

“Education for knowledge, science and culture” - Shikshanmaharshi Dr. Bapuji Salunkhe
Shri Swami Vivekanand Shikshan Sanstha’s

VIVEKANAND COLLEGE (AUTONOMOUS), KOLHAPUR

B. Sc. Part – I (Computer science Entire)

CBCS Syllabus with effect from June, 2021

B. Sc. (Computer Science Entire) – I C B C S PATTERN (2021-22)

Semester: I

Course Title: MATHEMATICS GEC-1300A

Paper – I Discrete Mathematics and Paper – II Algebra

After completion of this course students will be able:

CO1	To construct simple mathematical proofs and possess the ability to verify them.
CO2	To have substantial experience to comprehend formal logic arguments, apply basic counting techniques of combinatorial problems.
CO3	To specify and manipulate basic mathematical objects such as sets, functions and relations, verify simple mathematical properties that these objects possess, classify numbers into number sets.
CO4	To determine when a function is one-one & onto, Prove results involving divisibility & greatest common divisors, apply Fermat’s theorem to find the remainder when any large number is divided by any other integer.

Course Title: Electronics GEC-1301 A

Paper – I Analog electronics – I and

Paper – II Digital electronics - I

After completion of this course students will be able :

CO1	To demonstrate and explain electrical components and determine the value of Resistance of resistor, Inductance of inductor and capacitance of capacitor using color code method. Understand the basic properties of electrical elements, and solve DC circuit analysis problems, DC network theorems.
CO2	To acquire the knowledge about the characteristics and working principles of PN Junction diode, Zener diode, photo diode, LED and different diode applications, Understanding and designing of rectifier, filter and voltage regulator circuits.
CO3	To understanding the basics of Digital Electronics and different number systems and Conversion between them, design and construction of the basic and universal logic gates and Studying the Boolean algebra.
CO4	To simplify Boolean expression using different methods, understand, analyze and design various combinational circuits, analyze and design various sequential circuits



Course Title: Statistics GEC-1302 A

Paper – I Descriptive statistics-I

AND

Paper – II Probability and Discrete Probability Distributions-I

After completion of this course students will be able:

CO1	To analyze, classify, tabulate and represent the data graphically.
CO2	To compute and interpret various measures of central tendency, dispersion, moments, skewness, kurtosis, Nature of data.
CO3	To implement Real Life applications of probability and probability distributions.
CO4	To implement Practical work on Excel, R and C

Course Title: Computer science CC-CS-1303 A

Paper –I Introduction to computers

And Paper-II Programming in C-I

After learning the course the students should be able :

CO1	To learn fundamental concepts of computers, inputs, outputs and operating systems.
CO2	To learn the principles of office automation, develop logic for problem solving.
CO3	To teach basic principles of programming.
CO4	To develop skills for writing programs using 'C'.

Semester-II

Course Title: MATHEMATICS GEC-1300B

Paper – I Graph Theory

And Paper – II Calculus

After learning the course the students should be able:

CO1	To apply principles and concepts of graph theory in practical situations, have a strong background of graph theory which has so many applications in areas of computer Science, Biology, Chemistry, Physics, and Sociology etc.
CO2	To model real world problems using graph theory. Understand the use of graphs as models, Inspect the value of the limit of a function at a point using the definition of the limit.
CO3	To find the limit of a function at a point numerically & algebraically using appropriate Techniques including L'Hospital's rule, experiment with differentiation of exponential, logarithmic
CO4	To experiment trigonometric & inverse Trigonometric functions n times, illustrate the consequences of the intermediate value theorem for continuous functions, show whether a function is differentiable at a point.



Course Title: Electronics GEC-1301 B

Paper-I Analog electronics – II

And Digital electronics - II

After learning the course the students should be able:

CO1	To analyze output in different operating modes of Bipolar Junction Transistor and demonstrate the operating principle and output characteristics of Bipolar Junction Transistor, explain construction and characteristics of JFETs and MOSFETs.
CO2	To design of multistage amplifier and oscillators and Analyze the importance of feedback in amplifiers, apply the knowledge gained in the design of transistorized circuits, amplifiers and Oscillators, understanding various operating modes of Op-amp and its linear/non-linear applications
CO3	To explain and compare the working of multivibrators using special application IC 555, understanding and designing of multivibrator circuits, various memories and differentiate them.
CO4	To describe the architecture and functional block diagram of 8085 microprocessor along with pins and their functions, understand and classify the instruction set of 8085 microprocessor and distinguish the use of different instructions and apply it in assembly language programming.

Course Title: Statistics GEC-1302 B

Paper – I Descriptive statistics-II

And Paper – II Continuous Probability Distributions and Testing of Hypothesis

After learning the course the students should be able :

CO1	To analyze, classify, tabulate and represent the data graphically.
CO2	To compute and interpret various measures of central tendency, dispersion, moments, skewness, kurtosis, Nature of data.
CO3	To implement Real Life applications of probability and probability distributions.
CO4	To implement Practical work on Excel, R and C

Course Title: Computer science –CC-CS-1303 B

Paper- I Introduction to computers

And Paper-II Programming in C-II

After learning the course the students should be able :

CO1	To define the basics in web design, Visualize the basic concept of HTML.
CO2	To recognize the elements of HTML. Introduce basics concept of CSS.
CO3	To develop the concept of web publishing, know the concept of array and functions.
CO4	To implement pointers and structures, know file handling



Pesga
HEAD
DEPARTMENT OF B.SC. COMPUTER SCIENCE
(ENTIRE)
VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)