, COUNT IF, TABLES & CHARTS, CHART FORMATTING TECHNIQUES, SMART TABLES, CONDITIONAL FORMATTING, INVENTORY TRACK SHEETS, V LOOK UP, H LOOK UP AND PIVOT TABLES.
Tentative list of resource persons:	Arun Kumar Breakthrough Learning Malabar Innovation & Entrepreneurship Zone Mangattuparamba - Kannur Ph : 7907445621 email : info.blskills@gmail.com

Name of the Department	Department of Geography
Course Name	Certificate Course in GIS
Course Code	University will provide
About the course	Add on course for providing orientation for using QGIS 3.22 Software, GPS and Total Station Survey for Post Graduate Students. This is an Hybrid course with facilities to provide practical classes for students offline mode whenever necessary.
Course objectives	1. Utilize GIS, Remote Sensing and GPS tools to identify and map growth trends, patterns and problems within the planning sector in any spatial context. 2. Perform various Total Station survey workflows and modeling to aid decision making in spatial planning and management context. 3. Learn and promote Open Source GIS both as platform for creating spatial databases, analysis, modeling tool; and for disseminating information to internal & external stakeholders.
Course outcomes	On completion of this course, the participants are expected to: ▪ Obtain solid skills and experience in application of QGIS and Total Surveying. ▪ Acquire knowledge and skills needed for the collection, interpretation, and management of spatial information, using remote sensing and geographic information systems to support various geographical research works. ▪ Get acquainted with relevant GIS and other geo-techniques to provide project specific solutions in the field of geographical research work.
Course content	Module 1 – Introduction to Geospatial Technology Module 2 – QGIS 3.22 Software installation process and overview Module 3 – Georeferencing and error rectification

	Module 4 - Vectorization and Attribute data editing Module 5 – Topology error checking Module 6 – Vector analysis and its application Module 7 – Rater analysis and its application Module 8 – DEM/DTM/DSM preparation Module 9 – Generating run models for geographic analysis Module 10 – Integration of GPS data into QGIS Module 11 – Utilizing open data source for downloading the vector and raster data Module 12 – Importing excel data to QGIS Module 13 – Introduction to cloud GIS and its applications Module 14 – Exploring geoprocessing tools and its potentiality Module 15 – Introduction to Total station survey Module 16 – Field survey and survey techniques Module 17 – Importing total station data to QGIS Module 18 – Thematic map preparation for Total station survey Module 19 – Database Management System Module 20 – Thematic mapping in QGIS Module 21 - Land use change analysis Module 22 – Resource mapping Module 23 – Flood zone mapping using QGIS Module 24 – Transportation network analysis using QGIS Module 25 Landslide zone mapping Module 26 – Urban mapping and spatial expansion
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	Module 27 – Land suitability analysis Module 28 – Groundwater potential zone Module 29 – Suitable location of sites Module 30 = Watershed management.
Tentative list of resource persons	1. B Sukumar (Senior scientist Rtd, NCESS, Tvm) 2. Sri . Vishnu Kabil (M Tech RS, Asst Professor) 3. Dr. Akhil R (Asst. Prof, Himalyan University) 4. Vineeth Kumar V (GIS & Survey expert) 5. Dr. Shimod K, (GIS expert, Asst Prof) 6. Anumurali M (GIS & Survey expert) 7. Anoop Aravind (GIS expert, Programmer) 8. Dr. Rubeena K (GIS expert, Asst Prof)

KANNUR UNIVERSITY



VALUE ADDED COURSES

Name of the Department	Dr.Herman Gundert Central Library
Course Name	Research Ethics and Content Writing
Course Code	(will be given by University)
Duration	30 h.
About the course:	The course aims to make the students to acquire and to get an overview of important issues in research ethics, like be responsible for research, ethical vetting, and scientific misconduct. It also helps students to acquire skills of presenting arguments and results of ethical inquiries.
Course Objectives:	1. To make the students to be able to describe and apply theories and methods in ethics and research ethics. 2. To help them acquire an overview of writing skills, reference tool etc.
Course Outcomes:	To make the researchers knowledgable with the principle of ethics and to be active against research misconduct and fraud.
Course Content	Module 1: Research Ethics and Scientific Conduct. Module 2: Report writing.
Tentative list of resource persons:	1. Dr.Vinod.V.M, Central Library, University of Calicut 2. Mr. Muhammed Najeeb, Dr.Herman Gundert Central Library 3. Dr.Surendran Cherukodan, Central Library, CUSAT 4. Dr.Vasudevan.T.M, Dept.of LIS, University of Calicut 5. Dr.Muhammed Haneefa, Dept.of LIS, University of Calicut 6. Dr.Shyamili, Dept.of LIS, University of Calicut 7. Dr.Vahida Beegum, Dept.of LIS, University of Farook College



[Signature]
DEPUTY LIBRARIAN (i/c)
Dr. HERMANN GUNDETT CENTRAL LIBRARY
KANNUR UNIVERSITY, KANNUR-2

Value Added Course in Spoken English	
<i>Name of the Department</i>	Department of Studies in English
<i>Course Name</i>	Spoken English
<i>Course Code</i>	(will be given by University)
<i>Duration</i>	30 h
<i>About the Course</i>	The syllabus of spoken English would aim at enriching skills in spoke English. Developing proficiency in spoken communication in English is essential today for students who aspire to take up managerial or secretarial positions. As English is more of a global <i>lingua franca</i> , the learners will be in a position to travel to any part of the world as they could put across their thoughts and emotions in a fairly comprehensible manner.
<i>Course Objectives</i>	1. The course aims at enhancement of speaking competence through interactive learning. 2. Learners will begiven opportunities to familiarise themselves with grammatical items essential to spoken and written language. 3. Learners will be trained to use English with fair level of confidence and competence. 4. This two-week long Value-Added Course is offered offline for the MA students of the Department of Studies in English, Palayad.
<i>Course Outcomes</i>	1. The learners will have ample level of competence in spoken communication to put across their ideas in a comprehensible way. 2. The learners will be in a position to be self-reliant and confident in facing any career related interview board. 3. The learners will have attained ample level of confidence in raising questions and expressing their ideas in an intelligible way in classrooms and at seminars and conferences.
<i>Course Content</i>	Module 1: Basic and Essential Grammar Practical approaches to grammar in context grammar: Use of Tense, Use Singular and Plural. Verbs and Auxiliary Verbs. Pronouns. Identification of the use of the above given grammatical devices form different texts like

	newspapers, poems, stories, and general essays. Words & phrases used for conversation Module 2: Functional English Use of Modals in spoken English. Use of different grammatical constructions in various contexts (Inviting, Advising, Suggesting, Making statements, questions, Denying, Rejecting, Disagreeing-possibility-ability, permission, obligations, etc. Making Public Speech and its Principles. Telephonic Conversation Making Welcome Speech Proposing Vote of Thanks Module 3: Vocabulary Skills Idioms of Conversational English Collocations Phrasal Verbs
<i>Tentative List of Resource Persons</i>	1. Mr. Manoharan, Formerly Director (Retd.), LotutTrain language Institute, Dubai, UAE. 2. Dr. P K Babu, Associate Professor (Retd.) Formerly Head, Dept. of English, KAHM Unity Women's College, Manjaeri 3. Mr. Sreerag P K, Assistant Professor on Contract, Dept. of English, PRNSS College, Matatnnur, Kannur

Department of Chemistry, Kannur University
Swami Ananda theertha Campus, Payannur
Certificate Course in Sophisticated Instrumentation Techniques
(Value-Added Course)
Course Duration: 32 Hrs.

Course Objectives

Characterizations of materials are essential for the applications of the same in various fields of material science. This is also important in diverse fields, which includes chemical, microstructure and physical properties of different materials used as probes, sensors and in medical fields.

The aim of the course is to provide the students with an overview of sophisticated instrumentation techniques emphasized with special reference to the principles, practice and applications of UV-Visible spectroscopy, X-ray diffraction, thermal and electrochemical techniques.

Learning Outcomes

On successful completion of this short term course, a student will be able to:

- Explain the principles and operation of a range of advanced techniques such as UV-Visible spectroscopy, X-ray diffraction, thermal and electrochemical instruments used in characterization of various materials
- Develop an idea about the crystal structure of materials and their by its structure - property relations.
- Understanding, from a microstructural point of view, the thermal properties of materials and related applications.
- Hand on experience of instruments and interpretation of results.
- Apply the skills gained in research and industrial explores

Course Syllabus

Module -1 **Spectroscopic methods** (8 hrs)

Theory: Ultraviolet and Visible Spectroscopy: electronic transitions, radiative processes, energy diagram, internal conversion, conical intersection, Principle, solvent effects, instrumentation and applications of UV-Visible, spectroscopy, FT-IR, Raman and Fluorescence spectroscopy.

Practical: Hands on experience of operation with UV-Vis-, Raman and data analysis.

Module II **X-ray techniques** (8 hrs)

Theory: Principle, Theory- X-ray spectral lines, instrumentation, Powder XRD and Single crystal XRD, Chemical analysis using X-ray absorption, X-ray Fluorescence instrumentation and chemical analysis, X-ray Diffraction, Chemical analysis with X-ray diffraction, applications.

Practical: Instrumentation, sampling and hands on experience with instruments for analysis.

Module - III **Thermal Studies** (8 hrs)

Theory: Introduction, specific heat, thermal conductivity, thermal expansion, thermal stress, thermal stability. Relationship between structure and thermal properties of materials. Thermo gravimetric methods of analysis (TGA): Instrumentation, thermogram and information from

thermogram, factors affecting thermogram, applications TGA for quantitative analysis and problems based TGA. Differential Scanning Calorimetry (DSC): Principle, Instrumentation, Applications

Practical: Instrumentation, sampling, Hands on experience of operation with DSC and TGA and interpretation of Data

Module-IV

Electrochemical Studies

(8hrs)

Theory: Faradays laws of electrolysis, current - voltage relationship during an electrolysis, operating cell at fixed applied potential, electrolysis at constant working electrode potential, coulometric methods of analysis. Voltammetric principles, hydrodynamic voltammetry, stripping voltammetry, cyclic voltammetry (CV), Principle, criteria of reversibility of electrochemical reactions, quasi-reversible and irreversible processes, apparatus, advantages and limitations Instrumentation, sampling and application and interpretation of cyclic voltammograms

Practical: Instrumentation, working, samplings, hands on experience of operation CV and data analysis.

Books Recommended

- 1) Theory and Applications of UV Spectroscopy, H.H.Jaffe and M.Orchin, IBH-Oxford.
- 2) Inorganic spectroscopic methods, A.K. Brisdon, Oxford Chem. Primers, 1997, NewYork.
- 3) Applied Electron Spectroscopy for Chemical Analysis Ed. H. Windawi and F.L.Ho, Wiley Inter science.
- 4) Introduction to Spectroscopy, Pavia, Brooks/Cole Cenage, 4th edition, 2009, Belmont.
- 5) Fundamentals of Analytical Chemistry, Skoog, West, Holler, Croach, Thomson Brooks/Cole
- 6) Instrumental methods of chemical analysis, Willard, Dean and Merrit, Affiliated East West Press



Dr.S.Sudheesh
Professor & Head
School of Chemical Sciences

Name of the Department	Department of Hindi, Dr. P. K. Rajan Memorial Campus, Nileshtar.
Course Name	Certificate Course in Functional Hindi and Translation
About the Course	The course is useful for a thorough understanding of the functional applications of the language and the theoretical and practical phases of translatology. This will help the students in understanding the importance of translation in the modern socio-cultural and employment sectors.
Course Objectives	1. Understanding the meaning, concept and importance of Translation and functional Hindi. 2. Understanding various forms of Functional Hindi according to its area of application. 3. Understanding the importance of translation. 4. To learn and develop skills in Terminology and Technology of Translation. 5. To develop awareness of current issues in Translating Interpreting Translation studies and practice. 6. The course is designed to introduce the wide and vast study of translation, English to Hindi and vice-versa.
Course Outcomes	1. Developing skill of writing official letters in Functional Hindi. 2. Exploring, analysing and enriching the self knowledge. 3. Students will be able to develop an understanding of Hindi translation in both ways theoretically and practically. 4. Students can pursue further higher studies to get better opportunities in the area of Translation and Education. 5. It also helps to get better opportunities of employment In the field of Translation.
Course Content	Module 1 Translation: Meaning-Definition-Nature and Scope-Importance of translation in the present world. Module 2 Principles of translation- Functions of translation-Different forms of translation-The process of translation and the role of translator – source language text- Target language text-analysis-transfer. Module 3 Problems of translation-Problems of literary translation-Problems of scientific and technical translation-Problems of translation in journalism-Problems of commercial and administrative translation- Problems of

	translating Technical terminology-Administrative Drafting ,Letter writing and technical terminology. Module 4 Project work – Translation work based on literature (English to Hindi or Hindi to English to be submitted for evaluation at the end of the course.)
Tentative list of Resource Persons	1.Dr. Vanaja K, Professor&Head(Rtd.),Department of Hindi,CUSAT. 2. Dr. Pramod Kovvaprath, Professor&Head, Department of Hindi, Calicut University. 3. Dr. Muraleedharan Pillai, Reader&Head(Rtd.),Department of Hindi, Government Brennen College, Thalassery. 4. Dr. Manu,Professor&Head, Department of Hindi, Central University of Kerala. 5. Dr. M Aravindan, Reader&Head(Rtd.),Department of Hindi, Payyanur College. 6. Dr.Suma .S, Associate Professor &Head,Department of Hindi, Govt College For Women. 7. faculties from Hindi Dept. Kannur University

Sd/-

Head, Department of Hindi

Name of the Department	ITEC,Palayad
Course Name	Introduction to software development tools
Course Code	
Duration	30 h
About the course:	software development tools are the IDE and frameworks which are commonly used in IT Companies to develop software and mobile applications. This course provides an introduction to some of the tools and hands on training also.
Course Objectives:	To provide an introduction to important tools and frameworks used in IT companies To provide skills in one of the Tools.
Course Outcomes:	Basic knowledge in Software development tools Improvement in software development skills
Course Content	Module 1:Introduction to software development, Common tools ,Frameworks, Text Editors, Webserver, Node Js,Flutter Module 2:Visual Studio .Net, ASP .Net, C# basics, Database connection. Lab Develop a desktop application Develop a Web application
Tentative list of resource persons:	1. Mr. Anoop Kumar ,Full stack web developer 2. Mr.Jishnu EK,Flutter Developer,IHTS Technologies 3. Meera Varma,ITEC,Palayad 4. Shivaganaga R, ITEC,Palayad 5. Rithin M, ITEC,Palayad 6. Muhammed Shafi K, ITEC,Palayad 7. Sameen SAP, ITEC,Palayad

Syllabus for Theory Classes

Introduction

Need for optical communication, salient features of optical fibers, ray theory of light guidance, numerical aperture, modes of a fiber, single and multimode fibers, step-index and graded-index fibers.

Transmission characteristics of optical fibers, attenuation, pulse broadening mechanism, intermodal dispersion, bit rate - length product, material dispersion.

Basic Optical Communications Concepts

P2P System, Transmitter, Light Source, LED, Laser Diode, Detector, PIN diode, Avalanche Photo Diode, Optical Amplifiers, EDFA, PDFA, Regeneration, ADM, OADM, Digital Cross Connect, RPR Ring.

Optical Fiber

Core, Cladding, Primary Buffer, Types of Fibers, Silica Core Silica Cladding, Silica Core, Plastic Cladding (PCS), Plastic Core Plastic Cladding (POF), fiber fabrication techniques.

Cable Splicing

Fusion Splicing, Mechanical Splicing, Single Fiber Fusion Splicing, Mass Fusion Splicing, Stages of Splicing, Splicing Precautions, Misalignment, End Gap, End Angle, NA Mismatch, Core Mismatch, Waisting, Bulging, Axial Run-out, Bubble, Incomplete Fusion

Testing of Cables

Continuity Test, Light Source- Power Meter, OLTS, Visual Fault Locator, OTDR Testing, Measuring Cable Span, Attenuation Coefficient, Connector/ Splice Loss Measurement, Distance to Fault, OTDR Trace Analysis, Optical Loss Budget.

Syllabus for Laboratory Practice

The trainees will gain the knowledge about the various types of Optical Fiber Cables and get hands on experience of Fusion Splicing, OTDR Testing etc.

I. Introduction to Optical Fiber Cable

- Study the Composition of Fiber Optic Cable
- Simplex Cable
- Duplex Cable
- Multi fiber Cable
- Small, Medium, Large Cable
- Plastic Optic Fiber
- Pig Tail
- Patch Chord

II. Cabling Tools

- General Tools
- Scribe
- Shear
- Slit and Ring Tool
- Stripping Tool
- Buffer Stripper
- Crimping Tool
- Polishing Film
- Polishing Pad
- Polishing Puck
- Cleaning Materials
- Cleaning Solution
- Lint free wipes
- Cleaning Swab
- Cleaver
- Splice Protection Sleeve

- Fusion Splicer
- Mechanical Splice
- Fiber Closure
- Inspection Microscope
- Light Source
- Power Meter
- Optical Loss Test Set
- OTDR

III. Splicing

- Fusion Splicing Set Up
- Splicing Stage by Stage
- Arranging in Splice Tray
- Securing in Fiber Closure

IV. Fiber Optic Testing

- Fiber Continuity Test using Light Source and Power Meter
- Cable Loss Test
- OTDR Test
- Setting up of OTDR
- Measuring Cable Span
- Measuring Attenuation Coefficient
- Connector/Splice Loss Measurement
- Distance to Fault
- OTDR Trace Analysis
- Optical Loss Budget

KANNUR UNIVERSITY
VALUE ADDED COURSES

Name of the Department	Department of Malayalam, Dr. P.K. Rajan Memorial Campus, Nilesishwar
Course Name	മലയാളം ഡാറ്റ എൻട്രി
Course Code (will be given by University)	
Duration	30 h
About the course:	ധാരാളം തൊഴിൽ സാധ്യതകൾ രൂപപ്പെട്ടു വരുന്ന ഒരു മേഖലയാണ് മലയാളം കമ്പ്യൂട്ടിംഗ്. വർദ്ധിച്ചു വരുന്ന ഈ തൊഴിൽ സാധ്യത മുന്നിൽ കണ്ട് യൂണികോഡയിഷ്ഠിത ടൈപ്പിംഗ്, ഡാറ്റ എൻട്രി എന്നിവയിൽ സാങ്കേതികപരിശീലനം നൽകുകയാണ് കോഴ്സിന്റെ ലക്ഷ്യം.
Course Objectives:	1. അടിസ്ഥാന കമ്പ്യൂട്ടർ പരിജ്ഞാനം നൽകുക. 2.യൂണികോഡ്, മലയാളം കമ്പ്യൂട്ടിംഗ് എന്നിവ മനസ്സിലാക്കുക.

	3. ഡാറ്റ എൻട്രിയുമായി ബന്ധപ്പെട്ട സോഫ്റ്റ് വെയറുകൾ പരിചയപ്പെടുകയും പ്രായോഗിക പരിശീലനം നൽകുകയും ചെയ്യുക.
Course Outcomes:	1. മലയാളം കമ്പ്യൂട്ടിംഗ് സാമാന്യമായി പരിചയപ്പെടുക. 2. മലയാളം ഡാറ്റ എൻട്രിയിൽ സാങ്കേതിക പരിജ്ഞാനം നേടുക. 3. മലയാളം ടൈപ്പിംഗ് പരിചയപ്പെടുക. 4. യൂണികോഡ് കൺവെർഷനിൽ പരിശീലനം നേടുക.
Course Content Module 1: Module 2: (add more modules if necessary)	Module 1: Malayalam, Arabic, English Typing, Ms word syllabus Creating, editing, saving the text document Font and paragraph formatting Module 2: Inserting tables, smart art, page breaks Working with images Page layout and page set up Using spelling and grammar check, Excel Module 3: Mail merge, PPT Slide preparation, Basic Photoshop, Unicode Conversion, Analyzing Data- Filter, Subtotal, Secure and protecting worksheet
Tentative list of resource persons:	SALMA T.K. (G TEC COMPUTER INSTITUTION, KANHANGAD)



KANNUR UNIVERSITY

കണ്ണൂർ സർവകലാശാല

VALUE ADDED COURSES

Name of the Department	Department of Journalism and Media Studies
Course Name	Creative Writing
Course Code	MJJMCVS05V01
Duration	30 h
About the course:	This course is about ideas and words and how we use them to create compelling content that catches attention. This course will cover creative thinking strategies, copywriting and editing techniques, and essential software skills.
Course Objectives:	1. Offer students an opportunity to learn techniques about creative ideation and effective writing for the eye and the ear. 2. Enable students to be familiar with offline and online tools that can come in handy for copywriters.
Course Outcomes:	After completing the course, the students should understand: 1) the importance of copywriting in the digital world. 2) the skills required to write clear, compelling copy. 3) the essential tools required to prepare effective messages.
Course Content	Module 1: Basics of Copy Writing Module 2: Creative thinking strategies Module 3: Creative writing and copy editing Module 4: Essential software skills

Tentative list of resource persons:	Devi K Samseer Mambra Muhammad Ashik NP Athira MP Shiju C P

Kannur University

VALUE ADDED COURSES

Name of the Department	Department of Biotechnology and Microbiology
Course Name	Certificate course on basic genomics and proteomics data analysis tools
Duration	30 hours

About the Course: This course will be useful for the students of Biotechnology and Microbiology to focus on research and learning new techniques in basics of genomics and proteomics data science. This course will be an add on for the productivity and skills of students to understand basic data analysis in DNA and protein sequences

Course objectives: To Introduce students to basic Bioinformatics and to use these tools in Genomics and Proteomics analysis

Course Outcomes: The students will be well versed in basic understanding of genes, genomics and proteomics data analysis. This will enable them to find jobs prospectus in research and pharmaceutical industries.

Course Content:

1. Introduction to Bioinformatics
2. Use of bioinformatics in Genomics and Proteomics
3. Introduction to various Bioinformatics Tools
4. Basic Bioinformatics and Sequence Analysis
5. Genomics sequence Analysis
6. Proteomics Analysis

VALUE ADDED COURSES

Name of the Department	DEPARTMENT OF MUSIC
Course name	REVIVAL OF TRADITIONAL BHAJANA SAMPRADAYA IN KERALA
Couse Code	
About the course	Bhajana is a type of concert. It's congregational singing where songs of devotional nature are sung by vocalists with the accompaniment of traditional instruments such as Veena, Mridangam, Kanchira, Jalara etc. This is performance oriented (Practical) course wherein the participants will be trained in singing songs in Bhajana style.
Course objectives	Make the Bhajana tradition familiar to the current generation and its propagation. To create a Bhajana group. To equip participants to form their own Bhajana groups.
Course outcomes	1. Ability to render compositions in Bhajana tradition 2. Ability to align with congregational singing method 3. Ability to form Bhajana groups. 4. Vocation as Bhajana performers in various functions and festivals.
Course content	Module 1 (Malayalam Bhajans)

	Module 2 (Bhajans in other languages) Module 3 History of Bhajana tradition
Tentative list of resource persons	Smt.Uthara K M Ms Sreemol M V Smt Sruthi P V

SYLLABUS – Value added course (MUSIC)

(COURSE CODE)- REVIVAL OF TRADITIONAL BHAJANA SAMPRADAYA IN KERALA

30 Hours

No. of CREDITS:

Course objectives:

This course aims at making the Bhajana tradition familiar to the current generation and through that its propagation; to create a Bhajana group; to equip participants to form their own Bhajana groups.

Course Learning Outcomes:

1. Ability to render compositions in Bhajana tradition
2. Ability to align with congregational singing method
3. Ability to form Bhajana groups.
4. Vocation as Bhajana performers in various functions and festivals.

UNIT-1

Bhajans in Malayalam

1. Nanda Gopala
2. Sambho Mahadeva

UNIT-2

Bhajans in other languages

1. Achutham Kesavam
2. Garudagamana
3. Pavanaja sthuthi patra
4. Sree ramachandra kripalu

UNIT-3

History of Bhajana tradition

Reference:

1. HISTORY OF INDIAN MUSIC, Prof. P. SAMBAMOORTHY, B.A.,B.L., MUSICOLOGIST,THE INDIAN PUBLISHING HOUSE, New 23A,Sripuram First Street, Royapettah,Chennai-600 014. [2005]

2. DAKSHINENDIAN SANGEETHAM [Malayalam] , Part –I & Part –II, By A . K . Ravindranath, Published by The State Institute of Languages, Kerala, Thiruvananthapuram – 3 [2009]
3. A HISTORICAL STUDY OF INDIAN MUSIC, Swami Prajnananda, Munshiram Manoharlal Publishers Pvt.Ltd. Post Box No 5715, 54 Rani Jhansi Road, New Delhi 110055 [2002]
4. MUSIC THROUGH THE AGES, Premlatha V., Sundeep Prakashan, Delhi[1985]
5. HISTORY OF SOUTH INDIAN MUSIC, Rangaramanuja Ayyangar, Self Published, Madras[1972]
6. AN ANTHOLOGY ON ASPECTS OF INDIAN CULTURE, Dr. V. Raghavan, Dr. V. Raghavan Centre for Performing Arts, 2002
7. SANGEETA NIGHANDU, V T Sunil, DC Books, 2012
8. HINDU SPEAKS ON MUSIC, Kasturi & Sons Ltd
9. BHAJANA TRADITION IN SOUTH INDIA, Kuppuswamy , Gowri, Hariharan, M, Sangeeth Natak Akademi, New Delhi, 1982



VALUE ADDED COURSES

Name of the Department	DEPARTMENT OF WOOD SCIENCE AND TECHNOLOGY
Course Name	Adhesive manufacturing technology for wood-based products
Course Code	
Duration	30 h
About the course:	Adhesives are an important part of Wood panel product manufacturing. The quality of engineered wood is determined by the selection of adhesives for various purposes. The course provides learners an insight into industrial manufacturing and quality control of adhesives in wood industries.
Course Objectives:	To train the students to get a complete idea about the importance of Adhesives in Wood industry To teach them the manufacturing process and the testing of adhesive bonds.
Course Outcomes:	Learners will gain specific knowledge and capabilities in the field of wood adhesive manufacturing They will be able to develop low-cost adhesive technologies by modifying existing technologies. Quality control in wood panel manufacturing can be properly managed
Course Content	Module 1: Important Adhesives used in wood industries for manufacturing of engineered wood panel products and Solid wood products. Effect of wood species and moisture content on the strength of adhesive bonds Adhesive manufacturing technology for (1) Formaldehyde and non-Formaldehyde based resins (2) Bio-based adhesives and Natural adhesives – Cardanol, Lignin, Tannin, soy flour etc. Formaldehyde emission from wood panel products and the test for formaldehyde emission. Methods for manufacturing low formaldehyde adhesives Adhesive Module 2: Laboratory Preparation and Industrial preparation of Formaldehyde based resins – Industrial Visit Quality control in Adhesive Manufacturing- pH, specific gravity, purity of phenol and urea, viscosity etc. IS standards and methods of test for adhesive bonding

Tentative list of resource persons:	Ms. Sujatha D. Scientist, HoD, AdhesiveTechnology, IPIRTI Dr. Mamatha B.S. Scientist, AdhesiveTechnology, IPIRTI Shri Anand Nandanwar Scientist, Wood Testing Division, IPIRTI Mr. Vijaya Raghavan, Retired Adhesive technologist, Western India Plywoods Ltd. Vaidyanathan Hariharan Technical advisor and expert in No added Formaldehyde(NAF) adhesives N.B. The practical demonstration will be done by the concerned technicians in the industry and will change accordingly.
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Sd/-

Department council meeting

Department council meeting was held on 31-01-2023 to prepare and approve the syllabus for value added programme.

Decision was taken to approve the following syllabus for the value added course, "Adhesive manufacturing technology for wood based products".

Module-1 - Important adhesives used in wood industries for manufacturing of engineered wood panel products and solid wood products. Effect of wood species and moisture content on the strength of adhesive bonds. Adhesive manufacturing technology for (1) formaldehyde and non-formaldehyde based resins (2) Bio-based adhesives and Natural adhesives - casein, Lignin, Tannin, soy flour etc. Formaldehyde emissions from wood panel products and the test for formaldehyde emission. Methods for manufacturing low formaldehyde adhesives.

Module-2 - Laboratory preparations and industrial preparation of formaldehyde based resins - industrial visit, quality control in Adhesive manufacturing - pH, specific gravity, purity of phenol and urea, viscosity etc. IS standards and methods of test for adhesive bonding.

Members present

- ①. Ganesh gopal
- ②. Elwin Mathew
- ③. Syamjith K
- ④. Arun M.V

Ganesh

Dr. Ganesh Gopal, T.M
HOD, Department of Wood
Science & Technology
Kerala State University





KANNUR UNIVERSITY
VALUE ADDED COURSES

Name of the Department	DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE
Course Name	TECHNICAL WRITING
Course Code	(will be given by University)
Duration	30 h
About the course:	Technical Writing is a skill to be developed by every post graduate student in a programme. The course will be containing a detail discussion about technical writing, its need and purpose and its uses in various occasions. The course also include details about mechanics of technical writing, structure and format of different kinds of documents that may be prepared in different occasions C V, journal article, research proposal, dissertations and thesis etc. Similarly it includes different software packages that can be used for making different kinds of documents easily.
Course Objectives:	1. To provide various concepts in technical writing including types and principles, and to familiarize with mechanics of writing such as copy editing and proof reading. 2. To discuss common problems in technical writing including language, grammar, punctuation and structure of sentences, page designs, footnotes and end notes. 3. To familiarize the formats of different kinds of documents such as books, journal articles, conference matters, technical reports, research reports, dissertations and theses etc. 4. To introduce different types of software's used for technical writing such as Page Maker, etc. for document preparation, Mendeley, etc. for Reference Management and <i>Ouriginal</i> for <i>Plagiarism checking</i>.
Course Outcomes:	This course is aimed to equip the students with necessary writing skills needed for the programme and for career development and publications. The course will equip the M.Lib.I.Sc students to prepare library visit report, internship report and project report easily that are to be prepare during third and forth semesters. Addition to that the students will get training to prepare a C V, write a journal article or a research proposal needed for the career development.
Course Content	MODULE 1: TECHNICAL WRITING Definition- Overview-Purposes-Types-Characteristics - Functions Planning- Drafting- Editing-Finishing -Producing a Document Use of Editorial Tools – Dictionaries- Style Manuals (APA, MLA & Chicago Manual of Style) - Standards-specifications MODULE 2: MECHANICS OF TECHNICAL WRITING Common Problems in Spelling – Grammar- Usage and Punctuation- Semantics - Diction-Sentence, Structure, Readability and Aberrations Designing Pages- Elements of Page Design - Basic Design Guidelines- Defining, Describing, and Providing Set of Instructions – Including Footnotes and End notes- Summarizing Developing a Style Sheet - Using Visual aids - Tables- Line Graphs - Bar Graphs - Pie Charts-Charts-Illustrations MODULE 3: STRUCTURE AND FORMAT OF DOCUMENTS Journal Articles- Seminar/ Conference Papers - Review Articles Technical Reports -Research Proposals- Monographs Dissertations-Theses MODULE 4: SOFTWARE PACKAGES FOR TECHNICAL WRITING Software for Document Preparation- Page Maker - MS-Office – RoboHelp – Grammarly- LaTeX Software for Reference Management - Mendeley- EndNote - Zotero

	Software for <i>Plagiarism Checking- Ouriginal, Turnitin- Dupli Checker</i>
Tentative list of resource persons:	Dr. Abdul Majeed K (Course Director) Dr. K.P. Vijayakumar (Former Associate Professor and Head, Department of <i>Library</i> and <i>Information Science</i>, <i>University of Kerala</i>) Dr. <i>Gopakumar V.</i> (<i>University Librarian. Digital University</i>,Thiruvananthapuram) Dr. I. Anish (Assistant Professor (Daily Wages), Kannur University)

KANNUR UNIVERSITY
VALUE ADDED COURSES



Name of the Department	Rural and Tribal Sociology
Course Name	Certificate Course in Tribal Development
Course Code	
Duration	30 Hours
About the course:	As the universal vision adopted by the SDG goes with the pledge that 'no one will be left behind', the development of tribal people, though form 8.6% of the country, is also significant in Nation building. It is in this context, the department offers a certificate course in Tribal Development with an aim to create a workforce to accelerate the development and welfare measures implemented for the progress of the Scheduled Tribe population in India. The main objective of this course is to provide skill in the area of tribal development for the students, practitioners, researchers, administrators and policy makers who are interested in development of tribal people. The duration of this course is 30 hours and will be conducted in hybrid mode. It has both theoretical and practical components. Fieldwork is also a significant part of this course.
Course Objectives:	▪ To impart an understanding about Scheduled Tribe at conceptual as well as historical level ▪ To introduce the tribes of India in general and Kerala in specific. ▪ To familiarize the Scheduled Tribe Development in India (Approaches, Policies, Programmes and Schemes) and also the constitutional and legal measures to protect the right and interest of the people ▪ To critically examine the tribal situation in Kerala and also to look into the possibilities for reducing the challenges faced by the people. ▪ To familiarize a methodology for tribal development ▪ To strengthen the extension activities in the tribal area at grass root level.
Course Outcomes:	• The learners will get an idea about the concept of tribe, history and approaches of tribal development in India. • The learners will get familiarize with the methodology for tribal development from an interdisciplinary perspective. • The field based experience would help the learners to critically examine the issues of tribal people. • The course will help the learners (especially those who are already engaged in the area of tribal development) to strengthen work for the tribal people with a newer perspectives.

	The course will give confidence to the learners to start NGO for the development of tribes and also to become job providers for those who are interested in the area of tribal development.
Course Content	Module I Schedule Tribe – An Introduction Module II Scheduled Tribe Development Module III Tribal Situation in Kerala Module IV Methodology for Tribal Development Module V Field based Training
Tentative list of resource persons:	1. Prof. S Gregory, Former Dean of social Science, Kannur University 2. Sri. V.K. Mohankumar, Former Director, KIRTADS 3. Mr. E.G. Joseph, Joint, Director (Retd.) STDD 4. Dr. B Francis Kulirani, Deputy Director (Retd.) Anthropological Survey of India 5. Dr. Satyanaranyana, Deputy Director (Retd.) Anthropological Survey of India 6. Dr. Pradeepkumar K.S , Deputy Director, KIRTADS 7. Dr. Suresh Madavan, Associate Professor, TISS 8. Dr. Seetha Kakkoth, Assistant Professor, DRTS 9. Dr. Amitabachan, Assistant Professor, MES Asmabi College, Kodungallur 10. Mr. Arunjith KP, Assistant Professor, DRTS 11. Mr. Muhammed Siyas Assistant Professor, DRTS 12. Mr. Subash V.S Research Officer, KIRTADS 13. Mr. Hareendran P, Assistant Professor & Head, DRTS

Sd/-
Head of the Department
Department of Rural and Tribal Sociology



VALUE ADDED COURSES

Name of the Department	DEPARTMENT OF HISTORY
Course Name	ACADEMIC WRITING SKILLS FOR SOCIAL SCIENCES
Course Code	(will be given by University)
Duration	30 h
About the course:	Academic writing is different from popular or journalistic writing as it needs to be analytic, cohesive and systematically organised following a logical flow of ideas. Students would benefit greatly from learning to write in concise and systematic manner with cogent articulation following standard academic practices of citation and style.
Course Objectives:	The course is intended to equip students with writing skills a) to draft proposals for higher studies b) write academic articles c) paper presentations at academic seminars.
Course Outcomes:	Students will learn to make proposals using cogent and critical arguments following standard academical practices . The course is also expected to instill confidence in students to produce academic articles and to engage with social science theory as well as contemporary social issues through writing.
Course Content	Module 1:Introduction: Conceptualising the Research Problem Module 2: Theoretical Framework and Literature Review (add more modules if necessary) Module 3 : Evaluating Sources Module 4: Discussions, Citations, Editing and Proofreading
Tentative list of resource persons:	Dr.Anupama Prasad, Post doc Scholar, JNU Ms.Meera Muraleedharan, Doctoral Scholar, Wellington University Dr. Deepsikha Borah, Post doc scholar, Australian National University Dr. Divya Balan, Assistant Professor, Flame University Dr. Anas Ali, Assistant Professor, Gitam. University



VALUE ADDED COURSE

Name of the Department	Department of Botany
Course Name	Biology- Ethics and Philosophy
Course Code	(will be given by University)
Duration	30 Hours
About the course:	This course mainly aims to impart ethical sensitivity to students and to identify ethical issues in a research proposal and suggest appropriate methods to ensure ethical conduct of biological research. After completion of this course students will be able to impart knowledge of sustainability and development and the conservation strategies to the society.
Course Objectives:	1. To impart ethical sensitivity to students 2. Can recognise and identify ethical issues in biology, 3. Can analyse an ethical dilemmas and the philosophy behind it and come to a conclusion 4. Understands and can apply the various component of methodology and philosophy of biological science.
Course Outcomes:	1. Can apply academic knowledge to social issues 2. Can scrutinise and identify health, administrative and public health policies to identify ethical issues 3. Can identify ethical issues in a research proposal and suggest appropriate methods to ensure ethical conduct of biological research 4. Can impart knowledge of sustainability and development and the conservation strategies to the society.
Course Content	Module 1: (12 hrs) Biology -The nature and logic of biological sciences -Logic of life. -Molecular logic of life. Problems of Biological classification -biological species concept- Evolution and Natural selection- Function and adaptation-The gene-centric view of evolution. Philosophical issues in Genetics - Classical and Molecular genetics- Genes and information -Genetic determinism-genetics and society- Eugenics and Euphenics- Reductionism in Biology Module 2: (10 hrs) Philosophical and political issues in Ecology- Sustainable development-conservation and waste management - Anthropocentric and Ecocentric views- Biological determinism. Pandemics and Covid-19- Issues and Analysis. Module 3: (8hrs) Bio Ethics- Ethical dimensions of scientific practice-Contemporary issues in Bio ethics Ethical Issues in Biotechnology -Medical ethics- Ethics of Clinical practices- Methodology and Ethics in Biological research-Bio ethics and Social justice.

Tentative list of resource persons:	Dr. Babu Valliyodan, Assistant professor, Department of agriculture and environmental Science, Lincoln University, USA Dr.T.V. Sajeew, Senior Scientist, KFRI Peechi Dr.P.K.Prasadan, Department of Zoology, Kannur University Campus, Mananthavady Dr. K.N. Ajoykumar, Course coordinator, Department of Botany, Kannur University Campus, Mananthavady Dr. Ratheesh Chandra, Assistant professor, Kannur University Campus, Mananthavady Dr. Abdussalam A.K., Assistant professor, Sir Syed College, Taliparamba Dr. Sangeeth Thekkan, Assistant professor, Kannur University Campus, Mananthavady Anjana Ramachandran. E, Assistant professor, Kannur University Campus, Mananthavady Arya Sasidharan, Assistant Professor, Kannur University Campus, Mananthavady
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KANNUR UNIVERSITY

DEPARTMENT OF ZOOLOGY

MANANTHAVADY CAMPUS

Edavaka Post, WAYANAD Dt. 670645 Ph: 9847803136

Name of the Department	Department of Zoology
Course Name	Certificate course on Biodiversity Conservation
Duration	30 hours

About the Course: This course will be useful for students of Zoology, Botany, and Tribal studies to focus on research and learning new techniques in the basics of biodiversity. This course will be an add-on for the productivity and skills of students to understand the basis of biodiversity tools and related field methods.

Course objectives: To Introduce students to know about the basic of biodiversity and to use tools like GPS and GIS for biodiversity assessment.

Course Outcomes: The students will be well-versed in the basic understanding of Biodiversity software, Role of GPS and GIS in biodiversity management. This will enable them to find jobs prospectus in field-oriented research and monitoring biodiversity

Course Content:

1. **Biodiversity –Concept and definition**
2. **Field ecology and methodology in biodiversity**
3. **Measuring Biodiversity**
4. **GIS in biodiversity conservation**
5. **Biodiversity Act and Patent**
6. **Biodiversity and Traditional Health Systems**

BIODIVERSITY CONSERVATION

VALUE ADDED COURSE

DEPARTMENT OF ZOOLOGY

Biodiversity –Concept and definition -4hrs

Scope and Constraints of Biodiversity Science, Composition and Scales of Biodiversity: Genetic Diversity, Species/Organismal Diversity, Ecological/Ecosystem Diversity, Landscape/Pattern Diversity, Agrobiodiversity, Bicultural Diversity, and Urban Biodiversity. Values and threat to biodiversity

Field ecology and methodology in biodiversity- 6hrs

Collection methods and Field Techniques: For invertebrates and vertebrates Line/belt transects, Quadrat sampling, point count, Scan sampling, and Focal sampling.

Measuring Biodiversity- 8 hrs

Getting familiar with different diversity software; Estimating diversity by employing similarity measures like the Jaccard measure and Sorenson measure and species diversity by Simpsons Index. Study of community structure and assessment of cover and basal area of species present and determine the IVI (Importance Value Index) of the species

GIS in biodiversity conservation-6hrs

Basics of GPS, satellite generation, and positioning services. Geographic Information System (GIS) Basic, principles and components of GIS, spatial information, and spatial data types.

Biodiversity Act and Patent-3 hrs

The Biological Diversity Act, 2002; Biological Diversity Rules, 2003; PBR. A brief idea of Patent Copyright, Trade Mark and Trade-related aspects of Intellectual Property (TRIPS); The Protection of Plant Varieties and Farmers' Rights (PVPFR) Act, 2001, 2007;

Biodiversity and Traditional Health Systems -3 hrs

Indigenous people and conservation, Significance of traditional ways of life, Ethno-biology and Ethno-pharmacology,

TENTATIVE LIST OF RESOURCE PERSONS FOR VALUE ADDED COURSE

Sl.No	Name	Institution
1.	Dr. Sajeev TV	Chief Scientist, KFRI, Peechi

2	Dr. Sasidharan	Senior Scientist, IFGTB, Coimbatore
3.	Dr. Roshnath	KVASU, Pookode, Wayanad
4.	Dr. Sasi	Postdoc fellow, SACON, Coimbatore
5.	Dr. Jaffer Palot	Scientist, ZSI, Pune
6.	Dr. Sugahnthan S	Scientist, KFRI
7.	Dr. Madhu	Assistant Professor, Punjabi University
8.	Dr. Vipin das	Director, Hume research centre, Kalpetta
9.	Mr. Vinayan	Director, Fern, Wayanad
10.	Dr. Sumodan	Retd. Professor, Govt. college Madapally

KANNUR UNIVERSITY



VALUE ADDED COURSES

Name of the Department	Department of Environmental Studies
Course Name	Water Quality Monitoring
Course code	MSEVS05V01
Duration	30 hrs
About the course:	This course is intended to make students appreciate the importance of water quality management, physical, chemical and biological characteristics of water and their significance in different water systems; Water quality monitoring and monitoring strategy; sources of contaminants; water quality standards and indicators; Institutional and legal framework regarding water quality in India and Introduction to modelling of water quality in natural systems.
Course Objectives:	❖ Introduce the concepts of water quality management and monitoring ❖ To understand the physical, chemical and biological characteristics of water and their significance ❖ To learn ways to improve water quality through treatment and management of chemically and biologically polluted waters. ❖ To appreciate the importance of water quality monitoring and development of monitoring strategy ❖ Recognize the role of water quality guidelines and legislation in water quality management
Course Outcomes:	❖ To become knowledgeable in the field of water quality monitoring and apply the principles in the field of water quality management and monitoring. ❖ Gain analytical skills in the field/ area of water quality management and monitoring ❖ Gain insight into key concepts of water quality, water quality and health, impairment of natural water bodies. ❖ Comprehend components of water treatment and schemes based on source of water, select suitable unit process and unit operation at conceptual, theoretical, methodical level. ❖ Comprehend components of wastewater treatment and schemes based on input water quality and desired water quality. ❖ Develop an integrated perspective on water resource and water

	quality management
Course Content:	Module 1 Introduction 8 H 1. Water quality and health linkage; impurities (pollutants and contaminants) in water, their significance and estimation techniques; water borne diseases; standards of potable water. 2. Impact of water pollutants on environment; self-purification of waste in streams; zones of purification; eutrophication; disposal standards, Impairment of natural water bodies 3. Water Quality Characteristics: Physical, chemical and biological water quality parameters. Module II Significance of the Characteristics of Water: 6H 1. Water quality in rivers 2. Water quality in lakes and reservoirs 3. Water quality in groundwater aquifers 4. Water quality in aquaculture. Module III Movement of contaminants in the environment: 8 H 1. Point and Non-point Sources of Pollution 2. Types of pollutants a) municipal wastewater discharge, b) Agriculture related water impurities, c) Industrial related water impurities. 3. Standards and criteria for drinking water/irrigation water/water in industry. 4. Institutional and legal framework regarding Water Quality Pollution control in India. Module IV Introduction to water quality monitoring techniques: 8 H 1. Design of water quality monitoring networks 2. Water quality sampling program: Selection of sampling stations: Sampling frequency, Representative sampling, Types of samples and preservation of samples, Field quality assurance requirements, Transportation and storage of samples, Safety during field work.

	3. Modelling of water quality in natural systems.
Tentative list of resource persons:	1. Dr. Madhavan Komath, Retd. Senior Scientist, CWRDM, Kozhikode 2. Dr. Arun Babu V, Assistant Professor, Dept. of Environmental Studies, Malayalam University 3. Dr. Sreedharan K, Scientist, Kerala State Biodiversity Board, Govt. of Kerala 4. Dr. Dipu S, Scientist, CWRDM, Thiruvananthapuram 5. Dr. Magesh S, Scientist, CWRDM, Kunnamangalam, Kozhikkode 6. Dr. Jayasurya, Scientist, CWRDM, Kunnamangalam, Kozhikkode 7. Dr. Mahesh Mohan, Assistant Professor, Dept. of Environmental Studies, M.G University, Kottayam



KANNUR UNIVERSITY

VALUE ADDED COURSES

Name of the Department	Information Technology
Course Name	IoT Bootcamp: From Fundamentals to Practical Applications
Course Code	IT2023VAC001
Duration	30 h
About the course:	The course is designed to provide students with a comprehensive understanding of the Internet of Things (IoT) technology, its devices, networking, and applications. The course covers the basics of IoT, including the components, devices, and sensors used to build IoT systems, as well as the connectivity and data management technologies used to integrate and analyse IoT data. Through hands-on projects, students will have the opportunity to apply the concepts and technologies covered in the course to build and test real-world IoT systems. The course also covers advanced topics in IoT, including security, privacy, and ethical considerations, and provides students with an overview of current and future trends in the field. Upon completion of the course, students will have a solid understanding of IoT technology and be able to apply this knowledge to build and design their own IoT systems.
Course Objectives:	1. Provide a comprehensive understanding of IoT technology and its components, including devices, sensors, and networking. 2. Develop skills in designing and building IoT systems, including hands-on experience with IoT devices and programming. 3. Familiarize students with IoT data management and analytics, including the collection, integration, and analysis of IoT data. 4. Introduce students to the security, privacy, and ethical considerations involved in building and deploying IoT systems. 5. Provide students with an overview of current and future trends in IoT technology and its applications. 6. Enable students to apply their knowledge and skills to real-world IoT projects and design their own IoT systems.
Course Outcomes:	1. Understanding of IoT fundamentals: Students will have a clear understanding of the definition and concept of IoT, its key components, and how it works. 2. Knowledge of IoT applications: Students will be able to identify and describe various IoT applications in different industries and understand the benefits of

	IoT in these industries. 3. Awareness of IoT architecture and protocols: Students will be able to explain the different layers of IoT architecture, understand the most commonly used IoT protocols, and appreciate their role in IoT systems. 4. Familiarity with IoT security and privacy: Students will be able to identify common security and privacy issues in IoT, understand the implications of these issues, and know how to secure IoT systems and protect sensitive data. 5. Hands-on experience with IoT technologies: Students will be able to apply the concepts learned in the course through hands-on activities using IoT devices, sensors, and platforms. 6. Preparedness for further studies and careers in IoT: Students will be equipped with the foundational knowledge and skills required to pursue further studies or careers in IoT-related fields. By successfully completing the course, students will be well-equipped to understand, design, and implement IoT systems, and to contribute to the development and growth of IoT in various industries.
Course Content	Module 1: Introduction to IoT • Definition and Overview of IoT • IoT Architecture and Components • IoT Applications and Use Cases Module 2: IoT Devices and Sensors • Types of IoT Devices and Sensors • IoT Device Characteristics and Requirements • IoT Device Interfacing and Communication Module 3: IoT Networking and Connectivity • IoT Networking and Communication Technologies • IoT Protocols and Standards (e.g., MQTT, CoAP, Zigbee, etc.) • IoT Cloud Services and Platforms (e.g., AWS IoT, Microsoft Azure IoT, etc.) Module 4: IoT Data Management and Analytics • IoT Data Collection, Storage and Processing • IoT Data Analytics and Visualization • IoT Data Privacy and Security Module 5: IoT Applications Development • IoT Application Development Frameworks and Tools (e.g., Node-RED, Python, etc.) • IoT Application Development Life Cycle • IoT Application Deployment and Management Module 6: IoT Case Studies and Hands-on Sessions • IoT Case Studies and Best Practices

	IoT Hands-on Sessions (e.g., IoT Device Interfacing, IoT Networking, IoT Data Analytics, IoT Application Development, etc.)
Tentative list of resource persons:	1.Sreejith R S Asst. Professor, Department of Computer Science, College of Applied Science Manjeshwaram. 2. Brijul Prakash, Technical Assistant, Dept. Of IT 3. Rishna , Technical Assistant, Dept.. of IT



KANNUR UNIVERSITY

VALUE ADDED COURSES

Name of the Department	Dept. of Mathematical Sciences
Course Name	An introduction to Python Programming
Course Code	MSMATVAC02
Duration	30 hours
About the Course:	The course will cover the basic features of Python, like variables, data types, control flow statements etc., keeping the focus on applications in science, mathematics and data analysis. The Numpy module will be introduced to learn the array operations. We will use the Matplotlib package to generate 2D and 3D plots. Important data structures of the Pandas package will be used to explore several examples of data analysis. Basics of scientific computation like numerical integration, differentiation and equation solving will be covered. Some basic understanding about algebra and matrices are assumed. No prior knowledge about computer programming required.
Course Objectives	To gain knowledge in basics of python programming which is used for developing websites and software, task automation, data analysis, and data visualization. Python is a general-purpose language used in almost all fields like Scientific and mathematical computing, Data analysis, Web development, Finance and trading, Computer graphics, etc.
Course Outcomes	After successful completion of the course the student will acquire Python programming skill which enable the students to apply it in their fields of study and also prepare them for new and emerging job opportunities.
Course Content	Module 1: Features of high level languages- compiled and interpreted languages - modes of using Python Interpreter - installing Python - pip - jupyter notebook- variables and data types - Python statements - arithmetic and logical operations - operator precedence - data types like int, float, str, list etc. - indexing and slicing - practicing with simple examples. (3 hrs) Module 2. Input output statements - python keywords - control flow statements - while and for loops- if elif else statements - continue and break - blocks of statements - colon and indentation - examples demonstrating control flow statements. (3 hrs) Module 3. code reuse - functions, modules and packages - different

	ways of importing - manipulating strings and lists - deep and shallow copying - formatted printing - exception handling - object oriented programming. (3 hrs) Module 4. file I/O - character streams - data serialization - pickle module - event driven programming - GUI toolkits - PyQt (3 hrs) Module 5. Numpy module - arrays - creating arrays from lists - reshape - functions to create arrays - array operations - file I/O - vectorized functions - array copying - indexing and slicing of 2D arrays. (3 hrs) Module 6. Matplotlib - architecture - 2D plots - different kinds of plots - plotting various geometric shapes - axis labeling - defining range - multiple plots- error bars - 2D animation. (3 hrs) Module 7. 3D plots - line plots - surface plots - mesh grid - simple examples - 3D animation (3 hrs) Module 8. Numerical methods - numerical integration - differentiation - solving differential equations - Euler and Runge-Kutta methods - practical applications. (3 hrs) Module 9. Pandas - Series - creating - index - Dataframe - create from dictionary - numpy array - description - selecting rows and columns - adding and deleting columns (3 hrs) Module 10. Loading and saving - concatenation - arithmetic operations - plotting using matplotlib - (3 hrs)
Tentative list of resource persons:	1) Dr. Ajith Kumar. B. P, Scientist, Inter University Accelerator Centre, New Delhi. 2) Dr. Ajees A P Asst. Professor , MG University Kottayam.



VALUE ADDED COURSES

Name of the Department	Department of Management Studies
Course Name	Certificate Course in Advanced Excel
Course Code	(will be given by University)
Duration	30 hours
About the course:	This course intends to provide students with skills in using Microsoft Excel
Course Objectives:	This Advanced Excel course is expected to help in working with databases in Microsoft Excel.
Course Outcomes:	• Use advanced functions and productivity tools to assist in developing worksheets • Manipulate data lists using Outline, Autofilter and PivotTables • Use Consolidation to summarise and report results from multiple worksheets
Course Content	Module I Overview of the Basics of Excel, Basic Formula - Add, Subtract, Multiply, Divide, BODMAS / Formula Error Checking, Sum Function. Module II LOOKUP Functions, PivotTables, Logical Functions, Statistical Functions, Math & Trigonometry Functions Module III Chart Data Techniques, Text Functions, Advanced Filters and Sorting, Summarizing Data, Custom Views
Tentative list of resource persons:	Mr. Radeesh Kutty Microsoft Certified Trainer Active Edu Foundation Bangalore

(Signature)

Head
Department of Management Studies
Kannur University
Thiruvananthapuram, P.O.
Thiruvananthapuram - 695 014, India

KANNUR UNIVERSITY
SCHOOL OF PEDAGOGICAL SCIENCES

Kannur University Campus P.O., Dharmasala – 670567
Phone: 0497-2781290 e-mail: spskannuruty@gmail.com

Value Added Course

Course Duration : 30 hours

Course Title: INSTRUCTIONAL DESIGN FOR TECHNOLOGY ENABLED EDUCATION

Course Syllabus

Course Objectives

- To understand the various forms of digital technology in teaching/learning process and make the students skilled in some of the many digital tools used in today's class rooms.
- To provide a foundation for text editor, spread sheet and presentation and tips for creating attractive presentations, documentation, tabulation and consolidation.
- To familiarize various applications / platforms like Xrecorder, QuillBot, ChatGPT, Moodle, Blogger, Jam board etc and other Google platforms
- Expose to basic technology enabled instructional designs and assist in determining appropriate applications of these techniques in educational settings
- To enable the learner in higher-level thinking and creativity through ICT learning and instructional technology
- To provide an understanding of the ethical and legal issues in developing eContents.

COURSE LEARNING OUTCOMES

After completing the course, the learner will be able to

- Understand certain concepts and applications of educational technology
- Understand the instructional technology and instructional design
- Understand and implement the different innovative strategies for online learning
- Integrate e-learning methods in classroom interaction
- Design new learning platform for teacher education.

Module I: Educational Technology - Introduction to Office packages (10 hours)

Introduction to Educational Technology- Introduction to Text Editor - Basic of *MS-Word*-Working with a document, Finding a particular pattern-Inserting objects into a document-Basics of *Google docs*. Introduction to Spreadsheet - Starting with *MS Excel*- Formula bar- Work Book- Creating a new Workbook- Working with cells- Preparation of nominal roll-Data entry-Preparation of mark list and an alysis-Analysis of classroom performance of students –Introduction to *Google spread sheet*. Introduction to Power point- Starting with *MS-Power Point*- Creative Presentation tips-Working with slides- Applying Design Templates- Animation-Conversion of PPT to video-Basics of *Google slides*.

Module II : Technology enabled Education: -- eContent development and Instructional Design
(10 hours)

Online teaching skills- Planning online class-Choosing appropriate technology tools-Online teaching platforms-Interactive boards in online and offline classes-Demonstration: *Google classroom, Google meet, Jam board*-Online assessment tools. Guidelines for developing eContent-Forms of eContent –Process of developing eContent-Instructional designs- *ADDIE*- Guidelines for curating eContent- Quality parameters-Tools for evaluation–Introduction to *Moodle*.

File formats of eContent- Universal Design of Learning framework-EPUB Accessibility Guidelines- Guidelines for Developing Webpage and Mobile App-Metadata- Intellectual property rights and Copyrights.

Module III : Tools and Techniques for e-Content development (10 hours)

Tools for creating e content-Typing tools –Matter/Voice typing - Paraphrasing tools-*QuillBot*-Latest Keyboards- Optimising Language Models for Dialogue-*ChatGPT*-Presentation tools- *MS-Power Point* Video creation and editing tools- *xrecorder app* e-Content uploading platforms-Open Broadcaster softwares-*OBS studio*-You tube Live streaming-Vlogging and Blogging- *Blogger*.

S/d

Head of the Department
School of Pedagogical Sciences



KANNUR UNIVERSITY

(NAAC Accredited with B++ Grade)

DEPARTMENT OF ECONOMICS

Dr. JANAKI AMMAL CAMPUS, P.O PALAYAD -670661

VALUE ADDED COURSE

Name of the Department	DEPARTMENT OF ECONOMICS
Course Name	Certificate Course in Data Analysis Software SAS, SPSS, STATA E VIEWS, GRETTL and R
Course Code	
Duration	30 Hrs (from 13 February 2023 to 28 February 2023)
About the course:	This course is an initiative of the Department of Economics, Kannur University to address the Capacity Building in the area of Economic Data Analysis. This programme aims to produce trained professionals for the corporate and academic sector who can effortlessly do secondary data analysis using statistical software. In essence, the major outcome of the course is to develop graduate students fit for modern data analytical jobs and also to mould trained professionals to implement and manage governance projects/policy programmes in a disciplined manner.
Course Objectives:	The course intends • To provide the students the benefits of different types of data sets like time series, cross sectional and panel data. • Provide various socio-economic databases • To introduce various open source statistical software along with hands on training on how to derive the data and do basic data analysis using SAS, SPSS, STATA E VIEWS, GRETTL and R.
Course Outcomes:	• To develop students who are well versed in handling secondary and primary sources of socio-economic data. • To produce trained professionals who can effortlessly do data analysis using open source statistical software. • To develop the students fit for modern data analytical jobs.

Course Content Module	Module - 1: Introduction to Causal Inference in Economics Correlation Vs Causation - Ordinary Least Squares-Issue of Endogeneity - Causes of Endogeneity -Randomized Controlled Trails- The Gold Standard- Quasi-experimental Methods- Instrumental Variables Method- Fixed-Effects Method- Difference-in-Differences- Regression Discontinuity Design Module - 2 : Overview of Databases Database on Indian economy- World inequality database- Shrug- Night light data- World political cleavages and inequality database- multilateral economic database - guesstimate- open statistical software - GRETl and R Module - 3 : E VIEWS Identifying different Type of data-Introduction to E-views-Downloading the software-Manual data adding- The data importing -Panel data analysis-Descriptive statistics-Correlation-regression-POLS- Data interpretation -Fixed effect model Module - 4 : STATA Software installation- Introduction to STATA- Data Management in STATA-data manual adding and importing- Time series, cross-section, and panel data management - Correlation and interpretation- Regression and interpretation- Graph building and modification- Panel data analysis with POLS, fixed and random effect model testing and Haussman test Module – 5 : SPSS Software installation - Introduction to SPSS- Data Management -data manual adding and importing- Chart building -bar diagram, multiple bar diagram, pie diagram- Correlation analysis- Regression analysis- Chi-square for the independence of attributes Module - 6 : R STUDIO Software installation - Introduction to R Studio- Data Management -data importing- Graphics using r- Correlation- Regression- Graph building -

	bar, multiple bar diagram, box plot Module – 7 : SAS Creating data set in SAS- Import Dataset- Data management in SAS- analysis of descriptive statistics- Correlation analysis- Regression analysis- statistical tests
Tentative list of resource persons	1. Dr. Jince Shajan - Advanced Analyst, Ernst and Young, former Assistant Professor SRM University, Delhi-NCR, Sonapat, Haryana 2. Dr. Hari Kurup K K - Associate Professor, and Head (Rtd.), Department of PG Studies and Research in Economics, Government College Kasaragod. 3. Dr. Deepthi V - Assistant Professor (on Contract) - Department of Statistical Sciences - Kannur University, Kerala, India 4. Sri. Baiju P - Ph. D Scholar, Department of Humanities and Social Sciences, NIT, North Goa, Goa. 5. Sri. Naveen Hari- Research Assistant, King's College London (KCL) Former Research Associate Ashoka University 6. Sri. Vimal. V, Ph. D Scholar in Economics, Dr. Hermann Gundert Central Library - Kannur University, Thavakkara, Kannur



Head of the Department
Department of Economics
Kannur University, Thalassery Campus
P. O. Palayad-670661



BASE SAS CERTIFICATION COURSE

SAS stands for the Statistical Analysis System. It is a command-driven software package used for statistical analysis and data visualization. It is available only for Windows operating systems. It is arguably one of the most widely used statistical software packages in both industry and academia. In view of the recent rise in the market of Data Science and Predictive Analytics, SAS seems to have a good future ahead.

Day 1: Base SAS

- SAS WINDOW ENVIRONMENT
- CREATION OF LIBRARIES
- SAS PROGRAMMING
- DATASTEP
- PROC STEP
- WAYS TO READ DATA INTO SAS
- BACKEND PROCESS OF DATASTEP
- DATA STATEMENT & DATASET OPTIONS
- INFILE STATEMENT & OPTIONS
- INPUT STATEMENT
- OPTIONS
- DATALINES STATEMENT

Day 2: Base SAS continues

- ATTRIBUTES OF THE VARIABLES
- LENGTH, LABEL STATEMENTS
- INFORMATS & FORMATS
- HOW DATES WORKS IN SAS
- OTHER STATEMENTS (SUM, RETAIN, KEEP, DROP, RENAME, OUTPUT, IF, IF/THEN, IF/THEN/ELSE, IF/THEN OUTPUT, IF/THEN DELETE, WHERE, DO, DO UNTIL & DO WHILE)

Day 3: Advance SAS

- FUNCTIONS (CHARACTER, NUMERIC, DATE)
- PROC STEP (PROC CONTENTS, PROC COPY, PROC DELETE, PROC SORT, PROC COMPARE, PROC TRANSPOSE, PROC FORMAT, PROC PRINT, PROC REPORT)

Day 4: Advance SAS continues

- SAS/STAT
- BASIC FUNCTIONAL CLASSES OF STATISTICS PROCEDURES (PROC MEANS, PROC)

Day 5: Clinical SAS

- SDTM
- ADaM
- TLF