Integrated B.Sc-M.Sc. (Biotechnology)

Syllabus for Ability and Skill Enhancement Courses under CBCS

Sem I  Communicative English (Ability Enhancement Course)
Sem II  Environmental Sciences (Ability Enhancement Course)
Sem III Mathematics & Statistics for Biologists (Skill Enhancement Course)
Sem IV  IT Skills (Skill Enhancement Course)
Sem V   Entrepreneurship Development (Skill Enhancement Course)
Sem VI  Disaster Management (Social Orientation course)
Semester I

AEC- 101        Communicative English
TIME : 30 HOURS  CREDITS: 02

Unit – I

Spoken English: Practice in the correct pronunciation of English vowels and consonants, syllables and accent, International Phonetic Alphabet (IPA) basics – to enable the students to consult an English pronouncing dictionary.

Unit – II

Usage of English Language: Vocabulary development, word structure, word order and phrasal verbs

Unit – III

Comprehension: Listening and Reading Comprehension, Written Communication and Composition: Paragraph writing, précis writing, dicto composition, letter writing, writing a term paper, writing book reviews

Unit – IV

Essentials of Grammar: Remedial exercises in parts of speech, structure of sentences, sequence of tenses, use of articles and modes of reporting.
In addition to these components, students would be involved in performing communicative tasks such as making short speeches, interpreting visual presentations, role play and group discussions.

Recommended Reading:
Semester II

AEC-201

ENVIROMENTAL SCIENCES

TIME : 30 HOURS

CREDITS: 02

Social Oriented Course (Environment and Sustainable Development)

UNIT I (Concept of environment)
Environment, Definition, Scope and importance, Concepts of ecology and ecosystem
Food chain and food web Biogeochemical cycles (Hydrological cycle, P,N, S)
Concept of sustainable development

UNIT II (Environmentalism)
Environmental views: Anthropocentric and eco-centric view, Environmental activism and justice,
Environmental feminism, Environmental movements (chipko, appiko), Green economy and green politics

UNIT III (Global Environmental Issues)

UNIT IV (Social Environmental Issues and Protection)

Suggested Reading:

5. Bharucha E, Textbook of Environmental Studies for Undergraduate Courses 2nd Ed., UNIVERSITIES PRESS (INDIA P LTD)-CHENNAI.
6. William Cunningham, Mary Cunningham, Environmental Science: A Global Concern, Mc Gr aw Hill Educat
UNIT I
Preliminaries: A brief review of algebra Equations in one and two variables
Number system: Decimal, Binary, Octal and Hexadecimal.
Permutations: Principles of counting, concept, permutation of objects not all distinct, permutation when objects can repeat, circular permutations, Combinations,
Sequence and Series: Definitions, special types of sequences and series, harmonic progression, arithmetic mean, geometric mean, harmonic mean.

UNIT II
Classifications of a function. Limit of a function, Evaluation of a limit of a function, some important limits. Trigonometric functions and Identities
Differentiation: Differential Coefficient, fundamental theorems of differentiation, Differential coefficient of a product and quotient of two functions, Differential coefficient of circular, Logarithmic and exponential functions, successive differentiation.
Integration: Integration as a reverse of differentiation, Definite integrals, integration by substitution and integration by parts. Trigonometric ratios, Trigonometric identities

Unit III
Probability classical & axiomatic definition of probability, Theorems on total and compound probability), Elementary ideas of Binomial, Poisson and Normal distributions.

UNIT IV
Types of Data, Collection of data; Primary & Secondary data, Classification and Graphical representation of Statistical data. Measures of central tendency and Dispersion. Measures of Skewness and Kurtosis.

Suggested Reading:
Semester IV
SEC-401 IT SKILLS
TIME: 30 HOURS CREDITS: 02

Unit I (Introduction to Information Technology)
Information Technology: Data, Information, Application of IT; Computer: Definition, Characteristics, Application; Components of Computer System: Central Processing Unit (C.P.U), Input and Output Devices; Memory; Concept of Hardware and Software, Classification of computers. Introduction to Operating Systems (D.O.S, Windows and Linux).

Unit II (Application Software I)

Unit- III (Application Software II)

Unit- IV (Computer Communication and Internet)

Note: This course has to be taught and evaluated both by theory: practicals by giving weight age of 50 : 50.

Suggested Reading:
1. V. Rajaraman, Computer Fundamentals, PHI.
5. Alexis Lean and Mathews Leon, Fundamentals of Information Technology
Two B Sc. – M Sc. (Integrated) courses of 5 year duration are offered by the Kerala Agricultural University in (1) Biotechnology and (2) Climate Change Adaptation for Plus Two students. 1. M Sc. Biotechnology (Integrated) - No. of Seats - 20.

The M Sc. Biotechnology (Integrated) course was started during 2009-10 with budgetary support from Govt. of Kerala with the objective of improving the quality of biotechnology education in the state. The dur See more of BSc-MSc Integrated Biotechnology, COA, Vellayani,Thiruvananthapuram on Facebook. Log In. or. Create New Account. See more of BSc-MSc Integrated Biotechnology, COA, Vellayani,Thiruvananthapuram on Facebook. Log In. Forgotten account?Â The B.Sc.-M.Sc. (Integrated) Biotechnology course was started during 2009-10 with budgetary support See more. CommunitySee all. Integrated M.Sc programme in Computer Science is designed to provide students an overview of computing, an understanding of the concepts, principles and skills in their application and extension, and a practical experience in applied computing.Â Select State Andhra Pradesh Arunachal Pradesh Assam Andaman and Nicobar Islands Bihar Chhattisgarh Chandigarh Dadra and Nagar Haveli Daman and Diu Delhi Gujarat GOA Haryana Himachal Pradesh Jammu and Kashmir Jharkhand Karnataka Kerala Lakshadweep Madhya Pradesh Maharashtra Manipur Meghalaya Mizoram Nagaland Orissa Punjab Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Telangana Uttar Pradesh Uttar Pradesh West Bengal. Select Programme. B.Sc. Biotechnology (3-year integrated course) degree examination of Mumbai University or any other University recognized as equivalent thereto, with at least 6 units in Biotech (i.e. minimum required for majoring in the subject). OR With three units in Biotechnology at the T.Y.B.Sc in combination with three units of any other major subject at the T.Y.B.Sc. Fees. The total fees, including deposit and laboratory fees, as sanctioned by the Management Board, St. Xavierâ€™s College: M.Sc. Part I : Rs. 69,339 (approx.) M.Sc. Part II : Rs. 66,773 (approx.)