

Courses for exchange students (undergraduate)

II semester: November 2012 to March 2013

Course in Indian languages - (Communication skills) - for elementary learners:
3 credits – 40 hours (including class room learning, field visits & practicals)

The evaluation method: viva and written examination

I. Functional Marathi / Functional Hindi / Functional Gujrati

1. Linguistic and Socio-cultural nature of language and its place in the globalised world
2. Phonetic system of language
3. Basic introduction to word structure, phrases and idioms
4. Sentence formation
5. Learning and understanding Communication skills through audio-visual modes
6. Common errors in conversion
7. Communication with family
8. Communication with friends
9. Communication with teachers
10. Communication at office
11. Communication at market places

Department of Sanskrit : 3 credits - 45 teaching hours (of 48 minutes each) for each paper

Courses

- I. Sanskrit didactic literature:** selection from Panchtantra and Nitishatakam-moral sayings
Evaluation: class work and Home Assignments
- II. Bhagvadgita:** Seletion from - Karmayoga - Philosophical Literature
Evaluation: Dissertation and Home Assignments
- III. Introduction to Sanskrit Literature** with special reference to Kalidas (an Indian poet)
Evaluation: class test and Home Assignments

Department of Mathematics

Mathematical and Statistical Techniques - 4 Credits - Total number of lectures 75 of 48 minutes each

Course: UBCOMFSI.6

Mathematical and Statistical Techniques-II

Method of evaluation: Tests, Project & written examination

A. Mathematics

Unit VI

Functions, Derivatives and Their Applications

Concept of real functions: constant function, linear function, x^n , e^x , a^x , $\log x$.

Demand, Supply, Total Revenue, Average Revenue, Total cost, Average cost and Profit function. Equilibrium Point, Break-even point.

Derivative as rate measure.

Derivatives of functions: Constant function, x^n , e^x , a^x , $\log x$.

Rules of derivatives: Scalar multiplication, sum, difference, product, quotient, simple problems.

Second Order derivatives

Applications: Marginal Cost, Marginal Revenue, Elasticity of Demand. Maxima and Minima for functions in Economics and Commerce

Unit VII

Interest and Annuity

Simple Interest and Compound Interest

Interest compounded more than once a year. Calculations involving upto 4 time periods.

Equated Monthly Instalments(EMI) using reducing and flat interest system. Present value, Future value.

Annuity Immediate and due: Simple problems with $(1 + \frac{r}{100})^n$ with $n \leq 4$.

B. Statistics

Unit VIII

Bivariate Linear Correlation: Scatter Diagram, Computation of Karl Pearson's Coefficient of Correlation(Case of Bivariate Frequency Table to be excluded), Computation of Spearman's Rank Correlation Coefficient (case of repeated ranks upto 2 repetitions only)

Bivariate Linear Regression: Finding Regression lines by method of least squares.

Properties of Regression Coefficients- i) $r = \sqrt{b_{yx}b_{xy}}$ ii) (\bar{x}, \bar{y}) is the point of intersection of two regression lines.

Unit IX

Time series: Concepts and components of a time series. Estimation of Trend using Moving Average Method and Least Squares Method(only Linear Trend)

Estimation of Seasonal Component using Simple Arithmetic Mean (For Trend free data only)

Concept of Forecasting using Least Squares Method.

Index Numbers: Concept and uses. Simple and Composite Index Nos. (unweighted, weighted), Laspeyre's Price Index No, Paasche's Price Index No, Fisher's Price Index No., Cost of living Index No., Real Income, Simple Examples.

Concept of Wholesale Price Index No .(Examples on missing values should not be done)

Unit X

Decision Theory: Decision making situation, Decision maker, Courses of Action, States of Nature, Pay-off and Pay-off matrix; Decision making under uncertainty, Maximin, Maximax, Minimax regret and Laplace criteria; simple examples to find optimum decision.

Decision making under Risk, Expected Monetary Value(EMV); Decision tree; simple Examples based on EMV, Expected Opportunity Loss(EOL), simple Examples based on EOL.

Department of Sociology

Courses

Evaluation Method: Tests, Project & written examination for both the papers

Foundations of Sociology – 3 credit - No. of Lectures per Unit – 15 of 48 minutes each

Unit 1: Social Institutions: Concepts and Significance

- Social Stratification
- Bases of Stratification: Caste, Class, Gender, Age
- Religion: Church, Sect, Cult
- Political Institution: State and Government, Types of States
- Economic Institutions: Capitalism, Socialism

Unit 2: Socialization

- Socialization as a process
- Agencies of socialization
- Development of self: C H Cooley, G H Mead
- Gender socialization
- Political socialization
- Resocialization

Unit 3: Social Change

- Theories of Change: Evolutionary, Functionalist, Conflict
- Factors of Social Change
- Resistance to change
- Environment, Sustainable development and Social change

I. Emerging issues in Indian Society - credits 3 - No. of Lectures per Unit – 15 of 48 minutes each

1. Mass Media: Approaches to study mass media, Impact of print & visual media
2. Tourism: Tourism & sociology, Tourism & development, Impact of Tourism on environment & culture, Alternative tourism
3. Ageing: Overview, ageing as a global issue, initiatives & intervention by state & civil society

Department of History :

Courses

Evaluation by tests, project and written examination for both the papers

I. History of Modern Maharashtra (1848-1960): credits 3

Module 1: Mumbai the Financial Capital - lectures 12 (48 minutes each)

- a) Textile Mills, Stock Market and Banking
- b) Labour Movements

Module 2: Rise of New Forces - Lectures 11

- a) Dr. B. R. Ambedkar and Dalit Movement
- b) Tribal Uprisings and Peasants Movements

Module 3: Integration and Reorganization – Lectures 11

- a) Hyderabad Mukti Sangram
- b) Sanyukta Maharashtra Movement

Module 4: Education and Culture - Lectures 11

- a) Progress in Education and Press
- b) Development in Theatre and Cinema. Architectural Development in Mumbai

II. Ancient India (up to 1000 AD)- credits 3

Total No. of lectures 45

Unit : Mauryan and Post Mauryan Period (322 BC-320 AD)

- A. Chandragupta and Ashoka
- B. Mauryan Administration
- C. Post- Mauryan Dynasties (Shungas, Kushanas and Satavahanas)

Unit : Gupta Age (320 AD – 600 AD)

- A. Imperial Expansion
- B. Administration
- C. Classical Age

Unit : India in the post Gupta Period (600 AD -1000 AD)

- A. Huna Invasion
- B. Reign of Harshavardhana
- C. Arab invasion and Rise of Rajputs

Unit : Major Dynasties of Deccan and South India

- A. Chalukya of Badami
- B. Rashtrakutas
- C. Pallavas
- D. Cholas

Department of Philosophy

Evaluation: class test and Home Assignment and written examination

Indian and Western Philosophy - Credits 03 - 45 lectures (48 minutes each)

- Constituents of Reality
- Theories of Truth and Error
- Life after Death
- 20th Century Philosophy
- Value of Philosophy

Department of Environmental Studies

Environmental Studies - Credits 03 - 55 lectures (48 minutes each)

Map work: 5 lectures (48 minutes each): Environmentally significant features of Konkan & Mumbai

Evaluation Method: Written test, Assignment & written examination

Theory:

- Secondary & tertiary sector
- Disaster Management
- Environmental Issues, Movements & Management

Department of Commerce

Courses

Evaluation Method: Tests, Project & written examination

Lectures: 45 (of 48 minutes each) for each paper

I. Business Development (Credits 03)

Banking, General Insurance, Transport and Communication, Telecommunication, Tourism and Hospitality, Retail management, BPO and KPO.

II. Advertising (Credit 03)

Planning an Advertising Campaign, Creativity in Advertising and Advertising Research.

III. Human Resource Management (Credit 03)

Human Resource Planning Human Resource Development, Human Relations and Current Issues in HRM

Department of Psychology

Courses

Total hours = are 50+ for each paper

Method of evaluation: practical, field visit, assignments & written examination

I. General Psychology – 3 Credits

- 1 Motivation and Emotion
- 2 Learning
- 3 Intelligence and personality
- 4 Statistics

II. Social Psychology - 4 Credits

- 1 Interpersonal attraction and close relationships
- 2 Social influences
- 3 Pro-social behaviour
- 4 Aggressions
- 5 Groups and Individuals

III. Development Psychology – 4 Credits

- 1 Early Childhood
 - 2 Middle Childhood
 - 3 Adolescence
- [In the above topics physical, cognitive, social and personality development will be discussed]

Department of Botany

Course: 4 credits

Total hours = Lectures: 45 (of 48 minutes each) + Practicals

Total Credits: 04 – Theory Credits 03+ Practical Credits 01

Evaluation Method: Multiple choice Questions

Theory:

1. Horticultural practices
2. Forestry and Herbal cosmetics
3. Organic manures and Mushroom cultivation

Department of Chemistry

Course: 4 credits

Total hours: Lectures: 45 (of 48 minutes each) + Practicals

Total Credits 04: Theory - Credits 3 + Practical - Credits 01

Evaluation Method: Multiple choice Questions (Class test), Two assignments, Semester end Written Examination

Theory:

1. Periodic Table & Periodic Properties
2. Thermodynamics
3. Study of matter

Department of Geology

Course: 4 Credits

Total hours: Lectures: 45 (of 48 minutes each) + Practicals

Total Credits 04: Theory - Credits 03+ Practical - Credits 01

Method of Evaluation:

Theory:

- i. Continuous evaluation (Multiple choice Tests).
- ii. Two Assignments & PowerPoint presentations in each Semester
- iii. Semester-end Written Examination.

Practicals:

- i. Continuous evaluation (Tests)
- ii. Assessment of Laboratory Records
- iii. Assessment of the Field Reports
- iv. Semester-end Practical Examination
- v. Viva Vice

Theory:

Crystallography

Mineralogy

Petrology

Department of Physics

Course: 4 Credits

Total hours: Lectures: 45 (of 48 minutes each) + Practicals

Total Credits: 04 – Theory Credits 03+ Practical Credits 01

Evaluation Method: Multiple choice Questions (Class test), Two assignments, Semester end Written Examination.

Theory:

1. Transient response of circuits & A.C. Theory
2. Nuclear Physics
3. Rectifier, Amplifier & Digital Electronics

Department of Microbiology

Course: 4 Credits

Total hours: Lectures: 45 (of 48 minutes each) + Practicals

Total Credits: 04 – Theory Credits 03+ Practical Credits 01

Evaluation Methodologies: Multiple choice Questions (Class test), Two assignments, Semester end Written Examination.

Theory:

1. Microscopy
2. Contrast enhancement techniques
3. Control of microorganisms