



P.K.R. ARTS COLLEGE FOR WOMEN

Accredited with 'A' Grade by NAAC

**Autonomous Institution– Affiliated to Bharathiar University
Gobichettipalayam**

VALUE ADDED COURSES

2021-2022

BROCHURE

P.K.R. Arts College for Women, an autonomous college affiliated to Bharathiar University is an unaided college of Arts & Science. It was established with a vision to empower rural women and is managed by Dhandapani Rural Charitable Trust since 1994. The college is dedicated to the everlasting memory of late Thiru.Kalimudhaliar, who had a noble vision of educating the masses. Unfortunately, he was not able to realize his dream during his life time and the responsibility was bestowed on his grandson, late Thiru P.R. Natarajan, founder correspondent of this college. Inspired by his grandfather's ideals, he dedicated his life to enlighten the rural women by starting a women's college in the name of his father Late Thiru.P.K. Ramasamy and this college emerged as P.K.R. Arts College for Women. The ideal of women empowerment was the guiding spirit of our founder correspondent, which elevated the college to an enviable position within a very short span of time. His sudden demise has left a void and his name would be inscribed in the annals of our college.

Thiru P.R.Viswanathan, the younger brother of Thiru.P.R. Natarajan, assumed the office of the correspondent from the year 2007, and he is determined to emulate his brother and took the college forward. Later, the office of the Correspondent cum Secretary was assumed by Thiru. P.N.Venkatachalam the younger son of the founder correspondent, on 23rd January, 2012. The college is recognized by the university grants commission under sections 2(f) and 12(B) of the UGC Act. Further, the UGC has given autonomous status to the college on 6th April 2017. The management's tireless efforts have resulted in getting affiliation for more number of new courses every year. With strenuous efforts and progressive results, the college is now offering 12 UG, 8 PG, 7 Research programmes and 2 UGC sponsored add-on courses in Functional English. There are 7 departments with 104 teaching staff members for 2161 students resulting in a healthy teacher-student ratio of 1:21. With the motto of education, enlightenment, service and discipline, the college works to bring a new dimension to the concept of higher education.

VALUE ADDED COURSES 2021 - 2022

Our college is offering value added courses for all the students intended to provide additional learner centric graded skill oriented technical training. The courses enhance the ability of students in their respective domains and progress in communication.

Objectives

Objectives of providing value added courses are to

- Gain knowledge from the subject experts
- Meet the expectations of industry
- Improve the employability skills of the students

Courses Structure

- ✓ Industry experts / eminent academicians from other Institutes/ Subject Experts from the respective departments teach the value added course
- ✓ The registration for the courses will be done at the beginning of academic year
- ✓ The duration of each course is 40 hours of Theory / Practical / Both

Expected Outcomes

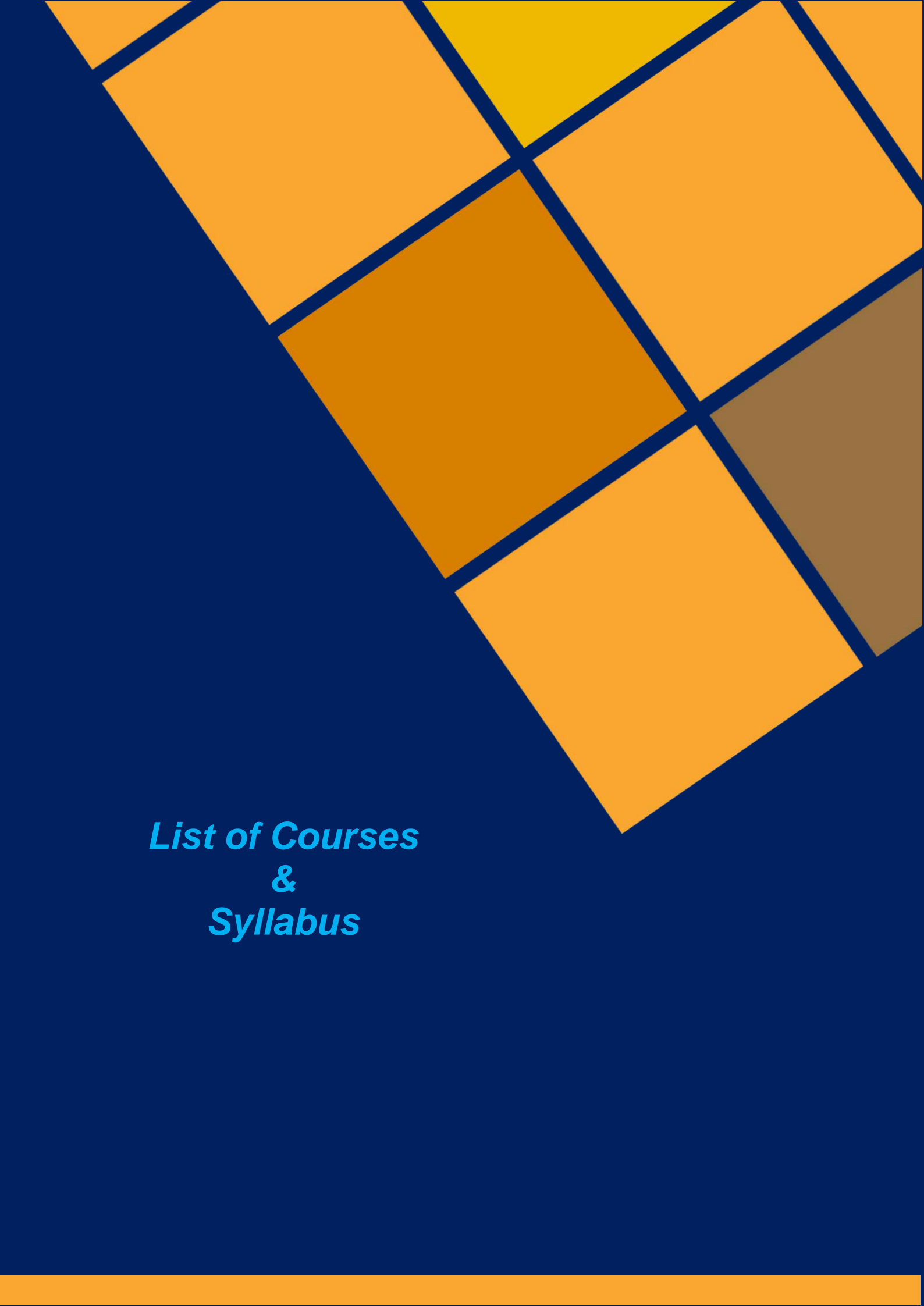
Students will be able to

- Demonstrate their technical and communication skills
- Apply the novel technologies in their respective fields
- ✓ Face the challenges in the current industry scenario

Evaluation & Result

Evaluation of value added courses shall be carried out annually for 100 marks. Students will be given certificates with the grades based on the marks scored in the Examination.

90 - 100 - A++ Outstanding 80 – 89 - A+ Excellent 70 – 79 - A Very Good
60 - 69 - B+ Good 50 – 59 - B Average 40 – 49 - C Satisfactory



*List of Courses
&
Syllabus*

Courses offered in the Academic Year 2021-2022

DEPARTMENT	COURSE CODE	COURSE TITLE
TAMIL	21TAVAU1	இதழியல்
	20GPVAU1	PROFESSIONAL ENGLISH FOR ARTS AND SOCIAL SCIENCE
	19TAVAU1	கல்வெட்டியல்
	21TAVAP1	தமிழ் மின்னூல் உள்ளடக்கம்
	20TAVAP1	வகைமை நோக்கில் தமிழ் இலக்கிய வரலாறு
ENGLISH	21ENVAU1	CONVERSATIONAL ENGLISH
	20GPVAU1	PROFESSIONAL ENGLISH FOR ARTS AND SOCIAL SCIENCE
	19ENVAU1	INTRODUCTION TO TRANSLATION
	21ENVAP1	PROFESSIONAL ENGLISH
	20ENVAP1	INTRODUCTION TO COPYEDITING
MATHEMATICS	21MAVAU1	VEDIC MATHEMATICS
	20GPVAU2	PROFESSIONAL ENGLISH FOR PHYSICAL SCIENCES
	19MAVAU1	NUMERICAL APTITUDE
	21MAVAP1	MATHEMATICS FOR COMPETITIVE EXAMINATIONS
	20MAVAP1	TYPESETTING IN LATEX
PHYSICS	21PHVAU1	CRYSTAL PHYSICS
	20GPVAU2	PROFESSIONAL ENGLISH FOR PHYSICAL SCIENCES
	19PHVAU1	PROBLEM SOLVING IN PHYSICS FOR COMPETITIVE EXAMS
	21PHVAP1	MATERIAL SCIENCE
	20PHVAP1	PROBLEM SOLVING FOR NET/SLET EXAMS
COMPUTER SCIENCE	21CSVAU1/ 21CAVAU1/ 21ITVAU1	COMPUTER FUNDAMENTALS & OFFICE AUTOMATION
	20CSVAU1/ 20CAVAU1/ 20ITVAU1	MS EXCEL-BASICS TO ADVANCED
	20GPVAU2	PROFESSIONAL ENGLISH FOR PHYSICAL SCIENCES
	19CSVAU1/19CAVAU1/ 19ITVAU1	SOFTWARE DEVELOPMENT
	21CAVAP1	CORPORATE CULTURE AND BUSINESS COMMUNICATIONS
COMMERCE	21CGVAU1/ 21CPVAU1/ 21CCVAU1	INTELLIGENCE FOR EXCELLENCE
	20GPVAU3	PROFESSIONAL ENGLISH FOR COMMERCE AND MANAGEMENT
	20CGVAU1/ 20CCVAU1/ 20CPVAU1	PRACTICAL PSYCHOLOGY
	19CGVAU1/ 19CCVAU1/ 19CPVAU1	TALLY ESSENTIAL LEVEL 2
	21CGVAP1	INTRODUCTION TO DIGITAL MARKETING
	20CGVAP1	PRACTICAL APPROACH TO DIGITAL MARKETING
MANAGEMENT	21BAVAU1	BASICS OF FOOD SCIENCE
	20GPVAU3	PROFESSIONAL ENGLISH FOR COMMERCE AND MANAGEMENT
	19BAVAU1	WEALTH MANAGEMENT
	21BAVAP1	OFFICE AUTOMATION
	20BAVAP1	EXCEL FOR EXCELLENCE

DEPARTMENT OF TAMIL

COURSES

- இதழியல்
- கல்வெட்டியல்
- தமிழ் மின்னூல் உள்ளடக்கம்
- வகைமை நோக்கில் தமிழ் இலக்கிய வரலாறு

இதழியல்

அலகு - 1

இந்திய இதழ்களின் தோற்றமும் வளர்ச்சியும் - தமிழ் இதழ்களின் தோற்றமும் வளர்ச்சியும் - இதழ் வகைகள்

அலகு - 2

செய்தித்தாள் நிர்வாக அமைப்பு - இதழ்களின் இன்றியமையா பகுதிகள் - செய்தி நிறுவனங்கள்

அலகு - 3

இதழியல் சட்டங்கள் - இதழ்களும் விளம்பரங்களும் - இதழ்களும் சமுதாயமும்

அலகு - 4

சிறுபத்திரிகைகளின் வாழ்வும் வரலாறும் - மொழிவளர்ச்சியில் இதழியலின் பங்கு

அலகு - 5

பண்பாட்டு வளர்ச்சியிற் இதழியலின் பங்கு - படைப்பிலக்கிய வளர்ச்சியில் இதழியலின் பங்கு

பாடநூல்

1. இதழியல், டாக்டர் சு.சக்திவேல், மணிவாசகர் பதிப்பகம், 31,சிங்கர் தெரு,பாரிமுனை, சென்னை-600108,மு.ப:2008

பார்வைநூல்கள்

1. இதழியல், முனைவர் ச.ஈஸ்வரன், முனைவர் இரா.சபாபதி, பாவைப்பள்ளிகேஷன்ஸ், இராயப்பேட்டை, சென்னை- 600014, ஆறாம் பதிப்பு: 2014.
2. தமிழ் இதழியல் வரலாறு, எம்.ஆர்.ரகுநாதன், ஸ்ரீ செண்பகா பதிப்பகம், பாண்டிபஜார், சென்னை- 600017, மு.ப:2008

கல்வெட்டியல்

அலகு - 1

வரலாற்று உருவாக்கத்தில் கல்வெட்டுக்களின் பங்கு - கல்வெட்டுக்கள் எழுதும் முறை - இந்திய கல்வெட்டுக்களில் காணும் மொழிகள் - கல்வெட்டுக்களின் தன்மை

அலகு - 2

அசோகர் கல்வெட்டுக்கள் - தமிழகக் கல்வெட்டுக்களின் பொதுத்தன்மை - இந்தியக் கல்வெட்டாய்வின் வரலாறு - தென்னிந்திய கல்வெட்டாய்வின் தோற்றமும் வளர்ச்சியும்

அலகு - 3

கல்வெட்டுக்களில் காலகணிப்பு - எழுத்துக்களின் தோற்றம் - சிந்துவெளி எழுத்துக்கள் - பிராமி

அலகு - 4

கரோஷ்டி - குறியீடுகள் - தமிழ்பிராமி

அலகு - 5

வட்டெழுத்து - கிரந்த எழுத்து - தமிழ் எழுத்துக்கள்

பாடநூல்

1. கல்வெட்டியல் -கா.ராஜன், மனோபதிப்பகம், தஞ்சாவூர் 2006

பார்வைநூல்கள்

1. தொல்லியல் - முனைவர் தி.மனோன்மணி, முனைவர் தி.செல்வநாயகி, நியூசெஞ்சுரி பக்ஹவுஸ், அம்பத்தூர், சென்னை 2010, தொல்லியல் - கோ.சுந்தர்(மொ.பெ.ஆ) அடையாளம் பதிப்பகம், 2007

தமிழ் மின்னூல் உள்ளடக்கம்

அலகு 1

1. தமிழ் எழுத்துருக்கள் (Tamil Fonts)
2. தமிழ் எழுதுமென்பொருள்கள் (Tamil Typewriting software)
3. தமிழ்த்தட்டச்சு முறைகள் (Tamil Typing Instructions)
4. ஒருங்குறி எழுத்துருக்கள் (Unicode tamil fonts)
5. ஒருங்குறி எழுத்துரு மாற்றிகள் (Unicode tamil font converter)
6. தமிழ் மொழிபெயர்ப்பு (Tamil Translation Techniques)
7. பிறை திருத்த மென்பொருள்கள் (spell checker tamil)
8. ஒளி எழுத்துணரி (optical character recognizer)

அலகு 2

1. வலைப்பதிவு அறிமுகம் (Blog Introduction)
2. வலைப்பதிவு உருவாக்கம் (Blog creation)
3. வலைப்பதிவின் உள்ளடக்கங்கள் (Blog contents)
4. வலைப்பதிவின் வகைகள் (Blog Types)
5. வலைப்பதிவுத் திரட்டிகள் (Blog aggregators)

அலகு 3

1. விக்கிப்பீடியா (<https://ta.wikipedia.org>)
2. விக்கி நூல்கள் (<https://ta.wikibooks.org>)
3. விக்கி மேற்கோள்கள் (<https://ta.wikiquote.org>)
4. விக்கிசனரி (<https://ta.wiktionary.org/>)
5. விக்கி பொதுவகம் (<https://commons.wikimedia.org/wiki>)
6. விக்கிமூலம் (<https://ta.wikisource.org>)

அலகு 4

1. தமிழ் மின்னூலகங்கள்
2. தமிழ் மின்னூல்கள் (Tamil E - Books)
3. தமிழ் மின்னூல்கள் வெளியிடும் முறைகள் (Methods of Publishing Tamil E - Books)
4. குறுஞ்செயலிகள் உருவாக்கம்
5. தமிழ் ஒலி நூல்கள் உருவாக்கும் முறைகள் (Methods of Making Tamil Audio Boks)
6. தமிழ் யூடியூப் அலைவரிசை உருவாக்கம் (youtube channel creation)
7. காணொளி திருத்த மென்பொருள்கள்

அலகு 5

1. அச்சுக்கலை வேர்டு (பேஜ்மேக்கர், இன்டிசைன், போட்டோசாப்)
2. ஆட்சென்ஸ் - (வலைப்பதிவு, யூடியூப், முகநூல், குறுஞ்செய்திகள், மின்னூல்)

வகைமை நோக்கில் தமிழ் இலக்கிய வரலாறு

அலகு 1

உயர்தனிச் செம்மொழி - முச்சங்கங்கள் -சங்ககாலத்து இலக்கண நூல்கள் - தொல்காப்பியம் - எட்டுத்தொகை நூல்கள் - பத்துப்பாட்டு - சங்க இலக்கிய மேன்மைகள் - பதினெண்கழ்க்கணக்கு - பிற நூல்கள் - ஐம்பெரும்காப்பியங்கள் -ஐஞ்சிறுகாப்பியங்கள் - முத்தொள்ளாயிரம் .

அலகு - 2

பெருங்கதை - கம்பராமாயணம் -ராமாயண நூல்கள் -தொன்ம இலக்கியங்கள் -பாரத இலக்கியங்கள் - பௌத்தத்தின் தமிழ்ப்பணி - சமணத்தின் தமிழ்ப்பணி - சைவத்தின் தமிழ்ப்பணி -வைணவத்தின் தமிழ்ப்பணி -கிறித்துவத்தின் தமிழ்ப்பணி -இசுலாமியத்தின் தமிழ்ப்பணி -பிற்காலக் காப்பியங்கள் - இலக்கண நூல்கள் .

அலகு - 3

சிற்றிலக்கியத் தோற்றமும் வளர்ச்சியும் - நிகண்டு தோற்றமும் வளர்ச்சியும் - அகராதித் தோற்றமும் வளர்ச்சியும் -உரைநடைத் தோற்றமும் வளர்ச்சியும் - இசைத்தமிழ் தோற்றமும் வளர்ச்சியும் -நாடகம் தோற்றமும் வளர்ச்சியும் -சிறுகதைத் தோற்றமும் வளர்ச்சியும் -புதினத்தின் தோற்றமும் வளர்ச்சியும் -புதுக்கவிதை தோற்றமும் வளர்ச்சியும் -ஹைக்கூ கவிதை தோற்றமும் வளர்ச்சியும்.

அலகு - 4

சித்தர் இலக்கியங்கள் - பதிப்பாசிரியர்கள் - உரையாசிரியர்கள் - தொல்லியல் துறைகள் -நாட்டுப்புறவியல் - பயண இலக்கியங்கள் -வாழ்க்கை வரலாற்று இலக்கியங்கள் -கடித இலக்கியங்கள் - ஒப்பிலக்கியம் - ஒப்பிலக்கிண மொழியியல் - திறனாய்வியல் - மொழிபெயர்ப்பியல்.

அலகு - 5

அறிவியல் தமிழ் - பெண்ணியம் -தலித்திய இலக்கியம் -ஊடகவியல் -குழந்தை இலக்கியங்கள் -அணிந்துரை இலக்கியம் -நாட்குறிப்பு -மருத்துவ இலக்கியங்கள் -புலம் பெயர்ந்தோர் இலக்கியங்கள் -சொற்பொழிவு இலக்கியங்கள் - அரவாணிய இலக்கியங்கள் - நேர்க்காணல் இலக்கியங்கள் -ஒரு பக்க கட்டுரை இலக்கியம் -இலக்கிய இயக்கங்கள் - திராவிட இயக்கம் - மார்க்சிய இயக்கம் .

பாடநூல்கள் :

1. வகைமை நோக்கில் தமிழ்இலக்கியவரலாறு - பேரா .முனைவர் பாக்கியமேரி.புவேந்தன் பதிப்பகம் ,சென்னை 600004 ,முதற் பதிப்பு -2014,இரண்டாம் பதிப்பு -2017. கைப்பேசி -8056228557

பார்வை நூல்கள்:

1. தமிழ் இலக்கிய வரலாறு - முனைவர் சி .பாலசுப்பிரமணியன். மணமலர்ப் பதிப்பகம் சென்னை.முதற்பதிப்பு -1959 ,இருபத்தியேழாம் பதிப்பு -1998 தமிழ் இலக்கிய வரலாறு- மு.வரதராசனார்.



**DEPARTMENT
OF
ENGLISH**

COURSES

- **Conversational English**
- **Introduction to Translation**
- **Professional English**
- **Introduction to Copyediting**

Conversational English

UNIT I

8 Hours

Greeting
Introducing
Inviting someone
Making requests
Seeking permission
Persuading

UNIT II

8 Hours

Compliment/congratulating
Expressing sympathy
Complaining
Apologising
Starting a conversation with a stranger
Ending a conversation

UNIT III

8 Hours

Asking for information
Asking someone to say something again
Checking that you have understood
Asking if someone is able to do something

UNIT IV

8 Hours

At the Doctor's
At the bank
Railway enquiry
Looking for accommodation
In a Government office
At the Greengrocer's

UNIT V

8 Hours

Invitation to a party
Talking about a vacation
Seeking admission in a school
Asking about a course
Selling a product
Getting a book published
An interview

PRESCRIBED TEXT:

- 1.Spoken English for You Level 1 by Radhakrishna Pillai G, K.Rajeevan, Emerald Publishers, Chennai.
- 2.Spoken English for You Level 2 by Radhakrishna Pillai G, Emerald Publishers, Chennai.

Introduction to Translation

UNIT I

8 Hours

Introduction
History of Translation Translation theories in India

UNIT II

8 Hours

Translation, a science or art
The Translator's Responsibilities
Kinds of Translation.

UNIT III

8 Hours

Translation Procedures Machine Translation

UNIT IV

8 Hours

Some concepts of Translation.
Evaluating a translation

UNIT V

8 Hours

Practice in translation.
Translating any passage from English to Tamil and from Tamil to English

PRESCRIBED TEXT:

Translatology by Dr. A. Shanmugakani , Dr. A. Samuel Kirubahar

Professional English

UNIT I Basics of Technical English	8 Hours
UNIT II Components of Technical Writing	8 Hours
UNIT III Basic Technical Writing skills	8 Hours
UNIT IV Common Grammatical errors and Technical style	8 Hours
UNIT V Presentation strategies and Oral communication	8 Hours

PRESCRIBED TEXT:

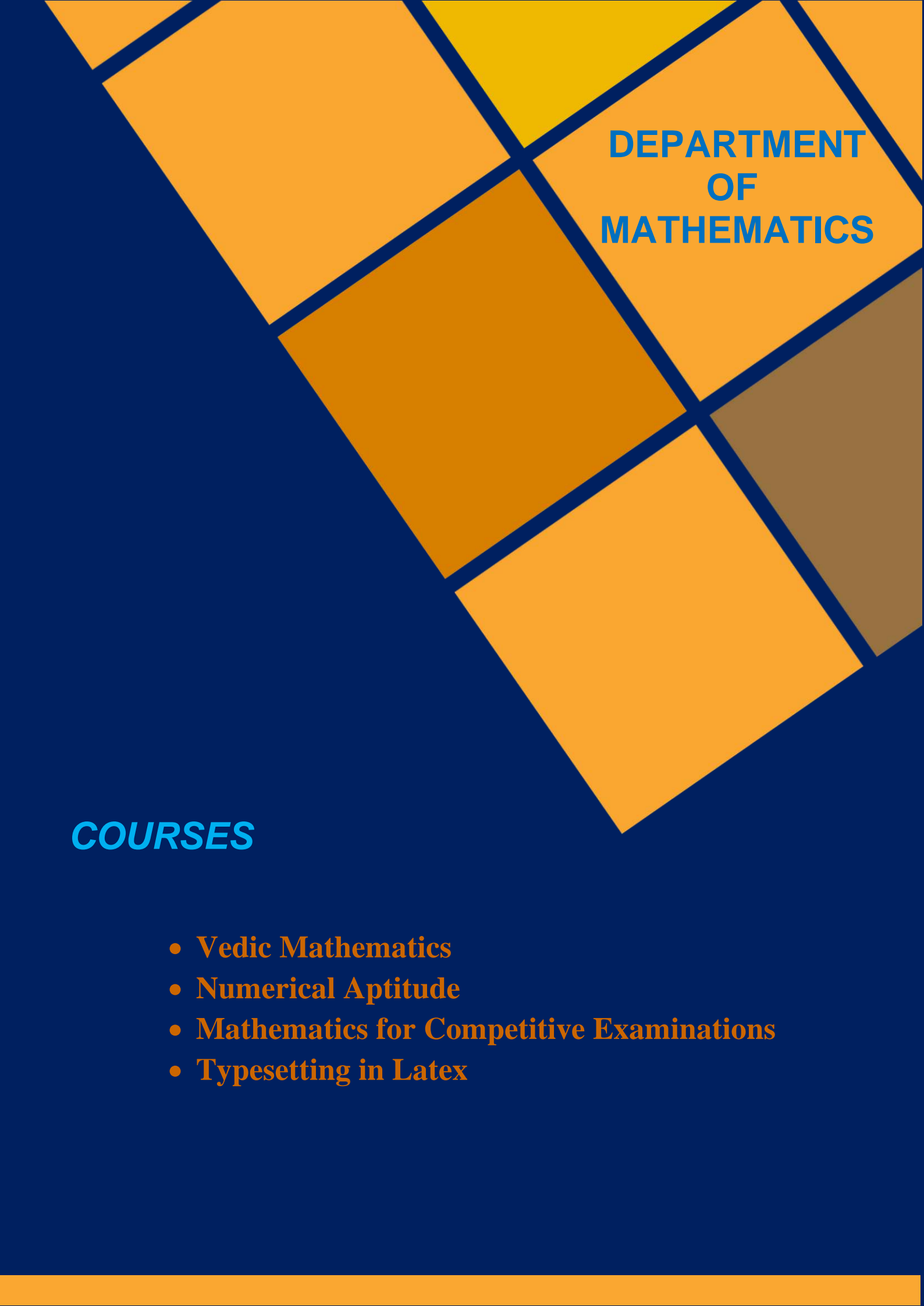
Professional English by Meenakshi Raman and Sangeeta Sharma (Oxford university press)

Introduction to Copyediting

UNIT I Introduction What is copyediting? Typescripts- hard-copy, electronic parts of a book Preparing a copy.	8 Hours
UNIT II Spelling, hyphenation, punctuation, capitalization, Names, italic, roman and other type of treatments.	8 Hours
UNIT III Proofs, how to read proofs, How to make corrections, Second proof, Press proof.	8 Hours
UNIT IV Work titles in text, quotations and direct speech, abbreviations and symbols.	8 Hours
UNIT V Indexes What need to be done? General organization, Style within the entry.	8 Hours

PRESCRIBED TEXT:

Copyediting by Judith Butcher, Cambridge university press



**DEPARTMENT
OF
MATHEMATICS**

COURSES

- **Vedic Mathematics**
- **Numerical Aptitude**
- **Mathematics for Competitive Examinations**
- **Typesetting in Latex**

VEDIC MATHEMATICS

UNIT: I

Introduction – Sutras of Vedic Mathematics – Advantages of using Vedic Mathematics – Applications of Vedic Mathematics in the Modern World- Simplification by Traditional Method versus Vedic method – Comparison between Traditional Method and Vedic method-. Sutra for finding Square of a number-Conversion of Vulgar Fraction into Decimal.

UNIT: II ADDITION AND MULTIPLICATION

Addition-Multiplication-Subtraction of a number from an aadhar — Multiplication of two numbers close to an aadhar (base)Method– Cases : I , II and III- Division by 9-All from 9 and the last from 10 (Subtraction) – Cases : I , II and III.

UNIT: III MULTIPLICATION AND DIVISION

Two – digit Multiplication without carry - Two – digit Multiplication with carry over – Three– digit Multiplication- Division-When the remainder is positive and negative-Multiplication by 12-Divisibility by 4-Multiplication-Division-“Antyayordasakepi” sutra.

UNIT: IV LINEAR EQUATION

Linear Equation – “Shunyan Samyasmuchaye” sutra- Solving Simultaneous Linear Equations (Anurupye Shunyamanyat & Sankalana Vyavkalanabhyam).- Roots of a Quadratic Equation-Roots of Cubic Equations-Roots of a Quadratic Equation.

UNIT: V SQUARE AND CUBE

Square of a number –Cube of a number-Rational Expression-Square root-Cube root.

TEXT BOOK:

Sumita Bose -2017 “Vedic Mathematics”– V&S Publishers, New Delhi.

Unit - I	Page: 19-28
Unit – II	Page: 62-65,29-36
Unit –III	Page: 37-45,68-71,79-86,102-104
Unit –IV	Page: 46-61
Unit – V	Page: 98-101, 105-107, 118-125

REFERENCE BOOK:

1.H.K. Gupta -2014 “Vedic Mathematics”– BPI Publishers, New Delhi.

Numerical Aptitude

UNIT I

Numbers-H.C.F and L.C.M of Numbers-Simplification

UNIT II

Square roots and Cube roots .

UNIT III

Problem on Numbers.

UNIT IV

Problem on Ages.

UNIT V

Percentage- Concept of percentage.

TEXT BOOK:

Aggarwal R.S. (2012 Edition), Quantitative Aptitude for Competitive Examinations, S. Chand & Company Ltd, New Delhi

REFERENCE BOOKS:

1. Sijwali B. S.(2007), Quantitative Aptitude,Arihand Publications (India) PVT LTD.
2. AbhijitGuha(2006), Quantitative Aptitude for Competitive Examinations, McGraw Hill Companies.

Mathematics For Competitive Examinations

UNIT-I : SEQUENCES AND SERIES

Sequence and Series – Convergence - Lim sup

UNIT-II : SEQUENCES AND SERIES

Lim inf - Bolzano weierstrass theorem - Heine Borel theorem

UNIT-III : GROUP THEORY

Groups – Subgroups - Normal subgroups - Quotient groups – Homomorphism - Cyclic groups -Permutation groups.

UNIT-IV : GROUP THEORY

Homomorphism - Cyclic groups -Permutation groups.

UNIT-V : COMPLEX NUMBERS , ANALYTIC FUNCTION

Power series - Analytic functions – Cauchy Riemann equations.

TEXT BOOK

UGC CSIR NET/SET -Mathematical Analysis- 'Pawansharma,Neha Sharma and Suraj singh'- Arihant publications(India)Ltd.

REFERENCE BOOK:

UGC CSIR NET/SET-MathematicalAnalysis, Akilesh Mmani Thirupathi and Sunil Kushwaha, Kanika publishing company.

Type Setting in Latex

UNIT I

Preparing an input file, sentences and paragraphs, the document class, sectioning, display material, running Latex,

UNIT II

Changes the type style, producing mathematical symbols and mathematical formulae, arrays, delimiters, multiline formulae, putting one thing on other, spacing in math mode.

UNIT III

Defining command and environments, Producing and including graphics in a Latex file, figures and other floating bodies, lining it up in columns, table of content, cross-reference, bibliography and citation, making index and glossary, slides, overlays and notes, letters.

UNIT IV

Design it yourself: document class, page style, title page, customizing the style, line and page breaking, numbering, length, spaces and boxes, formatting with boxes, centering and flushing, list making environments, changing font type size and special symbols.

UNIT V

Picture, picture environments, picture objects, text, boxes, straight lines, arrow, stacks, circles, oval, framing, curve, grid, repeat patterns.

TEXT BOOK:

Leslie Lamport , A Document Preparation System User's Guide and Reference Manual, Addison-Wesley Publishing Company.

REFERENCE BOOKS:

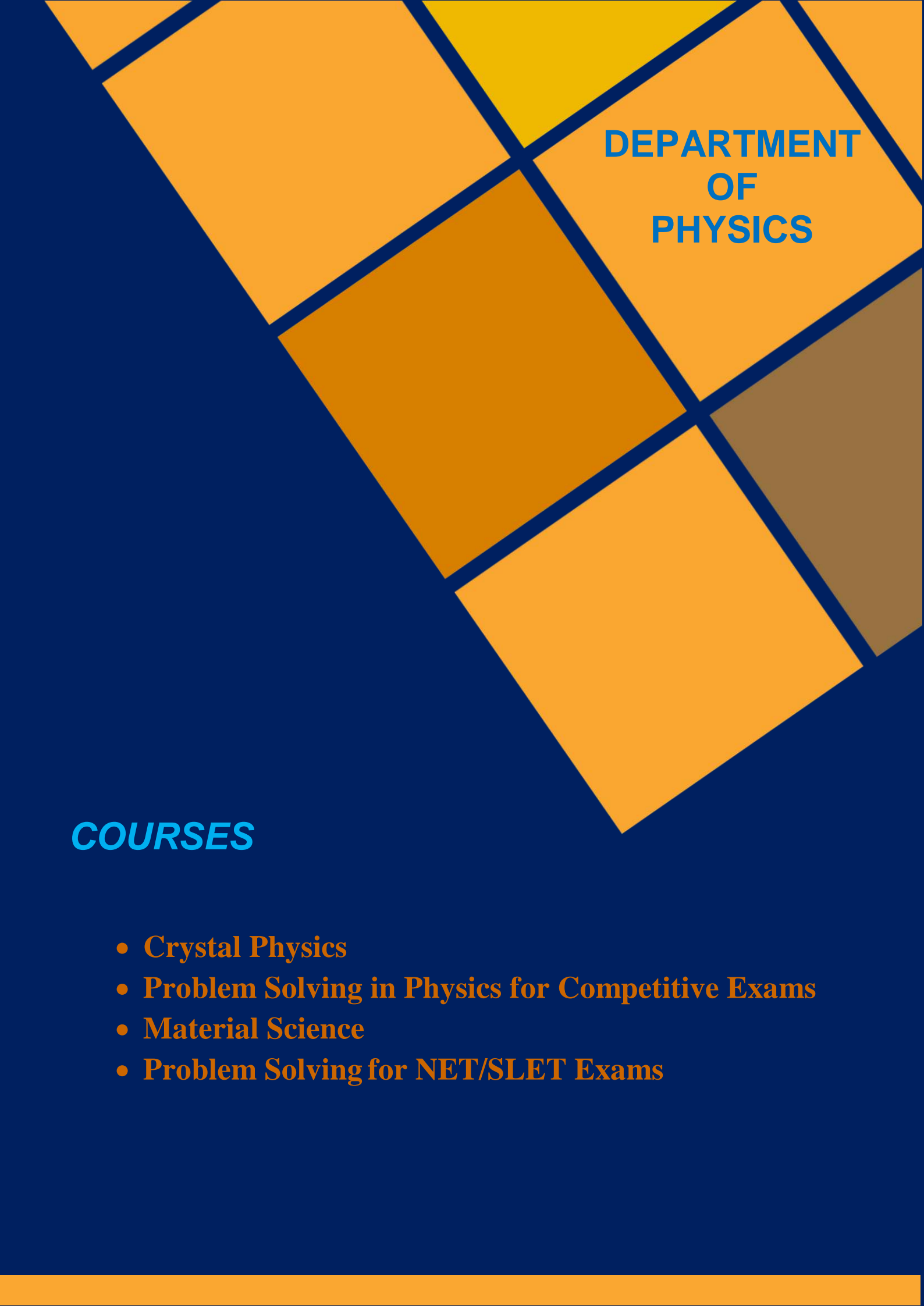
1. Stefan Kottwitz , LaTeX Beginner's Guide, Packt Publishing, UK.

OTHER SOURCES FOR READING:

1. Till Tantau , User Guide to the Beamer Class, <http://latex-beamer.sourceforge.net>.

2. Tobias Oetiker, The Not So Short Introduction to LATEX 2E,

<https://tobi.oetiker.ch/lshort/lshort.pdf>



**DEPARTMENT
OF
PHYSICS**

COURSES

- **Crystal Physics**
- **Problem Solving in Physics for Competitive Exams**
- **Material Science**
- **Problem Solving for NET/SLET Exams**

Crystal Physics

Unit I

(10 Hours)

Crystal Structure: Distinction between Crystalline and Amorphous –Different features of the crystals–Crystal Lattice – Basis –Crystal Structure – Unit cell – Primitive lattice – Seven crystal system

Unit II

(10 Hours)

Crystal Defects: Classification of Crystal imperfections –Schottky Defect – Frenkel defect – Edge dislocation – Screw dislocation

Unit III

(10 Hours)

Bonding in Solids: Type of Bonds in Crystals – Ionic – Covalent – Metallic – Molecular - Hydrogen bonding

Unit IV

(10 Hours)

Band Theory of Solids: Classification of solids based on the basis of Band theory: Conductors – Semiconductors– Insulators– Conductivity of Semiconductors

REFERENCES

Text Books

1. Modern Physics– R Murugesan, 2018, S. Chand & Co
2. Concepts of Modern Physics – Arthur Beiser, Sixth Edition, 2013, McGraw Hill

Reference Books

1. Solid State Physics – Gupta and Kumar, 9th Revised Edition, 2016, K. Nath& Co, Meerut
2. Elements of Solid State Physics – J.P. Srivastava, 2nd Edition, 2006, Prentice-Hall of India4.

Problem Solving In Physics for Competitive Exams

Unit I

(9 Hours)

Motion in One Dimension: Displacement, Velocity, and Speed - Instantaneous Velocity and Speed – Acceleration - One-Dimensional Motion with Constant Acceleration - Freely Falling Objects (Example Problems only)

UNIT II

(9 Hours)

Vectors: Coordinate Systems -Vector and Scalar Quantities - Some Properties of Vectors - Components of a Vector and Unit Vectors

Motion in Two Dimensions: The Displacement, Velocity, and Acceleration Vectors - Two-Dimensional Motion with Constant Acceleration - Projectile Motion - Uniform Circular Motion (Example Problems only)

Unit III

(9 Hours)

The Laws of Motion: The Concept of Force - Newton's First Law and Inertial frames – Mass - Newton's Second Law - The Force of Gravity and Weight - Newton's Third Law - Some Applications of Newton's Laws - Forces of Friction. (Example Problems only)

Unit IV

(9 Hours)

Electric Fields: Properties of Electric Charges - Insulators and Conductors - Coulomb's Law - The Electric Field - Electric Field of a Continuous Charge Distribution - Electric Field Lines - Motion of Charged Particles in a Uniform Electric Field. (Example Problems only)

Unit V

(9 Hours)

Current and Resistance: Electric Current - Resistance and Ohm's Law - A Model for Electrical Conduction - Resistance and Temperature - Electrical Energy and Power.

Direct Current Circuits: Electromotive Force - Resistors in Series and in Parallel - Kirchhoff's Rules - RC Circuits. (Example Problems only)

REFERENCES

Text Books

1. Fundamentals of Physics by David Halliday, Robert Resnick, Jearl Walker, 10th Edition, ISBN: 978-1-118-23072-5, 2013, John Wiley & Sons Inc.,.

Material Science

Unit I

(9 Hours)

Material Science: Properties of Engineering Material– Selection of Materials for Engineering Applications.

Unit II

(9 Hours)

Magnetic Materials: Different types of Magnetic Materials –Diamagnetism and Paramagnetism – Ferromagnetism – Domain theory of ferromagnetism - Hard and Soft magnetic materials

Unit III

(9 Hours)

Modern Engineering Materials: Polymer – Ceramics – Super Strong Materials – Cermets– High temperature materials– Thermoelectric Materials– Electrets– Nuclear Engineering materials

Unit IV

(9 Hours)

New Materials: Metallic glasses – Fiber reinforced plastics – Metal matrix composites – Optical Materials– Materials for optical sources and detectors– Fiber Optic materials and their applications

Unit V

(9 Hours)

Display Materials – Acoustic Materials and their applications– SAW materials– Biomaterials

REFERENCES

Books for Study

1. Materials science- M Arumugam, Anuradha agencies

Reference Books

1. Materials Science and Engineering - V. Raghavan, Prentice Hall of India,

Problem Solving for NET/SLET Exams

UNIT I

(9 Hours)

Vector Calculus: Product of vectors – Gradient – Divergence & Curl – Integration of vectors: Linear integration of vectors, Surface integration of vectors, Volume integration of vectors, Linear dependency of vectors, Orthogonal curvilinear co-ordinates

UNIT II

(9 Hours)

Matrices: Eigen values & Eigen vectors – Cayley -Hamilton theorem – Rank of a matrix – Diagonalisation of a matrix – Linear transformation – Applications

UNIT – III

(9 Hours)

Complex Analysis: Function of complex variables – Complex analytic function – Power series: Expansion of Complex function – Singularity of Complex function – Residue of a Complex function

UNIT – IV

(9 Hours)

Differential Equations: Differential equation of first order and first degree – Linear second order differential equation – Legendre differential equation – Bessel differential equation – Hermite differential equation – Laguerre differential equation.

UNIT –V

(9 Hours)

Tensor Analysis: Basic review of tensors – Algebra of tensors – Fundamental tensors – Christoffel symbols – Co-variant, contra-variant and mixed tensors.

REFERENCES

Text Books

1. Mathematical Physics (revised), H K Dass, S. Chand (2008), ISBN 8121914698, 9788121914697.
2. Mathematical Physics(revised), SatyaPrakash, Sultan Chand & Sons (2014), ISBN 8180549283, 978-8180549281

Reference Books

1. Mathematical Physics, Kakani S.L - 3rd Edition 2009, ISBN 9789386478238.
2. Mathematical Physics, B.D Gupta- Vikas publishing house–4th Edition 2009, ISBN 8125930965, 9788125930969.
3. Mathematical Physics, Rajput B.S. –Pragatiprakashan -23rd Edition-2011

Reference Links

1. <https://nptel.ac.in/courses>



**DEPARTMENT
OF
COMPUTER
SCIENCE**

COURSES

- **Computer Fundamentals and Office Automation**
- **Microsoft Excel- Basics to Advanced**
- **Software Development**
- **Corporate Culture and Business Communications**

Computer Fundamentals & Office Automation

UNIT-I Introduction to Computers (8 Hours)

Introduction, Characteristics of Computers, Block diagram of computer. Types of computers and features, Mini Computers, Micro Computers, Mainframe Computers, Super Computers. Types of Programming Languages (Machine Languages, Assembly Languages, High Level Languages). Data Organization, Drives, Files, Directories. Types of Memory (Primary And Secondary) RAM, ROM, PROM, EPROM. Secondary Storage Devices (FD, CD, HD, Pen drive) I/O Devices (Scanners, Plotters, LCD, Plasma Display) Number Systems Introduction to Binary, Octal, Hexadecimal system Conversion, Simple Addition, Subtraction, Multiplication

UNIT-II Algorithm and Flowcharts (8 Hours)

Algorithm: Definition, Characteristics, Advantages and disadvantages, Examples Flowchart: Definition, Define symbols of flowchart, Advantages and disadvantages, Examples.

UNIT-III Operating System and Services in O.S. (8 Hours)

Dos – History, Files and Directories, Internal and External Commands, Batch Files, Types of O.S.

UNIT-IV Windows Operating Environment (8 Hours)

Features of MS – Windows, Control Panel, Taskbar, Desktop, Windows Application, Icons, Windows Accessories, Notepad, Paintbrush.

UNIT-V Editors and Word Processors (8 Hours)

Basic Concepts, Examples: MS-Word, Introduction to desktop publishing. Spreadsheets and Database packages Purpose, usage, command, MS-Excel, MS-PowerPoint.

Reference Book:

1. Archana Kumar, "Computer Basics with Office Auomation", IK International Publishing House Pvt. Ltd, First Edition. ISBN:9789380578620.

Microsoft Excel- Basics to Advanced

Unit I

(5 Hours)

Microsoft Excel Introduction: MS Excel Fundamentals-Entering and Editing Text and Formulas - Working with Basic Excel functions - Modifying an Excel Worksheet.

Unit II

(8 Hours)

Formatting data in an Excel Worksheet - Inserting Images and Shapes into an Excel Worksheet - Creating Basic Charts in Excel - Printing an Excel Worksheet-Working with Excel Templates.

Unit III

(9 Hours)

Working with an Excel list - Excel list functions - Excel data validation - Importing and Exporting data - Excel PivotTables - Working with Excel's PowerPivot Tools - Working with Large sets of Excel data.

Unit IV

(9 Hours)

Working with Excel's Conditional Functions-Working with Excel's Lookup functions-Working with Excel's Text Based functions-Auditing an Excel Worksheet-Protecting Excel Worksheets and Workbooks-Mastering Excel's "What if?" Tools.

Unit V

(9 Hours)

Automating repetitive tasks in Excel with Macros - MS Excel Macros and VBA introduction - Excel VBA concepts - Exercises.

REFERENCES

Reference Link:

<https://www.udemy.com/share/101WdeBEMbcl5RRHg=/>

Software Development

UNIT I: Software an Outlook (8 Hours)

Introduction - Software Products and Ideas Behind - Different Models - Research and Development - Knowledge Sharing Platform - Minimum Viable Product. **Roles, Responsibilities, and Methodologies:** Roles and Responsibilities - Business Owner - Product Manager - Designers - Backend - Frontend - Quality Assurance (QA) - DevOps (development + operations) - It's Normal to be Confused About Roles! - Methodologies - Our Team and Process

Unit II: Necessities and Proceeding (8 Hours)

Requirements, Commitment, and Deadlines: Product Manager - Preparation- Requirements and Roadmap - Kick-Off - Commitment and Deadline - Requirements for Our MVP. **User-Centered Design:** Design Journey—Its Start and End - Types of Design User Interface and User Experience - Design Process—How Designers Run It - Designing Our Online Education Platform - Initial Brainstorming - Usability Testing

UNIT III: Backend Development (8 Hours)

Backend Development: About the Stack - Defining Backend Applications -Bootstrapping the Project - Build Automation Tool: Maven - Database - Pros – Cons – Authentication - Development - Database - Persistence Layer - Service Layer - Service API -REST API and Transformation Layer -Implementing the Registration –Testing.

UNIT IV: Frontend Development (8 Hours)

Frontend Development: Where Does Frontend Start? - Markup and DOM - Document Object Model - Headings - Hyperlinks - Images - Forms - Inline and Block Elements - Style - Layout - Design Systems - Pre-Processors and Template Engines - Dynamic Content - Development Tools Console - Variables - Including JavaScript – Functions - Frameworks - Contract Between Frontend and Backend - Creating the Frontend Application for Our Platform .

UNIT V: Testing and Maintenance (8 Hours)

Testing Our Product: Different Types of Testing - Who Is Testing What? - Tools, Platforms, and Frameworks - Testing Our Product. **Maintaining and Improving Your Software:** Maintaining – Improving.

Reference Book:

1. Olga Filipova, Rui Vilao “**Software Development From A to Z** - A Deep Dive into all the Roles Involved in the Creation of Software “ Apress Publication
ISBN-13 (pbk): 978-1-4842-3944-5
ISBN-13 (electronic): 978-1-4842-3945-2(ebook)

Corporate Culture and Business Communication

UNIT-I: Nature And Scope Of Communication 8 Hours

Nature And Scope Of Communication - Definition, Classification – Process - Objectives - Purpose - Scope - Functions-Evaluation of Effective Communication - Organizational Communication.

UNIT-II: Oral And Written Communication 8 Hours

Oral And Written Communication – Introduction - Verbal Communication Oral – Verbal Communication Written.

UNIT-III: Non-Verbal Communication 8 Hours

Non-Verbal Communication – Introduction - Characteristics of Non-Verbal Communication – Relationship of Non-Verbal Messages With Verbal Message – Classification of Non-Verbal Communication

UNIT-IV: Report Writing 8 Hours

Report Writing – Significance, Type Of Reports, Routine Reports, Five W's And One H, Report Planning - Report Writing Process- Outline of A Report – Guidelines – Technicalities – Visual Aids – Effectiveness of A Report – Illustrations.

UNIT-V: Business Letter 8 Hours

Business Letter – Introduction – Different Types Of Business Letter – Knowing What Qualifies As A Bad Letter – Essentials Of A Business Letters – Layout Of Business Letter – Resume Writing – Introduction – Job Application Or Covering Letter – Resume / CV Writing.

REFERENCE BOOK

1. M K Sehgal Vandana Khetarpal – Business Communication, Excel Books Publications, Ist Edition

Professional English for Physical Sciences

Unit I: Communication

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

Speaking: Pair work and small group work.

Reading: Comprehension passages –Differentiate between facts and opinion

Writing: Developing a story with pictures.

Vocabulary: Register specific - Incorporated into the LSRW tasks.

Unit II: Description

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

Speaking: Role play (formal context)

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

Writing: Process Description –Compare and Contrast Paragraph-Sentence Definition and Extended definition- Free Writing.

Vocabulary: Register specific -Incorporated into the LSRW tasks.

Unit III: Negotiation Strategies

Listening: Listening to interviews of specialists / Inventors in fields (Subject specific)

Speaking: Brainstorming. (Mind Mapping). , Small group discussions (Subject- Specific)

Reading: Longer Reading text.

Writing: Essay Writing (250 words)

Vocabulary: Register specific - Incorporated into the LSRW tasks

Unit IV: Presentation Skills

Listening: Listening to lectures.

Speaking: Short talks.

Reading: Reading Comprehension passages

Writing: Writing Recommendations, Interpreting Visuals inputs

Vocabulary: Register specific - Incorporated into the LSRW tasks

Unit V: Critical Thinking Skills

Listening: Listening comprehension- Listening for information.

Speaking: Making presentations (with PPT- practice).

Reading: Comprehension passages –Note making.

Comprehension: Motivational article on Professional Competence, Professional

Ethics and Life Skills)

Writing: Problem and Solution essay– Creative writing –Summary writing

Vocabulary: Register specific - Incorporated into the LSRW tasks

REFERNCES:

Text Book: English for Physical Sciences - TANSICHE

The logo for the Department of Commerce features a dark blue background with several overlapping geometric shapes in shades of orange and yellow. The text 'DEPARTMENT OF COMMERCE' is written in a bold, blue, sans-serif font, centered within one of the yellow shapes.

**DEPARTMENT
OF
COMMERCE**

COURSES

- **Intelligence for Excellence**
- **Practical Psychology**
- **Tally Essential Level 2**
- **Introduction to Digital Marketing**
- **Practical Approach to Digital Marketing**

Intelligence for Excellence

Unit-I Self Intelligence 6 Hrs

Intelligence: Definition and Meaning – Intelligence cycle- Self Intelligence: Personality - Strategic thinking - Lateral Thinking- Emotional Intelligence: Self awareness - Motivation – Self regulation- Social awareness – Empathy - Decision making: meaning-methods- types and steps in making effective decision making. \

Unit-II Multiple Intelligence 6 Hrs

Meaning and types of Multiple intelligence- Successful Intelligence Meaning and types of Successful Intelligence-Creative Intelligence- Practical Intelligence -Analytical Intelligence.

Unit-III Interpersonal intelligence 6 Hrs

Definition- Meaning and development of interpersonal intelligence – Interpersonal intelligence and career advancement- Negotiation: Definition and meaning – Principles involved in negotiation – methods of negotiation- Conflict: Definition and meaning – sources of conflicts – types of conflicts - conflict management; Change: Definition and meaning— Types of change – Handling of change – Balancing work and Life.

Unit-IV Social and Spiritual intelligence 6 Hrs

Social Intelligence: Meaning and Dimensions of Social Intelligence- Situation- Presence – Authenticity – Clarity-Empathy -Spiritual Intelligence: Meaning-Competencies and skills of spiritual intelligence.

Unit-V Environmental Intelligence 6 Hrs

Understanding and caring of Natural Resources- Food- Land- Forest Mineral- Water and Energy- Pollution: Types: Air Pollution, Water Pollution, Noise Pollution, Thermal and Radiation; Specific Absorption Rate (SAR) values; Issues affecting environment: Population growth – Deforestation- Globalization - Sustainable development: meaning, process, concrete action plans for sustainability.

Text Books

1. Karl Albrecht ,” Social Intelligence: The new science of Success”, John Wiley & Sons,2006
2. Robert J Sternberg,” Successful Intelligence” Magna Publishing Co Ltd, 2000

Reference Books

1. Dorathy A Sisk,” Spiritual Intelligence “,Creative Education Foundation,2001
1. Daniel Goleman,” Emotional Intelligence”, Bantom Books,1995

Practical Psychology

UNIT - I PERSONALITY 8 Hrs

Personality: Meaning, Types Traits: Physical, Mental, Emotional, Social; improving personality.

UNIT - II MAKING THE FIRST IMPRESSION 8 Hrs

Remember names, Smile, Appealing to self expression, listening to others, Being empathetic.

UNIT - III HANDLING PEOPLE 8 Hrs

Meaning, Need Techniques: Appreciation, Criticism, Avoid Flattery, Avoid arguments and Fault finding.

UNIT - IV INTERPERSONAL SKILLS 8 Hrs

Meaning, Importance, Elements: Ability to handle diverse roles, Altruism, Negotiation, Handling conflicts, Developing skills: Role play, Behaviour modelling, Structured insight.

UNIT – V INTERACTIVE SKILLS 8 Hrs

Meaning, Nature, Types, Transaction Analysis: Ego states, Types of transactions.

REFERENCE BOOKS

1. Feltham, Colin, and Windy, 2004, “Dictionary of Counseling”, Second Edition, John Wiley and Sons, New Delhi.
2. Narayana Rao S and Sahajpal P, 2012, “Counseling and Guidance”, Third Edition, Tata Mc Graw Hill, New Delhi.
3. Nayak A.K, 2012, “Guidance and Counseling”, First Edition, APH Publishing Corporation, New Delhi.
4. Dr.S.S.Khanka, 2012, Organisational Behaviour, Reprint, S.Chand & Company Ltd, New Delhi.
5. M.R.Kopmeyer, 2003, ‘Here is help’ UBS Publishers

Tally Essential Level 2

UNIT I Fundamentals of Accounting (10 Hrs)

Introduction – Accounting Terms – Accounting Assumptions, Concepts and Principles – Double Entry System of accounting – Types of accounts – The Golden Rules of Accounting – Source Documents of Accounting – Recording of Business Transactions – Ledger – Trail Balance – Subsidiary books – Financial Statements – Trading and Profit and Loss Accounts – Balance sheet.

UNIT II Maintaining Charts of Accounting in Tally ERP 9 (10 Hrs)

Introduction – Company Creation – Company Features and configurations – Charts of accounts – Ledger creation – Group creation – Displaying group and ledger – Deletion of groups and ledgers.

Maintaining Stock Keeping Units (SKU):

Introduction – Inventory masters in Tally ERP 9 - Creation Inventory Masters – Reports.

UNIT III Recording day to day Transactions in Tally ERP 9 (10 Hrs)

Introduction – Business Transactions – Source Document or Voucher – Recording transactions in Tally ERP 9 – Accounting vouchers. **Accounts Receivable and Payable Management:**

Introduction – Maintaining bill wise details – Activation of maintain bill wise details feature – New reference – Against reference – Advance – on account – Stock category Report – Changing the Financial year in Tally ERP 9

UNIT IV Management Information System (MIS) (10 Hrs)

Introduction – Advantages of Management Information System – MIS reports in Tally ERP 9 – Trail balance – Balance Sheet – Profit and Loss account – Cash flow statement – Ratio analysis – Books and Reports.

UNIT V Getting Started with GST (10 Hrs)

Introduction – Enabling GST and Defining Tax Details – Transferring input tax credit to GST – Intrastate supply of goods – Interstate supply of goods – Return of goods – Suppliers inclusive of tax – Defining tax rates at master and transactions levels – GST Report – Input tax credit set off – GST tax payment – Exporting GSTR -1 return and uploading in GST portal – Accounting of supply services -Accounting Exempted Services. **Recording Vouchers with TDS (Tax Deducted at Source):** Introduction – Basic concepts of TDS – TDS in Tally ERP 9 – Activation of TDS features in Tally ERP 9 – TDS statutory masters – Configuring TDS at group level – Configuring TDS at ledger level – Booking of Expenses in Purchase Voucher – TDS Report.

Introduction to Digital Marketing

UNIT 1 INTRODUCTION TO DIGITAL MARKETING (6 Hours)

Digital marketing – Meaning, Definition, Objectives-Importance of digital marketing - Difference between traditional and digital marketing - recent trends and current scenario of the industry - digital marketing tools -digital marketing to increase sales-competitive analysis -Case studies on digital marketing strategies. Website Planning and Creation- website tool to generate leads, increase their credibility among consumers – Basic structure of a website – commercial websites –personal website and Blogs.

UNIT 2 SEARCH ENGINE OPTIMISATION (SEO) (6 Hours)

Search Engine Optimisation - search engine's results page (SERP) - various search engines and their algorithms -SEO like on-page and off-page optimisation, keywords research, meta tags, meta description & link building. Search Engine Marketing – Objectives, Functions, Advantages- Problems - SEM activities via Google Ads platform - search volume, cost-per- click (CPC), customer lifetime value (CLV) and other such metrics - ad copy, URL, ad description and call-to-action (CTA).

UNIT 3 SOCIAL MEDIA MARKETING (6 Hours)

Social Media Marketing (SMM) – Need & Importance - social media strategies on platforms such as Facebook, Twitter, Instagram, YouTube, LinkedIn, Pinterest, Google+, Snapchat and TikTok - Ccost-Per-Click (CPC), Cost-Per-View (CPV), Cost-Per-Impression (CPM) -case studies on successful social media strategies . Mobile Marketing – apps- app installations- analyze app metrics - app store optimisation (ASO). Besides this, -app advertising, in-app messaging and push notification.

UNIT 4 CONTENT STRATEGIES (6 Hours)

Content Marketing - a target audience – Fundamentals of digital -content validation – Branding-social media content calendar for a brand. Web Analytics – meaning, importance, advantages –methods of Web Analytics -website visitor's behaviour-Measurement- website visitor's actions via Google Analytics bounce rate, page view, session time, etc. - Analytics to decode a website's audience - behaviour and acquisition reports.

UNIT 5 DIGITAL MEDIA PLANNING AND BUYING (6 Hours)

Media Planning – Meaning, importance- Steps in Media Planning- Digital Media –Types, Uses - Selection of appropriate Media- Media Audit- cost-per-install (CPI), cost-per-order (CPO), cost-per-acquisition (CPA), click-through-rate (CTR), etc. - platform-based Ad space, and media planning and budgeting. Web Remarketing - Web Remarketing - Remarketing process – Need and Importance, Advantages -remarketing and remarketing list.

REFERENCE BOOKS

1. Vandana Ahuja," Digital Marketing", Oxford Universitypress, UK,2018
2. Romi Sainy and Rajendra Nargundkar," Digital Marketing Cases from India", Notion Press Chennai,2018
3. Social Beat(Digital Agency)," Digital Marketing Insights", Notion Press Chennai,2018

Practical Approach to Digital Marketing

UNIT 1 DIGITAL MARKETING FUNDAMENTALS (6 Hours)

Concept of Digital Marketing-Digital Marketing v/s Traditional Marketing – Digital Marketing Mix and 4 Ps – Functions of Digital Marketing -Inbound vs Outbound Marketing- Content Marketing & Importance of Content Development in Digital Marketing - Understanding Traffic - Understanding Leads - Strategic Flow for Marketing Activities – Corporate Success Stories.

UNIT 2 FACEBOOK MARKETING FUNDAMENTALS (6 Hours)

Profiles and Pages - Business Categories- Getting Assets Ready -Creating Facebook Pages - Page Info and Settings - Page Custom URL - Invite Page Likes -Featured Video -Pin Post and Highlights - Scheduling Posts - Facebook Events - Reply and Message- Facebook Insights Reports - Competitor's Page - Ban User on Page- Connect with Twitter.

UNIT 3 FACEBOOK AD CAMPAIGNS (6 Hours)

Organic v/s Paid- Defining Ad Objective- Performance Matrix- Ad Components- Designing Creative Image- Facebook Ad Structure- Setting Up Facebook Ad Account- Create Ad – Targeting- Create Ad – Budgeting- Create Ad – Creative- Content and CTA- Boosting Page Posts- Page Promotion- Video Promotion - Similar Ads and Audiences- Tracking Pixels Code- Remarketing - Website Visitors- Custom Audiences - Look Alike- Custom Audience - Saved Group- Managing and Editing Ads- Ad Reports and Ad Insights- Billing and Account.

UNIT 4 GOOGLE ADWORDS BASICS (6 Hours)

Understanding Adwords - Google Ad Types- Pricing Models- PPC Cost Formula -Ad Page Rank - Billing and Payments - Adwords User Interface -Keyword Planning- Keywords Control- Creating Ad – Campaigns -Creating Text Ads- Creating Ad Groups -Bidding Strategy for CPC - Practical Examples.

UNIT 5 YOUTUBE MARKETING FUNDAMENTALS (6 Hours)

Video Flow- Google Pages for YouTube Channel Verify Channel -Webmaster Tool – Adding Asset-Associated Website Linking -Custom Channel URL -Channel ART -Channel Links - Channel Keywords -Branding Watermark -Featured Contents on Channel -Channel Main Trailer -Uploading Videos -Uploading Defaults -Creator Library.

REFERENCE BOOKS

1. Tracy L.Tuten and Michael R.,” Social Media Marketing”. SAGE Publications Private Ltd.,New Delhi.,2017
2. Sorav Jain , “101 Content Marketing Tips on Social Media”, Notion Press Chennai,2018
3. Dan Zarrela and Zarrela,” The Facebook Marketing Book”, O' Reilly Publications

Professional English for Commerce And Management

UNIT 1 Basics of professional English communication (8 Hrs)

Definition, Reading, Skimming, Scanning. Writing: Methods: Inductive, Deductive, Exposition, Linear, Interrupted, Spatial & Chronological; Listening: Active, Passive, Thinking Strategies, Positive and logical Thinking.

UNIT 2 Components of Professional English (8 Hrs)

Vocabulary building: Select words, Word Formation, Root words from foreign languages & their use in English, Prefixes & Suffixes, Synonyms, Antonyms, Homophones, Requisites of Sentences.

UNIT 3 Basics of Professional English (8 Hrs)

Forms- Business writing- Purchase & sales letter, Drafts: Official writing- Letter, Notice, Agenda, Minutes of meeting, Sentence Structure, Techniques of writing

UNIT 4 Common grammatical errors & Technical style (8 Hrs)

Correct Usage- Noun, Pronoun, Agreement, Prepositions. Technical Style- Features, Choice of word. Sentence-Defining & classifying, length of paragraph, writing of introduction & conclusion.

UNIT 5 Presentation strategies & Oral Communication (8 Hrs)

Audience, Modulating Style & content, speaking with Confidence, Kinesics, Paralinguistic Features of voice Dynamics: Pitch, Intonation, Stress & Rhythm, Conversation & dialogue.

Text Book:

1. Arthur Mckeown Ros Wright ,” Professional English” Cambridge University Press ,2011

REFERENCE BOOKS

1. Norman Lewis , “Word Power Made Easy “,W.R.Goyal Pub. & Distributers,2009
2. Krishna Mohan Meera Bannaerjee ,” Developing Communication Skill”, Macmillan India Ltd., ,1990



**DEPARTMENT
OF
MANAGEMENT**

COURSES

- **Basics of Food Science**
- **Wealth Management**
- **Office Automation**
- **Excel for Excellence**

Basics of Food Science

UNIT – I INTRODUCTION TO NUTRITION (8 Hours)

Introduction to nutrition: Definition- Food as a source of nutrients-Functions of foods -Inter relationship between nutrition and health-visible symptoms of good health

UNIT – II FOOD GUIDE (8 Hours)

Food guide- basic five food groups - usage of food guide- Use of food in body: digestion, absorption, transport, utilization of nutrients in the body.

UNIT – III WATER AS A NUTRIENT (8 Hours)

Water as a nutrient- function- sources- requirement-structure and water balance -effect of deficiency

UNIT – IV MACRONUTRIENTS (8 Hours)

Carbohydrates: composition- classification-sources, functions-structure- **Lipids:** classification-composition- saturated& unsaturated fatty acids- food sources- functions of fats-**Proteins:** composition- classification-sources-functions-denaturation and protein deficiency- **Amino acids:** classification- modification of food protein through processing and storage.

UNIT – V MICRONUTRIENTS (8 Hours)

Minerals: functions-Sources-Bio-availability- deficiency diseases caused by minerals-**Vitamins:** Classification-units of measurement- sources- functions and deficiency diseases caused by vitamins.

Reference Books:

1. Adams, M.R and Mass, M.D. - Food Microbiology - New Age International Pvt. LTd.- 2008
2. Banwart, G.T.- Basic Food Microbiology- CBS Publications:New Delhi-2003

Wealth Management

Unit I: Introduction to Wealth Management (8 Hours)

Meaning of Wealth Management, Scope, Process and Needs of Wealth Management; Wealth Manager- Meaning, Duties of Wealth Manager.

Unit II: Insurance Planning (8 Hours)

Meaning, Basic Principles of Insurance, Functions and Characteristics, Different Types of Insurance Policies.

Unit III: Investment Planning (8 Hours)

Investment – Meaning, Types of Investment, Risks related to investments, Features and importance of Investment, Investment alternatives.

Unit IV: Retirement Planning (8 Hours)

Understanding of Different Salary Components, Introduction to Retirement Planning, Purpose and Need of Retirement Planning, Retirement Benefits plans.

Unit V: Tax Savings Schemes (8 Hours)

Tax saving schemes – Meaning and concepts, Importance and benefits of tax saving, Various Income Tax Savings Schemes.

Reference Books:

1. S.K.Bagchi- Wealth Management- Jaico Publishing House-2009
2. Dun and Bradstreet- Wealth Management- McGraw Hill Education-2017
3. Harold Evensky- The New Wealth Management- Wiley Publication-2011

Office Automation

Unit I

(8 Hours)

Operating System (Windows): Windows concepts, Features, Windows Structure, Desktop, Taskbar, Start Menu, My Computer, Recycle Bin, Windows Accessories- Calculator, Notepad, Paint, and Word pad, Character Map, Windows Explorer.

Unit II

Word Processing:

(8 Hours)

MS Word: Features, Creating, Opening and Saving Documents in Word, Interface, Toolbars, Ruler, Keyboard 100 Shortcut, Editing, Previewing, Printing, & Formatting a Document, Advanced Features of MS Word, Find & Replace, Using Thesaurus, Using Auto- Multiple Functions, Mail Merge, Handling Graphics, Tables & Charts, Converting a word document into various formats.

Unit III

(8 Hours)

Worksheet- MS-Excel: Worksheet basics, creating worksheet, entering into worksheet, heading information, data, text, dates, alphanumeric values, saving worksheet, Opening and moving around in an existing worksheet, Toolbars and Menus, Keyboard shortcuts, Working with single and multiple workbook, working with formulae & cell referencing, Auto sum, Coping formulae, Previewing & Printing worksheet, Graphs and charts, Database, Creating and Using macros.

Unit IV

(8 Hours)

MS Power Point: Creating slide show with animations. Auto content Wizard, creating a blank presentation, auto layout, Power point screen: screen layout and Views, insert a new slide, applying design template, changing slide layout, reordering and hiding slides, slide show and editing custom slide. Resizing a text box ,Text box properties, Delete a text box, Bulleted lists, Numbered lists, Adding notes ,Video and Audio, AutoShapes, WordArt, Backgrounds, Slide animation preview, Slide master Header and footer, Slide numbers Date and time.

Unit V

(8 Hours)

Database Basics: Databases, Records Fields, data types, Database Types · Library Catalogues
Intranet: Intranet tools: E-mail: Anatomy of e-mail,e-mail address, finding e-mail address, adding signature, attaching files, opening attachments, managing e-mail account.

Reference books:

1. Professional Office Procedure by Susan H Cooperman, Printice Hall
2. Information Technology:Principles , Practices and Oppertunities by James A Senn, Printice Hall
3. Technology and Procedures for Administrative Professionals by Patsy Fulton-Calkins, Thomson Learning

Excel for Excellence

Unit I : Workbook Options and Settings (8Hours)

Navigate in Worksheets and Workbooks - Format Worksheets and Workbooks- Customize Options and Views for Worksheets and Workbooks.

Unit II : Operations with Formulas and Functions (8Hours)

Summarize Data by using Functions- Perform Conditional Operations by using Functions - Format and Modify Text by using Functions.

Unit III : Create Tables (8Hours)

Create and Manage Tables -Manage Table Styles and Options - Filter and Sort a Table Tables – Adding, editing, deleting tables – Working within tables – Adding, deleting, modifying rows and columns – merging & splitting cells.

Unit IV : Charts and Objects (8Hours)

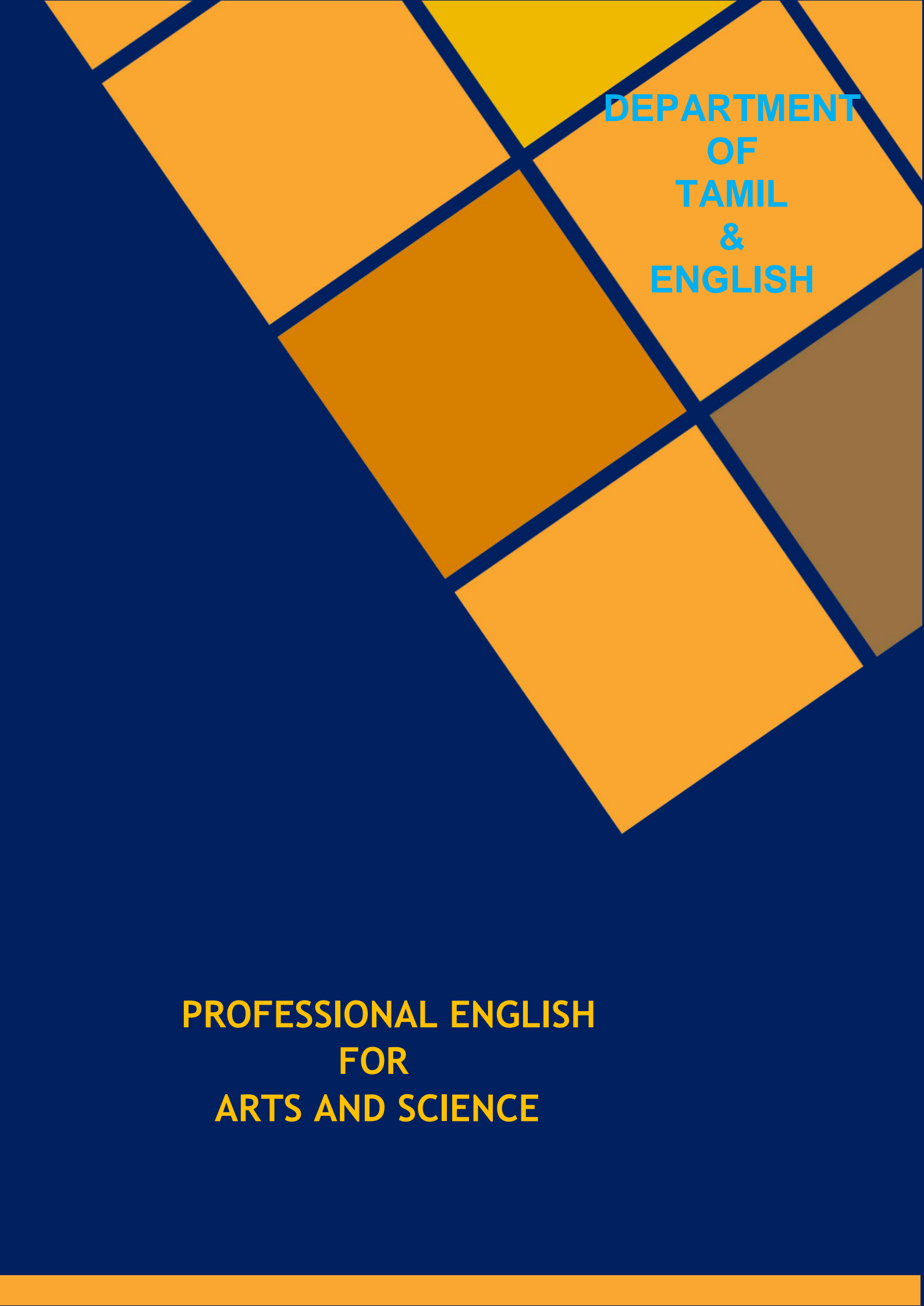
Elements of an Excel Chart – Selecting data to a chart – Types of chart – chart wizard – Formatting chart elements – Editing a chart – Printing charts - Format Charts - Insert and Format Objects.

Unit V : Sort, Filter, Subtotal and Pivot Table (8Hours)

Introduction – Sort – Filter – Subtotal - PivotTables- Using formulas for quick Calculations

Reference Books:

1. [Michael Alexander](#) and Richard Kusleika-Excel 2019 Bible-Wiley Publishers-2019
2. William Fischer– Excel :Quick Start Guide from Beginner to Expert- BPB Publications-2016.



**DEPARTMENT
OF
TAMIL
&
ENGLISH**

**PROFESSIONAL ENGLISH
FOR
ARTS AND SCIENCE**

Professional English for Arts and Social Science

UNIT 1: COMMUNICATION

Listening: Listening to instructions

Speaking: Telephone etiquette and official phone conversations

Reading: Short passages (3 passages, one from each – History, Sociology/Social Work/ Psychology, English & Tamil Literature)

Writing: Letters and Emails in professional context

Grammar in Context:

- Wh and Yes/No questions
- Question tags
- Imperatives

6. Vocabulary: Word formation

- i) Creating antonyms using Prefixes
 - ii) Intensifying prefixes (E. g inflammable)
 - iii) Changing words using suffixes
- A) Noun Endings
 - B) Adjective Endings
 - C) Verb Endings

UNIT 2: DESCRIPTION

Listening: Listening to process description

Speaking: Role play

Formal:

- With faculty and mentors in academic environment
- Workplace communication

Informal:

- With peers in academic environment
- Workplace communication

Reading: Reading passages on social issues, psychological well-being, literary achievements/contributions

Writing: Writing sentence definitions (e.g. monarchy) and extended definitions (e.g. government)

Picture Description – E.g. Description of natural calamities and their impact on people. (100 words)

Grammar in Context: Connectives and linkers.

Vocabulary: Synonyms (register)

Compare & contrast expressions.

UNIT 3: NEGOTIATION STRATEGIES

Listening: Listening to interviews of specialists / inventors in fields (Subject specific)

Speaking: Brainstorming (mind mapping). Small group discussions (subject- specific)

Reading: Longer Reading text (Comprehensive passages)

Writing: Essay Writing (250 word essay on topics related to subject area like education of the girl child, book reviews, adolescence and youth)

Grammar in Context:

- Active voice & Passive voice
- If conditionals

Vocabulary: Collocations –Phrasal verbs

UNIT 4: PRESENTATION SKILLS

Listening: Listening to presentations, listening to lectures, watching documentaries (discovery / history channel videos with subtitles)

Speaking: Short speech

Making formal presentations (PPT)

Reading: Reading a written speech by eminent personalities in the relevant field /short poems / short biography.

Writing: Writing Recommendations

Interpreting visuals - charts / tables/flow diagrams/charts

Grammar in Context: Modals

Vocabulary: Single word substitution (register)

UNIT 5: CRITICAL THINKING SKILLS

Listening - Listening to advertisements/news and brief documentary films (with subtitles)

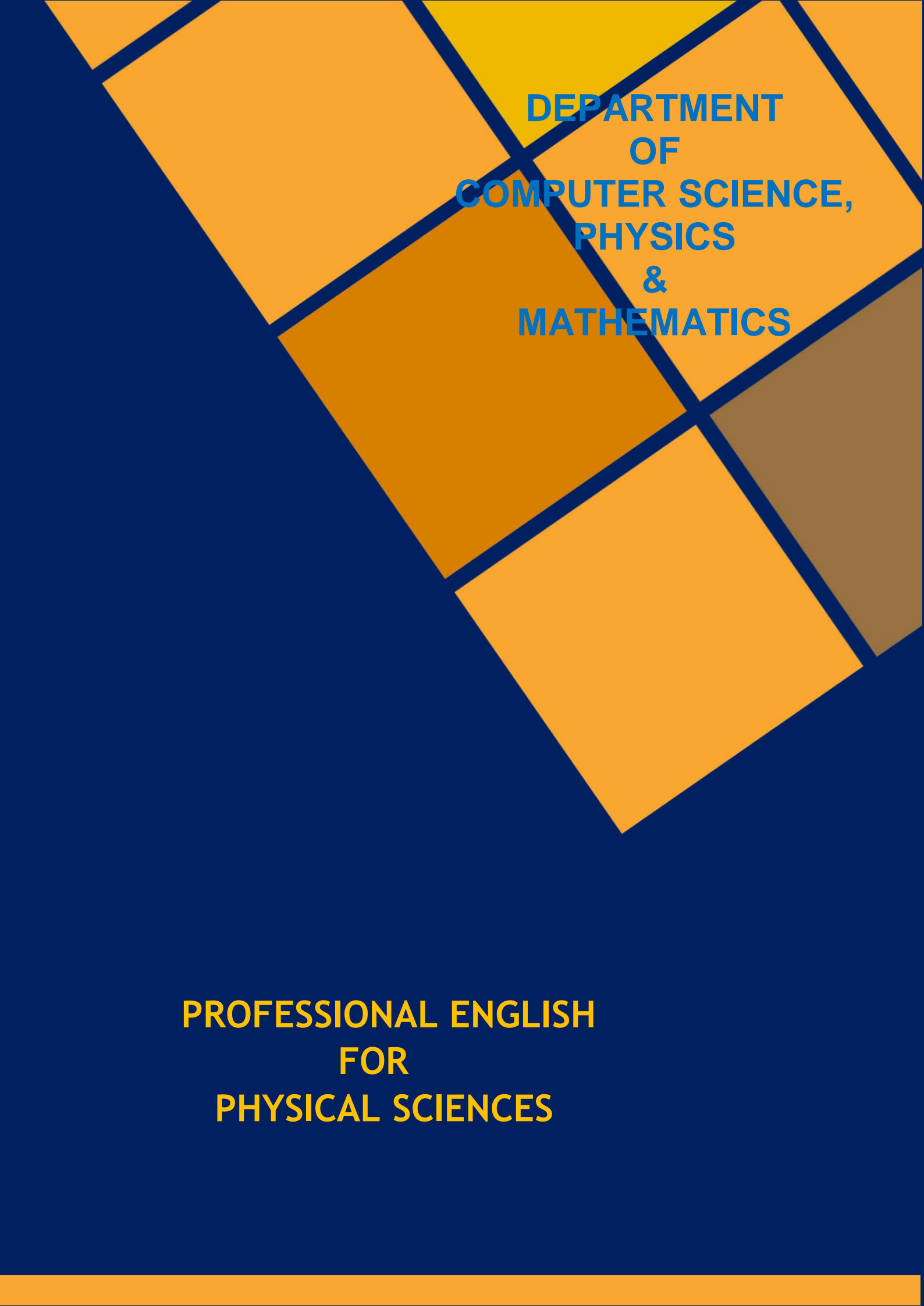
Speaking – Problem - Solution Speeches (Brief speeches). E.g. should the use of public transport be promoted to curb pollution?

Reading: Motivational stories on Professional Competence, Professional Ethics and Life Skills (subject-specific)

Writing Studying problem and finding solutions (Essay in 200 words)

Grammar: Framing simple sentences

Vocabulary: Fixed expressions



**DEPARTMENT
OF
COMPUTER SCIENCE,
PHYSICS
&
MATHEMATICS**

**PROFESSIONAL ENGLISH
FOR
PHYSICAL SCIENCES**

Professional English for Physical Sciences

UNIT I: COMMUNICATION

1. Listening: Listening to instructions
2. Speaking: Telephone etiquette and official phone conversations
3. Reading: Short passages (3 passages, one from each—Physics, Chemistry, Mathematics/Computer Science)
4. Writing: Letters and Emails in professional context
5. Grammar in Context: •Wh and Yes/No questions •Question tags •Imperatives
6. Vocabulary: Word formation
 - i) Creating antonyms using Prefixes
 - ii) Intensifying prefixes (E.g inflammable)
 - iii) Changing words using suffixes
 - A) Noun Endings
 - B) Adjective Endings
 - C) Verb Endings

UNIT II: DESCRIPTION

1. Listening: Listening to process description
2. Speaking: Role play Formal:
 - With faculty and mentors in academic environment
 - Workplace communication Informal:
 - With peers in academic environment
 - Workplace communication
3. Reading: Reading passages on products, equipment and gadgets
4. Writing: Writing sentence definitions (e.g. computer) and extended definitions (e.g. artificial intelligence) Picture Description—Description of Natural Phenomena (100 words)
5. Grammar in Context: Connectives and linkers. Vocabulary: Synonyms (register)- Compare & contrast expressions.

UNIT III: NEGOTIATION STRATEGIES

1. Listening: Listening to interviews of specialists / inventors in the field (Subject- specific)
2. Speaking: Brainstorming (mind mapping). Small group discussions (subject - specific)
3. Reading: Longer Reading text. (Comprehensive passages)
4. Writing: Essay Writing (250 word essay on topics related to subject area, Like pollution, use of pesticides in cultivation, merits and demerits of devices like mobile phones, merits and demerits of technology in development)
5. Grammar in Context:
 - Active voice & Passive voice
 - If conditional
 - Vocabulary: i) Collocations ii) Phrasal verbs

UNIT IV: PRESENTATION SKILLS

1. Listening: Listening to presentations, listening to lectures, watching documentaries (discovery / history channel videos with subtitles)
2. Speaking: Short speech. Making formal presentations (PPT)
3. Reading: Reading a written speech by eminent personalities in the relevant field /short poems / short biography.
4. Writing: Writing Recommendations Interpreting visuals-charts/ tables/flow diagrams
5. Grammar in Context: Modals Vocabulary: Single word substitution(register)

UNIT V: CRITICAL THINKING SKILLS

1. Listening: Listening to advertisements/news and brief documentary films (with subtitles)
2. Speaking: Problem-Solution Speeches (Brief speeches). E.g. Should the use of public transport Be promoted to curb pollution?
3. Reading: Motivational stories on Professional Competence, Professional Ethics and Life Skills (subject- specific)
4. Writing: Studying problems and finding solutions (Essay in 210 words)
5. Grammar: Framing simple sentences
6. Vocabulary: Fixed expressions

REFERENCES:

Text Book:

English for Physical Sciences - TANSICHE



**DEPARTMENT
OF
COMMERCE
&
MANAGEMENT**

**PROFESSIONAL ENGLISH
FOR
COMMERCE AND MANAGEMENT**

Professional English for Commerce and Management

Unit I: (8 Hours) Basics of Professional English Communication:

Definition, Reading, Skimming, Scanning. Writing: Methods: Inductive, Deductive, Exposition, Linear, Interrupted, Spatial & Chronological; Listening: Active, Passive, Thinking Strategies, Positive and logical Thinking.

Unit II: (8 Hours) Components of Professional English:

Vocabulary building: Select words, Word Formation, Root words from foreign languages & their use in English, Prefixes & Suffixes, Synonyms, Antonyms, Homophones, and Requisites of Sentences.

Unit III: (8 Hours) Basics of Professional English:

Forms- Business writing- Purchase & sales letter, Drafts: Official writing- Letter, Notice, Agenda, Minutes of meeting, Sentence Structure, Techniques of writing.

Unit IV: (8 Hours) Common grammatical errors & Technical style:

Correct Usage- Noun, Pronoun, Agreement, Prepositions. Technical Style- Features, Choice of word. Sentence-Defining & classifying, length of paragraph, writing of introduction & conclusion.

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Audience, Modulating Style & content, speaking with Confidence, Kinesics, Paralinguistic Features of voice Dynamics: Pitch, Intonation, Stress & Rhythm, Conversation & dialogue.

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