SONA COLLEGE OF TECHNOLOGY, SALEM-5

(An Autonomous Institution)

B.Tech- Fashion Technology

CURRICULUM and SYLLABI

[For students admitted in 2023-2024]

B.E / B.Tech Regulations 2023
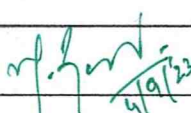
Approved by BOS and Academic Council meetings

S. No	Course Code	Course Title	L	T	P	J	C	Category	Total Contact Hours	Course Type*
		Theory courses								
1.	U23ENG101A	Communication Skills in English	2	0	2	0	3	HS	60	TL
2.	U23MAT102C	Calculus and Statistics with MATLAB	3	0	2	0	4	BS	75	TL
3.	U23CHE104E	Chemistry for Fashion Technology	3	0	0	0	3	BS	45	T
4.	U23FT101	Fibres and Yarns for Fashion	3	0	0	0	3	PC	45	T
5.	U23TAM101	தமிழர் மரபு /Heritage of Tamils	1	0	0	0	1	HS	15	T
6.	U23GE101	Basic Aptitude-I	2	0	0	0	0	AC	30	T
		Practical courses								
7.	U23CHL111B	Chemistry Laboratory	0	0	2	0	1	BS	30	L
8.	U23FTL102	Fibre and Yarn Analytical Laboratory	0	0	2	0	1	PC	30	L
9.	U23FTL103	Fashion Illustration Laboratory	0	0	2	0	1	PC	30	L
10.	U23FTL104	Computer Basics for Fashion Technology Laboratory	0	0	2	0	1	PC	30	L
					Total Credits		18			
		Optional Language Courses**								
11.	U23OL1101	French	1	0	0	0	1	OL	15	T
12.	U23OL1102	German							15	T
13.	U23OL1103	Japanese							15	T
14.	U23OL1104	Korean							15	T

*T- Theory, TT- Theory with Tutorial, TL- Theory with Laboratory, TP- Theory with Project, TLP- Theory with Laboratory and Project, L-Laboratory, LT- Laboratory with Theory, LP- Laboratory with Project

**Students may opt for foreign languages viz., German/French/Japanese/Korean with additional one credit (Not accounted for CGPA calculation)

Approved By

Chairperson, Science and Humanities BoS	Chairperson, FT BoS	Member Secretary, Academic Council	Dean-Academics	Chairperson, Academic Council & Principal
Dr.M.Renuga	Dr.D.Raja	Dr.R.Shivakumar	Dr.J.Akilandeswari	Dr.S.R.R.Senthil Kumar

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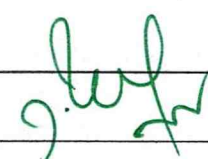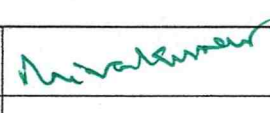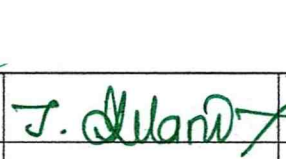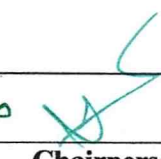HOD/ Fashion Technology, First Semester B.Tech. FT Students and Staff, COE

Sona College of Technology, Salem
(An Autonomous Institution)
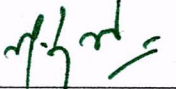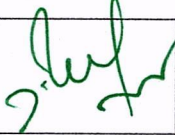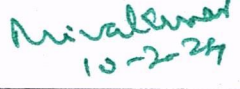### Courses of Study for B.E/B.Tech. Semester II under Regulations 2023 (CBCS)
Branch: Fashion Technology

S. No	Course Code	Course Title	L	T	P	J	C	Category	Total Contact Hours	Course Type*
		Theory courses								
1	U23ENG201A	Technical English	2	0	0	0	2	HS	30	T
2	U23MAT202E	Probability and Statistical Quality Control	3	1	0	0	4	BS	60	TT
3	U23PHY203E	Physics for Fashion Technology	3	0	0	0	3	BS	45	T
4	U23BEE206C	Basics of Electrical, Electronics and Instrumentation Engineering	3	0	0	0	3	ES	45	T
5	U23EGR207	Engineering Graphics	3	0	0	0	3	ES	45	T
6	U23TAM201	தமிழரும் தொழில்நுட்பமும் / Tamils and Technology	1	0	0	0	1	HS	15	T
7	U23GE201	Basic Aptitude II	2	0	0	0	0	AC	30	T
		Practical courses								
8	U23PHL210A	Physics Laboratory	0	0	2	0	1	BS	30	L
9	U23BEEL213C	Basics of Electrical, Electronics and Instrumentation Engineering Laboratory	0	0	2	0	1	ES	30	L
10	U23FT201	Digital Fashion Foundation Laboratory	1	0	2	0	2	PC	45	LT
11	U23WPL214	Workshop Practice	0	0	2	0	1	ES	30	L
		Total Credits					21			
		Optional Language Courses**								
12	U23OL1201	French - II	1	0	0	0	1	OL	15	T
13	U23OL1202	German - II							15	T
14	U23OL1203	Japanese - II							15	T
15	U23OL1204	Korean - II							15	T

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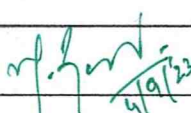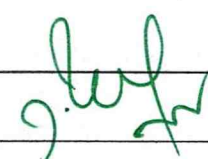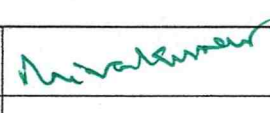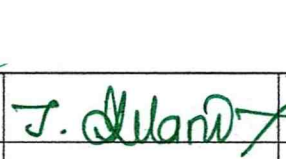
PRINCIPAL
SONA COLLEGE OF TECHNOLOGY
SALEM - 636 005

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		Theory courses								
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4.	U23FT101	Fibres and Yarns for Fashion	3	0	0	0	3	PC	45	T
5.	U23TAM101	தமிழர் மரபு /Heritage of Tamils	1	0	0	0	1	HS	15	T
6.	U23GE101	Basic Aptitude-I	2	0	0	0	0	AC	30	T
		Practical courses								
7.	U23CHL111B	Chemistry Laboratory	0	0	2	0	1	BS	30	L
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Copy to:-

HOD/ Fashion Technology, First Semester B.Tech. FT Students and Staff, COE

U23ENG101A	Communication Skills in English (Common to ADS, AIML, BME, CSD, CSE, CIVIL, ECE, EEE, MCT, FT, IT Branches)	L	T	P	J	C
		2	0	2	0	3

Course Outcomes

At the end of the course, the student will be able to

CO1:	Use grammatical components effectively in both written and spoken communication
CO2:	Develop speaking skills for self-introduction, delivering speeches and technical presentation
CO3:	Demonstrate effective listening skills for academic and professional purposes
CO4:	Write emails and formal letters and build resumes and construct paragraphs
CO5:	Develop speaking skills both in terms of fluency and comprehensibility

Pre-requisite:

- Knowledge and Understanding of Grammar
- Fundamental Language Skills (LSRW)

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	1	1	1	1	1	3	3	2	3	3	2	3	2	3
CO2	1	1	1	1	1	3	3	3	3	3	3	3	3	3
CO3	1	2	3	2	2	3	3	2	3	3	3	3	3	3
CO4	1	2	1	2	2	3	3	3	3	3	3	3	3	3
CO5	1	2	2	3	2	3	3	3	3	3	3	3	3	3

Course Assessment methods

Direct		Indirect
CIE test I (10) (Theory) CIE test II (10) (Theory) CIE test III (10) (Theory) CIE test IV (10) (Practical) Assignment/seminar/Quiz (5)	Attendance (5) Total CIE: 50 marks Semester End Examination (50) (SEE – Theory (25 marks + Lab (25 marks)	Course end survey

Unit 01:	6 Hours

- General vocabulary, Parts of Speech, Articles
- Email, fixing an appointment, cancelling appointments, conference details, hotel accommodation, order for equipment, training programme details, paper submission for seminars and conferences
- Paragraph writing – Describing – defining – providing examples or evidences

Unit 02:	6 Hours
• Tenses, Sentence Patterns • Instructions • Letter Writing - calling for quotations, placing orders	
Unit 03:	6 Hours
• Prefixes and Suffixes • Cover letter and resume writing	
Unit 04:	6 Hours
• Modal verbs, concord • Checklist • Letter Writing - Business communication, complaints, replies to queries from business customers	
Unit 05:	6 Hours
• If conditionals • Letter Writing - inviting dignitaries, accepting and declining invitations	

Lab component:

1. Self-introduction, personal information, name, home background, study details, area of interest, hobbies, strengths and weaknesses, projects and paper presentations, likes and dislikes in food, travel, clothes, special features of home town.
2. Mini presentation - Office Arrangements, Facilities, Office Functions, Sales, Purchases, Training Recruitment, Advertising, Applying for financial assistance, applying for a job.
3. Listening - understanding short conversations or monologues, taking down phone messages, orders, notes, etc.
4. Listening – entering information in tabular form
5. Loud Reading

Theory: 30 Hrs	Tutorial: --	Practical: 30 hours-	Project:--	Total Hours: 60 Hrs

TEXT BOOKS	
1.	Technical English I & II, Dr. M. Renuga et al. Sonaversity, 2016

2.	**Extensive Reading**
	    1. She is Dancing Back to Life – A Short Story"
	    2. The Story of Google – Sara Gilbert, published by Jaico
	    3. The Story of Amazon.com- Sara Gilbert, published by Jaico

REFERENCES	
1.	Norman Whitby, Business Benchmark – Pre-Intermediate to Intermediate, Students Book, Cambridge University Press, 2006.
2.	A Course in Communication Skills, P. Kiranmai Dutt, Geetha Rajeevan, C. L. N. Prakash, published by Cambridge University Press India Pvt. Ltd.

HOD

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 6

B. Tech. / FASHION TECHNOLOGY						
SEMESTER - I	**CALCULUS AND STATISTICS WITH MATLAB**	L	T	P	J	C
U23MAT102C		3	0	2	0	4

Course Outcomes

At the end of the course, the student will be able to

CO1:	apply the various differentiation techniques to the algebraic and transcendental functions
CO2:	apply the various integration techniques to the algebraic and transcendental functions
CO3:	represent the data in the form of diagram and graph and analyze them
CO4:	apply the concepts of measure of central tendency, dispersion and skewness to the given data and analyze the results
CO5:	apply the concepts of correlation and regression to the data and analyze the results.

Pre-requisites:

- Fundamentals of elementary algebra
- Fundamentals of calculus
- Fundamentals of geometry
- Fundamentals of trigonometry
- Fundamentals of statistics

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3		3								2			3
CO2	3	3		3								2			3
CO3	3	3		3								2			3
CO4	3	3		3								2			3
CO5	3	3		3								2			3

Course assessment methods [Theory with laboratory course]

Direct		Indirect
CIE test I (10) (Theory) CIE test II (10) (Theory) CIE test III (10) (Theory) CIE test IV (10) (Practical) Attendance (5) Assignment/Quiz/Seminar (5)	Total CIE: 50 marks Semester End Examination (50) [SEE- Theory (35) + Lab(15) marks]	Course end survey

Unit 01	DIFFERENTIAL CALCULUS	9 Hours

Ordinary Differentiation: Rules of differentiation – differentiation of elementary functions – differentiation of inverse functions – differentiation of logarithmic functions – differentiation of implicit functions – successive differentiation of simple functions. **Partial Differentiation:** Total differential coefficient – Euler's theorem – partial differentiations of implicit functions.

Unit 02	INTEGRAL CALCULUS	9 Hours

Definite and indefinite integrals – substitution rule – integration by parts – Bernoulli's formula – integration of rational functions by partial fraction – double integral in Cartesian coordinates – change of order of integration.

Unit 03	COLLECTION AND REPRESENTATION OF DATA	9 Hours

Collection of data – primary and secondary data – diagrammatic representation – simple, subdivided and multiple bar diagrams – Pie diagram – pictograph – graphs of frequency distribution – histogram – frequency polygon – frequency curve – cumulative frequency curve.

Unit 04	MEASURES OF CENTRAL TENDENCY, DISPERSION AND SKEWNESS	9 Hours

Measures of central tendency (Simple arithmetic mean, median, mode) – quartiles – measures of dispersion (range, inter-quartile range, quartile deviation, mean deviation, standard deviation, coefficient of variation) – skewness – Karl Pearson's coefficient of skewness.

Unit 05	CORRELATION AND REGRESSION	9 Hours

Simple and rank correlations – multiple and partial correlations – linear regression – multiple and partial regressions – curve fitting (straight line and parabola).

List of MATLAB Programs	
1.	Finding derivatives of polynomial functions.
2.	Finding derivatives of exponential functions.
3.	Finding derivatives of logarithmic functions.
4.	Finding derivatives of trigonometric functions.
5.	Finding successive derivatives of simple functions.
6.	Evaluating definite integral.
7.	Evaluating indefinite integral.
8.	Evaluating double integrals.
9.	Plotting simple functions.
10.	Finding mean, median, mode and standard deviations for the given data.

Theory: 45 Hrs	Tutorial: -	Practical: 30 Hrs	Project:--	Total Hours: 75 Hrs

TEXT BOOKS:

1.	S. Narayanan and T. K. Manicavachagom Pillay, "Calculus – volume I and II", S.Viswanathan Publishers, 2016.
2.	S. P. Gupta, "Statistical Methods", Sultan Chand and Sons Publishers, 15th Edition, 2012.
3.	W. Yang, Y. K. Choi, K. Jaekwon, M. C. Kim, H. J. Kim and T. Im, "Engineering Mathematics with MATLAB", CRC Press Publishers, 1st Edition, 2017.

REFERENCE BOOKS:

1.	J. Stewart, "Calculus", Cengage Publishers, 8th Edition, 2016.
2.	G. B. Thomas, "Calculus", Pearson Publishers, 14th Edition, 2018.
3.	S. C. Gupta and V. K. Kapoor, "Fundamentals of Mathematical Statistics", Sultan Chand and Sons Publishers, 11th Edition, Reprint, 2019.
4.	R. A. Johnson and C. B. Gupta, "Miller and Freund's, Probability and Statistics for Engineers", Pearson Publishers, 9th Edition, 2018.
5.	P. G. Hoel, S. C. Port and C. J. Stone, "Introduction to Probability Theory", Universal Book Stall Publishers, Reprint, 2003.
6.	D. Xu, "Calculus problem solutions with MATLAB", Walter de Gruyter Publishers, 1st Edition, 2020.

Dr. S. JAYABHARATHI
Head / Department of Mathematics
Sona College of Technology
Salem – 636 005

Dr. M. RENUGA
BoS - Chairperson / Science and Humanities
Sona College of Technology
Salem – 636 005

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 005.

BoS Date: 08. 07. 2023   B.E. / B.Tech. Regulations 2023

Dr. S. JAYABHARATHI
ASSOCIATE PROFESSOR & HEAD
DEPARTMENT OF MATHEMATICS,
SONA COLLEGE OF TECHNOLOGY,
SALEM-636 005. Tamilnadu.
Ph: 0427 - 4099999.

U23CHE104E	CHEMISTRY FOR FASHION TECHNOLOGY	L	T	P	J	C
		3	0	0	0	3

Course Outcomes

At the end of the course, the student will be able to

CO1:	Analyse the impurities of water, their removal methods and explain the conditioning methods for industrial uses.
CO2:	Compare the type of bonds and their significances.
CO3:	Understand the basic concepts, and analyse the applications of surface chemistry and catalysis in engineering and technology.
CO4:	Analyse the chemical characteristics of oils, fats, soaps, detergents, lubricants and their applications in textile industry.
CO5:	Compare the types of polymerization reaction techniques and classification of dyes and their intermediates.

Pre-requisite: Basic knowledge on the concepts of organic, inorganic and physical chemistry.

CO/PO, PSO Mapping

(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2					3							2
CO2	3	2												2
CO3	3	2												2
CO4	3	2				2	3							2
CO5	3	2				2	3							2

Course Assessment methods

Direct		Indirect
CIE test I (8)	Objectives Test (6)	
CIE test II (8)	Attendance (5)	Course end survey
CIE test III (8)	Total CIE: 40 marks	
Assignment/seminar/Quiz (5)	Semester End Examination (60)	

Unit 01: WATER TECHNOLOGY	**9 Hours**

Introduction, Water quality parameters – hardness – estimation of hardness of water by EDTA method, alkalinity – estimation of alkalinity by indicator method, significances of pH, TDS, COD, BOD, chloride, sulphate – Water for industrial use – boiler troubles and remedies, internal conditioning – colloidal, phosphate, calgon and carbonate conditioning – External treatment methods – Zeolite   and

demineralization processes – desalination of brackish water by reverse osmosis method.

Unit 02: CHEMICAL BONDING	9 Hours

Types of chemical bonds - van der Waals (or) intermolecular forces – types – hydrogen bond – types, Valence Bond Theory (VBT) – VSEPR Theory - Molecular Orbital Theory – Linear Combination of Atomic Orbitals (LCAO method)- energy level diagram of molecular orbitals (nitrogen and oxygen only) – coordinate bond – metallic bond.

Unit 03: SURFACE CHEMISTRY AND CATALYSIS	9 Hours

Adsorption-types-physical and chemical adsorption – adsorption of gases on solids-adsorption isotherms-Freundlich and Langmuir isotherms - role of adsorption in catalytic reactions - applications of adsorption – detergency, water repellency, wetting and foaming, emulsifiers, deemulsifiers and defoamers – catalysis – definition and types – homogeneous and heterogeneous catalysis.

Unit 04: CHEMISTRY OF OILS, FATS, SOAPS AND LUBRICANTS	9 Hours

Oils and fats – chemical constitution and general chemical characteristics – drying, rancidifications, hydrogenation, hydrogenolysis – chemical analysis – acid, saponification and iodine, R M values – determination and their significances, Soaps and detergents – types and cleansing actions, Lubricants – types – mechanism of lubrication – properties of lubricants – viscosity, flash and fire points, cloud and pour points.

Unit 05: POLYMER AND DYE CHEMISTRY	9 Hours

Introduction – degree of polymerization, functionality and tacticity, glass transition temperature – types of polymers – types of polymerization – addition, condensation and copolymerization Dyes : Theory of colour and constitution–chromophore and auxochromes. Optical brightening agents. Nomenclature of dyes - commercial naming, colour index. Classification of dyes based on chemical structure and application. Chemistry of dye Intermediates - nitration, halogenation, sulphonation.

Theory: 45 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 45 Hrs

TEXT BOOKS

1.	P.C.Jain and Monica Jain, "Engineering Chemistry" Dhanpat Rai Pub, Co., New Delhi , 17th Edition, 2018.
2.	BS. Bahl and Arun Bahl, "A Textbook of Organic Chemistry" S Chand and Company, Limited, New Delhi, Reprint 2019.

REFERENCES

1.	H.K. Chopra, A. Parmer, "Chemistry for Engineers", Narosa Publishing House, New Delhi, 110002, 2016.
2.	Kannan P., Ravikrishnan A., "Engineering Chemistry", Sri Krishna Hi-tech Publishing Company Pvt. Ltd., Chennai, 2009.
3.	B. Sivasankar "Engineering Chemistry" Tata McGraw-Hill Pub.Co.Ltd, New Delhi, 2008.
4.	Puri, Sharma, Pathania"Principles of Physical Chemistry" Vishal Publishing Co. 48th Edition, 2021.

4.8.2023   Version 1.0   Programme: B.E / B..Tech Regulations 2023

Dr. C. SHANTHI, M.Sc.,M.E.,Ph.D.,
Professor of Physics
Head, Department of Sciences
Sona College of Technology (Autonomo·
SALEM-636 005.

Dr. M. RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 005.

U23CHL111B	CHEMISTRY LABORATORY (Common to Mechanical, EEE, & FT branches)	L	T	P	J	C
		0	0	2	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Analyse the given water sample to determine the amount of hardness and alkalinity.
CO2:	Analyse the quality of brass by estimating copper and estimate the amount of HCl in given sample by pH metry, conductometry.
CO3:	Estimate the amount of ferrous ion in the given water sample and determine the molecular weight of water soluble polymer.

Pre-requisite: Capable of using Screw gauge, Vernier calliper, Travelling microscope, Spectrometer, able to handle burette, pipette and standard measuring flask.

CO/PO, PSO Mapping

(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2		1		1			1					2
CO2	3	2		1		1			1					2
CO3	3	2		1		1			1					2

Course Assessment methods

Direct		Indirect
CIE test I (15)	RTPS (10)	
Quiz 1 (5)	Record (10)	Course end survey
CIE test II (15)	Total CIE:60 marks	
Quiz 2 (5)	Semester End Examination (40 marks)	

LIST OF EXPERIMENTS

1	Estimation of hardness of water sample by EDTA method.
2	Estimation of alkalinity of water sample by indicator method.
3	Estimation of copper in brass by EDTA method.

4	Estimation of HCl acid by pH metry.	
5	Estimation of HCl by conductometry. (HCl vs NaOH)	
6	Estimation of mixture of acids by conductometry. (HCl + CH₃COOH vs NaOH)	
7	Estimation of ferrous ion by potentiometric titration.	
8	Determination of molecular weight of a polymer by viscosity measurements.	
		TOTAL : 30 HOURS

Dr. C. SHANTHI, M.Sc.,M.E.,Ph.D.,
Professor of Physics
Head, Department of Sciences
Sona College of Technology (Autonomous)
SALEM-636 005

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 005.

U23FT101	FIBRES AND YARNS FOR FASHION	L	T	P	J	C
		3	0	0	0	3

Course Outcomes

At the end of the course, the student will be able to

CO1:	Classify textile fibres, define the basic terms used, outline fundamental concepts of fibre structure, describe the properties of an ideal fibre and state the properties and uses of major natural fibres.
CO2:	Describe the common man-made fibre spinning techniques and explain the properties and uses of major natural-polymer, synthetic and special fibres.
CO3:	Describe the identification methods of common fibres and define the common linear density terms used for man-made fibres.
CO4:	Outline the objectives and working principles of the different processes in spun yarn production.
CO5:	Describe sewing thread types, fibres used, quality requirements, outline of production and state the characteristics and uses of fancy yarns and certain special yarns.

Pre-requisite: -

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	2	3		3	1					3	1	2
CO2	3	3	2	2	2	2	2					3	3	2
CO3	3	2	2	2	2	1						3	2	1
CO4	3	3	3	3	2	3	3	3				3	3	2
CO5	2	3	2	2	2	2	2	3				3	2	2

Course Assessment methods

Direct		Indirect
CIE test I (8)	Assignment/seminar/Quiz (5)	
CIE test II (8)	Attendance (5)	Course end survey
CIE test III (8)	Total CIE: 40 marks	
Objectives Test (6)	Semester End Examination (60 marks)	

Unit 01: GENERAL INTRODUCTION AND NATURAL FIBRES	10 Hours

Definitions: Textile fibre, staple fibre, filament; yarn: spun, continuous filament, monofilament and multifilament, flat and textured yarn; single, ply and cabled yarns; thread; fabric: woven, knitted and non-woven

Classification of textile fibres: Main classes and sub-classes with examples for each class / sub-class

Basic concepts of fibre structure: Definition of orientation, types, schematic representations and examples; definition of crystallinity, schematic representation of fibre with crystalline and amorphous contents, outline of influence of crystallinity on fibre properties; crystallinity values of some common natural and man-made fibres

Properties expected of a Textile Fibre: Definitions of fibre length, fineness, strength, flexibility, elongation, elasticity, moisture content, moisture regain, crimp, fibre uniformity, lustre, fibre modulus, Tm and Tg,; Essential and desirable properties of a textile fibre

Natural Fibres: Definition and source, properties and uses of cotton, flax, silk and wool

Unconventional natural fibers: Source, properties and uses of jute, coir, pineapple and banana

Unit 02: MAN MADE FIBRES	9 Hours

Introduction to man-made fibre spinning: Principles of wet-spinning, dry-spinning and melt-spinning of

Dr. D. RAJA, M.Tech., Ph.D.,
Professor & Head
Department of Fashion Technology
Sona College of Technology
Salem - 636 005. Tamil Nadu

man-made fibres, principle of drawing and its importance.

Raw materials, properties and uses of natural-polymer and synthetic fibres: Viscose rayon, modal, bamboo, polyester, nylon 6, acrylic and elastomeric fibre.

High performance fibres: Definition, characteristics, types, properties and uses of carbon, glass, nomex and kevlar. latest developments in fibres to attain comfort properties.

Unit 03: LINEAR DENSITY AND IDENTIFICATION OF FIBRES	8 Hours

Linear density: Definition, denier and tex systems, decitex, millitex, kilotex and English cotton count; Conversion formulae and simple calculations of linear density Definition, properties and uses: Micro, nano fibres and bio polymers

Identification of common textile fibres: Microscopic test, burning test, solubility test and density test

Unit 04: OUTLINE OF YARN PRODUCTION	10 Hours

Preparatory processes: Objects of ginning, names of machines used; Objects of mixing and blending; Objects of blow room, common sequence of machines used for processing of cotton, manmade fibre and blends; Objects of carding, outline of working principle of high production card; Objects of combing, difference between carded and combed yarns; Objects of draw frame, outline of working principle of draw frame; Objects of speed frame, outline of working principle of simplex

Yarn production: Objects of ring spinning outline of working principle of ring frame; yarn count and TPI; Objects of doubling, difference between single and double yarn; Outline of principles of compact spinning. New spinning system: Types and its needs, principle of rotor and air jet spinning system.

Unit 05: SEWING THREADS, FANCY YARNS AND SPECIAL YARNS	8 Hours

Sewing thread: Definition, quality requirements, fibres used, types, properties, production process, selection of sewing thread, ticket number, leading brands of sewing threads

Fancy yarns: Definition, brief study of chenille yarn, slub yarn, snarl yarn, melange yarn, and corkscrew yarn and spotted yarn. End uses of fancy yarn

Other special yarns: Brief study of core spun yarn, metallic yarn, hollow yarn and applications of these yarns

Theory: 45 Hrs	Tutorial: 0	Practical: 0	Project: 0	Total Hours: 45 Hrs

TEXT BOOKS

1.	Mishra S.P., "Fibre Science and Technology", New Age International Publishers, New Delhi, 2000
2.	Lord P. R., "Yarn Production: Science Technology and Economics", The Textile Institute, Manchester, U.K., 2003

REFERENCES

1.	Bernard P. Corbman, "Textiles: Fibre to Fabric", McGraw Hill International Edition, New Delhi, 1983
2.	Srinivasamoorthy H. V., "Introduction to Textile Fibres", The Textile Association India, Mumbai, 1993
3.	Cook, J. Gordon, "Hand Book of Textile Fibres: Man-Made Fibres", Vol. 1 and 2, Merrow Publishing Co. Ltd., England, 2005
4.	Moncrief R.W., "Manmade Fibres", John Willey & Sons, New York, 2004
5.	Klein W. " A practical guide to opening and carding", Vol 2, The Textile Institute, Manchester, 1987
6.	Klein W. " A practical guide to combing and drawing ",Vol 3, The Textile Institute, Manchester, 1987
7.	Klein W. " A practical guide to ring spinning",Vol 4, The Textile Institute, Manchester, 1987

Dr. D. RAJA, M.Tech., Ph.D.,
Professor & Head
Department of Fashion Technology
Sona College of Technology
Salem - 636 005. Tamil Nadu

U23FTL102	FIBRE AND YARN ANALYTICAL LABORATORY	L	T	P	J	C
		0	0	2	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Identify the common textile fibres and determine the blend proportion of binary blends
CO2:	Determine the physical properties like moisture regain, linear density, swelling behaviour of fibre and yarn / sewing thread characteristics like yarn type, yarn count and ticket number
CO3:	Solve real time problems in fibre identification, fibre and yarn properties

Pre-requisite: -

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	2	3	3	3	3					3	3	2
CO2	3	3	2	3	3	3	3					3	3	2
CO3	3	3	2	3	2	3	3					3	2	2

Course Assessment methods

Direct		Indirect
CIE test I (15)	RTPS (10)	
Quiz 1 (5)	Record (10)	Course end survey
CIE test II (15)	Total CIE: 60 marks	
Quiz 2 (5)	Semester End Examination (40 marks)	

LIST OF EXPERIMENTS

1. Identification of fibres by microscopy: longitudinal views of fibres
2. Identification of fibres by microscopy: cross-sectional views of fibres
3. Confirmation of fibres by means of the burning test
4. Confirmation of fibres by means of the solubility test
5. Identification of a textile fibre of unknown identity using microscopic, burning and solubility tests
6. Determination of blend proportion in fibre mixture / blended yarn / fabric.
7. Determination of the atmospheric conditions in the lab and the amount of moisture in given samples of conditioned and unconditioned fibre
8. Estimation of the crimp of man-made staple fibre and the denier by length and mass measurements
9. (a) Identification of yarn type and twist direction and determination of yarn count of given spun yarn
   (b) Identification of fibre type and determination of number of filaments and yarn linear density of given continuous filament yarn
   (c) Identification of filament yarn and spun yarn
10. Identification of type of given sewing thread and determination of its ticket number and linear density

DEMONSTRATION

11. Identification of fibre by density test using density gradient column
12. Examination of the diametric swelling behaviour of cotton and viscose rayon fibres in water and alkali solution

SAMPLE COLLECTION

13. Collection of various fibre and yarn samples

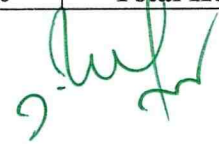| Theory: 0	Tutorial: 0	Practical: 30	Project: 0	Total Hours: 30 Hrs

Dr. D. RAJA, M.Tech., Ph.D.,
Professor & Head
Department of Fashion Technology
Sona College of Technology
Salem - 636 005. Tamil Nadu

U23FTL103	FASHION ILLUSTRATION LABORATORY	L	T	P	J	C
		0	0	2	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Develop the basic creative and manipulative skills necessary for fashion design through various shading techniques and Sketching and Draw fashion figures and visually communicate apparel design details.
CO2:	Demonstrate an understanding of the color theory using various color schemes and illustrate different styles of garment components and reproduce it to fit fashion figures.
CO3:	Illustrate different fashion figures incorporating all the illustrating techniques and designing high end fashion garments

Pre-requisite:

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	2	3	3	3	3					3	3	2
CO2	3	3	2	3	3	3	3					3	3	2
CO3	3	3	2	3	2	3	3					3	2	2

Course Assessment methods

Direct		Indirect
CIE test I (15)	RTPS (10)	
Quiz 1 (5)	Record (10)	Course end survey
CIE test II (15)	Total CIE: 60 marks	
Quiz 2 (5)	Semester End Examination (40 marks)	

LIST OF EXPERIMENTS

1. Illustration of lines and strokes using pencil shading techniques
2. Illustration of different lettering and numbering styles
3. Illustration of human face
4. Illustration of different postures of human head, hand, leg and feet
5. Illustration of different hair styles
6. Sketching of lay figure using head theory (8 and 10 head theory)
7. Illustration of different postures of fashion figure.
8. Preparation of Prang's colour wheel and colour schemes
9. Illustration of sleeves and cuffs.
10. Illustration of pockets and necklines
11. Illustration of Men's lower torso garments.
12. Illustration of skirts and skirt tops

Theory: 0	Tutorial: 0	Practical: 30	Project: 0	Total Hours: 30 Hrs

Dr. D. RAJA, M.Tech., Ph.D.,
Professor & Head
Department of Fashion Technology
Sona College of Technology
Salem - 636 005. Tamil Nadu

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U23FTL104	COMPUTER BASICS FOR FASHION TECHNOLOGY LABORATORY	L	T	P	J	C
		0	0	2	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Apply MS Excel tools for fashion, apparel manufacturing and retail data creation and management.
CO2:	Apply different MS Excel data analysis tools for Fashion, Apparel manufacturing and retail area applications.
CO3:	Develop basic fashion sketches and technical specification sheets by using fashion CAD software

Pre-requisite:

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	3	1	2				2	2	3	2	2
CO2	3	3	3	2	3	2	2			1		3	2	3
CO3	3	3	3	3	1	2	2			2		2	2	3

Course Assessment methods

Direct		Indirect
CIE test I (15)	RTPS (10)	
Quiz 1 (5)	Record (10)	Course end survey
CIE test II (15)	Total CIE: 60 marks	
Quiz 2 (5)	Semester End Examination (40 marks)	

LIST OF EXPERIMENTS

1. Practice on MS Excel Basic tools, formulas and functions. (1 session)
2. Prepare, validate and manage Fashion, Apparel and Retail data in spread sheets. (1 session)
3. Create charts for visualization of Fashion, Apparel and Retail data. (1 session)
4. Prepare different outputs from master data by applying filtering, sorting and conditional formatting methods for Fashion, Apparel and Retail applications. (1 session)
5. Summarize, analyze, explore and present data using pivot tables and charts for Fashion, Apparel and Retail applications. (1 session)
6. Create a dashboard with different visualization elements for Fashion, Apparel and Retail applications. (1 session)
7. Practice on basic fashion illustration software tools and create basic motifs for textiles designing. (1 session)
8. Design unisex T-shirt with five different textures and designs using fashion illustration software. (1 session)
9. Design a women's fashion illustration and apply motifs, designs, textures and colours using fashion illustration software (1 session)
10. Develop technical specification sheet for men's garment with all technical details using fashion illustration software (1 session)

Theory: 0	Tutorial: 0	Practical: 30	Project: 0	Total Hours: 30 Hrs

Dr. D. RAJA, M.Tech., Ph.D.,
Professor & Head
Department of Fashion Technology
Sona College of Technology
Salem - 636 005. Tamil Nadu

U23TAM101	தமிழர் மரபு / Heritage of Tamils	L	T	P	J	C
		1	0	0	0	1

Course Outcomes	
At the end of the course, the student will be able to	
CO1:	Describe Tamil Language and Literature
CO2:	Analyse Heritage - Rock Art Paintings To Modern Art – Sculpture
CO3:	Explain Folk and Martial Arts
CO4:	Describe Thinai Concept of Tamils
CO5:	Analyse Contribution of Tamils to Indian National Movement and Indian Culture

Course Assessment methods		
Direct		Indirect
CIE test I (30) CIE test II (30) CIE test III (40)	Total CIE: 100 marks Semester End Examination: NIL	Course end survey

அலகு 1 : மொழி மற்றும் இலக்கியம	3 Hours

இந்திய மொழிக் குடும்பங்கள் - திராவிட மொழிகள் - தமிழ் ஒரு செம்மொழி -தமிழ் செவ்விலக்கியங்கள் - சங்க இலக்கியத்தின் சமயச் சார்பற்ற தன்மை - சங்க இலக்கியத்தில் பகிர்தல் அறம் - திருக்குறளில் மேலாண்மைக் கருத்துக்கள் - தமிழ்க் காப்பியங்கள், தமிழகத்தில் சமண பௌத்த சமயங்களின் தாக்கம் - பக்தி இலக்கியம், ஆழ்வார்கள் மற்றும் நாயன்மார்கள் - சிற்றிலக்கியங்கள் - தமிழில் நவீன இலக்கியத்தின் வளர்ச்சி - தமிழ் இலக்கிய வளர்ச்சியில் பாரதியார் மற்றும் பாரதிதாசன் ஆகியோரின் பங்களிப்பு.

அலகு 2 : மரபு – பாறை ஓவியங்கள் முதல் ஓவியங்கள் வரை – சிற்பக் கலை	3 Hours

நடுகல் முதல் சிற்பங்கள் வரை – ஐம்பொன் சிலைகள் - பழங்குடியினர் மற்றும் அவர்கள் தயாரிக்கும் கைவினைப் பொருட்கள், பொம்மைகள் - தேர் செய்யும் கலை- சுடுமண் சிற்பங்கள் - நாட்டுப்புறத் தெய்வங்கள் - குமரிமுனையில் திருவள்ளுவர் சிலை - இசைக் கருவிகள் - மிருதங்கம், பறை, வீணை, யாழ், நாதஸ்வரம் - தமிழர்களின் சமூக பொருளாதார வாழ்வில் கோவில்களின் பங்கு

அலகு 3: நாட்டுப்புறக் கலைகள் மற்றும் வீர விளையாட்டுகள்	3 Hours

தெருக்கூத்து, கரகாட்டம், வில்லுப்பாட்டு, கணியான் கூத்து, ஒயிலாட்டம், தோலபாவைக் கூத்து, சிலம்பாட்டம், வளரி, புலியாட்டம், தமிழர்களின் விளையாட்டுகள்.

அலகு 4: தமிழர்களின் திணைக் கோட்பாடுகள்	3 Hours

தமிழகத்தின் தாவரங்களும், விலங்குகளும் - தொல்காப்பியம் மற்றும் சங்க இலக்கியத்தில் அகம் மற்றும் புறக் கோட்பாடுகள் — தமிழர்கள் போற்றிய அறக்கோட்பாடு — சங்ககாலத்தில் தமிழகத்தில் எழுத்தறிவும், கல்வியும் -

சங்ககால நகரங்களும் துறை முகங்களும் - சங்ககாலத்தில் ஏற்றுமதி மற்றும் இறக்குமதி – கடல்கடந்த நாடுகளில் சோழர்களின் வெற்றி.

அலகு 5: இந்திய தேசிய இயக்கம் மற்றும் இந்திய பண்பாட்டிற்குத் தமிழர்களின் பங்களிப்பு	3 Hours

இந்திய விடுதலைப்போரில் தமிழர்களின் பங்கு - இந்தியாவின் பிறப்பகுதிகளில் தமிழ்ப் பண்பாட்டின் தாக்கம் - சுயமரியாதை இயக்கம் - இந்திய மருத்துவத்தில், சித்த மருத்துவத்தின் பங்கு – கல்வெட்டுகள் கையெழுத்துப்படிகள் - தமிழ்ப் புத்தகங்களின் அச்சு வரலாறு.

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

REFERENCES	
1	தமிழக வரலாறு – மக்களும் பண்பாடு – கே.கே. பிள்ளை (வெளியீடு: தமிழ்நாடு பாடநூல் மற்றும் கல்வியியல் பணிகள் கழகம்).
2	கணினித் தமிழ் - முனைவர் இல.சுந்தரம்.(விகடன் பிரசுரம்).
3	கீழடி – வைகை நதிக்கரையில் சங்ககால நகர நாகரிகம் (தொல்லியல் துறை வெளியீடு)
4	பொருநை –ஆற்றங்கரை நாகரிகம். (தொல்லியல் துறை வெளியீடு)
5	Social Life of Tamils (Dr.K.K.Pillay) A joint publication of TNTB & ESC and RMRL – (in print)
6	Social Life of the Tamils - The Classical Period (Dr.S.Singaravelu) (Published by: International Institute of Tamil Studies
7	Historical Heritage of the Tamils (Dr.S.V.Subatamanian, Dr.K.D. Thirunavukkarasu) (Published by: International Institute of Tamil Studies).
8	The Contributions of the Tamils to Indian Culture (Dr.M.Valarmathi) (Published by: International Institute of Tamil Studies.)
9	Keeladi - 'Sangam City C ivilization on the banks of river Vaigai' (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
10	Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay) (Published by: The Author)
11	Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
12	Journey of Civilization Indus to Vaigai (R.Balakrishnan) (Published by: RMRL) – Reference Book.

HOD

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 005.

U23TAM101	தமிழர் மரபு / Heritage of Tamils	L	T	P	J	C
		1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Describe Tamil Language and Literature
CO2:	Analyse Heritage - Rock Art Paintings To Modern Art – Sculpture
CO3:	Explain Folk and Martial Arts
CO4:	Describe Thinai Concept of Tamils
CO5:	Analyse Contribution of Tamils to Indian National Movement and Indian Culture

Course Assessment methods

Direct		Indirect
CIE test I (30) CIE test II (30) CIE test III (40)	Total CIE: 100 marks Semester End Examination: NIL	Course end survey

Unit 01: **LANGUAGE AND LITERATURE**	3 Hours

Language Families in India - Dravidian Languages – Tamil as a Classical Language - Classical Literature in Tamil – Secular Nature of Sangam Literature – Distributive Justice in Sangam Literature - Management Principles in Thirukural - Tamil Epics and Impact of Buddhism & Jainism in Tamil Land - Bakthi Literature Azhwars and Nayanmars - Forms of minor Poetry - Development of Modern literature in Tamil - Contribution of Bharathiyar and Bharathidhasan..

Unit 02: **HERITAGE - ROCK ART PAINTINGS TO MODERN ART – SCULPTURE**	3 Hours

Hero stone to modern sculpture - Bronze icons - Tribes and their handicrafts - Art of temple car making - - Massive Terracotta sculptures, Village deities, Thiruvalluvar Statue at Kanyakumari, Making of musical instruments - Mridhangam, Parai, Veenai, Yazh and Nadhaswaram - Role of Temples in Social and Economic Life of Tamils

Unit 03: **FOLK AND MARTIAL ARTS**	3 Hours

Therukoothu, Karagattam, Villu Pattu, Kaniyan Koothu, Oyillattam, Leather puppetry, Silambattam, Valari, Tiger dance - Sports and Games of Tamils

Unit 04: **THINAI CONCEPT OF TAMILS**	3 Hours

Flora and Fauna of Tamils & Aham and Puram Concept from Tholkappiyam and Sangam Literature - Aram Concept of Tamils - Education and Literacy during Sangam Age - Ancient Cities and Ports of Sangam Age - Export and Import during Sangam Age - Overseas Conquest of Cholas.

Unit 05: **CONTRIBUTION OF TAMILS TO INDIAN NATIONAL MOVEMENT AND INDIAN CULTURE**	3 Hours

Contribution of Tamils to Indian Freedom Struggle - The Cultural Influence of Tamils over the other parts of India – Self-Respect Movement - Role of Siddha Medicine in Indigenous Systems of Medicine – Inscriptions & Manuscripts – Print History of Tamil Books

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

REFERENCES

1	தமிழக வரலொாறு – மக்களும் பண் பொடும் – மக.மக. பிள்மள (தவளியீடு: தமிழ்நொடு பொடநூல் மற்றும் கல்வியியல் பணிகள் கழகம்).
2	கணினித ் தமிழ் – முமனவர ்இல. சுந்தரம் . (விகடன் பிரசுரம்).

3	கீழடி – மவமக நதிக்கமரயில் எங்ககொல நகர நொகரிகம் (தெதொல்லியல் துமறதவளியீடு)
4	பொருமந – ஆற்றங்கமர நொகரிகம். (தெதொல்லியல் துமற தவளியீடு)
5	Social Life of Tamils (Dr.K.K.Pillay) A joint publication of TNTB & ESC and RMRL – (in print)
6	Social Life of the Tamils - The Classical Period (Dr.S.Singaravelu) (Published by: International Institute of Tamil Studies
7	Historical Heritage of the Tamils (Dr.S.V.Subatamanian, Dr.K.D. Thirunavukkarasu) (Published by: International Institute of Tamil Studies).
8	The Contributions of the Tamils to Indian Culture (Dr.M.Valarmathi) (Published by: International Institute of Tamil Studies.)
9	Keeladi - 'Sangam City C ivilization on the banks of river Vaigai' (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
10	Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay) (Published by: The Author)
11	Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
12	Journey of Civilization Indus to Vaigai (R.Balakrishnan) (Published by: RMRL) – Reference Book.

HOD

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 0

U23GE101	BASIC APTITUDE-1	L	T	P	J	C
		2	0	0	0	0

Course Outcomes

At the end of the course, the student will be able to

CO1:	Solve the problems in Divisibility , Division algorithm ,Successive Division and HCF & LCM. Identify Synonyms and Antonyms.
CO2:	Elucidate the problems in BODMAS rule, Approximation, Surds and Indices, Algebraic Simplification and Square root and Cube root. Choose appropriate Verbal Analogies and edit the given passages.
CO3:	Crack the problems involving Ratio and Proportion, and discuss Proportionality Theorems. Comprehend the given passages for Reading Comprehension activity and answer the questions correctly.
CO4:	Deduce the problems involving Linear equation and Quadratic equation. Demonstrate good vocabulary skill by doing the one word substitution and sentence filler exercise with high degree of accuracy.
CO5:	Interpret the logical reasoning problems from Number series ,Coding and Decoding and Exhibit good expertise in detecting errors in the given sentences.

Pre-requisite:

- Basic English language and Grammar knowledge
- Knowledge in Basic Mathematics

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12
CO1	3	3	3	2	1	1	1	3	3	3	2	3
CO2	3	3	3	2	1	1	1	3	3	3	2	3
CO3	3	3	3	2	1	1	1	3	3	3	2	3
CO4	3	3	3	2	1	1	1	3	3	3	2	3
CO5	3	3	3	2	1	1	1	3	3	3	2	3

Course Assessment methods

Direct		Indirect
CIE test I (30) - Theory	Total CIE: 100 marks	
CIE test II (30) - Theory	Semester End Examination – NIL	Course end survey
CIE test III (40) – Theory		

Unit 01	6 Hours

Number Properties: Classification of numbers - Divisibility - Division algorithm -Successive Division - HCF and LCM –Problems

Verbal Aptitude: Synonyms and b. Antonyms

Unit 02	6 Hours

Simplification: BODMAS Rule - Approximation - Surds and Indices - Algebraic Simplification - Square root and Cube root – Problems

Verbal Aptitude: Verbal analogy, Editing passages

Unit 03	6 Hours

Ratio and Proportion : Ratio - Properties of Ratios - Compound Ratio - Coin based problems - Proportion - Proportionality Test - Proportionality Theorems - Inverse Proportion - Variation - Problems

Verbal Aptitude: Reading Comprehension

Unit 04	6 Hours

Equations:

a. Linear equation: Simultaneous Linear Equations - Consistent System - Inconsistent System - Problems
b. Quadratic Equation: Different Ways to Express the Quadratic Equation - Discriminant of the Quadratic Equations - Roots - Nature of the Roots - Relation between roots and coefficient of equation - Formation of a Quadratic Equation – Problems

Verbal Aptitude: One word substitution , Sentence filler words

Unit 05	6 Hours

Logical Reasoning : Number series – Coding and Decoding – Problem
Verbal Aptitude: Error detection

Theory: 30 Hrs	Tutorial: 0	Practical: 0	Project: 0	Total Hours: 30 Hrs

TEXT BOOKS	
1.	S.Chand and Dr.R.S.Aggarwal, "Quantitative Aptitude for competitive examinations", S Chand and Company Limited 2019.
2.	Nishit K.Sinha, "Logical Reasoning and Data Interpretation", Pearson 2021.

Dr.S.Anita

Head/Training

Dr. S. ANITA
Professor and Head
Department of Training,
SONA COLLEGE OF TECHNOLOGY,
SALEM-636 005.

U23OL1101	French			L	T	P	J	C
				1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Read French phrases, Spell French phonitis, practice French accents, differentiate French and English sounds
CO2:	Introduce oneself, talk about someone, ask others personal information, identify an object, ask and respond politely in a conversation
CO3:	Read and write a small annoncement, describe about neighbours, write a small portrait
CO4:	Express one's wishes, talk about one's hobbies, ask time, describe one's status of life in a blog, justify a choice, express one's preferences, write a list of needs
CO5:	Suggest to do something, appreciate something, talk about a movie, write a postal card

Course Assessment methods

Direct		Indirect
CIE test I (30)	Total CIE: 100 marks	Course end survey
CIE test II (30)	Semester End Examination: NIL	
CIE test III (40)		

Unit 01:	3 Hours
Hr 2: Alphabets, Basic wishes, self-introduction, basic verbs: avoir and être Hr 4: Nationalities and countries, colors, days & months Hr 6: Definite articles, numbers 0-20, write about one's identification	

Unit 02:	3 Hours
Hr 8: Professions, conjugation: 1st group verbs, indefinite articles Hr 10: Preposition of place, identity card, negative sentence Hr 12: Things around us, subjective and ephatitic pronouns, self-introduction online	

Unit 03:	3 Hours
Hr 14: Talk about accommodation, conjugation: aller and venir, possessive adjectives Hr 16: Adjective's gender, noun's gender, things in a room, simple prepositions Hr 18: Physical description, speak about accommodation, writing a self-potrait	

Unit 04:	3 Hours
Hr 20: Hobbies, conjugation: vouloir, pouvoir and devoir, connected articles Hr 22: Interrogative adjectives, daily activities, time and seasons, pronominal verbs Hr 24: Near future tense, talk about preferences, write a mail	

Unit 05:	3 Hours
Hr 26: Outing activities, conjugation: faire and sortir, demonstrative adjectives Hr 28: Adverbs of frequency, family members, past tenses (passé composé and imparfait) Hr 30: French arts, talk about a film, and write a postal card	

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

TEXT BOOKS

1.	The course faculty will provide relevant audios, videos, handouts and notes
2.	Books : Saison (Méthode de français, cachier d'activités)
3.	Reference books : La conjugaison, Dondon, Echo

HOD

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
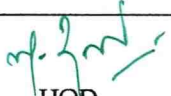Sona College of Technology,
SALEM - 63

U23OL1102	German		L	T	P	J	C
			1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Use common, everyday expressions to greet others and introduce themselves.
CO2:	Construct simple sentences /questions.
CO3:	Initiate and sustain basic conversation based on family, professions,
CO4:	Hobbies and food.
CO5:	Identify differences in using nouns based on gender.

Course Assessment methods

Direct		Indirect
CIE test I (30) CIE test II (30) CIE test III (40)	Total CIE: 100 marks Semester End Examination: NIL	Course end survey

Unit 01:	3 Hours
• Greeting and taking leave, introducing oneself, introducing others	

Unit 02:	3 Hours
• Alphabets, spelling, numbers	

Unit 03:	3 Hours
• Age, Telephone/mobile numbers, Month, Date, Time	

Unit 04:	3 Hours
• Languages, Family, Asking/giving information about family members	

Unit 05:	3 Hours
• Hobbies, Professions	

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

TEXT BOOKS

1.	Netzwerk A1

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Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 63.

U23OL1103	Japanese	L	T	P	J	C
		1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Use words and phrases of greeting in Japanese, write the letters of the alphabet, identify names of objects and do a self-introduction using short and simple sentences
CO2:	Demonstrate the use of time-related words and verb conjunctions and make light conversation asking for directions and answering questions
CO3:	Use different kinds of verbs through the day and those used for giving things, and demonstrate the use of adjectives
CO4:	Express liking for the Japanese language, describe the locations of different things and demonstrate counting in Japanese
CO5:	Make comparisons of stated things, express a willingness to go to Japan and use 'Te-form' verbs

Course Assessment methods

Direct		Indirect
CIE test I (30)	Total CIE: 100 marks	Course end survey
CIE test II (30)	Semester End Examination: NIL	
CIE test III (40)		

Unit 01:	3 Hours

Hr 1-2: Greeting words and phrases; the Japanese alphabet: 104 Hiragana and 104 Katakana letters
Hr 3-4: Identifying words from pictures or objects shown
Hr 5-6: Self-introduction

Unit 02:	3 Hours

Hr 7-8: Asking for directions when shopping
Hr 9-10: Time words and Verb Conjugations
Hr 11-12: Making light conversation

Unit 03:	3 Hours

Hr 13-14: Expressions to use verbs from morning to night
Hr 15-16: Verbs used for giving things
Hr 17-18: Adjectives

Unit 04:	3 Hours

Hr 19-20: Ways to show liking for the Japanese language
Hr 21-22: Describing the location of things (or where things are)
Hr 23-24: Japanese numbers and counting

Unit 05:	3 Hours

Hr 25-26: Making comparisons
Hr 27-28: Expressions wishing for something, like 'I want to go to Japan …!'
Hr 29-30: Using 'Te-form' Verb

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

TEXT BOOKS

1.	The course faculty will provide handouts / notes / course material.
2.	Books on Basic Japanese language available in the college library.

HOD
Dr. M.RENUGA,
Professor & Head,
Department of Humanities & La~ ~s.

U23OL1104	Korean	L	T	P	J	C
		1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Use single vowels and consonants syllable structure.
CO2:	Greet others and introduce themselves.
CO3:	Identify time , date and week
CO4:	Explain location and places
CO5:	Construct simple sentences / questions.

Course Assessment methods

Direct		Indirect
CIE test I (30) CIE test II (30) CIE test III (40)	Total CIE: 100 marks Semester End Examination: NIL	Course end survey

Unit 01: Hangeul	3 Hours
Single Vowels & Consonants Syllable Structure Tense Consonants Aspirated Consonants Double Vowels Final Consonants Double Final Consonants Liaison	
Unit 02: Introduction	3 Hours
Greetings Talking about names Self-introduction Introducing my family members	
Unit 03: Time and Date	**3 Hours**
Talking about location Talking about dates and days of the week Talking about doing something in the past	
Unit 04: Location and Places	**3 Hours**
Talking about location Talking about doing something at a location Talking about directions	
Unit 05: Future	**3 Hours**
Talking about doing something in the future Talking about plans for the future Talking about hope for the future	

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

REFERENCES	
1	Vitamin Korean - 1

HOD
Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM-636 005.

4.8.2023   Version 1.0   Programme: B. E / B. Tech   B.E / B..Tech Regulations 2023

Sona College of Technology, Salem
(An Autonomous Institution)
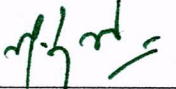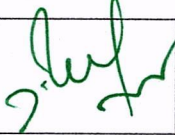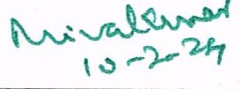### Courses of Study for B.E/B.Tech. Semester II under Regulations 2023 (CBCS)
Branch: Fashion Technology

S. No	Course Code	Course Title	L	T	P	J	C	Category	Total Contact Hours	Course Type*
		Theory courses								
1	U23ENG201A	Technical English	2	0	0	0	2	HS	30	T
2	U23MAT202E	Probability and Statistical Quality Control	3	1	0	0	4	BS	60	TT
3	U23PHY203E	Physics for Fashion Technology	3	0	0	0	3	BS	45	T
4	U23BEE206C	Basics of Electrical, Electronics and Instrumentation Engineering	3	0	0	0	3	ES	45	T
5	U23EGR207	Engineering Graphics	3	0	0	0	3	ES	45	T
6	U23TAM201	தமிழரும் தொழில்நுட்பமும் / Tamils and Technology	1	0	0	0	1	HS	15	T
7	U23GE201	Basic Aptitude II	2	0	0	0	0	AC	30	T
		Practical courses								
8	U23PHL210A	Physics Laboratory	0	0	2	0	1	BS	30	L
9	U23BEEL213C	Basics of Electrical, Electronics and Instrumentation Engineering Laboratory	0	0	2	0	1	ES	30	L
10	U23FT201	Digital Fashion Foundation Laboratory	1	0	2	0	2	PC	45	LT
11	U23WPL214	Workshop Practice	0	0	2	0	1	ES	30	L
		Total Credits					21			
		Optional Language Courses**								
12	U23OL1201	French - II							15	T
13	U23OL1202	German - II	1	0	0	0	1	OL	15	T
14	U23OL1203	Japanese - II							15	T
15	U23OL1204	Korean - II							15	T

*T- Theory, TT- Theory with Tutorial, TL- Theory with Laboratory,TP- Theory with Project, TLP- Theory with Laboratory and Project, L-Laboratory, LT- Laboratory with Theory, LP- Laboratory with Project

**Students may opt for foreign languages viz., German/French/Japanese/Korean with additional one credit (Not accounted for CGPA calculation)

Approved By

Chairperson, Science and Humanities BoS	Chairperson, FT-BoS	Member Secretary, Academic Council	Dean-Academics	Chairperson, Academic Council & Principal
Dr.M.Renuga	Dr.D.Raja	Dr.R.Shivakumar	Dr.J.Akilandeswari	Dr. S.R.R. Senthil Kumar

Copy to:-HOD/ Fashion Technology, Second Semester, B.Tech. FT Students and Staff, COE

PRINCIPAL
SONA COLLEGE OF TECHNOLOGY
SALEM - 636 005

U23ENG201A	Technical English (Common to ADS, AIML, BME, CSD, CSE, CIVIL, ECE, EEE, MCT, FT, IT Branches)	L	T	P	J	C
		2	0	0	0	2

Course Outcomes

At the end of the course, the student will be able to

CO1:	Frame sentences correctly, both in written and spoken forms of language with accuracy and fluency
CO2:	Develop effective reading skills and reinforce language skills required for using grammar and building vocabulary
CO3:	Organise ideas and supporting arguments logically
CO4:	Develop skills for writing conversations, proposals, reports and transcoding
CO5:	Read for understanding and interpreting information and to utilise information accordingly

Pre-requisite:

- Knowledge and Understanding of Grammar
- Fundamental Language Skills (LSRW)

CO/PO, PSO Mapping

(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	2	1	2	3	2	3	3	3	3	3	3	3	3	3
CO2	2	2	2	3	2	3	3	3	3	3	3	3	3	3
CO3	3	2	2	3	2	3	3	3	3	3	3	3	3	3
CO4	3	3	2	3	2	3	3	3	3	3	3	3	3	3
CO5	3	3	2	3	2	3	3	3	3	3	3	3	3	3

Course Assessment methods

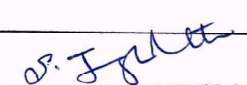| Direct		Indirect
CIE test I (8)	Objectives Test (6)	
CIE test II (8)	Attendance (5)	Course end survey
CIE test III (8)	Total CIE: 40 marks	
Assignment/seminar/Quiz (5)	Semester End Examination (60)	

Unit 01:	6 Hours

- Comparative adjectives
- Recommendations
- Conversation writing
- Reading passages for specific information transfer

Unit 02:					6 Hours

- Prepositions, adverbs
- Note making
- Reading passage with multiple choice questions, reading for gist and reading for specific information

Unit 03:					6 Hours

- Collocations, direct and indirect speech
- Memo
- Proposal: establishing a lab, introducing a subject in the curriculum, training programme for students
- Short reading passage: gap-filling exercise related to grammar

Unit 04:					6 Hours

- Cause and effect
- Technical report writing – feasibility report, accident report, survey report
- Short reading passages for sentence matching exercises, picking out specific information in a short text

Unit 05:					6 Hours

- Pronouns
- Transcoding – bar chart, pie chart, tabular column

Theory: 30 Hrs	Tutorial: --	Practical: -	Project:--	Total Hours: 30 Hrs

TEXT BOOKS

1. Technical English I & II, Dr. M. Renuga et al. Sonaversity, 2016
2. **Extensive Reading**
   1. Who Moved my Cheese? – Spencer Johnson-G. P. Putnam's Sons
   2. Discover the Diamond in You – Arindham Chaudhari – Vikas Publishing House Pvt. Ltd.
   3. Grandma's Bag of Stories – Sudha Murthy – Penguin Random House, India.

REFERENCES

1. Norman Whitby, Business Benchmark – Pre-Intermediate to Intermediate, Students Book, Cambridge University Press, 2006.
2. A Course in Communication Skills, P. Kiranmai Dutt, Geetha Rajeevan, C. L. N. Prakash, published by Cambridge University Press India Pvt. Ltd.

HOD   13/2/24.

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
College of Technology,
M - 6?

SEMESTER - II	PROBABILITY AND STATISTICAL QUALITY CONTROL (FASHION TECHNOLOGY)	L	T	P	J	C
U23MAT202E		3	1	0	0	4

Course Outcomes

At the end of the course, the student will be able to

CO1:	apply the concepts of probability, random variable and their properties to generate the moments.
CO2:	fit the suitable distribution and its properties to the real world problems and interpret the results.
CO3:	apply the concepts of joint probability distribution and its properties to find the covariance and transformation of random variables.
CO4:	apply the various designs of experiments to find cause-and-effect relationships.
CO5:	apply the process control techniques to control and maintain the quality of the product.

Pre-requisites:

- Fundamentals of elementary algebra
- Fundamentals of calculus
- Fundamentals of geometry
- Fundamentals of trigonometry
- Fundamentals of statistics

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3		3								2			3
CO2	3	3		3								2			3
CO3	3	3		3								2			3
CO4	3	3		3								2			3
CO5	3	3		3								2			3

Course assessment methods [Theory with tutorial course]

Direct		Indirect
CIE test I (8) (Theory) CIE test II (8) (Theory) CIE test III (8) (Theory) Objectives Test (6)	Attendance (5) Assignment/Quiz/Seminar (5) Total CIE: 40 marks Semester End Examination: 60marks	Course end survey

Unit 01	ONE DIMENSIONAL RANDOM VARIABLE	12 Hours

One dimensional random variable – Discrete random variable – Distribution function of the discrete random variable – Probability mass function - Properties – Continuous random variable – Distribution function of the continuous random variable - Probability density function – Properties – Moments – Mathematical expectations – Moment generating function and its properties.

Unit 02	THEORETICAL DISTRIBUTIONS	12 Hours

Discrete distributions – Binomial distribution – Additive property, moment generating function, mean, variance and standard deviation of binomial distribution – Poisson distribution - Additive property, moment generating function, mean, variance and standard deviation of Poisson

distribution – Poisson approximation to the binomial distribution – Geometric distribution - Memoryless property, moment generating function, mean, variance and standard deviation of Geometric distribution – Continuous distributions - Uniform distribution - Moment generating function, mean, variance and standard deviation of Uniform distribution - Exponential distribution - Memoryless property, moment generating function, mean, variance and standard deviation of exponential distribution - Normal distribution - Additive property, moment generating function, mean, variance and standard deviation of normal distribution – Problems based on real time applications in discrete and continuous distributions.

Unit 03	TWO DIMENSIONAL RANDOM VARIABLES	12 Hours

Two dimensional discrete random variables – Joint probability distribution of discrete random variables – Marginal and conditional probability distributions – Two dimensional continuous random variables – Joint probability density function – Joint probability distribution function for continuous two dimensional random variables - Marginal and conditional density functions – Covariance – Correlation.

Unit 04	DESIGN OF EXPERIMENTS	12 Hours

Basic principles of experimental design - Analysis of variance for one factor of classification – Completely randomized design – Analysis of variance for two factor of classification – Randomized block design – Analysis of variance for three factor of classification – Latin square design.

Unit 05	STATISTICAL QUALITY CONTROL	12 Hours

Control charts for measurements ($\bar{X}$ and R charts) - Control charts for attributes, p, c and np Charts – Examples of application of statistical control charts in garment industry.

Theory: 45 Hrs	Tutorial: - 15	Practical: -	Project:--	Total Hours: 60 Hrs

TEXT BOOK:

1. T. Veerarajan, "Probability, Statistics and Random Processes with Queueing Theory and Queueing Networks", McGraw Hill Publishers, 4th Edition, 7th reprint, 2018.

REFERENCE BOOKS:

1. S. C. Gupta and V. K. Kapoor, "Fundamentals of Mathematical Statistics", Sultan Chand and Sons Publishers, 11th Edition, Reprint, 2019.
2. S. P. Gupta, "Statistical Methods", Sultan Chand and Sons Publishers, 15th Edition, 2012.
3. R. A. Johnson and C. B. Gupta, "Miller and Freund's, Probability and Statistics for Engineers", Pearson Publishers, 9th Edition, 2018.
4. S. Ross, "A first course in probability", Pearson Publishers, 9th Edition, 2019.
5. P. G. Hoel, S. C. Port and C. J. Stone, "Introduction to Probability Theory", Universal Book Stall Publishers, Reprint, 2003.
6. W. Feller, "An Introduction to Probability Theory and its Applications", Vol. 1, 3rd Edition, Wiley Publishers, 2008.

Dr. S. JAYABHARATHI
ASSOCIATE PROFESSOR & HEAD
DEPARTMENT OF MATHEMATICS,
SONA COLLEGE OF TECHNOLOGY,
SALEM-636 005. Tamilnadu.
Ph: 0427 - 4099999.

BoS Date: 08. 07. 2023	HoD / Mathematics

U23PHY203E	PHYSICS FOR FASHION TECHNOLOGY	L	T	P	J	C
		3	0	0	0	3

Course Outcomes

At the end of the course, the student will be able to

CO1:	Analyse the relation between arrangement of atoms and material properties.
CO2:	Discuss the dual nature of matter and radiation and the application of wave nature of particles.
CO3:	Describe the basic components of lasers.
CO4:	Examine the elastic behaviour of solid materials and apply hydrodynamic principles for the flow of liquids.
CO5:	Elucidate the different modes of heat transfer.

Pre-requisite:

Basic Knowledge in atomic physics, optics and modern physics

CO/PO, PSO Mapping

(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	-	-	-	2	2	-	-	2	-	1	-	2	-
CO2	3	2	-	-	-	2	2	-	-	2	-	1	-	2	-
CO3	3	2	-	-	-	2	2	-	-	2	-	1	-	2	-
CO4	3	2	-	-	-	2	2	-	-	2	-	1	-	2	-
CO5	3	2	-	-	-	2	2	-	-	2	-	1	-	2	-

Course Assessment methods

Direct		Indirect
CIE test I (8)	Objectives Test (6)	
CIE test II (8)	Attendance (5)	Course end survey
CIE test III (8)	Total CIE: 40 marks	
Assignment/seminar/Quiz (5)	Semester End Examination (60)	

Unit 01: CRYSTAL PHYSICS	9 Hours

Importance of crystals - Types of crystals - Basic definitions in crystallography (Lattice -space lattice - unit cell - lattice parameters - basis) - Bravais lattices - Lattice planes and Miller indices - Interplanar distance - d spacing in cubic lattice - Calculation of number of atoms per unit cell - Atomic radius - Coordination number - Atomic Packing Factor for SC, BCC, FCC and HCP structures - Polymorphism and allotropy - Crystal imperfections - Point, line and surface defects - Burger vector.

Unit 02: QUANTUM PHYSICS	9 Hours

Limitations of classical theory - Dual nature of matter and radiation - Compton effect - Expression for Compton shift (no derivation) - de Broglie waves - Heisenberg's Uncertainty Principle - Schrödinger's time independent and time dependent wave equations - Physical significance of wave function - Energy and wave function of an electron trapped in one dimensional box - Application of wave nature of particles - Electron microscope - Comparison of optical and electron microscope - Scanning electron microscope - Transmission electron microscope - Limitations of electron microscope.

Unit 03: LASERS	9 Hours

Energy level - Stimulated absorption - Population inversion - Meta stable state - Spontaneous emission - Stimulated emission - Basic components of a laser - Einstein's theory of spontaneous and stimulated emission of radiation - Types of lasers - Solid state laser - Nd:YAG laser - Gas laser - CO_2 laser - Semiconductor laser - Homojunction and hetero junction laser - Holography - Construction and reconstruction of hologram - Application of laser in industry – Cutting, welding and drilling – Medical applications – Lasik.

Unit 04: ELASTIC PROPERTIES OF MATERIALS AND HYDRODYNAMICS	9 Hours

Elasticity - Poisson's ratio and relation between moduli (qualitative) - Stress strain diagram - Factors affecting elasticity - Bending of beams – Cantilever - Expression for bending moment - Measurement of Young's modulus by uniform and non-uniform bending - Hydrodynamics - Stream line flow - Turbulent flow - Poiseuille's formula for flow of liquid through a capillary tube - Determination of coefficient of viscosity of a liquid.

Unit 05: THERMAL PHYSICS	9 Hours

Heat and temperature - Modes of heat transfer - Conduction, convection and radiation - Specific heat capacity - Thermal capacity and coefficient of linear thermal expansion - Thermal conductivity - Measurement of thermal conductivity of a good conductor - Forbe's method - Measurement of thermal conductivity of a bad conductor - Lee's disc method - Radial flow of heat - Cylindrical flow of heat - Practical applications of conduction of heat - Thermal radiations - Properties and applications of thermal radiations.

Theory: 45 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 45 Hrs

TEXT BOOKS

1.	M.N. Avadhanulu, P.G. Kshirsagar , "A Textbook of Engineering Physics", S.Chand & Company Ltd, New Delhi 2014.
2.	B D. K. Bhattacharya, Poonam Tandon "Engineering Physics", Oxford University Press 2017.

REFERENCES

1.	"Engineering Physics", Sonaversity, Sona College of Technology, Salem, Revised Edition 2018.
2.	B. K. Pandey and S. Chaturvedi, "Engineering Physics", Cengage Learning India Pvt. Ltd., Delhi, 2021.
3.	Brij Lal and N. Subrahmanyam , "Properties of Matter", S.Chand & Company Ltd, New Delhi 2003.
4.	R. Murugeshan, Kiruthiga Sivaprasath, "Thermal Physics", S.Chand & Company Ltd, New Delhi 2018.
5.	R.Wolfson, "Essential University Physics", Volume 1 & 2. Pearson Education (Indian Edition), 2009.

Dr. C. SHANTHI, M.Sc.,M.E.,Ph.D.,
Professor of Physics
Head, Department of Sciences
Sona College of Technology (Autonomous)
SALEM-636 005.

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 005.

U23BEE206C	BASICS OF ELECTRICAL,ELECTRONICS AND INSTRUMENTATION ENGINEERING	L	T	P	J	C
		3	0	0	0	3

Course Outcomes

At the end of the course, the student will be able to

CO1:	Apply the fundamental laws of electrical circuits.
CO2:	Apply the key concepts of AC electrical circuits and analyse their steady state performance.
CO3:	Select electrical machines for various applications.
CO4:	Analyze the construction and working of various measuring instruments and sensors.
CO5:	Describe the operation of semiconductor devices and interpret their input and output characteristics.

Pre-requisite:

Mathematics, Physics

CO/PO, PSO Mapping

(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	2	-	2	2		-	2	2	2	3	2	2
CO2	3	2	2	-	2	2		-	2	2	2	3	2	2
CO3	2	2	1	1	1	2		-	2	2	2	2	2	2
CO4	2	2	1	1	1	2		-	2	2	2	2	2	2
CO5	2	2	1	1	2	1		1	2	2	2	2	2	2

Course Assessment methods

Direct		Indirect
CIE test I (8)	Objectives Test (6)	
CIE test II (8)	Attendance (5)	Course end survey
CIE test III (8)	Total CIE: 40 marks	
Assignment/seminar/Quiz (5)	Semester End Examination (60)	

Unit 01: DC CIRCUITS	9 Hours

Circuit Components: Resistor, Inductor, Capacitor – Ohm's Law – Kirchhoff's Laws –- Series and Parallel Combinations of Resistances- Voltage and Current Division, Source transformation.

Unit 02: AC CIRCUITS	9 Hours

Introduction to AC Circuits and Parameters: Power and Energy-Waveforms- Sinusoidal, Triangular and square waveforms, Average value, RMS Value, Form factor and Peak factor, Instantaneous power, real power, reactive power and apparent power, power factor – Three phase supply – star and delta connection.

Unit 03: DC AND AC MACHINES	9 Hours

DC Generator: Construction - Principle of operation - EMF equation - Types - Characteristics - Applications.
DC Motors: Construction - Principle of operation – Torque equation - Types - Characteristics - Applications.
Induction Motor (Three Phase): Construction - Principle of operation-Applications.

Dr.S.PADMA, M.E., Ph.L.,

Professor and Head,
Department of EEE,
Sona College of Technology
Salem-636 005. Tamil Nadu.

Unit 04: MEASUREMENTS AND INSTRUMENTATION	9 Hours

Functional elements of instrument – Static & Dynamic characteristics – Moving coil and Moving Iron instruments-Energy meter, wattmeter, DC Bridge (Wheatstone bridge) –AC Bridge (Anderson Bridge and Schering Bridge).

Sensors, Photo sensors, Proximity sensors, Piezoelectric, Thermal Imagers.

Unit 05: SEMICONDUCTOR DEVICES AND CIRCUITS	9 Hours

PN Junction Diodes– Characteristics & Application- Diode rectifier: Working principle of half wave rectifier and Bridge rectifier – Bipolar Junction Transistor-Transistor as an amplifier-study of CE configurations and characteristics – SCR, MOSFET-Characteristics & Application - Single phase inverter circuit.

Theory: 45 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 45 Hrs

TEXT BOOKS	
1.	S. Salivahanan, R Rengaraj and G.R Venkatakrishnan, "Basic Electrical and Instrumentation Engineering", McGraw Hill Education Publisher, 2018.
2.	D P Kothari, I J Nagrath, 'Basic Electrical Engineering', 4th Edition, Mc Graw Hill Education Publishers, 2019.

REFERENCES	
1.	S.K. Bhattacharya, "Basic Electrical and Electronics Engineering", Pearson publishers, 2016.
2.	Leonard S Bobrow, "Foundations of Electrical Engineering", Oxford University Press, 2013.
3.	Arun K. Ghosh, "Foundations of Electrical Engineering", Easter Economy Edition, 4th Edition, 2012.
4.	B.L. Theraja, A.K. Theraja, A Text Book of Electrical Technology, Electronic Devices and Circuits, Volume-IV, S. Chand Publishers, Reprint, 2019.

Dr.S.PADMA, M.E., Ph.D.,
Professor and Head,
Department of EEE,
Sona College of Technology
Salem-636 005. Tamil Nad.

U23EGR207	ENGINEERING GRAPHICS (Common to ADS, IT, BME, CSE, ECE, and FT branches)	L	T	P	J	C
		3	0	0	0	3

Course Outcomes

At the end of the course, the student will be able to

CO1:	Construct –Ellipse, Parabola, Hyperbola, Cycloids and Involutes.
CO2:	Draw the projection of Point, Line and Plane surfaces.
CO3:	Draw the projection of simple solids by rotating object method.
CO4:	Develop the section of simple solids and lateral surface of truncated solids.
CO5:	Draw the isometric view to orthographic projection.

Pre-requisite: Nil

CO/PO, PSO Mapping

(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	1							3		2			1	
CO2					3			2		2		2		2
CO3					3			2		2		2	1	2
CO4					3			2		2		2	1	2
CO5			2					2		2		2	1	

Course Assessment methods

Direct		Indirect
CIE test I (8)	Objectives Test (6)	
CIE test II (8)	Attendance (5)	Course end survey
CIE test III (8)	Total CIE: 40 marks	
Assignment/seminar/Quiz (5)	Semester End Examination (60)	

CONCEPTS AND CONVENTIONS - (Not for Examination).

Importance of graphics in engineering applications - Use of drafting instruments - BIS conventions and specifications — Size, layout and folding of drawing sheets — Lettering and dimensioning.

Unit 01: PLANE CURVES - (Manual drafting).	9 Hours
Basic Geometrical constructions, Curves used in engineering practices: Conics — Construction of ellipse, parabola and hyperbola by eccentricity method — Construction of cycloid — construction of Involute of circle — Drawing of tangents and normal to the above curves.	

Unit 02: PROJECTION OF POINTS, LINES AND PLANE SURFACES. (CAD Software)	
Orthographic projection- principles-principal planes-First angle projection-projection of points. Projection of straight lines (only First angle projections) inclined to both the principal planes -Determination of true lengths and true inclinations by rotating line method. Projection of planes (polygonal and circular surfaces) inclined to one of the principal plane by rotating object method.	9 Hours

Unit 03: PROJECTION OF SOLIDS (CAD Software)	
Projection of simple solids - prisms, pyramids, cylinder, cone and truncated solids when the axis is inclined to one of the principal planes and parallel to the other by rotating object method.	9 Hours

Unit 04: PROJECTION OF SECTIONED SOLIDS AND DEVELOPMENT OF SURFACES. (CAD Software)	
Section of solids in simple vertical position when the cutting plane is inclined to one of the principal planes and perpendicular to the other — (obtaining true shape of section is not required). Development of lateral surfaces of truncated solids — Prisms, pyramids cylinders and cones.	9 Hours

Unit 05: ISOMETRIC TO ORTHOGRAPHICS PROJECTION- (Manual drafting).	
Representation of three dimensional objects – General Principles - Need for importance of multiple views – First angle projection – layout of views – Conversion of isometric view to orthographic views. Practicing three dimensional modelling of simple objects using CAD Software (Not for examination)	9 Hours

Theory: 45 Hrs	Tutorial: --	Practical: --	Project: --	Total Hours: 45 Hrs

TEXT BOOKS

1.	Bhatt N.D. and Panchal V.M., "Engineering Drawing", Charotar Publishing House, 53rd Edition, 2019.
2.	Natrajan K.V., "A Text Book of Engineering Graphics", Dhanalakshmi Publishers, Chennai, 2018.
3.	Parthasarathy, N. S. and Vela Murali, "Engineering Drawing", Oxford University Press, 2015
4.	P.Suresh., "Engineering Graphics and Drawing", Sonaversity, Sona College of Technology, Salem, Revised edition, 2012.

Dr. D. SENTHIL KUMAR, M.E.,Ph.D
PROFESSOR & HEAD
DEPT. OF MECHANICAL ENGG.
SONA COLLEGE OF TECHNOLOGY
JUNCTION MAIN ROAD, SALEM-5.

U23TAM201	தமிழரும் தொழில்நுட்பமும்	L	T	P	J	C
		1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Describe the weaving and ceramic technology
CO2:	Explain the design and construction technology
CO3:	Analyse the manufacturing technology
CO4:	Describe the agriculture and irrigation technology
CO5:	Explain the Scientific Tamil and Tamil Computing

Course Assessment methods

Direct		Indirect
CIE test I (30) CIE test II (30) CIE test III (40)	Total CIE: 100 marks Semester End Examination: NIL	Course end survey

Unit 01: WEAVING AND CERAMIC TECHNOLOGY	3 Hours

அலகு I **நெசவு மற்றும் பானைத் தொழில்நுட்பம்:**
சங்க காலத்தில் நெசவுத் தொழில் – பானைத் தொழில்நுட்பம் – கருப்பு சிவப்பு பாண்டங்கள் பாண்டங்களில் கீறல் குறியீடுகள்.

Unit 02: DESIGN AND CONSTRUCTION TECHNOLOGY	3 Hours
	3

அலகு II **வடிவமைப்பு மற்றும் கட்டிடத் தொழில்நுட்பம்:**
சங்க காலத்தில் வடிவமைப்பு மற்றும் கட்டுமானங்கள் & சங்க காலத்தில் வீட்டுப் பொருட்களில் வடிவமைப்பு– சங்க காலத்தில் கட்டுமான பொருட்களும் நடுகல்லும் – சிலப்பதிகாரத்தில் மேடை அமைப்பு பற்றிய விவரங்கள் – மாமல்லபுரச் சிற்பங்களும், கோவில்களும் – சோழர் காலத்துப் பெருங்கோயில்கள் மற்றும் பிற வழிபாட்டுத் தலங்கள் – நாயக்கர் காலக் கோயில்கள் – மாதிரி கட்டமைப்புகள் பற்றி அறிதல், மதுரை மீனாட்சி அம்மன் ஆலயம் மற்றும் திருமலை நாயக்கர் மஹால் – செட்டிநாட்டு வீடுகள் – பிரிட்டிஷ் காலத்தில் சென்னையில் இந்தோ–சாரோசெனிக் கட்டிடக் கலை.

Unit 03: MANUFACTURING TECHNOLOGY	3 Hours
	3

அலகு III **உற்பத்தித் தொழில் நுட்பம்:**
கப்பல் கட்டும் கலை – உலோகவியல் – இரும்புத் தொழிற்சாலை – இரும்பை உருக்குதல், எஃகு – வரலாற்றுச் சான்றுகளாக செம்பு மற்றும் தங்க நாணயங்கள் – நாணயங்கள் அச்சடித்தல் – மணி உருவாக்கும் தொழிற்சாலைகள் – கல்மணிகள், கண்ணாடி மணிகள் – சுடுமண் மணிகள் – சங்கு மணிகள் – எலும்புத்துண்டுகள் – தொல்லியல் சான்றுகள் – சிலப்பதிகாரத்தில் மணிகளின் வகைகள்.

Unit 04: AGRICULTURE AND IRRIGATION TECHNOLOGY	3 Hours
	3

அலகு IV **வேளாண்மை மற்றும் நீர்ப்பாசனத் தொழில் நுட்பம்:**
அணை, ஏரி, குளங்கள், மதகு – சோழர்காலக் குமுழித் தூம்பின் முக்கியத்துவம் – கால்நடை பராமரிப்பு – கால்நடைகளுக்காக வடிவமைக்கப்பட்ட கிணறுகள் – வேளாண்மை மற்றும் வேளாண்மைச் சார்ந்த செயல்பாடுகள் – கடல்சார் அறிவு – மீன்வளம் – முத்து மற்றும் முத்துக்குளித்தல் – பெருங்கடல் குறித்த பண்டைய அறிவு – அறிவுசார் சமூகம்.

Unit 05: SCIENTIFIC TAMIL & TAMIL COMPUTING	3 Hours
	3

அலகு V **அறிவியல் தமிழ் மற்றும் கணித்தமிழ்:**
அறிவியல் தமிழின் வளர்ச்சி –கணித்தமிழ் வளர்ச்சி – தமிழ் நூல்களை மின்பதிப்பு செய்தல் – தமிழ் மென்பொருட்கள் உருவாக்கம் – தமிழ் இணையக் கல்விக்கழகம் – தமிழ் மின் நூலகம் – இணையத்தில் தமிழ் அகராதிகள் – சொற்குவைத் திட்டம்.

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

TEXT BOOKS

1. தமிழக வரலாறு – மக்களும் பண்பாடும் – கே.கே. பிள்ளை (வெளியீடு: தமிழ்நாடு பாடநூல் மற்றும் கல்வியியல் பணிகள் கழகம்).

2. கணினித் தமிழ் –முனைவர் இல. சுந்தரம். (விகடன் பிரசுரம்).
கீழடி – வைகை நதிக்கரையில் சங்ககால நகர நாகரிகம் (தொல்லியல் துறை வெளியீடு)
பொருநை – ஆற்றங்கரை நாகரிகம். (தொல்லியல் துறை வெளியீடு)

REFERENCES

3. Social Life of Tamils (Dr.K.K.Pillay) A joint publication of TNTB & ESC and RMRL – (in print)

4. Social Life of the Tamils - The Classical Period (Dr.S.Singaravelu) (Published by: International Institute of Tamil Studies.

5. Historical Heritage of the Tamils (Dr.S.V.Subatamanian, Dr.K.D. Thirunavukkarasu) (Published by: International Institute of Tamil Studies).

6. The Contributions of the Tamils to Indian Culture (Dr.M.Valarmathi) (Published by: International Institute of Tamil Studies.)

7. Keeladi - 'Sangam City Civilization on the banks of river Vaigai' (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)

8. Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay) (Published by: The Author)

9. Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)

10 Journey of Civilization Indus to Vaigai (R.Ramakrishna) (Published by: RMRL) – Reference Book.

HOD

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 005.

U23TAM201	TAMILS AND TECHNOLOGY	L	T	P	J	C
		1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Describe the weaving and ceramic technology
CO2:	Explain the design and construction technology
CO3:	Analyse the manufacturing technology
CO4:	Describe the agriculture and irrigation technology
CO5:	Explain the Scientific Tamil and Tamil Computing

Course Assessment methods

Direct		Indirect
CIE test I (30) CIE test II (30) CIE test III (40)	Total CIE: 100 marks Semester End Examination: NIL	Course end survey

Unit 01: WEAVING AND CERAMIC TECHNOLOGY	3 Hours
Weaving Industry during Sangam Age – Ceramic technology – Black and Red Ware Potteries (BRW) – Graffiti on Potteries	

Unit 02: DESIGN AND CONSTRUCTION TECHNOLOGY	3 Hours
Designing and Structural construction House & Designs in household materials during Sangam Age - Building materials and Hero stones of Sangam age – Details of Stage Constructions in Silappathikaram - Sculptures and Temples of Mamallapuram - Great Temples of Cholas and other worship places - Temples of Nayaka Period - Type study (Madurai Meenakshi Temple)- Thirumalai Nayakar Mahal - Chetti Nadu Houses, Indo - Saracenic architecture at Madras during British Period.	

Unit 03: MANUFACTURING TECHNOLOGY	3 Hours
Art of Ship Building - Metallurgical studies - Iron industry - Iron smelting, steel -Copper and gold- Coins as source of history - Minting of Coins – Beads making-industries Stone beads -Glass beads - Terracotta beads -Shell beads/ bone beats - Archeological evidences - Gem stone types described inSilappathikaram.	

Unit 04: AGRICULTURE AND IRRIGATION TECHNOLOGY	3 Hours
Dam, Tank, ponds, Sluice, Significance of Kumizhi Thoompu of Chola Period, Animal Husbandry - Wells designed for cattle use - Agriculture and Agro Processing - Knowledge of Sea - Fisheries – Pearl - Conche diving - Ancient Knowledge of Ocean - Knowledge Specific Society	

Unit 05: SCIENTIFIC TAMIL & TAMIL COMPUTING	3 Hours
Development of Scientific Tamil - Tamil computing – Digitalization of Tamil Books – Development of Tamil Software – Tamil Virtual Academy – Tamil Digital Library – Online Tamil Dictionaries –Sorkuvai Project	

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

TEXT BOOKS

1.	தமிழக வரலாறு –மக்களும் பண்பாடும் – கே.கே. பிள்ளை (வெளியீடு: தமிழ்நாடு பாடநூல் மற்றும் கல்வியியல் பணிகள் கழகம்).
2.	கணினித் தமிழ் –முனைவர் இல. சுந்தரம். (விகடன் பிரசுரம்). இஃது –வைகை நதிக்கரையில் சங்ககால நகர நாகரிகம் (தொல்லியல் துறை வெளியீடு) பொருநை – ஆற்றங்கரை நாகரிகம். (தொல்லியல் துறை வெளியீடு)

REFERENCES	
1.	Social Life of Tamils (Dr.K.K.Pillay) A joint publication of TNTB & ESC and RMRL – (in print)
2.	Social Life of the Tamils - The Classical Period (Dr.S.Singaravelu) (Published by: International Institute of Tamil Studies.
3.	Historical Heritage of the Tamils (Dr.S.V.Subatamanian, Dr.K.D. Thirunavukkarasu) (Published by: International Institute of Tamil Studies).
4.	The Contributions of the Tamils to Indian Culture (Dr.M.Valarmathi) (Published by: International Institute of Tamil Studies.)
5.	Keeladi - 'Sangam City C ivilization on the banks of river Vaigai' (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
6.	Studies in the History of India with Special Reference to Tamil Nadu (Dr.K.K.Pillay) (Published by: The Author)
7.	Porunai Civilization (Jointly Published by: Department of Archaeology & Tamil Nadu Text Book and Educational Services Corporation, Tamil Nadu)
8.	Journey of Civilization Indus to Vaigai (R.Ramakrishna) (Published by: RMRL) – Reference Book.

HOD

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
D   College of Technology,
**   LEM - 6   005.**

U23GE201	BASIC APTITUDE-II (Common to All Departments)	L	T	P	J	C
		2	0	0	0	0

Course Outcomes

At the end of the course, the student will be able to

CO1:	Solve the problems in Percentage, Conversion of Percentage to Ratio and Ratio into Percentage and work on verbal aptitude questions
CO2:	Elucidate the problems in Profit and loss and percentage of profit and loss. Choose appropriate sentence fillers and Idioms and phrase
CO3:	Crack the problems involving Geometry, Area, Perimeter/Circumference, Surface area and Volume. Comprehend the given passages for Reading Comprehension activity and answer the questions correctly.
CO4:	Deduce the problems involving Trigonometry and exhibit good expertise in detecting errors in the given sentences.
CO5:	Interpret the problems on Ages & logarithm and work on logical reasoning and demonstrate good vocabulary skill by spotting errors.

Pre-requisite:

- Basic English language and Grammar knowledge
- Knowledge in Basic Mathematics

CO/PO, PSO Mapping

(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12
CO1	3	3	3	2	1	1	1	3	3	3	2	3
CO2	3	3	3	2	1	1	1	3	3	3	2	3
CO3	3	3	3	2	1	1	1	3	3	3	2	3
CO4	3	3	3	2	1	1	1	3	3	3	2	3
CO5	3	3	3	2	1	1	1	3	3	3	2	3

Course Assessment methods

Direct		Indirect
CIE test I (30) - Theory	Total CIE: 100 marks	Course end survey
CIE test II (30) - Theory		
CIE test III (40) – Theory	Semester End Examination – NIL	

Unit 01	6 Hours

Percentage: Conversion of a Percentage into a Fraction – Conversion of a Percentage into a Ratio – Conversion of a Ratio into a Percentage - Percentage Change – Successive percentage – Problems

Verbal Aptitude: Jumbled sentences & Reconstructions of sentences (PQRS)

Unit 02	6 Hours

Profit Loss: Types of prices – Profit – Loss – Percentage of Profit and Loss - Common Gain or Loss – Selling Price and Cost Price Equality – Successive Profit and Loss – Problems

Verbal Aptitude: Sentence fillers two words & Idioms and phrase

Unit 03	6 Hours

Geometry: Angles – Complementary and Supplementary angles – Lines – Triangle – Types of triangles – Properties of Triangles – Problems

Area, Perimeter / Circumference: Triangles - Rectangles and Squares – Parallelogram, Rhombus and Trapezium – Circles – Problems

Surface area, curved surface area & Volume: Cuboid – Cube – Right circular cylinder – Right circular cone – Sphere – Hemisphere– Problems

Verbal Aptitude: Reading comprehension.

Unit 04	6 Hours

Trigonometry: Value of Trigonometry ratios for particular values – Sign of Trigonometrical ratios – Trigonometrical ratios for sum or difference of angles Problems

Verbal Aptitude: Spotting errors

Unit 05	6 Hours

Averages – Problems on ages – Logarithm - **Logical Reasoning:** Alpha Series – Venn diagram – Problems

Verbal Aptitude: Writing captions for given pictures.

Theory: 30 Hrs	Tutorial: 0	Practical: 0	Project: 0	Total Hours: 30 Hrs

TEXT BOOKS	
1.	S.Chand and Dr.R.S.Aggarwal, "Quantitative Aptitude for competitive examinations", S Chand and Company Limited 2019.
2.	Nishit K.Sinha, "Logical Reasoning and Data Interpretation", Pearson 2021.

Dr.S.Anita
Professor & Head
Department of Training

U23PHL210A	PHYSICS LABORATORY (Common to I Year B.E/B.Tech. CIVIL, MECH & FT)	L	T	P	J	C
		0	0	2	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Determine the optical, thermal and magnetic properties of materials by various physics laboratory equipment.
CO2:	Access, process and analyse scientific information.
CO3:	Solve problems individually and collaboratively.

Pre-requisite: Capable of using Screw gauge, Vernier calliper, Travelling microscope, able to handle interferometer.

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2		1		1			1					2
CO2	3	2		1		1			1					2
CO3	3	2		1		1			1					2

Course Assessment methods

Direct		Indirect
CIE test I (15)	RTPS (10)	
Quiz 1 (5)	Record (10)	Course end survey
CIE test II (15)	Total CIE:60 marks	
Quiz 2 (5)	Semester End Examination (40 marks)	

LIST OF EXPERIMENTS

1	Determination of the thickness of a thin wire by forming interference fringes using air wedge apparatus.
2	Determination of velocity of ultrasonic waves and compressibility of the given liquid using ultrasonic interferometer.
3	Determination of Rigidity Modulus of given wire using Torsion Pendulum.
4	Determination of coefficient of viscosity of liquid by Poiseuille's method.
5	Determination of Young's modulus of the material of the beam by Non-uniform bending method.
6	Determination of the wavelength of a diode laser.

7	Determination of particle size of lycopodium powder using diode laser.	
8	Determination of acceptance angle and numerical aperture of an optical fibre using diode laser.	
9	Determination of the thermal conductivity of a bad conductor using Lee's Disc apparatus.	
10	Determination of hysteresis using B-H curve method.	
		TOTAL : 30 HOURS

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Lar.
Sona College of Techn~~'~~
SALEM - 6 ..

Dr. C. SHANTHI, M.Sc.,M.E.,Ph.D.,
Professor of Physics
Head, Department of Sciences
Sona College of Technology (Autonomous)
SALEM-636 005.

U23BEEL213C	BASICS OF ELECTRICAL,ELECTRONICS AND INSTRUMENTATION ENGINEERING LABORATORY	L	T	P	J	C
		0	0	2	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Calculate the electrical parameters of DC circuits using basic circuital laws and to determine the loop currents and nodal voltages of DC circuits.
CO2:	Analyze the performance characteristics of electron devices using circuit components.
CO3:	Design an electrical circuit for real-time textile applications.

CO/PO, PSO Mapping

(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	2	2	2	-	-	3	2	2	3	3	3
CO2	3	3	3	2	2	2	-	-	3	2	2	3	3	3
CO3	2	3	3	2	2	2	-	-	3	2	2	3	3	3

Course Assessment methods

Direct		Indirect
CIE test I (15)	RTPS (10)	
Quiz I- (5)	Record (10)	Course end survey
CIE test II (15)	Total CIE: 60 marks	
Quiz II- (5)	Semester End Examination (40 marks)	

LIST OF EXPERIMENTS

1. Verification of Ohm's Law and Kirchhoff's Laws.
2. Measurement of power and power factor for series RLC circuit
3. Load characteristics of DC shunt motor.
4. Load test on self-excited DC generator.
5. Speed control of DC shunt motor.
6. VI characteristics of BJT(CE Configuration) and MOSFET
7. Measurement of inductance using Anderson Bridge.
8. Measurement of capacitance using Schering Bridge.
9. Assembly, Integration techniques of electronics components in smart garments and continuity testing.
10. Development of sensors and switches using conductive yarn and conductive fabric.
11. Design and analysis of half wave and full wave rectifiers.
12. Practical study of conductive yarn and its electrical properties.

Theory: --	Tutorial: --	Practical: 30 Hrs	Project:--	Total Hours: 30 Hrs

Dr.S.PADMA, M.E., Ph.D.,
Regulations 2023
Professor and Head,
Department of EEE,
Sona College of Technology
Salem-636 005. Tamil Nadu.

U23FT201	DIGITAL FASHION FOUNDATION LABORATORY	L	T	P	J	C
		1	0	2	0	2

Course Outcomes

At the end of the course, the student will be able to

CO1:	1. Demonstrate a comprehensive understanding of fashion, including proficiency in fashion figure drawing, colour theory application, and the ability to identify and analyse design features and style variations in various garment categories.
CO2:	2. Analyse and apply the fundamental design elements in garment design, demonstrating an understanding of both structural and decorative aspects and to articulate the effects of these design elements on apparel of various silhouettes and their types.
CO3:	3. Apply design principles in the context of apparel and demonstrate an understanding of how these principles impact both the functionality and aesthetics of garments to give a harmonious and visually appealing product.

Pre-requisite: -

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	2	2	3	1	3	3	-	-	2	3	1	1
CO2	3	3	1	3	3	2	3	1	1	-	2	3	2	-
CO3	3	3	3	3	3	3	3	-	-	-	2	3	3	1

Course Assessment methods

Direct		Indirect
CIE test 1 (Laboratory) (10) Quiz 1 (5) CIE test 2 (Laboratory) (10) Quiz 2 (5)	CIE test 3 (Theory) (10) Record (10) Total CIE: 50 marks Semester End Examination (Laboratory) (50 marks)	Course end survey

Unit 01: INTRODUCTION AND OVERVIEW OF FASHION	5 Hours

Introduction, definition, fashion figure drawing and rendering, color theory and its application in fashion. Overview of garment categories, design features and style variations of tops and blouses, Bottoms: pants, skirts, and shorts, dresses, jumpsuit, outerwear and jackets.

Unit 02: ELEMENTS OF DESIGN	5 Hours

Introduction: Garment Design: structural design and decorative design
Elements of design: Line, Size, Shape, Texture, Form, Colour and light - effects of elements of design in the apparel. Silhouettes, types and their application

Unit 03: PRINCIPLES OF DESIGN	5 Hours

Principles of design: Introduction to principles of designs - Balance, Proportion, Emphasis, Rhythm, Harmony. effects of principles of design in the apparel, Principles on functionality and aesthetics

Dr. D. RAJA, M.Tech., Ph.D.,
Professor & Head
Department of Fashion Technology
Sona College of Technology
Salem - 636 005. Tamil Nadu

LIST OF EXPERIMENTS	30 Hours

Practice using design software

1. Develop a croquie using 8 and 10 head theory
2. Illustrate different hair styles
3. Develop a design following line, shape and size as an elements of design
4. Develop a design following texture as an elements of design
5. Develop a design following colour as an elements of design
6. Develop a design following balance and proportion as principles of design
7. Develop a design following emphasis and rhythm as principles of design
8. Develop a design following harmony as principles of design
9. Develop flat sketches for men, women and kids garment

Theory: 15 Hrs	Tutorial: 0	Practical: 30	Project: 0	Total Hours: 45 Hrs

TEXT BOOKS

1.	Faerm, S. (2021). Fashion Design Course: Principles, Practice, and Techniques: A Practical Guide for Aspiring Fashion Designers. Thames & Hudson.
2.	McKelvey, K., & Munslow, J. (2021). Fashion Design: Process, Innovation, and Practice. Wiley.
3.	Hopkins, J. (2020). Fashion Design: The Complete Guide. Laurence King Publishing.
4.	Schaffer, J. (2020). Fashion Design Course: Accessories: Design Practice and Processes for Creating Hats, Bags, Shoes, and More. Thames & Hudson.

REFERENCES

1.	Jones, S. J. (2021). Fashion Design Course: Principles and Practice of Costumes and Stage Wear. Fairchild Books.
2.	Stone, E. (2021). Fashion Design Course: Accessories. Thames & Hudson.
3.	Seelenbinder, D. (2022). Fashion Design: A Guide to the Industry and the Creative Process. Bloomsbury Visual Arts.
4.	Joseph-Armstrong, H. (2020). Patternmaking for Fashion Design. Pearson

Dr. D. RAJA, M.Tech., Ph.D.,
Professor & Head
Department of Fashion Technology
Sona College of Technology
Salem - 636 005. Tamil Nadu

U23WPL214	WORKSHOP PRACTICE	L	T	P	J	C
	(Common to MCT and FT branches)	0	0	2	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Perform the various techniques of sheet metal fabrication.
CO2:	Analyse various techniques of welding and carpentry works.
CO3:	Solve the real-time problems using sheet metal, welding and carpentry.

Pre-requisite: Nil

CO/PO, PSO Mapping
(3/2/1 indicates the strength of correlation) 3-Strong, 2-Medium, 1-Weak

COs	Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12	PSO1	PSO2
CO1	1							3				2	2	
CO2	1							3				2	2	
CO3	1							3				2	2	

Course Assessment methods

Direct		Indirect
CIE test I (15)	RTPS (10)	
Quiz I- (5)	Record (10)	
CIE test II (15)	Total CIE: 60 marks	Course end survey
Quiz II- (5)	Semester End Examination (40 marks)	

Importance of workshop practice- Introduction to Measuring and marking devices, Tools and equipment Maintenance - Workshop apparatus - Human safety practices - First aid procedures. **(Not for Examination)**

LIST OF EXPERIMENTS

SECTION 1:	**SHEET METAL**	8 hours
	Making of Cone, Dust Pan and Funnel.	
SECTION 2:	**WELDING**	8 hours
	Arc welding of Butt joint and Lap Joint.	
SECTION 3:	**CARPENTRY**	8 hours
	Making of Half Lap joint and Dovetail Joint.	
Demonstration:	**FOUNDRY PRACTICES**	6 hours
	Simple pattern making	

Total Number of hours: 30

Theory: --	Tutorial: --	Practical: 30 Hrs	Project: --	Total Hours: 30 Hrs

Dr. D. SENTHIL KUMAR, M.E.,Ph.D
PROFESSOR & HEAD
DEPT. OF MECHANICAL ENGG.
SONA COLLEGE OF TECHNOLOGY
JUNCTION MAIN ROAD, SALEM-5.

U23OL1201	French - II	L	T	P	J	C
		1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Accept and refuse of an invitation, give some instruction of do's and don'ts, converse in commercial centres, write an invitation
CO2:	Describe a city, locate a place in a city, ask further details, describe one's hometown
CO3:	Talk about things around us, recite a past event, identify sign boards, express agree and disagree, express obligation and prohibition, sell an object in online
CO4:	Talk about one's goals, express one's feelings, write a list of things to do, express an opinion, talk about weather, draft a mail response
CO5:	Express one's interest and wish, describe a pet animal, express one's aversions, encourage others, write to ask for a help, narrate a past event, write a biography

Course Assessment methods

Direct		Indirect
CIE test I (30)	Total CIE: 100 marks	
CIE test II (30)	Semester End Examination: NIL	Course end survey
CIE test III (40)		

Unit 01:	3 Hours

Hr 2: City shopping and services, conjugation: payer, manger and acheter, negative sentence
Hr 4: Imperative sentence, food and beverages, utensils, cutleries, corckeries
Hr 6: Quantitative articles, quantities, pronoun 'en', express appreciation, write an invitation

Unit 02:	3 Hours

Hr 8: City and localities, Conjugation: prendre, adjectives of place, pronoun 'y'
Hr 10: Transport, leisure activities, preposition of place, degrees of comparison
Hr 12: Asking information about a new place, describe a city

Unit 03:	3 Hours

Hr 14: Things in a store, conjugation : faire, imparfait 2, passé composé
Hr 16: Things in a repairing shop, computer, relative pronouns: que and qui
Hr 18: Imperative negative, express obligation and interdiction, online sale and response

Unit 04:	3 Hours

Hr 20: Professions, conjugation: croire, voir, recent past tense
Hr 22: Traveling formalities, expressing about health condition, future tense
Hr 24: Pronoun COD, talk about weather condition, write about one's plans and projections

Unit 05:	3 Hours

Hr 26: Citizenship and solidarity, conjugation: connaitre and savoir, depuis vs pendant
Hr 28: Imparfait vs passé composé, nature and environment, indirect pronouns COI
Hr 30: Animals, conditional, talk on supporting others, write a biography

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

TEXT BOOKS

1.	The course faculty will provide relevant audios, videos, handouts and notes.
2.	Books : Saison (Méthode de français, cachier d'activités)
3.	Reference books : La conjugaison, Dondon, Echo

HOD
Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sena College of Technology
SALEM - 6

U23OL1202	German - II	L	T	P	J	C
		1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Use grammatical expressions appropriately in day-to-day conversation.
CO2:	Make them frame simple sentences /questions.
CO3:	Accentuate to start and sustain basic conversation
CO4:	Helps them articulate thoughts in German
CO5:	Identify the different forms of the verb

<table>
<tr><th colspan="3">Course Assessment methods</th></tr>
<tr><th colspan="2">Direct</th><th>Indirect</th></tr>
<tr>
<td>CIE test I (30)
CIE test II (30)
CIE test III (40)</td>
<td>Total CIE: 100 marks
Semester End Examination: NIL</td>
<td>Course end survey</td>
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Unit 01:	3 Hours
Nominative/accusative case, adjectives	

Unit 02:	3 Hours
Modes of transportation, orientation, giving/understanding simple directions	

Unit 03:	3 Hours
• Food and beverages, Modal verbs, Separable verbs	

Unit 04:	3 Hours
• Simple sentences using modal / separable verbs	

Unit 05:	3 Hours
• Articles of clothing	

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

TEXT BOOKS

1. Netzwerk A1

HOD 13/2/24

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636

U23OL1203	Japanese - II	L	T	P	J	C
		1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Use verbs in polite conversation or for dissuasion and describe two different activities
CO2:	Demonstrate the application of causative verbs and those that express ability or possibility, and describe experiences
CO3:	Use plain-style expressions, those that state opinions, and verbs and adjectives that go with nouns
CO4:	Express sentences that use 'when' and 'if' and those that describe how services are given and received
CO5:	Read 126 letters of Kanji, and demonstrate adequate knowledge of the lessons learnt in Levels I and II to pass the Japanese Language Proficiency Test (JLPT) for the N5 Level

Course Assessment methods

Direct		Indirect
CIE test I (30)	Total CIE: 100 marks	
CIE test II (30)	Semester End Examination: NIL	Course end survey
CIE test III (40)		

Unit 01:	3 Hours

Hr 1-2: Words and verbs expressing requests / Kanji 1-10
Hr 3-4: Asking for permission; making statements to prohibit something / Kanji 11-20
Hr 5-6: Describing two activities / Kanji 21-30

Unit 02:	3 Hours

Hr 7-8: Verbs that express 'I have to ...' / Kanji 31-40
Hr 9-10: Verbs which express ability or possibility / Kanji 41-50
Hr 11-12: Describing experience / Kanji 51-60

Unit 03:	3 Hours

Hr 13-14: Plain-style expressions / Kanji 61-70
Hr 15-16: Expressions like 'I think that ...' / Kanji 71-80
Hr 17-18: Qualifying nouns with verbs and adjectives / Kanji 81-90

Unit 04:	3 Hours

Hr 19-20: Expressions using 'When ...' / Kanji 91-100
Hr 21-22: Describing the giving and receiving of services / Kanji 101-110
Hr 23-24: Expressions using 'If ...' / Kanji 111-126

Unit 05:	3 Hours

Hr 25-26: Preparing for JLPT N5
Hr 27-28: Preparing for JLPT N5
Hr 29-30: Preparing for JLPT N5

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

TEXT BOOKS

1.	The course faculty will provide handouts / notes / course material.
2.	Books on Basic Japanese language available in the college library.

HOD
Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 005.

13.2.2024   Version 1.0   Programme: B.E / B.Tech   B.E / B..Tech Regulations 2023

U23OL1204	Korean - II	L	T	P	J	C
		1	0	0	0	1

Course Outcomes

At the end of the course, the student will be able to

CO1:	Identify time
CO2:	Identify the date and days of the week
CO3:	Explain location and places
CO4:	Explain destination
CO5:	Construct simple sentences / questions.

Course Assessment methods

Direct		Indirect
CIE test I (30) CIE test II (30) CIE test III (40)	Total CIE: 100 marks Semester End Examination: NIL	Course end survey

Unit 01: Time	3 Hours
Talking about time	

Unit 02: Date	3 Hours
Talking about dates and days of the week Talking about doing something in the past	

Unit 03: Location	3 Hours
Talking about location Talking about doing something at a location	

Unit 04: Direction	3 Hours
Talking about directions	

Unit 05: Future	3 Hours
Talking about doing something in the future Talking about plans for the future Talking about hope for the future	

Theory: 15 Hrs	Tutorial: --	Practical: --	Project:--	Total Hours: 15 Hrs

REFERENCES

1	Vitamin Korean - 1

HOD

Dr. M.RENUGA,
Professor & Head,
Department of Humanities & Languages,
Sona College of Technology,
SALEM - 636 00..

13.2.2024   Version 1.0   Programme: B. E / B. Tech   B.E / B..Tech Regulations 2023