

SCHOOL OF LIBERAL STUDIES  
PANDIT DEENDAYAL PETROLEUM UNIVERSITY  
B.A. / B.B.A. (Hons.)

<b>SEMESTER I</b>				
<b>Sr. No.</b>	<b>Title of the Course</b>	<b>Course Credits</b>	<b>Course Code</b>	<b>Hours per week</b>
1	English Communication (Core)	3	A101	5
2	Basic Mathematics (Core)	3	A102	4
3	Science in Everyday Life (Core)	3	A103	4
4	Introduction to Computer Science (Core)	3	A104	5
5	Leadership (Core)	3	A106	3
6	Understanding of Theatrical Arts (Core)	3	A107	5
7	French - 1 (Core)	3	A108	5
8	Chinese - 1 (Core)	3	A109	5
9	Japanese - 1 (Core)	3	A110	5

## 1. English Communication

Course Credits: 03

### Course Objective:

The course aims to impart understanding of the fundamental elements of communication, its process, interpersonal communication and communication in groups of different organizational settings.

The course caters to know and understand different practices of verbal and non-verbal communication along with practices on listening, reading and writing skills.

### Learning Outcomes:

At the end of the programme, the participants should be able to:

1. Communicate their ideas with clarity and accuracy in expression; and understand the purpose of communication.
2. Analyze and appreciate effective human communication

### Course Content:

#### Unit 1: Theories of Communication

- Nature and Significance of Communication
- Nature and Significance of Listening Skills
- Process of Communication
- Barriers to Communication
- Ways to overcome the Barriers

#### Unit 2: Speaking & Presentation Skills

- Individual Presentation
- Group Presentation
- Group Discussion
- Art of Debating
- Extempore

#### Unit 3: Reading Skills

- Strategies for Reading
- Reading Comprehension: Prose
- Reading Comprehension: Verse
- Reading Graphics and Maps
- Note Making from Newspaper

✚ Unit 4: Writing Skills

- Creative Writing
- Essay Writing (sharp focus upon Argumentative & Descriptive Essays)
- Event Report Writing
- Précis Writing
- Resume Writing

✚ Unit 5: Appreciation of Arts

- Strategies for Appreciating Art Forms
- Film Appreciation
- Appreciation of Dance/Music Performance
- Appreciation of Painting/Sculpture
- Appreciation of Historical Monument

**Recommended Books:**

- Bovee, Courtland, John Thill & Mukesh Chaturvedi. Business Communication Today. Delhi: Dorling kindersley, 2009.
- Kaul, Asha. Business Communication. Delhi: Prentice-Hall of India, 2006.
- Monippally, Matthukutty M. Business Communication Strategies. New Delhi : Tata McGraw-Hill Publishing Company Ltd., 2005.
- Sharma, Sangeeta and Binod Mishra. Communication Skills for Engineers and Scientists. New Delhi: PHI Learning Pvt. Ltd., 2009.

- **Note: Relevant reading literature will be made available from time to time.**

**Evaluation Method:**

- Mid Semester Examination: 25%
- End Semester Examination: 50%
- Internal Evaluation: 25%
  - Internal Quiz on Communication Theories
  - Individual Mock-Interview
  - Writing Assignments
  - Group Presentations
  - Group Discussion

## 2. Basic Mathematics

Course Credits: 03

### Course Objective:

Calculus was first invented to meet the mathematical needs of scientists of the sixteenth and seventeenth centuries, needs that mainly mechanical in nature. Nowadays it is a tool used almost everywhere in the modern world to describe change and motion. Its use is widespread in science, engineering, medicine, business, industry, and many other fields. Calculus also provides important tools in understanding functions and has led to the development of new areas of mathematics including real and complex analysis, topology, and non-euclidean geometry.

The objective of this course is to introduce the fundamental ideas of the differential and integral calculus of functions of one variable.

### Learning Outcomes:

At the end of the programme, the participants should be able to: have a clear understanding of the ideas of Calculus as a solid foundation for subsequent courses in mathematics and other disciplines as well as for direct application to real life situation.

## PRECALCULUS

### Preliminaries

1. Real Numbers and Intervals on the Real Line, Absolute Value
2. Complex Numbers: Argand Diagram, Algebra of Complex numbers, Complex Conjugate, Polar form of a Complex Number
3. Inequalities, Lines Circles and Parabolas, Functions and their Graphs, Types of Functions: Hyperbolic, Polynomial and Rational Functions, Even and Odd Functions, Monotone Functions, Identifying Functions, Shifting and Scaling graphs

### Trigonometry

1. Angular Measurement
2. Trigonometrical Ratios of Allied Angles
3. Compound Angles
4. Multiple Angles

5. Inverse Circular Functions
6. Relation between the Sides and Angles of a triangle
7. Solutions of Triangles
8. Simple Problems on Heights and Distances

**Calculus**

1. Limits and Continuity
2. Differentiation
3. Applications of derivatives
4. Integration, Techniques of Integration, Applications of integration

**Reference Books:**

1. Mathematics by Qazi Zameeruddin & Vijay Khanna (Vikas Publication)
2. An Introduction to Business Mathematics by V. Sundareshan and S.D. Jeyaseelan.  
Tamil Nadu, Paperback Edition: 2010.

**Evaluation Method:**

- Mid Semester Examination: 25%
- End Semester Examination: 50%
- Internal Evaluation: 25%

### 3. Science in Everyday Life

Course Credits: 03

#### Objective:

1. To correlate the principles and laws of science in everyday life.
2. To understand the working and scientific principles of substances used in everyday life.

#### Learning Outcomes:

At the end of this course, students would be able to understand fundamental principles of science in everyday life. Course will not only provide basic knowledge required to understand science underlying everyday life.

#### UNIT I:

##### Mechanics

- Measurement Units
- Base and Derived Units
- Vector and Scalar Quantities
- Newton's Laws of Motion
- Kinematic Equations for constant Acceleration
- Universal Law of Gravity
- Orbital and Escape Velocity

##### Heat and Temperature

- Concept of Heat and Temperature
- various Temperature Scales and their Inter Conversion
- Energy Transfer Mechanisms (conduction, convection and radiation)
- Isothermal and Adiabatic Process
- Working Principle of Refrigerators
- Heat Capacity:
  - Importance for Monsoon/Latent Heat/Pressure/  
Boiling Point and Effect of Pressure

## **UNIT II:**

### **Basic Electrical and Electronic Devices**

- Working Principle of Heater
- Bulb and Tube Lights
- Properties of Conductor
- Semiconductor and Insulators and their use
- Working Principle of LED

### **Light**

- Working principle of Laser
- White Color of Light
- Formation of Rainbow
- Working Principle of Telescope

## **UNIT III:**

### **Basic Chemistry**

- Acid and bases / pH Scale
- Acid-base Titration
- Adulteration
- Oils and Fats
- Chromatography
- Water Properties
- Different Water Sources and Contaminations
- Salinity / hardness of the water

### **Introduction to Biomedical Sciences**

- Introduction to Electrocardiography (ECG)
- X-ray
- Magnetic Resonance Imaging (MRI)
- Ultrasound
- Blood Pressure
- Blood Groups
- Basic Instruments

## **UNIT IV:**

### **Sun and Stars**

- Big Bang
- Formation of Stars and Death

- Solar System
- Source of Solar Energy
- Aurora Formation

### **Earth's Atmosphere**

- Atmosphere and its Constituents
- Vertical Distribution of Temperature in the Atmosphere
- Cloud and Rain Formation

### **Practical:**

1. Screw Gauge
  - a. To measure diameter of a thin wire
2. Vernier Callipers
  - a. To measure diameter and depth of a given object
3. Viscosity Measurement
  - a. To determine the viscosity of glycerine
4. Thermal Expansion of Solid Bodies
  - a. Measuring the linear thermal expansion of a brass tube as a function of the overall length
5. Thermal Conductivity by heat-flow Measuring Plate
  - a. To measure the thermal conductivity of different building materials by reference method based on the principle of the heat-flow measuring plate
6. Heat Pump
  - a. Demonstration of working principle of heat pump
7. To determine the strength of given unknown acid solution (Hydrochloric acid, x N HCl) using standard solution of 0.1N Sodium hydroxide solution (NaOH)
8. To measure the pH, total dissolved solids (TDS) and presence of chloride in the given different water samples
9. To separate components present in plant pigment by paper chromatography

### **Reference Books**

1. Arthur Beiser, Concepts of Modern Physics by Arthur beiser, Tata McGraw Hill, 6<sup>th</sup> edition.
2. H. C. Verma, Concepts of Physics, Bharti Bhawan Publishers (2011).
3. H. C. Ohanian and J. T. Markert, Physics for Engineers and Scientists, W. W. Norton & Company, 3<sup>rd</sup> edition.
4. F. K. Lutgens and E. J. Tarbuck, The Atmosphere: An introduction to Meteorology, Prentice Hall, NY, 11<sup>th</sup> edition.
5. D. Halliday, R. Resnick and J. Walker, Fundamentals of Physics, John Wiley, 6<sup>th</sup> edition.



6. L. A. Bloomfield, How things Work, Wiley Publications, 4<sup>th</sup> edition.
7. M. C. Potter and E. P. Scott, Thermal Science, Cengage Learning India Pvt. Limited.
8. R. P. Feynman, R. B. Leighton and M. Sands, The Feynman Lectures on Physics, Pearson Publications.
9. D. Goldberg, Fundamentals of Chemistry, Mcgraw-hill Professional Publications.
10. P. Atkins, Physical Chemistry, Oxford University Press.
11. J. Kenkel, Basic Chemistry Concepts and Exercises, CRC Press.
12. P. Monk, Physical Chemistry, John Wiley Publications.
13. D. Jennings, A. Flint, B.C.H. firton and L.D.M. Nokes, Introduction to Medical Electronics Applications, Butterworth-Heinemann Publications.

**Evaluation Method:**

- Mid Semester Examination: 25%
- End Semester Examination: 50%
- Internal Evaluation: 25%

#### 4. Introduction to Computer Science

Course Credits: 03

##### Course Objective:

The course aims to provide students understanding of a role a computer can play in solving day-to-day problems.

##### Learning Outcomes:

At the end of the programme, the participants should be able to:

1. Solve problems using Visual thinking tools such as algorithm and flowchart.
2. Produce visual media using various movie making software & processes
3. Extract information from the database
4. Use Computers for different creative purposes

##### Course Contents:

1. The practical use of MS-Office
2. Computer assisted Communication
3. Computer-aided-Designs
4. Computer Animation (Requires Additional Software (e.g. dreamweaver, flash) to be installed in our lab)
5. Movie Making
6. Mat-Lab
7. Web-site Development
8. Internet Programming [Requires Additional software (e.g. .NET)]

##### Recommended Books:

- Anil Bikas Chaudhari, The Art of Programming Through Flowcharts & Algorithms  
New Delhi: Firewall Media

##### Evaluation Method:

- Mid Semester Examination: 25%
- End Semester Examination: 50%
- Internal Evaluation: 25%

## 5. Leadership

Course Credits: 03

### Objective:

To enable students to reflect on the socio-political aspects of a society and to understand the grass root problems of the Indian community. The brainstorming in the class would enable collective efforts to make the world a better place and think about Individual responsibility for the community.

### Learning Outcome:

It is expected that at the end of this course students would be able to:

1. apply their minds to the problems and challenges of the Indian society
2. find out practical and probable solutions to the challenges discussed
3. work in a team and think out of the box
4. have a sense of belongingness working towards inclusive society

### Course Contents:

1. Art of Persuasion
2. Non-Verbal Communication of Leaders
3. Inclusive Education for the better Society
4. Audit of the Country after the Independence
5. Servant Leadership
6. Leadership Shield
7. Empathy
8. Respecting Democracy and Political System
9. Motivation
10. Leadership Live Project
11. Creative Writing
12. Leadership Open Quiz

### Recommended Books:

1. Sham Lal. Indian Realities in Bits and Pieces, Rupa and Co. New Delhi 2003
2. Surendra Kumar & Pradeep Kapur. India of My Dreams, Academic Foundation, New Delhi, 2008
3. Nissam, Urlah. India: Economic, Political and Social Issues
4. Drucker, Peter and Maciariello, Joseph. 366 Days of Insight and Motivation for Getting the Right Things Done, Rutledge, 2014

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**Evaluation:**

- Mid Semester Examination: 25%
- End Semester Examination: 50%
- Internal Evaluation: 25%
  - Leadership Projects

## 6. Understanding of Theatrical Arts

Course Credits: 03

### Expected Outcomes:

- Understanding dramatic theories and history
- Understanding of dramatic techniques
- Acquaintance with inter-disciplinary theatrical arts like music, dance and drama
- Exploration of *rasas* in the Indian dramas
- Communication Skills
- Exposure to various genres of dramas
- Real experience of theatre performances

### Course Contents:

1. Introduction to Indian dramatic arts as promulgated by Bharata and the use of these techniques in today's theatre.
2. Natyasastra (the oldest treatise on dramaturgy and its relevance)
3. Exploration of the Nine Rasas  
(Shringar, Karun, Hasya, Veer, Raudra, Bhayanak, Bibhatsya, Adbhut, Shanta)
4. Introduction to various genres of Theatre
5. Orienting students to various aspects of theatre - Scripting, Acting, Direction, Designing.
6. Understanding Conflict and guiding students to develop a structure of a script based on the conflicts experienced or seen by them.
7. Contemporary Theatre
8. Inter-disciplinary approach to the Theatre
9. Two dramas to evaluate and enact:
  - I. Basic appreciation of plays – 'Aashadh Ka Ek Din' and 'Laramie Project.'
  - II. The Student Production. – 'The Key' by Dario

### Evaluation:

- Mid Semester Examination: 25%
- End Semester Examination: 50%
- Internal Evaluation: 25%

## 7. Foreign Languages:

Course Credit: 03

### A. French I

#### **Oral/Written Skills**

1. Ability to present oneself and others.
2. Comprehend and speak simple dialogues.
3. Give information about others and one own self.
4. Describe a person or situation.
5. Telephonic conversation.
6. Invite someone for party or movie.
7. Formal/informal conversation
8. Give instructions or orders or suggestions.
9. Ability to make a visiting card.
10. Ability to write, describe or provide information about a place or activities or people.
11. Ability to write a biography of a celebrity.
12. Ability to make an advertisement of newspaper.
13. Ability to write a letter.
14. Ability to write short messages and emails.
15. Ability to write short paragraphs.
16. Ability to write directions for a given address

#### **Topics**

1. Phonetics and accent
2. Basic language skills and grammar
3. Dictations
4. Grammatical concepts introduced with an activity.
5. Grammar topics:
  - a. articles (indefinite, definite, for quantity, with preposition)
  - b. verbs
  - c. Adjectives (descriptive, possessive, interrogative)
  - d. Negative sentence formation
  - e. Prepositions
  - f. Types of Question and their answers
  - g. Tenses (present, past, future)
  - h. Pronouns
  - i. Comparisons, imperative, different structures of sentences

6. Dialogue formation in groups in different given situations
7. Listening exercises
8. Comprehension (oral and written)
9. Vocabulary (numbers, months, days, nationalities, professions, activities, sports, family, time, hobbies, start and end a letter, animals, describing words, festivals, parts of body, climate, seasons, clothes and accessories, colours, French food etc.
10. Collect information about France through internet.
11. Culture of France
12. Letter, postcard, message, announcements, metrological predictions etc.

**Evaluation:**

- Mid Semester Examination: 25%
- End Semester Examination: 50%
- Internal Evaluation: 25%
  - Internal Quiz
  - Viva Examination

B. Chinese I

**Course Content:**

2. Numerals
3. Days of the week
4. Months of the year
5. Basic greetings
6. Self introduction
7. Life and Culture
8. Chinese writing ( Hanzi – Chinese characters)
9. Pronunciation (accent, intonation)
10. Introduction to Chinese Grammar
11. Sentence patterns
12. Talk about Family
13. Shopping & purchasing things at shop
14. Asking time (practicing through classroom conversation/dialogue)

**Skills Work:**

1. speaking
2. Listening
3. Learning proper Pronunciation

**Evaluation:**

- Mid Semester Examination: 25%
- End Semester Examination: 50%
- Internal Evaluation: 25%
  - Internal Quiz
  - Viva Examination



C. Japanese I

***Objectives of the Course:***

Can understand basic level of Japanese and become an international minded person by touching Japanese culture, philosophy and Japanese way of thinking.

***Deliverables:***

1. Basic Japanese words
2. Basic Grammars which are commonly used in Japan
3. Master conjugations of basic verbs/adjectives
4. Acquire a skill of reading and writing 2 different types of Japanese phonetic characters
5. Acquire better understanding about Japan and its culture, philosophy and business practices.

***Course Contents:***

- Writing and reading in Japanese phonetic letters.
- Listening to Japanese conversations.
- Communication with others using Japanese phrases (group work).

***List of Texts (if any):***

*Japanese worksheets (faculty prepares)*

***Evaluation:***

- Mid Semester Examination: 25%
- End Semester Examination: 50%
- Internal Evaluation: 25%
  - Internal Quiz
  - Viva Examination