V.V.VANNIAPERUMAL COLLEGE FOR WOMEN

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VIRUDHUNAGAR

Quality Education with Wisdom and Values

List of Non Major Elective Courses (NME)
(2023-2024 onwards)

PG PROGRAMMES

Name of the Course	Course Code	Department
Tourism in Tamilnadu	23PHIN31	History
Functional English	23PENN31	English
தமிழும் பிற துறைகளும்	23PTAN31	Tamil
Taxation Concepts and Assessment	23PCON31	Commerce
Entrepreneurship	23PBAN31	Business Administration
Statistics for Life and Social Sciences	23PMTN31	Mathematics
Advanced Chemistry for Competitive Examinations	23PCHN31	Chemistry
Nutrition and Health	23PHSN31	Home Science - Nutrition and Dietetics
Molecular Basis of Diseases and Therapeutic Strategies	23PBCN31	Biochemistry
Web Programming	23PCSN31	Computer Science
Fundamentals of Web Design	23PCAN31	Computer Applications

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M.A History

(For those who join in 2023-2024)

Semester III		Hours/Week: 5	
Elective Course (NME)	**Tourism in Tamil Nadu**	Credits: 3	
Course Code **23PHIN31**		Internal 25	External 75

Course Outcomes:

On the completion of the course the students will be able to

CO1: define the basic features in Tamil Nadu tourism and its significance. [K1]

CO2: discuss the elements, components and functions of Tamil Nadu Tourism industry. [K2]

CO3: infer the importance of Tamil Nadu Tourism and its nature. [K2]

CO4: discover the role of tourism in the promotion and protection of Tamil culture. [K3]

CO5: focus the knowledge on the growth of tourism industry.[K4]

UNIT I

Geography of Tamil Nadu – Types of Tourism in Tamil Nadu – Holiday Tourism – Religious Tourism – Heritage Tourism – Health Tourism – Fairs and Festivals. (15 Hours)

UNIT II

Role of Government in promotion Tourism – Guiding Principles of Tourism Promotion – Tamil Nadu Tourism Development Corporation – Functions. (15 Hours)

UNIT III

Training in Hotel Management and Catering Technology – Institute of Hotel Management, Catering Technology and Applied Nutrition, Chennai – State Institute of Hotel Management and Catering Technology, Tiruchirappalli. (15 Hours)

UNIT IV

Tourist Attractions in Tamil Nadu: Chennai – Ooty – Kodaikanal – Kutralam – Kanniyakumari – Kanchipuram – Madurai – Kumbakonam – Thanjavur – Mahabalipuram.

(15 Hours)

UNIT V

Tourism Industry in Tamil Nadu – Hotels – Resorts – Accommodation for Students and Travellers – Employment Opportunities - entrepreneurial opportunities in Tourism Industry – Tourist Guides – Chauffeurs – Interpreter. (15 Hours)

LEARNING RESOURCES

Recommended Books

Bhatia, A.K., *Tourism Development, Principles and Practices,* Sterling Publishers, New Delhi, 1987

Kannammal, Geetha, et. al, *An Introduction to Tourism in Tamil Nadu*, University of Madras, Chennai, 2007

Seth, Pran, *Successful Tourism Management, Vol. II: Tourism Practices,* Sterling Publishers, New Delhi, 1997

References

Citizen's Charter, Tourism Department, Government of Tamil Nadu, 2002

Enchanting Tamil Nadu, Tamil Nadu Tourism, September 2005

Selvam, M., *Tourism Industry in India,* Himalaya Publishing House, Bombay, 1989

Web Sources

1.https://www.tamilnadutourism.tn.gov.in

2. https://www.e-unwto.org/

Course Code 23PHIN31	PO1		PO2	PO3		PO4	PO5	PO6	PO7	PO8
	PSO 1.a	PSO 1.b	PSO 2	PSO 3.a	PSO 3.b	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8
CO1	3	2	2	2	1	1	2	2	2	2
CO2	3	2	3	2	1	1	1	2	2	2
CO3	2	2	2	2	2	2	2	2	2	2
CO4	3	3	3	3	3	3	3	2	3	2
CO5	1	1	1	1	1	1	1	1	1	2

3 – Strong, 2 – Medium, 1 - Low

Dr.M.Babyrani   Dr.V.Natchathira Selvakumari
Head of the department   **Course designer**

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Quality Education with Wisdom and Values

M.A. English

(For those who join in 2023-2024)

Semester III		Hours/Week: 5	
Non Major Elective	**FUNCTIONAL ENGLISH**	Credits: 3	
Course Code **23PENN31**		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, the students will be able to

CO1: describe the significance of language proficiency in speaking and writing. [K1]

CO2: identify the effective use of communication skills for professional enhancement. [K2]

CO3: explain the usage of English words in different contexts in life and at work.. [K2]

CO4: apply the functional aspects of spoken and written skills to informal and formal contexts [K3]

CO5: examine the effective strategies to develop the soft skills required for employability. [K4]

UNIT I - Public Speaking

Characteristics of a good speaker

Preparatory Steps, Structuring the Contents

Audience Awareness, Modes of Delivery

Vocal Aspects, Time Management

Handling Questions, Meeting Unexpected Situations   (15 Hours)

UNIT II - Speech for Situations

Speech to inform

Speech to persuade

Speeches for special occasions   (15 Hours)

UNIT III - Occupational Skills

Notice

Email

Resume   (12 Hours)

UNIT IV - Interview Skills

Prepare and practice for Interviews

General Questions in an Interview

Profile Writing for a Job

Presentation Skills   (18 Hours)

UNIT V - Interpersonal Skills

Team Development

Relationship and Communication

Negotiation   (15 Hours)

TEXT BOOKS

Beebe, Steven A. & Beebe, Susan A. (2017). *Public Speaking Handbook*. Boston: Pearson.

Mitra, Barun K. (2006). *Effective Technical Communication: A Guide for Scientists* and *Engineers*. Oxford University Press India.

Mohan, Krishna, et al. (2009). *Developing Communication Skills*. New Delhi: Macmillan Publishers India Ltd.

REFERENCE BOOKS

Lock, Graham. (1995). *Functional English Grammar: An Introduction for Second Language Teachers*. Cambridge University Press.

Sudha,S. *(2017). Job Fair Keys.* Madurai : Jayalakshmi Publications.

WEB RESOURCES

https://blog.vantagecircle.com/team- development/

https://2012books.lardbucket.org/books/a-primer-on communication-

https://www.pon.harvard.edu/daily/negotiation-skills-daily/what-is negotiation/

https://in.indeed.com/career-advice/interviewing/interviewing-skills

https://careerwise.minnstate.edu/careers/occupational- skills.html

https://www.sjsu.edu/writingcenter/docs/handouts/Memos.pdf

Course Code 23PENN31	PO1		PO2		PO3	PO4	PO5	PO6	PO7	PO8
	PSO 1.a	PSO 1.b	PSO 2.a	PSO 2.b	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	3	3	3	2	2	2	1	3	3
CO2	3	3	3	3	2	2	2	1	3	3
CO3	3	3	3	3	2	2	2	1	3	3
CO4	3	3	3	3	2	2	2	1	2	3
CO5	3	3	3	3	2	2	2	1	2	3

Strong (3)   Medium (2)   Low (1)

Dr.S.Anitha

Dr.V.Navaneethamani   Mrs. P.Amirthayogam

Head of the Department   Course Designers

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VIRUDHUNAGAR

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M.A. TAMIL

(2023- 2024 ம் ஆண்டில் சேரும் மாணவர்களுக்குரியது)

மூன்றாம்; பருவம்		நேரம் / வாரம் : 5	
பிற துறை மாணவியர்களுக்கான விருப்பப் பாடம்	தமிழும் பிறதுறைகளும்	தரமதிப்பு : 3	
பாடக் குறியீட்டெண் **23PTAN31**		அக மதிப்பெண் - 25	புற மதிப்பெண் - 75

கற்றல் வெளிப்பாடு

இந்த பாடத்திட்டம் முடிந்த பிறகு மாணவர்கள்,

CO1 - தமிழின் தொன்மை, பண்பாடு மற்றும் பிற சிறப்பினை உணர்ந்து கொள்வர். [K1]

CO 2 - தமிழைப் பிற துறைகளுடன் தொடர்புபடுத்தி அறிந்து கொள்வர். [K2]

CO 3 - தமிழ்மொழி மற்றும் தமிழரின் விழுமியங்களைக் கற்றுக் கொள்வர். [K2]

CO 4 - மேலைநாடுகளின் அறிவியல் வளர்ச்சியை தமிழ் இலக்கியங்கள் வழி ஒப்பிட்டு அறிவர். [K3]

CO 5 - போட்டித்தேர்வு மற்றும் பிறதுறை சார்ந்த வேலைவாய்ப்பிற்குத் தயாராவர். [K4]

கூறு I

தமிழ் - மொழியும் வரலாறும் - தமிழரின் உலகம் - வரலாறு – நிலம் - தொன்மை – மொழி – அகரம் - தமிழினிமை

(18 மணிநேரம்)

கூறு II

தமிழ் -உடல்அறிவியலும் மருத்துவமும் - மனிதஉடல் - உடல்இயக்கம் - பிணிகள் -மருத்துவம் -மருந்தும் உணவும் -உணவுமரபு –சித்த மருத்துவம்;

(18 மணிநேரம்)

கூறு III

தமிழ் -நுண்கலைகள் - கட்டிடக்கலை –கோயில் சிற்பம் - ஓவியம் - சி;த்திரம் - சிற்பங்கள் - கோலம் (18 மணிநேரம்)

கூறு IV

     தமிழ் -நுண்கலைகள் - தமிழிசை - இசைஒலிகள் (மண்ணிசை) – தமிழர் இசை - இசைக்கருவிகள் - ஆடல்கலை   (18 மணிநேரம்)

கூறு V

     தமிழ் -தாவரவியலும் கணிதமும் - தாவரங்கள் - மரங்கள் -தாவர அறிவியல் கணிதம் -கணித்தல் -காலக்கணக்கு   (18 மணிநேரம்)

பாடநூல்

     மாத்தளை சோமு, (2005). வியக்க வைக்கும் தமிழர் அறிவியல், திருச்சி

     தமிழ்க்குரல் பதிப்பகம்.

பார்வைநூல்கள்

1. தொ.சிராஜ் உன்னிசா நாசர், லொ.ஆ. உமாமகேஸ்வரி, அபிதா சபாபதி, 2003.

2. தமிழ் இலக்கியத்தில் அறிவியல் சிந்தனைகள், வானதி பதிப்பகம், சென்னை -17.

3. மயிலை சீனிவேங்கடசாமி, 2002. தமிழர் வளர்த்த அழகுக்கலைகள் - மணிவாசகர் பதிப்பகம், சென்னை -600 108.

Course Code 23PTAN31	PO1		PO2		PO3	PO4	PO5	PO6	PSO7	PSO8
	PSO 1.a	PSO 1.b	PSO 2.a	PSO 2.b	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8
CO1	3	3	3	3	3	1	3	3	2	1
CO2	3	3	3	3	3	3	3	3	3	3
CO3	3	3	3	3	3	-	3	3	-	-
CO4	3	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	-	3	3	-	-

(Strong -3,Medium-2,Low-1)

  Dr. B.Nagajothi   Dr.P.Aruljothi

Head of the Department   **Course Designer**

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VIRUDHUNAGAR
Quality Education with Wisdom and Values

M.Com.

(For those who join in 2023-2024)

Semester III		Hours/Week: 5	
Non Major Elective Course	**TAXATION CONCEPTS AND ASSESSMENT**	Credits: 3	
Course Code **23PCON31**		Internal	External
		25	75

COURSE OUTCOMES

On completion of the course, the students will be able to

CO1: state the basic concepts, e-filing, ITR forms, provisions and procedures related to income tax. [K1]

CO2: determine the residential status of an individual and apply the provisions in various heads of income. [K2]

CO3: illustrate the taxable income under various heads of income [K2]

CO4: calculate the taxation provisions regarding incidence of tax, valuation of perquisites, indexed cost and various types of assessment. [K3]

CO5: analyse the tax deducted at source and calculate income tax for individual. [K4]

UNIT I

Tax System in India: Classification of Taxes - Important Terms: Assessment Year, Previous Year, Assessee, Person, Income - Agricultural Income: Kinds of Agricultural Income, Partly Agricultural Income - Residence: Determination of Residential Status (Individual only) - Incidence of Tax - Computation of Taxable Income - Exempted Income (any 20). (15 Hours)

UNIT II

Income from Salary: Meaning - Definitions - Different Forms of Salary - Allowances - Taxable Allowances, Allowances Exempt up to Specified Limit, Fully

Exempted Allowances, Perquisites - Valuation of Perquisites, Residential Accommodation, Motor Car - Treatment of Death cum Retirement: Gratuity, Pension, Leave Salary - Deductions Allowed under the Head Salary - Form 16 (Simple Problems).

(15 Hours)

UNIT III

Income from House Property: Computation of Gross Annual Value of Let Out House Property - Self Occupied House Property - Format - Deductions Allowed - Form ITR2 Schedule HP (Simple Problems).

Profits and Gains from Business or Profession -Business, Profession- Deductions Expressly Allowed, Disallowed (Simple Problems). (15 Hours)

UNIT IV

Capital Gains: Meaning of Capital Assets- Kinds of Capital Assets - Computation of Short Term Capital Gain, Long Term Capital Gain (Formats) - Ascertaining Indexed Cost of Acquisition, Indexed Cost of Improvement- Tax on Capital Gain (excluding exemption from capital gain).

Income from Other Sources: Incomes Chargeable (Simple Problems). (15 Hours)

UNIT V

Deductions from Gross Total Income: Section 80C, 80D, 80DD, 80DDB, 80E, 80G and 80TTA.

Assessment Procedure: Tax Rates for Individuals for Current Assessment Year - Income Tax Authorities - ITR Forms - Due Dates for Filing of Returns - Steps for e-filling of ITR - Permanent Account Number – Form 26 AS - Types of Assessment -Tax Planning, Tax Avoidance and Tax Evasion. (15 Hours)

SELF STUDY FOR ASSIGNMENT

1. Tax Deducted at Source
2. Calculation of Income Tax of Individual for a Given Taxable Income.

NOTE

Composition of Question paper: Theory : **40%**

                                    Problem : **60%**

TEXT BOOK

        Mehrotra, H.C., & Goyal, S.P. (Current Assessment Year). *Income Tax Law and Accounts*. New Delhi: Sahitya Bhawan Publishers.

REFERENCE BOOKS

   1. Vinod Singhania, K. (Current Assessment Year). *Direct Taxes Law and Practice*. New Delhi: Taxmann Publication Private Ltd.

   2. Gaur and Narang, D.B. *Income Tax Law and Practice*. New Delhi: Kalyani Publishers.

   3. Hariharan, N. (Current Assessment Year). *Income Tax Law and Practice.* Chennai: Vijay Nicole Imprints Private Ltd.

   4. Reddy. T.S., & Hari Prasad Reddy, Y. (Current Assessment Year). *Income Tax Law and Practice*. Chennai: Margham Publications.

Course Code 23PCON31	PO1 PSO 1.a	PO1 PSO 1.b	PO2 PSO 2	PO3 PSO 3	PO4 PSO 4	PO5 PSO 5.a	PO5 PSO 5.b	PO6 PSO 6	PO7 PSO 7	PO8 PSO 8
CO1	3	3	2	-	-	1	-	1	-	3
CO2	3	3	2	2	2	1	-	1	-	1
CO3	3	3	2	2	2	1	-	1	-	1
CO4	3	3	2	2	2	1	-	1	-	2
CO5	3	3	2	2	2	1	-	1	-	2

Strong (3)   Medium (2)   Low (1)

Dr.M.Ponnien Selvi   Dr.P.Saritha

Head of the Department   **Course Designer**

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VIRUDHUNAGAR

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M.B.A.

(for those who join in 2023-2024)

Semester III		Hours/Week: 5	
NMEC	**ENTREPRENEURSHIP**	Credits: 3	
Course Code **23PBAN31**		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, the students will be able to

CO1: identify the concept of entrepreneur, sources of ideas and problems of rural entrepreneurs. [K1]

CO2: describe the functions of an entrepreneur, input requirement and dimensions of social responsibilities in business. [K2]

CO3: identify the remedial measure of women entrepreneur, intrapreneurship and ASPIRE. [K2]

CO4: apply the mode of entry into international business, Pradhan Mantri Mudra Yojana and Startup India Initiative. [K3]

CO5: analyze the qualities of true entrepreneurs, development of women entrepreneurs, entrepreneurship in backward areas in India and barriers of international entrepreneurship. [K4]

UNIT I

Entrepreneurship: Definition – Nature and Characteristics of Entrepreneurship – Evolution of the Concept of Entrepreneurship – Entrepreneurs & Managers – Qualities of True Entrepreneurs – Types of Entrepreneurship - Functions of an Entrepreneur.

(15 Hours)

UNIT II

Establishing Entrepreneurial System: Search for Business Idea – Sources of Idea – Idea Processing and Selection – Input Requirements – Rewards and Motivation.   (15 Hours)

UNIT III

Women Entrepreneurship: Development of Women Entrepreneur - Problem and Remedial Measures of Women Entrepreneur – Growth of Women Entrepreneurship – Intrapreneurship.

International Entrepreneurship: Mode of Entry into International Business – Barriers – Domestic Vs International.   (15 Hours)

UNIT IV

Rural Entrepreneurship: Importance – Development – Problems – Entrepreneurship in backward areas in India – Farm Entrepreneurship.   (15 Hours)

UNIT V

Institutions: Introduction and functions of DIC – SIDBI.

Government Schemes for Entrepreneurs in India: Startup India Initiative – ATAL Innovation Mission – Pradhan Mantri Mudra Yojana – ASPIRE.

Social Responsibilities of Business: Introduction to Concept – Dimensions   (15 Hours)

SELF STUDY FOR ASSIGNMENT

1. Functions of an Entrepreneur

2.Case Studies relating to Entrepreneurship

TEXT BOOKS

1.Gupta,C.B. & Srinivasan,N.P.(2010). *Entrepreneurial Development*, New Delhi:
   Sultan Chand & Sons, Revised Edition.

2.Khanka,S.S.(2012). *Entrepreneurial Development*, New Delhi: S.Chand & Company,
   Revised Edition.

REFERENCE BOOKS

1.Saravanavel,P.(2001). *Entrepreneurship Development – Principles Policies and
   Programmes*, Madras: Ess Pee Kay Publishing House.

2.Peter F.Drucker,(2002). *Innovation and Entrepreneurship – Practice and
   Principles*, United Kingdom: Elsevier Ltd.

Course Code 23PBAN31	PO1		PO2	PO3		PO4	PO5	PO6	PO7	PO8
	PSO 1 a	PSO 1 b	PSO 2	PSO 3 a	PSO 3 b	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8
CO1	3	3	3	2	2	2	3	-	1	3
CO2	2	3	-	3	2	1	1	2	1	2
CO3	3	2	1	3	2	2	3	3	2	-
CO4	3	3	3	2	3	3	-	2	3	2
CO5	2	3	2	2	2	2	1	-	2	3

Strong (3)   Medium (2)   Low (1)

Dr. P. Suganthi   Mrs.S.Jeya Shree

Head of the Department   **Course Designer**

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VIRUDHUNAGAR

Quality Education with Wisdom and Values

M.Sc. MATHEMATICS
(For those who join in 2023-2024)

Semester III		Hours/Week: 5	
Elective Course (NME)	**STATISTICS FOR LIFE AND SOCIAL SCIENCES**	Credits: 3	
Course Code **23PMTN31**		Internal 25	External 75

C

OURSE OUTCOMES

On completion of the course, students will be able to

CO1: define sampling distribution, Chi-square, F test and Yates corrections. [K1]

CO2: understand the concept of sample size for their study, probability, random variables and test of significance. [K2]

CO3: explain special probability distributions and the hypothesis testing of their samples. [K2]

CO4: apply the knowledge gained in various methods of distribution in real life problems. [K3]

CO5: analyze various distributions in real life problems. [K4]

UNIT I

Statistics - What and Why, Origin of Statistics, Growth of Statistics, Statistics Defined, Statistics: Science or Art, Functions of Statistics, Applications of Statistics, Limitations of Statistics, Distrust of Statistics, Statistical Methods vs Experimental Methods, Statistical Survey—An Introduction, Planning the Survey, Executing the Survey, COLLECTION OF DATA-Introduction, Primary and Secondary Data, Methods of Collecting Primary Data. SAMPLING AND SAMPLE DESIGNS-Introduction, Census and Sample Method, Theoretical Basis of Sampling, Essentials of Sampling, Methods of Sampling, Non-Probability Sampling Methods, Probability Sampling Methods, Size of Sample, Merits and Limitations of Sampling, Sampling and Non-Sampling Errors.   (15 Hours)

UNIT II

Classification And Tabulation of Data-Introduction, Meaning and Objectives of Classification, Types of Classification, Formation of Discrete and continuous Frequency Distribution, Tabulation of Data, Parts of a Table, General Rules of Tabulation, Types of Tables. Average-Defined, Types of Averages, Arithmetic Mean, Calculation of Arithmetic Mean—Continuous Series, Median, Calculation of Median—Continuous Series, Computation of Quartiles, Decides, Percentiles, Etc. Significance of Measuring Variation, Range, The Interquartile Range or the Quartile Deviation, Merits and Limitations, The Standard Deviation.   (15 Hours)

UNIT III

Probability - Introduction, Classical or a Priori Probability, Shortcomings of the Classical Approach, Relative Frequency Theory of Probability, Subjective Approach to Probability, Axiomatic Approach to Probability, Importance of the Concept of Probability, Calculation of Probability, Theorems of Probability, Addition Theorem, Multiplication Theorem, Conditional Probability, Bayes' Theorem, Mathematical Expectation, Random Variable and Probability Distribution, Binomial, Poisson and Normal Distributions, Hypothesis Testing - Introduction, Standard Error and Sampling Distribution, Estimation, Tests of Significance for Large Samples. Tests of Significance for Small Samples.   (15 Hours)

UNIT IV

Chi-Square Test - Introduction, Chi-Square Defined, Conditions for Applying Chi-Square Test, Yates' Corrections, Uses of Chi-Square Test, Additive Property of Chi-Square, Chi-Square Test for Specified Value of Population Variance, Misuse of Chi-Square Test, Limitations on the Use of Chi-Square Test.   (15 Hours)

UNIT V

The F-Test or the Variance Ratio Test, Applications of F-Test, Analysis of Variance, Analysis of Variance in Two-Way Classification Model.   (15 Hours)

TEXT BOOK

S. P. Gupta, Statistical Methods, Forty Sixth Revised Edition, Sultan Chand & Sons, New Delhi, 2021.

Unit	Chapter	Section
Part – I		
I	1	1.1 - 1.17
	2	2.1 -2.7
	3	3.1 - 3.6
	4	4.1 - 4.21
II	5	5.1 - 5.20
	7	7.1 -7.4 , 7.7,7.16,7.19,7.25
	8	8.1 - 8.6, 8.9 and 8.15
Part -II		
III	1	1.1 - 1.20
	2	2.2 , 2.4, 2.7, 2.8, 2.11, 2.13, 2.18, 2.19, 2.20, 2.21, 2.24, 2.25, 2.28, 2.30, 2.31, 2.33, 2.34, 2.38, and 2.46
	3	3.2, 3.8, and 3.19
IV	4	4.2 - 4.7 , 4.15 - 4.17 and 4.45
V	5	5.2 , 5.5, 5.6, 5.7, 5.12 and 5.14

REFERENCE BOOKS

1. Goon A.M. Gupta. A.K. and Das Gupta, B (1987). Fundamental of Statistics, vol.2 World Press Pvt. Ltd., Kolkatta

2. G.U.Yule and M.G. Kendall (1956). An introduction to the theory of Statistics, Charles Griffin.

Website and e-Learning Source

https://alison.com/course/the-fundamentals-of-statistics?utm_source=google&utm_medium=cpc&utm_campaign=PPC_Tier-4_First-Click_Courses-_Broad_&utm_adgroup=Course-2075_The-Fundamentals-of-Statistics&gclid=CjwKCAjw6IiiBhAOEiwALNqncf9ojFI3Uc738RVoW7KdG4FiGqFXcEA4OeJQLENoFw8gUYqltWhUkRoC1QMQAvD_BwE

Course Code 23PMTN31	PO1		PO2		PO3	PO4	PO5	PO6	PO7	PO8
	PSO 1.a	PSO 1.b	PSO 2, a	PSO 2.b	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8
CO1	3	1	3	3	1	-	3	3	1	-
CO2	3	2	3	1	2	2	3	3	1	-
CO3	3	2	3	1	2	2	3	3	1	-
CO4	3	1	2	3	2	2	2	3	1	-
CO5	3	1	1	2	3	3	2	3	1	-

Strong (3)   Medium (2)   Low (1)

 Dr.M.C. Maheswari   Mrs.G.Nagalakshmi
Head of the Department   **Course Designer**

V.V.VANNIAPERUMAL COLLEGE FOR WOMEN

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VIRUDHUNAGAR

Quality Education with Wisdom and Values

M.Sc. CHEMISTRY

(For those who join in 2023-2024)

Semester III	ADVANCED CHEMISTRY FOR COMPETITIVE EXAMINATIONS	Hours/Week: 5	
Elective Course NME		Credits: 3	
Course Code - 23PCHN31		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, the students will be able to

CO1: know the fundamentals of chemistry. [K1]

CO2: understand the basics of chemistry to predict the acidity and basicity, synthetic chemicals and reagents, analyze data and chemistry in service of man. [K2]

CO3: identify the types of chemical reactions, concepts of acids and bases, laboratory reagents, polymers, cement, carbohydrates, oil and fats [K2]

CO4: Apply the rudiment in chemistry, laboratory chemicals and reagents, data analysis and in service of man. [K3]

CO5: interpret important acid base concept, buffer, chemical reactions, laboratory chemicals and reagents chemical data, and chemistry in service of man. [K4]

UNIT I - Basic Chemistry

Atomic theory: Dalton's and Bohr's theory. Molecules: atomic and molecular mass, empirical and molecular formula. Definition of ore, mineral, alloy with examples. Types of chemical reactions: exothermic and endothermic, oxidation and reduction, addition, substitution and elimination reactions – ideal and real gas : definition. Concepts of Acids and Bases (Arrhenius, Bronsted and Lewis) – pH concept, Buffer solution: definition and types of buffer– Water – Hard and soft water – hardness of water and types- determination of hardness of water by ion exchange process.   (18 Hours)

UNIT II - Laboratory chemicals and reagents

a) Laboratory chemicals and reagents – different grades – commercial, LR, GR, AR, Chromatographic pure and spectral pure.

b) Preparation of reagents in the laboratory – Tollen's reagent – Neutral $FeCl_3$ – Borsche's reagent – Schiff's reagent – Fehling solution A & B.

c) Units of concentration of solution – Normality, Molarity, Molality, Mole fraction, Mass percentage and Volume percentage- simple problems to predict concentration of unknown samples   (18 hours)

UNIT III - Data Analysis

Mean, median, Precision and Accuracy– Confidence limits – Errors- types of error- rules of improving Accuracy of data – Rejection of data – significant figure- Method of least squares. Statistical tests of data -F- test, Students t- test, Q test Calibration curve.

                                                                                  (18 hours)

Unit IV - Chemistry In Service Of Man –I: (Only elementary idea can be given)

     Oils and fats – Definition, Structural and their properties- Soaps and detergent – Definition, Manufacturing method, Properties- Difference between soaps and detergent - Cement – Constituents -setting and hardening of cement - Allotropes of carbon (diamond, graphite, graphene, and buckminsterfullerene) – properties, applications- Conductor, Semiconductor, insulator – properties.   (18 hours)

Unit V - Chemistry in service of man –II: (Only elementary idea can be given)

Polymer—Classification (natural and synthetic) with examples- Rubber – Types with examples and vulcanization of rubber- Dye - classification based on the application - Carbohydrates – sources, classification, function – Sources and deficiency of Vitamins A, B6, B12, C, D, E and K (structural elucidation not required).   (18 hours)

TEXT BOOKS

1. Pui, B.R. Sharma, L.R. Pathania, M.S. (2003). *Principles of Physical Chemistry.* New Delhi: Vishal Publishing Co, 1st Edition.

2. Puri, B.R. Sharma, L.R. & Kalia, K.C. (2008). *Principles of Inorganic Chemistry*, New Delhi: Milestone Publishers, 2nd Edition.

3. Sharma, B. K.(2008). *Industrial Chemistry.* Meerut:GOEL Publishing House, 1st Edition.

4. Jayashree Ghosh, (2013). *Fundamental Concepts of Applied Chemistry*, New Delhi:S.Chand& Company Ltd.,1st Edition.

5. BagavathiSundari, K.(2008).*Applied Chemistry*. Chennai: MJP Publishers, 1st Edition.

6. Gopalan R. Subramanian P.S.(2017). Elements of Analytical Chemistry. Chennai: Sultan chand @Sons Publishers, 3rd Edition.

REFERENCE BOOKS

1. Jain, P.C. & Monika Jain, (2013). *Engineering Chemistry.*New Delhi: DhanpatRai Publishing Company Pvt.Ltd., 1st Edition.

2. Jayashree Ghosh. (2014).*A Text Book of Pharmaceutical Chemistry.* New Delhi: S.Chand & Company Ltd, 3rd Edition.

Course Code 23PCHN31	PO1		PO2	PO3		PO4	PO5	PO6	PO7	PO8
	PSO 1.a	PSO 1.b	PSO 2	PSO 3.a	PSO 3.b	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8
CO 1	3	3	3	3	3	3	2	2	2	2
CO 2	3	3	3	3	3	3	2	2	2	3
CO 3	3	3	3	3	3	3	2	2	2	2
CO 4	3	3	3	3	3	3	2	2	2	3
CO 5	3	3	3	3	3	3	2	2	2	3

3 – Strong, 2 – Medium, 1 - Low

Dr.J.Kavitha

Dr. J. Kavitha   Dr.M.Vairalakshmi
Head of the Department   **Course Designers**

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VIRUDHUNAGAR

Quality Education with Wisdom and Values

M.Sc. Home Science – Nutrition and Dietetics
(For those who join in 2023-2024)

Semester III	**NUTRITION AND HEALTH**	Hours/Week: 5	
Elective Course - 3 (NME)		Credits: 3	
Course Code **23PHSN31**		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, the students will be able to

CO1: describe the health, nutrition, nutrients, nutritional status and list the sources of nutrients.[K1]

CO2: classify the food groups, macro and micro nutrients and identify the factors affecting BMR.[K2]

CO3: explain the importance of balanced diet, food pyramid and the effects of nutrient deficiency diseases on human health.[K2]

CO4: write the dimensions of health, energy value of food, BMR, RDA and function of macro and micro nutrients. [K3]

CO5: focus the nutritional requirements of macro and micro nutrients for various age group.[K4]

UNIT I

Health – definition and dimensions of health. Food-definition, classification, food groups (four, five and seven food groups), importance of food groups. Balanced diet - definition, importance, food pyramid. Nutrition - definition, nutritional status and malnutrition.

(15 Hours)

UNIT II

Energy-definition, unit of measurement, BMR–definition and factors affecting BMR. Carbohydrate and Dietary fibre - classification, sources, functions, nutrient requirements and deficiency.

(15 Hours)

UNIT III

Protein and Fat - definition, classification, sources, functions, nutrient requirements and deficiency.   (15 Hours)

UNIT IV

Vitamins - definition, classification, food sources, functions, nutrient requirements and deficiency of the following vitamins

Water soluble vitamins - vitamin B1, B2, B6, B12, niacin, folic acid and vitamin C and Fat soluble vitamins - vitamin A, D, E, K.   (15 Hours)

UNIT V

Minerals - definition, classification. Calcium, phosphorus, iron, iodine and zinc - food sources, functions, nutrient requirements and deficiency. Water - functions and requirement, fluid and electrolyte balance.   (15 Hours)

TEXT BOOK

Sri Lakshmi, B. (2020). Nutrition Science, 7th Edition, New Delhi: New Age International Ltd.

REFERENCE BOOKS

1. Gajalakshmi, R. (2014). Nutrition Science, 1st Edition, Chennai: CBS Publishers & Distributors Pvt Ltd.

   2. Krause, M.V and Mahan, L.K. (1986).Food, Nutrition and Diet
        Therapy, London: Alan R Liss, Saunders Co.

2. Raheena Begum, M. (2010).Food, Nutrition and Dietetics, 3rd Edition, New Delhi: Sterling Publishers Pvt Ltd,

3. Robinson, C.H., Lawler, M.R., Chenoweth,W.L. and Garwick, A.E. (1986). Normal and Therapeutic Nutrition, New York: Macmillan Publishing Company.

4. Swaminathan, M. (2018). Essentials of Nutrition, Vol I & II, Madras: Ganesh and Company.

Course Code 23PHSN31	PO1		PO2	PO3		PO4	PO5	PO6	PO7	PO8
	PSO 1.a	PSO 1.b	PSO 2	PSO 3.a	PSO 3.b	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8
CO1	3	2	2	2	2	1	3	1`	-	-
CO2	3	2	2	2	2	1	3	2	-	-
CO3	3	2	2	3	3	3	3	2	-	-
CO4	3	2	2	3	3	3	3	2	-	-
CO5	3	2	2	3	3	3	3	2	-	2

Strong (3)   Medium (2)   Low (1)

Dr.D.Vijayarani   Mrs.S.Balasaraswathi

Head of the Department   **Course Designer**

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VIRUDHUNAGAR

Quality Education with Wisdom and Values

M.Sc. BIOCHEMISTRY

(For those who join in 2023-2024)

Semester III	**MOLECULAR BASIS OF DISEASES AND THERAPEUTIC STRATEGIES**	Hours/Week: 5	
Non Major Elective-1		Credits: 3	
Course Code **23PBCN31**		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, the students will be able to

CO1: List the diagnostic importance of blood sugar, gastric function, renal function, cancer, neurogenerative disorders and cardiovascular diseases. [K1]

CO2: Explain the methodologies of blood, urine and body fluids tests for diagnostic purpose. [K2]

CO3: Understand the abnormalities of digestive, reproductive, kidney , cardiac system and blood sugar level [K2]

CO4: make use of the laboratory results with respect to the biological reference ranges and relate them critically in light of the clinical picture. [K3]

CO5: analyse the consistent and inconsistent elements in biological fluids and explain its pathophysiology, signs, treatment. [K4]

UNIT I :

Mechanism of blood sugar regulation in human body: Pathophysiology of Type I and II diabetes, Diabetes – investigation methods for the diagnosis of diabetes. Nutritional care. Complications related to diabetes – Diabetic cardiovascular disease, retinopathy, neuropathy and nephropathy. Cellular and molecular mechanism of development of diabetes- Management of Type I and Type II diabetes, drugs for the treatment of diabetes. **(15 Hours)**

UNIT II

Biology of cancer: Overview of hallmarks of cancer. Tumorigenesis, Tumor progression and mechanism of Metastasis. Proto-oncogene to oncogene. Oncogene- myc and src family. Tumor suppressor gene-Rb and p53 pathway in cancer. Molecular techniques in cancer diagnosis. Treatment of cancer- surgery, radiotherapy, chemotherapy, hormonal treatment, and biological therapy. Introduction to personalized medicine.   **(15 Hours)**

UNIT III

Brain- neuronal network- memory- Neurogenerative diseases- Parkinson and Alzheimer Disease- molecular understanding of the neurodegenerative diseases- treatment modalities.

(15 Hours)

UNIT IV

Acute and chronic renal failure, glomerular diseases–glomerulonephritis, nephritic syndrome, diabetes insipidus, diagnosis of kidney disease.   **(15 Hours)**

UNIT V

Introduction to cardiovascular diseases, Lipids and lipoproteins in coronary heart disease- cardiac enzymes, Molecular changes during cardiac remodeling – hypertrophy of hearts – heart failure- treatment modalities.   **(15 Hours)**

Reading List (Print and Online)

1.The Biochemical basis of disease:2018, Barr AJ; Portland Press

2.Biochemical Basis of Diseases

3.https://www.biologydiscussion.com/diseases-2/biochemical-basis-of-diseases/44276

TEXT BOOKS

1.Wills' Biochemical Basis of Medicine: 2nd edition, Thomas H, Gillham B;Elsevier

2.Molecular Biochemistry of Human Diseases,2021, Feuer G ,de la Iglesia F; CRC Press

REFERENCE BOOKS

1. Harrison (1994). *Principles of Internal Medicine,*McGraw-Hill Companies, United States: 13th Edition.

2. Sonntag & Oswald (2002). *Tietz Fundamentals of Clinical Chemistry,* WB Saunders Philadelphia. 5th Edition.

Course code (23PBCN31)	PO1		PO2	PO3		PO4	PO5	PO6	PO7	PO8
	1a	**1b**	**2**	**3a**	**3b**	**4**	**5**	**6**	**7**	**8**
CO 1	2	2	2	2	2	2	2	2	1	2
CO 2	2	2	2	2	2	2	3	2	2	2
CO 3	2	2	2	2	2	3	2	2	3	2
CO 4	2	2	2	2	2	2	2	2	2	2
CO 5	2	2	2	2	2	2	2	2	2	2

Strong (3)   Medium (2)   Low (1)

Dr.P.Annapoorani   Dr.R.Gloria Jemmi Christobel
Head of the Department   **Course Designer**

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VIRUDHUNAGAR
Quality Education with Wisdom and Values

M.Sc. COMPUTER SCIENCE
(For those who join in 2023-2024)

Semester II		Hours/Week: 5	
Elective Course (NME)	**WEB PROGRAMMING**	Credits: 3	
Course Code **23PCSN31**		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, the learners will be able to

CO1: describe basic concepts of internet and HTML. [K1]

CO2: review tables, style sheets, frames and forms in HTML. [K2]

CO3: use various tags and create elegant web page using HTML. [K2]

CO4: apply various style sheets, form and frame set tag to design a web page.[K3]

CO5: determine appropriate usage of HTML tags for elegant view of webpage. [K4]

UNIT I

Introduction to the Internet: Computers in Business – Networking – Internet – Electronic Mail (E-Mail) – Resource Sharing – Gopher – World Wide Web – Usenet – Telnet – Bulletin Board Service – Wide Area Information Service. **Internet Technologies:** Modem – Internet Addressing – Physical Connections – Telephone Lines. Internet Browsers: Internet Explorer – Netscape Navigator. (16 Hours)

UNIT II

Introduction to HTML: Designing a Home Page – History of HTML – HTML Generations – HTML Documents – Anchor Tag – Hyper Links – Sample HTML Documents. **Head and Body Sections:** Header Section – Title – Prologue – Links – Colorful Web Page – Comment Lines – Some Sample HTML Documents. (16 Hours)

UNIT III

Designing the Body Section: Heading Printing – Aligning the Heading – Horizontal Rule – Paragraph – Tab Settings – Images and Pictures – Embedding PNG Format Images. Ordered and **Unordered Lists**: Lists – Unordered Lists – Heading in a List – Ordered Lists – Nested Lists. (14 Hours)

UNIT IV

Table Handling: Tables – Table Creation in Html – Width of the Table and Cells – Cells Spanning Multiple Rows/Columns – Coloring Cells – Column Specification – Some Sample Tables. **DHTML and Style Sheets**: Defining Styles – Elements of Styles – Linking a Style Sheet to an HTML Document – In-line Styles – External Style Sheets – Internal Style Sheets – Multiple Styles. (14 Hours)

UNIT V

Frames: Frameset Definition – Frame Definition – Nested Framesets. Forms: Action Attribute – Method Attribute – Enctype Attribute – Drop Down List – Sample Forms.

(15 Hours)

TEXT BOOK

Xavier, C. (2015). *World Wide Web Design with HTML*, New Delhi: Tata McGraw Hill Education Private Limited.

UNIT	CHAPTERS	SECTIONS
I	1	1.1 – 1.11
	2	2.1 – 2.4
	3	3.1, 3.2
II	4	4.1 - 4.7
	5	5.1 – 5.7
III	6	6.1 – 6.7
	7	7.1 – 7.5
IV	8	8.1 – 8.7
	9	9.1 – 9.7
V	10	10.1 – 10.3
	12	12.1 – 12.5

REFERENCE BOOKS

1.   Deitel, P.T. (2009). Internet & World Wide Web How To Program, United States of America: Pearson International Edition.

2.   Steven Holzner.(2000). HTML Black Book, New Delhi: Dreamtech Press.

3.   Wendy Willard. (2007).HTML: A Beginner's Guide, New Delhi: McGraw Hill Professional.

Course Code 23PCSN31	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO 1	2	2	-	-	1	-	-	-
CO 2	2	2	-	-	2	-	-	1
CO 3	3	2	1	-	3	-	-	1
CO 4	3	3	2	2	3	-	-	-
CO 5	3	3	3	2	3	-	-	2

Strong (3)   Medium (2)   Low (1)

Mrs.P.Aruna Devi   Mrs.P.Aruna Devi
Head of the Department   **Course Designer**

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VIRUDHUNAGAR

Quality Education with Wisdom and Values

M.C.A.

(For those who join in 2023-2024)

Semester III		Hours/Week: 5	
Elective Course (NME)	**FUNDAMENTALS OF WEB DESIGN**	Credits: 3	
Course Code **23PCAN31**		Internal 25	External 75

COURSE OUTCOMES

On completion of the course, the students will be able to

CO1 : gain knowledge on the basis of web, web pages, HTML tags, CSS and Java Script. [K1]

CO2 : understand the concepts of web page creation using HTML, CSS and Java Script. [K2]

CO3 : acquire knowledge of creating web pages. [K2]

CO4 : make use of HTML, CSS and Java Script to design web pages. [K3]

CO5 : analyse how the web works and the steps of creating a website using HTML, CSS and Java Script, examine G-Suite blog creation. [K4]

UNIT I

Internet Basics: Basic concepts – Communicating on the Internet – Internet domains – Internet server identities – Establishing connectivity on the Internet – Client IP address – Transmission control protocol. (15 Hours)

UNIT II

Introduction to HTML: HTML Tags – The structure of HTML program – Text formatting – Text styles – Other text effects. (15 Hours)

UNIT III

Lists: Types of lists - Adding graphics to HTML documents – Tables – Linking documents – Links – Images as hyperlinks – Frames. (15 Hours)

UNIT IV

Introduction to JavaScript: JavaScript in web pages – Basic programming techniques – Functions in JavaScript – Dialogue boxes. (15 Hours)

UNIT V

Forms used by a website – Form object – Dynamic HTML: Cascading style sheets – Class.

(15 Hours)

TEXT BOOK

1. Web enabled commercial Application Development using HTML, JavaScript, DHTML and PHP by Ivan Bayross Fourth Revised Edition BPB Publications, Reprinted 2013.

REFERENCE BOOKS

1. Jennifer Niederst Robbins, Mathews Leon – Learning Web Design – A Beginners guide to HTML, CSS, JAVA SCRIPT and Web Graphics, 5th Edition.
2. Core Web programming Marty Hall, Larry Brown-The SUN Microsystem Press, Second edition, 2001
3. Web Technology: A Developer's Perspective, N.P. Gopalan, J. Akilandeswari, PHI, 2007.

Course Code 23PCAN31	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	-	-	-	2	-	-
CO2	3	3	-	-	-	2	-	1
CO3	3	2	-	-	-	2	-	-
CO4	2	2	1	1	-	1	-	-
CO5	2	2	1	1	1	1	2	1

Strong (3)   Medium (2)   Low (1)

Dr. N. Santhi   Dr. K.S.Jeyalakshmi

Head of the Department   Course Designer