



Bhavan's Vivekananda College

Of Science, Humanities and Commerce

Autonomous College – Affiliated to Osmania University

Accredited with 'A' Grade by NAAC

Sainikpuri, Secunderabad – 500094

BTGC

Program Outcomes:

PO1 Knowledge: Understand the basic concepts, fundamental principles and scientific theories and processes related to the fields of Chemistry, Biochemistry, Biotechnology, Genetics and Microbiology with their relevance in day-to-day life.

PO2 Skills and analysis: Apply the scientific skills in terms of designing experiments, execution of protocols and data analysis in scientific research, industry, and entrepreneurship.

PO3 Creativity and Critical thinking: Think creatively and apply the core concept of Biology and Chemistry to a chosen scientific discipline and generate and interpret scientific data using quantitative, qualitative, and analytical methodologies and techniques.

PO4 Science and Society: Implement the acquired knowledge to assess societal, health, safety, legal and cultural issues, and the consequent responsibilities relevant to the professional scientific practice.

PO5 Communication: Communicate effectively on problems, issues, and solutions with community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO6 Ethics & Environment: Apply ethical principles and commit to professional ethics and responsibilities and norms in research and the functional areas, understand the issues of environmental context and sustainable development.

PO7 Individual and Teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO8 Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context of socio, economic and technological changes.

Program Specific Outcomes

PS01: Devise and apply the concepts of Biotechnology such as Molecular and Biophysical techniques along with Computational biology in various fields of animal/plant/industrial and environmental biotechnology and to build entrepreneurial skills.

PSO2: Interpret and apply the principles and concepts of Genetics, Genetic engineering, Genomics, Genetic Counselling and Evolutionary biology in reasoning, problem solving, mathematical analysis to understand the process of inheritance and genetic disorders.

PSO3: Utilise the concepts of Organic, Inorganic, General and Physical Chemistry to evaluate and develop analytical skills required for drug designing and green lab practices to safe guard the environment.

Course Outcomes:

| | |
|---------------------------|--|
| Name of the Course | Cell Biology and Genetics |
| Course Code | BT133 |
| CO1 | Compare the cell structure and function of prokaryotic and eukaryotic cells. |
| CO2 | Identify Chromosome organisation and cell division. |
| CO3 | Solve problems based on Mendelian Laws and Mechanism of inheritance. |
| CO4 | Interpret the fundamentals of recombination, linkage and sex determination |

| | |
|---------------------------|--|
| Name of the Course | Cell Biology and Genetics |
| Course Code | BT133P |
| CO1 | Students expertise in Microscopy skills and genetics problem solving |

| | |
|---------------------------|---|
| Name of the Course | Transmission Genetics |
| Course Code | GT132 |
| CO1 | Apply Mendelian laws and genetic notation for problem-solving. |
| CO2 | Solve problems using gene mapping and recombination. |
| CO3 | Examine the molecular mechanisms in cell cycle and chromosomal segregation. |
| CO4 | Identify chromosome structure and chromosomal aberrations. |

| | |
|---------------------------|---|
| Name of the Course | Transmission Genetics |
| Course Code | GT132P |
| CO1 | Students learn genetic annotations and develop analytical skills for problem solving. |

| | |
|---------------------------|---|
| Name of the course | Semester -I:Paper-I Inorganic And General Chemistry-I |
| Course code | CT135 |
| CO1 | Use the knowledge of Ionization energy and Electronegativity to predict types of compounds(Ionic /Covalent) & their reactivity. |
| CO2 | Compare the properties of s-& p-block elements & organometallic compounds. |
| CO3 | Familiarize the concept of VBT & MOT to differentiate physical parameters of various diatomic molecules, .Use the knowledge of quantum mechanics to explain atomic structure. |
| CO4 | Interpret organic reaction mechanisms, reactivity of a few organic compounds & examine the ions in soil, water by the semi micro analysis method. |

| | |
|---------------------------|--|
| Name of the course | Semester -I:Inorganic Chemistry-I |
| Course code | CT135P |
| CO1 | Learn to identify the presence of anions and cations in salt mixtures using systematic semi-micro analytical method. |

| | |
|---------------------------|--|
| Name of the Course | Nucleic Acids, Cell culture and Bioinformatics |
| Course Code | BT233 |
| CO1 | Compare the structure and function of Nucleic acids in prokaryotes and eukaryotes. |
| CO2 | Differentiate the different models of DNA replication. |
| CO3 | Interpret the fundamentals of Cell culture. |
| CO4 | Construct homology using BLAST program based on concepts of Bioinformatics. |

| | |
|---------------------------|--|
| Name of the Course | Nucleic Acids, Cell culture and Bioinformatics |
| Course Code | BT233P |
| CO1 | Students expertise in estimating DNA and RNA and also in analysis of biological data using bioinformatics tools. |

| | |
|---------------------------|--|
| Name of the Course | Genetic Analysis |
| Course Code | GT232 |
| CO1 | To distinguish structures of DNA and RNA. |
| CO2 | Learn the fundamental aspects of gene expression such as transcription, translation and mRNA splicing. |
| CO3 | Identify different mechanisms of gene regulation. |
| CO4 | Recognize the significance of rDNA technology in agriculture and medicine. |

| | |
|---------------------------|---|
| Name of the Course | Genetic Analysis |
| Course Code | GT232P |
| CO1 | Students understand the underlying principle involved in extraction of DNA, estimation of DNA/RNA, basic techniques used in Microbial Genetics. |

| | |
|---------------------------|--|
| Name of the course | Physical And General Chemistry-I |
| Course code | CT235 |
| CO1 | The student will know non-ideal behaviour of gases, PV isotherms, van der Waal's equation and critical phenomenon. They should be familiar with methods used to liquefy gases. |
| CO2 | Implement Nernst Distribution law to relate the solubility of solute in immiscible solvents, to interpret the change in physical parameters to liquefy gases & use of Liquid crystals in LCDs. |
| CO3 | At the end of this course, the student will be able to identify whether a molecule is chiral or not by symmetry criteria; the number of stereo isomers possible for a chiral molecule; and the absolute configuration at the chiral centre(s); and the theory of optical activity and internal compensation. The students are expected to know the methods of C - C, C=C formation, reagents and respective name reactions; the difference in reactivity of single, double and triple bonds; the meaning and use of reaction mechanisms with examples. |
| CO4 | The students interpret the theory of aromaticity, aromatic compounds and their reactivity; difference from acyclic conjugated alkenes. |

| | |
|--------------------|---|
| Name of the course | Semester -II:Inorganic Chemistry-II |
| Course code | CT235P |
| CO1 | By the end of this course, students will be able to 1.Prepare inorganic complexes & test the presence of ions in the salt mixtures. 2. Students will be able to utilize green solvents for analyses |

| | |
|--------------------|--|
| Name of the Course | Biochemistry |
| Course Code | BT333 |
| CO1 | To appreciate the structural and functional aspects of carbohydrates and Proteins. |
| CO2 | To evaluate Lipids, Enzymes, Vitamins and Minerals |
| CO3 | To appraise the metabolism of carbohydrates and lipids |
| CO4 | To appraise the metabolism of Proteins and Photosynthetic pathways |

| | |
|--------------------|---|
| Name of the Course | Biochemistry |
| Course Code | BT333P |
| CO1 | Expertise in qualitative and quantitative analysis of biomolecules. |

| | |
|--------------------|--|
| Name of the Course | Integrated Pest Management |
| Course Code | SE333 |
| CO1 | Students expertise in tackling the pests in an eco-friendly way |
| CO2 | Students are motivated to go for biological pesticides and employ IPM strategies for pest control. |

| | |
|--------------------|--|
| Name of the Course | Gene Structure, Organization and Expression |
| Course Code | GT332 |
| CO1 | To distinguish nucleic acid structures and types. |
| CO2 | To differentiate types of sequences in the genome. |
| CO3 | To recognize fine structure of the gene. |
| CO4 | To contrast gene expression in prokaryotes and eukaryotes. |

| | |
|---------------------------|--|
| Name of the Course | Gene Structure, Organization and Expression |
| Course Code | GT332P |
| CO1 | They learn the basics of sterilization, microbial culture and biochemical methods of estimation. |

| | |
|---------------------------|--|
| Name of the Course | Genetically Modified Organisms |
| Course Code | SE332 |
| CO1 | Students learn the basic concepts of gene transfer protocols. |
| CO2 | They learn to appreciate the role of Agrobacterium as a natural genetic engineer. |
| CO3 | They are acquainted with the significant role of transgenic plants in agriculture. |
| CO4 | Students learn from their field study the usage of GMOs in the local area. |

| | |
|---------------------------|--|
| Name of the course | Organic And General Chemistry-II |
| Course code | CT335 |
| CO1 | Differentiate between SN^1 and SN^2 reactions and identify different alcohols. Apply these reactions in organic synthesis |
| CO2 | Write mechanisms of organic reactions involving reactive intermediates. |
| CO3 | Solve problems based on various analytical tools. Design experiments with improved sample preparation and new measurement procedures. |
| CO4 | Appreciate the application of nuclear reactions in the field of Agriculture, medicine etc. Determine the symmetry operations of simple molecules. Apply Woodward Hoffman's rules for different molecular systems |

| | |
|---------------------------|---|
| Name of the course | Inorganic Chemistry-III |
| Course code | CT335P |
| CO1 | Acquire quantitative skills in volumetric analysis and gain knowledge about the neutralisation, redox and complexometric titrations. 1. Able to prepare standard solutions. 2. Find the concentrations of unknown solutions |

| | |
|---------------------------|---|
| Name of the course | Safety Rules In Chemistry Laboratory & Preparing Lab Reagent |
| Course code | SE335 |
| CO1 | To improve the skills of students in the application of theory and practical knowledge. |
| CO2 | To fill the gap between theory and experimental procedures. |
| CO3 | To train the students in understanding laboratory safety rules and to improve the skills in preparation of laboratory reagents. |
| CO4 | To make students aware about best lab practices |

| | |
|---------------------------|--|
| Name of the Course | Microbiology and Biophysical Techniques |
| Course Code | BT433 |
| CO1 | To interpret microorganism's structure and identify techniques to isolate them in pure forms |
| CO2 | To analyze microbial pathogenesis |
| CO3 | To locate and interpret the working of Photometry and micrometry |
| CO4 | To list the uses of Biophysical techniques |

| | |
|---------------------------|---|
| Name of the Course | Microbiology and Biophysical Techniques |
| Course Code | BT433P |
| CO1 | Students expertise in growing bacteria and explore electrophoresis analysis of proteins along with paper chromatography |

| | |
|---------------------------|---|
| Name of the Course | Bioinformatics |
| Course Code | SE433 |
| CO1 | The students interpret the data using various computational tools |
| CO2 | Using BLAST program students analyse data in the databases. |

| | |
|---------------------------|--|
| Name of the Course | Molecular Genetics |
| Course Code | GT432 |
| CO1 | Differentiate types of gene regulation mechanisms in Prokaryotes and Eukaryotes. |
| CO2 | Value rDNA technology as a tool for genetic engineering |
| CO3 | Identify the molecular mechanisms of gene mutation |
| CO4 | Recognize mechanisms of replication and transposable elements with examples. |

| | |
|---------------------------|--|
| Name of the Course | Molecular Genetics |
| Course Code | GT432P |
| CO1 | The students improve their analytical skills by working out problems based on replica plating, SLRL and restriction mapping. They understand the effect of UV on bacterial growth They understand the principle of DNA extraction from different sources |

| | |
|---------------------------|---|
| Name of the Course | Genetic Counselling |
| Course Code | SE432 |
| CO1 | The students learn the concepts of Human genetic disorders. |
| CO2 | Students learn the different steps involved in genetic counselling. |
| CO3 | They also learn various methods involved in carrier detection. |
| CO4 | They learn to appreciate the prenatal diagnostic techniques. |

| | |
|---------------------------|---|
| Name of the course | Inorganic And Physical Chemistry-II |
| Course code | CT435 |
| CO1 | Identify the basic principles related to structure and properties of lanthanides and Actinides. Apply the concept of lanthanide contraction for separation techniques. |
| CO2 | Identify the structure and bonding in simple metals .Apply the 18-electron rule to simple and bridged metal carbonyls. |
| CO3 | Use the phase rule to determine the number of components, phases and degrees of freedom of different systems. Calculate the molecular weights of solutes using colligative properties |
| CO4 | Write equations representing electrochemical cell and calculate electrochemical parameters |

| | |
|---------------------------|---|
| Name of the course | Inorganic Chemistry-IV |
| Course code | CT435P |
| CO1 | Acquire quantitative skills in volumetric analysis and gain knowledge about the neutralisation, redox and complexometric titrations. 1. Able to prepare standard solutions. 2. Find the concentrations of unknown solutions |

| | |
|---------------------------|--|
| Name of the course | Green Methods In Chemistry |
| Course code | SE435 |
| CO1 | Know about green lab practices. Improving reaction efficiency by changing certain parameters and making it more environment friendly. |
| CO2 | Learning about green reagents and their mode of action in making chemistry less hazardous. |
| CO3 | Atom economy and its usefulness i.e. utilizing 100% of the reactants |
| CO4 | Acquaint with different green reactions. |

| | |
|---------------------------|--|
| Name of the Course | Molecular Biology |
| Course Code | BT533 |
| CO1 | To differentiate and organize the genes and sketch their kinetic classes |
| CO2 | To understand and demonstrate the various levels of Genomic organization |
| CO3 | To relate and interpret gene expression |
| CO4 | To formulate new strategies applicable to state the function of various genes. |

| | |
|---------------------------|---|
| Name of the Course | Molecular Biology |
| Course Code | BT533P |
| CO1 | Expertise in isolating DNA and analysing it by electrophoresis. |

| | |
|---------------------------|--|
| Name of the Course | Animal and Plant Biotechnology |
| Course Code | BT533A |
| CO1 | To differentiate different types of animal cell cultures. |
| CO2 | To value the applications of animal cell culturing. |
| CO3 | To apply plant tissue culture principles |
| CO4 | To justify concepts of plant tissue culture and its applications |

| | |
|---------------------------|---|
| Name of the Course | Animal and Plant Biotechnology |
| Course Code | BT533A P |
| CO1 | To expertise in plant tissue culture and animal cells like leucocytes and understand bacterial growth curve by measuring the rate of growth at different time intervals |

| | |
|---------------------------|---|
| Name of the Course | Plant Tissue Culture |
| Course Code | SE533 |
| CO1 | The students expertise in plant tissue culture techniques |
| CO2 | Students expertise in encapsulating embryos using sodium alginate . |

| | |
|---------------------------|---|
| Name of the Course | Food Preservation and Adulteration |
| Course Code | GE533 |
| CO1 | Students learn the basic method of food preservation. |
| CO2 | Students interpret the health risks with different adulterants present in foods |

| | |
|---------------------------|--|
| Name of the Course | Population Genetics |
| Course Code | GT532 |
| CO1 | Demonstrate the concept of Genetic Equilibrium. |
| CO2 | Recognize HWE and relate it to mutation. |
| CO3 | Differentiate types of selection with examples. |
| CO4 | Distinguish the mechanisms for maintenance of balanced polymorphism. |

| | |
|---------------------------|---|
| Name of the Course | Population Genetics |
| Course Code | GT532P |
| CO1 | Students learn to use Mathematics and Statistics in problem solving. They understand the dynamics of Genetic Equilibrium and how it can be altered by the evolutionary processes. |

| | |
|---------------------------|---|
| Name of the Course | Advanced Techniques in genome analysis and Genetic Engineering |
| Course Code | GT532A |
| CO1 | To value biophysical techniques such as electrophoresis, Hybridization techniques, PCR |
| CO2 | To appreciate advanced genome analysis techniques like NGS and DNA Microarray. |
| CO3 | To differentiate gene transfer strategies for the development of Genetically Modified Organisms |
| CO4 | To appraise the uses of transgenic plants and animals |

| | |
|---------------------------|--|
| Name of the Course | Advanced Techniques in genome analysis and Genetic Engineering |
| Course Code | GT532A P |
| CO1 | The students learn cytogenetic techniques like Karyotyping and biophysical techniques like Agarose and Polyacrylamide gel electrophoresis. |

| | |
|---------------------------|--|
| Name of the Course | Vermicomposting |
| Course Code | SE532 |
| CO1 | The students learn to identify the different species of Earthworm. |
| CO2 | They learn to make their own vermi-compost. |
| CO3 | They can also start a start-up programme on vermicomposting. |
| CO4 | This skill enhancement course encourages entrepreneurship. |

| | |
|---------------------------|--|
| Name Of the Course | Organic,General And Physical Chemistry-III |
| Course code | CT535 |
| CO1 | Analyse different nitrogen compounds by conducting simple experiments. |
| CO2 | Identify the principles, structure and reactivity of selected coordination complexes. Utilise the principles of coordination complexes in understanding the functions of biological systems. |
| CO3 | Identify the heterocyclic structure in metalloproteins or enzymes. synthesise them through green chemistry approach. Interpret electronic spectra and magnetic properties |
| CO4 | Calculate change in thermodynamic properties. Calculate the absolute value of thermodynamic quantities (U, H, S, A, G). |

| | |
|---------------------------|--|
| Name of the course | Semester -V:Organic Chemistry- V |
| Course code | CT535P |
| CO1 | Develops a skill in organic synthesis and re-crystallisation |

| | |
|---------------------------|--|
| Name Of The Course | Physico-Chemical Methods Of Analysis,Spectroscopy And Analysis |
| Course code | CT535A |
| CO1 | Acquires a basic knowledge in solvent extraction and all chromatographic techniques |
| CO2 | Acquaint with spectroscopic techniques and colorimetric estimations .Students identify organic compounds using mass spectroscopy. |
| CO3 | Identify organic molecules using spectroscopic tools such as UV, IR, Raman and H^1NMR spectroscopy. |
| CO4 | Apply the knowledge of catalysis to carry out atom economy organic synthesis. Acquires the knowledge of how alcohol dehydrogenase catalysis is different in Asians and Europeans |

| | |
|---------------------------|---|
| Name of the course | Physical Chemistry- Vi |
| Course code | CT535AP |
| CO1 | Develops a skill to use conductometers, potentiometers, PH meters and colorimeters that are required for the industry |

| | |
|---------------------------|---|
| Name of the course | Basic Analytical Chemistry |
| Course code | SE535 |
| CO1 | It enhances the knowledge and skills required for attaining analytical and critical abilities, logical thinking, and ability to apply knowledge learnt to solve issues and problems related |

| | |
|-----|--|
| | to chemical analysis. |
| CO2 | Improve the use of statistical tools. |
| CO3 | Used in determining the water quality refers to the chemical, physical, biological, and radiological characteristics of water. It is a measure of the condition of water relative to the requirements of one or more biotic species and or to any human need or purpose. |

| | |
|---------------------------|--|
| Name of the course | Organic Farming |
| Course code | GE535 |
| CO1 | Upon successful completion of this course, students will: Have a better understanding of the basic principles of organic farming. Recognize that organic farming systems, if practiced in a an environmentally sound manner, can constitute a larger philosophy of sustainable agriculture. |
| CO2 | Be able to devise an organic farm management plan. |
| CO3 | Have improved their ability to think critically about the opportunities and challenges faced by organic growers. |

| | |
|---------------------------|---|
| Name of the Course | Genetic Engineering and Immunology |
| Course Code | BT633 |
| CO1 | To explain the concept and techniques of Genetic Engineering |
| CO2 | To state the applications and limitations of cloning. |
| CO3 | To identify the cellular and molecular basis of immune system |
| CO4 | To describe the roles of immune system in both maintaining health and combating the disease |

| | |
|---------------------------|---|
| Name of the Course | Genetic Engineering and Immunology |
| Course Code | BT633P |
| CO1 | Expertise in Immunology and Molecular Biology |

| | |
|---------------------------|---|
| Name of the Course | Industrial and Environmental Biotechnology |
| Course Code | BT633A |
| CO1 | To justify different bioreactors designed |
| CO2 | To expertise fermentation technology. |
| CO3 | To appraise various biofuels and nanotechnology |
| CO4 | To understand and apply microbial degradation |

| | |
|---------------------------|---|
| Name of the Course | Industrial and Environmental Biotechnology |
| Course Code | BT633A P |
| CO1 | To appraise wine quality by analysis and milk adulteration by MBRT. |

| | |
|---------------------------|---|
| Name of the Course | Fermentation Technology |
| Course Code | SE633 |
| CO1 | The students develop the skill of wine production. |
| CO2 | The students interpret the alcohol content in the wine produced by alcohol estimation |

| | |
|---------------------------|---|
| Name of the Course | Inbreeding, Breeding techniques and Genome Evolution |
| Course Code | GT632 |
| CO1 | Interpret the effects of inbreeding in populations through inbreeding coefficient. |
| CO2 | To discuss conventional and modern breeding methods in the progress of agriculture. |
| CO3 | To appreciate the techniques used in livestock improvement |
| CO4 | To judge evolutionary relationships between/among organisms. |

| | |
|---------------------------|--|
| Name of the Course | Inbreeding, Breeding techniques and Genome Evolution |
| Course Code | GT632P |
| CO1 | Students apply the concepts learnt in theory such as: calculation of inbreeding coefficient from pedigrees. They learn to calculate different types of Genetic load. They learn the bio-physical technique of native PAGE. They learn construction of phylogenetic trees using Bioinformatics software |

| | |
|---------------------------|--|
| Name of the Course | Human Genetics & Biostatistics |
| Course Code | GT632A |
| CO1 | Distinguish the strategies used for the management of human genetic disorders. |
| CO2 | Value gene therapy for various genetic disorders and the importance of genome projects & Bioinformatics. |
| CO3 | Apply the concepts of genetic engineering for industrial products. |
| CO4 | Relate to the importance of statistical methods used in Human Genetics. |

| | |
|---------------------------|--|
| Name of the Course | Human Genetics & Biostatistics |
| Course Code | GT632A P |
| CO1 | The students learn statistical testing of hypothesis by using different tests like Chi-Square test, Z-test and t-test. Students develop their mathematical and analytical skills. |

| | |
|---------------------------|--|
| Name of the Course | Medicinal Plants |
| Course Code | SE632 |
| CO1 | The students learn the importance of medicinal plants. |
| CO2 | The students are able to identify the medicinally important plants. |
| CO3 | They learn the technique involved in the powder analysis of different crude drugs |
| CO4 | They learn to appreciate the significance of medicinal botany with reference to Siddha and Ayurveda. |

| | |
|---------------------------|---|
| Name of the Course | Wine making |
| Course Code | GE632 |
| CO1 | Students learn the basic method of wine preparation. |
| CO2 | They learn the difference between wine and other alcoholic beverages. |
| CO3 | They learn to identify and taste the different kinds of wine. |
| CO4 | The present paper encourages them to be entrepreneurs. |

| | |
|---------------------------|--|
| Name of the Course | Organic, General And Physical Chemistry-IV |
| Course code | CT635 |
| CO1 | Identify the carbohydrates and explain its role in living organisms. |
| CO2 | Apply HSAB principle for stability and occurrence of simple salts in nature. |
| CO3 | Apply various synthetic strategies in the field of synthesis. Use retro synthesis and disconnection approach for synthesis of drugs. |
| CO4 | Solve problems on rate and rate constants. Calculate the age of rocks, carbon dating etc |

| | |
|---------------------------|---|
| Name of the course | Organic Chemistry- VII |
| Course code | CT635P |
| CO1 | Organic Analysis-Apply principles of identification techniques in organic analysis <ul style="list-style-type: none"> • Identify organic compounds Identify the presence of organic compounds in vegetables and fruits |

| | |
|---------------------------|---|
| Name Of The Course | Drugs, Pesticides, Macromolecules |
| Course code | CT 635A |
| CO1 | Apply the knowledge of drugs & formulation chemistry to the pharmaceutical industry. |
| CO2 | Acquaint with green pesticides and harmful effect of other organic pesticides. |
| CO3 | Acquire knowledge in Material science, super conductance and nanotechnology- the allied subjects in chemistry, which find a great place in modern research. |
| CO4 | Students can synthesize different polymers based on their tacticity and different mechanisms of polymerization. |

| | |
|---------------------------|--|
| Name of the course | Physical Chemistry- VI |
| Course code | CT635AP |
| CO1 | Familiarized with calculation of rate constant for first and second order kinetic reactions Utilise the technique of solvent extraction to separate different solutes in a compound or extract medicinal components from herbs. |

| | |
|---------------------------|---|
| Name of the course | Cheminformatics |
| Course code | SE635 |
| CO1 | Learn about drawing chemical structures on PC Using the tools to search the chemicals in the database to help in research. |
| CO2 | Identification of protein targets. Spectral predictions of various drugs. Molecular modelling Hands on experiment on drug development using cheminformatics. |
| CO3 | Hands on MOLINSPIRATION |

| | |
|---------------------------|--|
| Name of the course | Chemistry Of Cosmetics & Perfumes |
| Course code | GE635 |
| CO1 | Describe fundamentals of chemistry and the scientific basis for cosmetic formulation and the function of the active ingredients. |
| CO2 | Comprehend the efforts of scientists in cosmetic product design and developments. |

| | | | | | | | | | | | |
|--|------------------|------------|-------------|------------|-------------|----------|------------|-------------|----------------------------|----------|------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Cell Biology and Genetics | | | | | | | | | Course Code: BT 133 | | |
| Semester: I | | | | | | | | | Year: I | | |
| Academic Year: 19-20 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 1 | 1 | 1 | 0 | 1 | 3 | 2 | 0 | 0 |
| CO2 | 3 | 1 | 3 | 0 | 1 | 0 | 1 | 3 | 3 | 2 | 1 |
| CO3 | 3 | 2 | 3 | 2 | 1 | 0 | 2 | 3 | 2 | 3 | 1 |
| CO4 | 3 | 2 | 2 | 3 | 2 | 0 | 2 | 2 | 2 | 3 | 0 |
| Total | 12 | 6 | 9 | 6 | 5 | 0 | 6 | 11 | 9 | 8 | 2 |
| Average | 3 | 1.5 | 2.25 | 1.5 | 1.25 | 0 | 1.5 | 2.75 | 2.25 | 2 | 0.5 |

| | | | | | | | | | | | |
|--|------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Cell Biology and Genetics | | | | | | | | | Course Code: BT 133P | | |
| Semester: I | | | | | | | | | Year: I | | |
| Academic Year: 19-20 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 |
| Total | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 |
| Average | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 |

| | | | | | | | | | | | |
|--|------------------|-------------|------------|------------|----------|-------------|----------|------------|---------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Transmission Genetics | | | | | | | | | Course Code: GT132 | | |
| Semester: I | | | | | | | | | Year: I | | |
| Academic Year: 19-20 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 1 | 0 | 1 | 3 | 3 | 3 | 3 | 0 |
| CO2 | 3 | 1 | 2 | 0 | 1 | 0 | 1 | 3 | 3 | 3 | 0 |
| CO3 | 3 | 2 | 3 | 1 | 2 | 0 | 2 | 3 | 1 | 3 | 0 |
| CO4 | 1 | 2 | 3 | 0 | 1 | 0 | 2 | 1 | 0 | 3 | 0 |
| Total | 2.5 | 1.75 | 2.5 | 0.5 | 1 | 0.25 | 2 | 2.5 | 1.75 | 3 | 0 |
| Average | 2.5 | 1.75 | 2.5 | 0.5 | 1 | 1 | 2 | 2.5 | 2.3 | 3 | 0 |

| | | | | | | | | | | | |
|--|------------------|----------|----------|----------|----------|----------|----------|----------------------------|---------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Transmission Genetics | | | | | | | | Course Code: GT132P | | | |
| Semester: I | | | | | | | | Year: I | | | |
| Academic Year:19-20 | | | | | | | | Batch:2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO(P) | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 3 | 3 | 0 |
| Total | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 3 | 3 | 0 |
| Average | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 3 | 3 | 0 |

| | | | | | | | | | | | |
|---|------------------|------------|----------|----------|------------|------------|----------|-------------------------|---------------------------|-------------|----------|
| Name of the Program:BTGC | | | | | | | | | | | |
| Name of the Course:Inorganic And General Chemistry-I | | | | | | | | Corse Code:CT135 | | | |
| Semester: I | | | | | | | | Year:1st year | | | |
| Academic Year:19-20 | | | | | | | | Batch:2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CT135.CO1 | 3 | 2 | 1 | 2 | 2 | 0 | 1 | 2 | 2 | 2 | 3 |
| CT135.CO2 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 3 |
| CT135.CO3 | 3 | 3 | 3 | 1 | 3 | 1 | 2 | 3 | 0 | 0 | 3 |
| CT135.CO4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 |
| AVERAGE | 3 | 2.5 | 2 | 2 | 2.5 | 1.5 | 2 | 2.75 | 1.75 | 1.25 | 3 |
| CT135P.CO | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | 3 |

| | | | | | | | | | | | |
|---|------------------|-------------|-------------|-------------|------------|----------|----------|---------------------------|---------------------------|-------------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Nucleic acids, cell culture and Bioinformatics | | | | | | | | Course Code: BT233 | | | |
| Semester: II | | | | | | | | Year: I | | | |
| Academic Year:19-20 | | | | | | | | Batch:2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 2 | 1 | 1 | 0 | 1 | 3 | 2 | 2 | 0 |
| CO2 | 3 | 1 | 2 | 1 | 0 | 0 | 2 | 3 | 1 | 1 | 0 |
| CO3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 1 | 1 |
| CO4 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 0 |
| Total | 12 | 7 | 9 | 7 | 5 | 4 | 8 | 12 | 9 | 7 | 1 |
| Average | 3 | 1.75 | 2.25 | 1.75 | 1.6 | 2 | 2 | 4 | 2.25 | 1.75 | 1 |

| | | | | | | | | | | | | |
|---|------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------------|----------|----------|--|
| Name of the Program: BtGC | | | | | | | | | | | | |
| Name of the Course: Nucleic acids, Cell culture and Bioinformatics | | | | | | | | | Course Code: BT 233P | | | |
| Semester: II | | | | | | | | | Year: I | | | |
| Academic Year: 19-20 | | | | | | | | | Batch: 2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| CO1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 | |
| Total | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 | |
| Average | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 | |

| | | | | | | | | | | | | |
|---|------------------|-------------|-------------|------------|------------|-------------|----------|-------------|---------------------------|-----------|----------|--|
| Name of the Program: BtGC | | | | | | | | | | | | |
| Name of the Course: Genetic Analysis | | | | | | | | | Course Code: GT232 | | | |
| Semester: II | | | | | | | | | Year: I | | | |
| Academic Year: 19-20 | | | | | | | | | Batch: 2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| CO1 | 3 | 2 | 2 | 1 | 2 | 0 | 2 | 0 | 0 | 3 | 0 | |
| CO2 | 3 | 3 | 2 | 1 | 1 | 0 | 3 | 3 | 0 | 3 | 0 | |
| CO3 | 2 | 2 | 2 | 0 | 2 | 1 | 1 | 2 | 0 | 3 | 0 | |
| CO4 | 2 | 2 | 3 | 0 | 1 | 0 | 2 | 0 | 2 | 3 | 0 | |
| Total | 10 | 9 | 9 | 2 | 6 | 1 | 8 | 5 | 2 | 12 | 0 | |
| Average | 2.5 | 2.25 | 2.25 | 0.5 | 1.5 | 0.25 | 2 | 1.25 | 0.5 | 3 | 0 | |

| | | | | | | | | | | | | |
|---|------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------|----------|----------|--|
| Name of the Program: BtGC | | | | | | | | | | | | |
| Name of the Course: Genetic Analysis | | | | | | | | | Course Code: GT232P | | | |
| Semester: II | | | | | | | | | Year: I | | | |
| Academic Year: 19-20 | | | | | | | | | Batch: 2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| CO(P) | 2 | 2 | 2 | 1 | 2 | 0 | 2 | 1 | 1 | 3 | 0 | |
| Total | 2 | 2 | 2 | 1 | 2 | 0 | 2 | 1 | 1 | 3 | 0 | |
| Average | 2 | 2 | 2 | 1 | 2 | 0 | 2 | 1 | 1 | 3 | 0 | |

| | | | | | | | | | | | | |
|---|------------------|------|-----|-----|-----|-----|-----|-----|---------------------------|------|------|--|
| Name of the Program: BtGC | | | | | | | | | | | | |
| Name of the Course: Physical And General Chemistry-I | | | | | | | | | Course Code: CT235 | | | |
| Semester: II | | | | | | | | | Year: 1st year | | | |
| Academic Year: 19-20 | | | | | | | | | Batch: 2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COURSE ATTAINMENT | | BtGC | | | | | | | | | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| CT235.CO1 | 3 | 3 | 1 | 3 | 2 | 2 | 1 | 3 | 0 | 0 | 3 | |

| | | | | | | | | | | | |
|----------------|----------|----------|------------|------------|-------------|-------------|-------------|------------|-------------|------------|----------|
| CT235.CO2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 1 | 1 | 3 |
| CT235.CO3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 1 | 3 |
| CT235.CO4 | 3 | 3 | 3 | 1 | 3 | 1 | 2 | 1 | 2 | 0 | 3 |
| AVERAGE | 3 | 3 | 2.5 | 2.5 | 2.25 | 1.75 | 1.75 | 2.5 | 1.25 | 0.5 | 3 |
| CT235P.CO | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 3 |

| | | | | | | | | | | | |
|---|-------------------------|----------|------------|----------|-------------|----------------------------|-------------|-------------|----------------------------------|----------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Biochemistry | | | | | | Course Code: BT 333 | | | | | |
| Semester: III | | | | | | Year: II | | | | | |
| Academic Year: 2020-21 | | | | | | Batch: 2019-2022 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 3 | 1 | 3 | 1 | 2 | 3 | 1 | 0 | 2 |
| CO2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 1 |
| CO3 | 3 | 1 | 2 | 2 | 0 | 1 | 0 | 2 | 3 | 1 | 3 |
| CO4 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 |
| Total | 12 | 8 | 10 | 8 | 9 | 7 | 7 | 11 | 10 | 4 | 9 |
| Average | 3 | 2 | 2.5 | 2 | 2.25 | 1.75 | 1.75 | 2.75 | 2.5 | 1 | 2.25 |

| | | | | | | | | | | | |
|---|-------------------------|----------|----------|----------|----------|-----------------------------|----------|----------|----------------------------------|----------|----------|
| Name of the Program : BtGC | | | | | | | | | | | |
| Name of the Course: Biochemistry | | | | | | Course Code: BT 333P | | | | | |
| Semester: III | | | | | | Year: II | | | | | |
| Academic Year: 2020-21 | | | | | | Batch: 2019-2022 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 0 | 3 |
| Total | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 0 | 3 |
| Average | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 0 | 3 |

| | | | | | | | | | | | |
|--|-------------------------|----------|----------|----------|----------|---------------------------|----------|----------|----------------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Intergrated Pest Management | | | | | | Course Code: SE333 | | | | | |
| Semester: III | | | | | | Year: II | | | | | |
| Academic Year: 2020-21 | | | | | | Batch: 2019-2022 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 0 | 2 | 3 | 3 | 3 | 4 | 3 | 2 | 1 | 2 |
| CO2 | 3 | 0 | 2 | 3 | 3 | 3 | 4 | 3 | 2 | 1 | 2 |
| Total | 3 | 0 | 2 | 3 | 3 | 3 | 4 | 3 | 2 | 1 | 2 |
| Average | 3 | 0 | 2 | 3 | 3 | 3 | 4 | 3 | 2 | 1 | 2 |

| | | | | | | | | | | | |
|--|------------------|----------|-----------|----------|----------|----------|----------|----------|---------------------------|----------|-----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Gene Structure, Organization and Expression | | | | | | | | | Course Code: GT332 | | |
| Semester: III | | | | | | | | | Year: II | | |
| Academic Year: 2020-21 | | | | | | | | | Batch: 2019-2022 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 0 | 2 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 3 |
| CO2 | 2 | 2 | 2 | 1 | 0 | 2 | 2 | 1 | 3 | 3 | 3 |
| CO3 | 2 | 0 | 3 | 1 | 0 | 1 | 1 | 2 | 2 | 2 | 2 |
| CO4 | 2 | 1 | 3 | 1 | 1 | 2 | 1 | 3 | 3 | 2 | 3 |
| Total | 8 | 3 | 10 | 4 | 2 | 5 | 5 | 7 | 10 | 8 | 11 |

| | | | | | | | | | | | |
|--|------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Gene Structure, Organization and Expression | | | | | | | | | Course Code: GT332P | | |
| Semester: III | | | | | | | | | Year: II | | |
| Academic Year: 2020-21 | | | | | | | | | Batch: 2019-2022 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO(P) | 2 | 3 | 3 | 1 | 1 | 2 | 2 | 3 | 3 | 1 | 2 |
| Total | 2 | 3 | 3 | 1 | 1 | 2 | 2 | 3 | 3 | 1 | 2 |
| Average | 2 | 3 | 3 | 1 | 1 | 2 | 2 | 3 | 3 | 1 | 2 |

| | | | | | | | | | | | |
|---|------------------|----------|----------|----------|----------|------------|----------|----------|-------------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Genetically Modified Organisms | | | | | | | | | Course: SE332 | | |
| Semester: III | | | | | | | | | Year: II | | |
| Academic Year: 2018-19 | | | | | | | | | Academic Year: 2020-21 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 2 | 1 | 1 | 2 | 1 | 3 | 3 | 3 | 0 |
| CO2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 0 |
| Total | 6 | 2 | 4 | 2 | 2 | 3 | 2 | 6 | 6 | 6 | 0 |
| Average | 3 | 1 | 2 | 1 | 1 | 1.5 | 1 | 3 | 3 | 3 | 0 |

| | | | | | | | | | | | |
|--|------------------|--|--|--|--|--|--|--|---------------------------|--|--|
| Name of the Program: BTGC | | | | | | | | | | | |
| Name of the Course: Organic And General Chemistry- II | | | | | | | | | Course Code: CT335 | | |
| Semester: III | | | | | | | | | Year: 2nd year | | |
| Academic Year: 2020-21 | | | | | | | | | Batch: 2019-2022 | | |
| | Program Outcomes | | | | | | | | Program Specific | | |

| COs/POs | | | | | | | | | Outcomes | | |
|----------------|----------|----------|----------|----------|------------|------------|----------|------------|------------|-------------|----------|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CT335.CO1 | 3 | 3 | 3 | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 3 |
| CT335.CO2 | 3 | 3 | 3 | 1 | 1 | 2 | 2 | 2 | 0 | 0 | 3 |
| CT335.CO3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 1 | 1 | 3 |
| CT335.CO4 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 0 | 2 | 3 |
| AVERAGE | 3 | 3 | 3 | 2 | 1.5 | 2.5 | 2 | 2.5 | 0.5 | 0.75 | 3 |
| CT335P.CO | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |

| SKILL ENHANCEMENT COURSE(SEC) | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|---------------------------|------|------|
| Safety Rules In Chemistry Laboratory & Preparing Lab Reagent | | | | | | | | | Course Code:SE335 | | |
| Semester: III | | | | | | | | | | | |
| Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| SE335 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

| Name of the Program: BtGC | | | | | | | | | | | |
|---|-----------|-----------|-------------|------------|-------------|-------------|-------------|-------------|---------------------------|-------------|------------|
| Name of the Course: Microbiology and Biophysical Techniques | | | | | | | | | Course Code: BT 433 | | |
| Semester: IV | | | | | | | | | Year: II | | |
| Academic Year: 2020-21 | | | | | | | | | Batch: 2019-2022 | | |
| Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 1 |
| CO2 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 2 | 2 | 0 | 1 |
| CO3 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 2 | 1 |
| CO4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 |
| Total | 12 | 12 | 11 | 10 | 11 | 9 | 9 | 11 | 10 | 5 | 6 |
| Average | 3 | 3 | 2.75 | 2.5 | 2.75 | 2.25 | 2.25 | 2.75 | 2.5 | 1.25 | 1.5 |

| Name of the Program: BtGC | | | | | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|----------|---------------------------|----------|----------|
| Name of the Course: Microbiology and Biophysical techniques | | | | | | | | | Course Code: BT 433 P | | |
| Semester: IV | | | | | | | | | Year: II | | |
| Academic Year: 2020-21 | | | | | | | | | Batch: 2019-2022 | | |
| Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Total | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Average | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |

| | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|---------------------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Bioinformatics | | | | | | | | Course Code: SE433 | | | |
| Semester: IV | | | | | | | | Year: II | | | |
| Academic Year: 2020-21 | | | | | | | | Batch:2019-2022 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 0 |
| CO2 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 0 |
| Total | 6 | 6 | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 0 |

| | | | | | | | | | | | |
|---|-------------------------|------------|------------|-------------|------------|-------------|------------|---------------------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Molecular Genetics | | | | | | | | Course Code: GT432 | | | |
| Semester: IV | | | | | | | | Year: II | | | |
| Academic Year: 2020-21 | | | | | | | | Batch:2019-2022 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 1 | 1 | 0 | 1 | 0 | 2 | 3 | 2 | 2 | 2 |
| CO2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 1 |
| CO3 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 3 | 2 | 3 | 2 |
| CO4 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| Total | 8 | 8 | 8 | 7 | 6 | 5 | 6 | 10 | 8 | 9 | 6 |
| Average | 2 | 2 | 2 | 1.75 | 1.5 | 1.25 | 1.5 | 2.5 | 2 | 2.25 | 1.5 |

| | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|----------------------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Molecular Genetics | | | | | | | | Course Code: GT432P | | | |
| Semester: IV | | | | | | | | Year: II | | | |
| Academic Year: 2020-21 | | | | | | | | Batch:2019-2022 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO(P) | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 |
| Total | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 |
| Average | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 |

| | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|---------------------------|----------------------------------|-------------|-------------|
| Name of the Program: BTGC | | | | | | | | | | | |
| Name of the Course: Genetic Counseling | | | | | | | | Course Code: SE432 | | | |
| Semester: IV | | | | | | | | Year: II | | | |
| Academic Year: 2020-21 | | | | | | | | Batch:2019-2022 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 1 | 1 | 1 | 2 | 2 | 0 | 1 | 3 | 1 | 2 | 0 |
| CO2 | 1 | 1 | 1 | 2 | 2 | 0 | 1 | 3 | 1 | 2 | 0 |
| Total | 2 | 2 | 2 | 4 | 4 | 0 | 2 | 6 | 2 | 4 | 0 |
| Average | 1 | 1 | 1 | 2 | 2 | 0 | 1 | 3 | 1 | 2 | 0 |

| | | | | | | | | | | | |
|--|-------------------------|-------------|------------|------------|------------|-------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: BTGC | | | | | | | | | | | |
| Name of the Course: Inorganic And Physical Chemistry-II | | | | | | | | | Course Code: CT435 | | |
| Semester: IV | | | | | | | | | Year: 2nd year | | |
| Academic Year: 2020-21 | | | | | | | | | Batch: 2019-2022 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COURSE ATTAINMENT | BtGC | | | | | | | | | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CT435.CO1 | 3 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 1 |
| CT435.CO2 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |
| CT435.CO3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 3 |
| CT435.CO4 | 3 | 3 | 3 | 3 | 2 | 1 | 1 | 2 | 1 | 1 | 3 |
| AVERAGE | 2.75 | 2.25 | 2 | 1.5 | 1.5 | 0.75 | 1 | 1.5 | 0.5 | 0.5 | 2 |
| CT435P.CO | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |

| | | | | | | | | | | | |
|--------------------------------------|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|
| SKILL ENHANCEMENT COURSE(SEC) | | | | | | | | | | | |
| Green Methods In Chemistry | | | | | | | | | Course Code: SE435 | | |
| Semester: IV | | | | | | | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| SE335 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

| | | | | | | | | | | | |
|--|-------------------------|------------|-------------|------------|------------|-------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Molecular biology | | | | | | | | | Course Code: BT 533 | | |
| Semester: V | | | | | | | | | Year: III | | |
| Academic Year: 21-22 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 1 | 1 | 0 | 2 | 1 | 3 | 3 | 3 | 3 | 2 |
| CO2 | 3 | 2 | 2 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| CO3 | 3 | 0 | 1 | 0 | 2 | 1 | 3 | 3 | 3 | 0 | 0 |
| CO4 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 |
| Total | 12 | 6 | 7 | 4 | 10 | 7 | 12 | 12 | 12 | 9 | 6 |
| Average | 3 | 1.5 | 1.75 | 1 | 2.5 | 1.75 | 3 | 3 | 3 | 2.25 | 1.5 |

| | | | | | | | | | | | |
|--|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Molecular Biology | | | | | | | | | Course Code: BT 533 P | | |
| Semester: V | | | | | | | | | Year: III | | |
| Academic Year: 21-22 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| Total | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| Average | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| Name of the Program: BtGC | | | | | | | | | | | |

| | | | | | | | | | | | | |
|--|------------------|-------------|-------------|----------|-----------|----------|-------------|-----------|---------------------------|-------------|------------|--|
| Name of the Course: Animal and Plant Biotechnology | | | | | | | | | course Code: BT533A | | | |
| Semester: V | | | | | | | | | Year: III | | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| CO1 | 3 | 3 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 0 | 1 | |
| CO2 | 3 | 4 | 4 | 2 | 3 | 2 | 4 | 3 | 4 | 3 | 0 | |
| CO3 | 3 | 4 | 4 | 2 | 4 | 2 | 4 | 3 | 4 | 1 | 1 | |
| CO4 | 4 | 4 | 4 | 2 | 4 | 2 | 4 | 3 | 4 | 3 | 0 | |
| Total | 13 | 15 | 15 | 8 | 12 | 8 | 15 | 12 | 15 | 7 | 2 | |
| Average | 3.25 | 3.75 | 3.75 | 2 | 3 | 2 | 3.75 | 3 | 3.75 | 1.75 | 0.5 | |

| | | | | | | | | | | | | |
|--|------------------|----------|----------|----------|----------|----------|----------|----------|---------------------------|----------|----------|--|
| Name of the Program: BtGC | | | | | | | | | | | | |
| Name of the Course: Animal and Plant Biotechnology | | | | | | | | | Course Code: BT 533AP | | | |
| Semester: V | | | | | | | | | Year: III | | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| CO1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 | |
| Total | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 | |
| Average | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 | |

| | | | | | | | | | | | | |
|--|------------------|----------|----------|----------|----------|----------|----------|----------|---------------------------|----------|----------|--|
| Name of the Program: BtGC | | | | | | | | | | | | |
| Name of the Course: Plant Tissue Culture | | | | | | | | | Course Code: SE533 | | | |
| Semester: V | | | | | | | | | Year: III | | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| CO1 | 3 | 4 | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 1 | 1 | |
| CO2 | 3 | 4 | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 1 | 1 | |
| Total | 6 | 8 | 8 | 4 | 8 | 4 | 8 | 4 | 8 | 2 | 2 | |
| Average | 3 | 4 | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 1 | 1 | |

| | | | | | | | | | | | | |
|---|------------------|----------|----------|----------|------------|----------|------------|------------|---------------------------|----------|----------|--|
| Name of the Program: Bcom, BBA, BA, BSc Physical Sciences | | | | | | | | | | | | |
| Name of the Course: Food Preservation and Adulteration (GE) | | | | | | | | | Course Code: GE 533 | | | |
| Semester: V | | | | | | | | | Year: III | | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| CO1 | 3 | 3 | 1 | 3 | 2 | 2 | 3 | 3 | 1 | 0 | 1 | |
| CO2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 0 | 1 | |
| Total | 5 | 6 | 4 | 6 | 5 | 4 | 5 | 5 | 3 | 0 | 2 | |
| Average | 2.5 | 3 | 2 | 3 | 2.5 | 2 | 2.5 | 2.5 | 1.5 | 0 | 1 | |

| | | | | | | | | | | | |
|---|------------------|------------|-------------|-------------|-------------|----------|----------|-----------|---------------------------|-----------|------------|
| Name of the Course: Population Genetics | | | | | | | | | Course: GT532 | | |
| Semester: V | | | | | | | | | Year:III | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 0 |
| CO2 | 3 | 2 | 3 | 3 | 2 | 2 | 1 | 3 | 1 | 3 | 2 |
| CO3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 3 | 1 | 3 | 0 |
| CO4 | 3 | 2 | 2 | 1 | 1 | 2 | 1 | 3 | 1 | 3 | 0 |
| Total | 12 | 10 | 11 | 9 | 7 | 8 | 4 | 12 | 4 | 12 | 2 |
| Average | 3 | 2.5 | 2.75 | 2.25 | 1.75 | 2 | 1 | 3 | 1 | 3 | 0.5 |

| | | | | | | | | | | | |
|---|------------------|----------|----------|----------|----------|----------|----------|----------|---------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Population Genetics | | | | | | | | | Course Code: GT532P | | |
| Semester: V | | | | | | | | | Year: III | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | 3 | 0 |
| Total | 3 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | 3 | 0 |
| Average | 3 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | 3 | 0 |

| | | | | | | | | | | | |
|--|------------------|-------------|-------------|----------|-------------|-------------|----------|-----------|---------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Advanced Techniques in genome analysis and Genetic Engineering | | | | | | | | | Course Code: GT532A | | |
| Semester: V | | | | | | | | | Year: III | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 2 | 1 | 1 | 2 | 3 | 3 | 3 | 1 |
| CO2 | 3 | 3 | 3 | 2 | 1 | 1 | 2 | 3 | 3 | 3 | 1 |
| CO3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 |
| CO4 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 3 | 1 |
| Total | 11 | 11 | 11 | 8 | 5 | 5 | 8 | 12 | 12 | 11 | 5 |
| Average | 2.75 | 2.75 | 2.75 | 2 | 1.25 | 1.25 | 2 | 3 | 3 | 2.75 | 1.25 |

| | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Advanced Techniques in genome analysis and Genetic Engineering | | | | | | | | | Course Code: GT532AP | | |
| Semester: V | | | | | | | | | Year: III | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO(P) | 2 | 3 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 3 |
| Total | 2 | 3 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 3 |
| Average | 2 | 3 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 3 |

| | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Vermicomposting (SEC) | | | | | | | | | Course Code: SE532 | | |
| Semester: V | | | | | | | | | Year: III | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 3 | 1 | 1 | 3 | 2 | 3 | 3 | 3 | 0 | 3 |
| CO2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 0 | 2 |
| Total | 5 | 6 | 4 | 3 | 6 | 5 | 6 | 6 | 5 | 0 | 5 |

| | | | | | | | | | | | |
|--|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: Bcom, BBA, BA, BSc Physical Sciences | | | | | | | | | | | |
| Name of the Course: Food Preservation and Adulteration (GE) | | | | | | | | | Course Code: GE 533 | | |
| Semester: V | | | | | | | | | Year: III | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 1 | 3 | 2 | 2 | 3 | 3 | 1 | 0 | 1 |
| CO2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 0 | 1 |
| Total | 5 | 6 | 4 | 6 | 5 | 4 | 5 | 5 | 3 | 0 | 2 |
| Average | 2.5 | 3 | 2 | 3 | 2.5 | 2 | 2.5 | 2.5 | 1.5 | 0 | 1 |

| | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: BTGC | | | | | | | | | | | |
| Name of the Course: Organic Chemistry- V | | | | | | | | | Course Code: CT535 | | |
| Semester: V | | | | | | | | | Year: 3rd year | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CT535.CO1 | 2 | 3 | 1 | 2 | 1 | 2 | 2 | 3 | 2 | 1 | 3 |
| CT535.CO2 | 3 | 3 | 3 | 3 | 1 | 2 | 2 | 3 | 0 | 1 | 3 |
| CT535.CO3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 3 |
| CT535.CO4 | 3 | 3 | 2 | 2 | 1 | 2 | 2 | 3 | 1 | 0 | 3 |

| | | | | | | | | | | | |
|----------------|-------------|----------|----------|-------------|-------------|----------|-------------|-------------|-------------|----------|----------|
| AVERAGE | 2.75 | 3 | 2 | 2.25 | 1.25 | 2 | 1.75 | 2.75 | 1.25 | 1 | 3 |
| CT535P.CO | 3 | 3 | 3 | 3 | 1 | 2 | 3 | 3 | 1 | 1 | 3 |

| | | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|-------------|------------|------------|------------|----------------------------------|-------------|-------------|--|
| Name of the Program:BTGC | | | | | | | | | | | | |
| Name of the Course: Physico-Chemical Methods Of Analysis,Spectroscopy And Analysis | | | | | | | | | Corse Code: CT535A | | | |
| Semester: V | | | | | | | | | Year:3rd year | | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| CT535A.CO1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| CT535A.CO2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| CT535A.CO3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| CT535A.CO4 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | |
| AVERAGE | 3 | 3 | 3 | 3 | 2.75 | 3 | 3 | 3 | 2.75 | 2.75 | 3 | |
| CT535AP.CO | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | |

SKILL ENHANCEMENT COURSE(SEC)

| | | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|--|
| Name of the Course :Basic Analytical Chemistry | | | | | | | | | Course Code:SE535 | | | |
| Semester: V | | | | | | | | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| SE335 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |

Generic elective(GE)

| | | | | | | | | | | | | |
|--|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|--|
| Name of the Course :Organic Farming | | | | | | | | | Course Code:GE535 | | | |
| GE535 | | | | | | | | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| SE335 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |

| | | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|--|
| Name of the Program:BtGC | | | | | | | | | | | | |
| Name of the Course: Genetic Engineering and Immunology | | | | | | | | | Course Code: BT 633 | | | |
| Semester:VI | | | | | | | | | Year:III | | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | |
| CO1 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | |

| | | | | | | | | | | | |
|----------------|-----------|----------|------------|------------|----------|----------|----------|-------------|-----------|-------------|----------|
| CO2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 1 |
| CO3 | 3 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 3 | 2 | 2 |
| CO4 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 2 |
| Total | 12 | 8 | 10 | 10 | 8 | 8 | 8 | 9 | 12 | 11 | 8 |
| Average | 3 | 2 | 2.5 | 2.5 | 2 | 2 | 2 | 2.25 | 3 | 2.75 | 2 |

| | | | | | | | | | | | |
|---|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Genetic Engineering and Immunology | | | | | | | | | Course Code: BT 633 (P) | | |
| Semester: VI | | | | | | | | | Year: III | | |
| Academic Year: 21-22 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 |
| Total | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 |
| Average | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 |

| | | | | | | | | | | | |
|---|-------------------------|------------|-------------|-----------|----------|-----------|----------|-----------|----------------------------------|-------------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Industrial and Environmental Biotechnology | | | | | | | | | Course Code: BT633A | | |
| Semester: VI | | | | | | | | | Year: III | | |
| Academic Year: 21-22 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 4 | 1 | 2 |
| CO2 | 4 | 4 | 3 | 3 | 2 | 2 | 2 | 3 | 4 | 1 | 2 |
| CO3 | 4 | 3 | 3 | 3 | 2 | 4 | 2 | 3 | 4 | 1 | 2 |
| CO4 | 4 | 3 | 3 | 4 | 2 | 4 | 2 | 3 | 4 | 2 | 2 |
| Total | 12 | 10 | 11 | 12 | 8 | 12 | 8 | 12 | 16 | 5 | 8 |
| Average | 4 | 2.5 | 2.75 | 3 | 2 | 3 | 2 | 3 | 4 | 1.25 | 2 |

| | | | | | | | | | | | |
|---|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Industrial and Environmental Biotechnology | | | | | | | | | Course Code: BT 633AP | | |
| Semester: VI | | | | | | | | | Year: III | | |
| Academic Year: 21-22 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 4 | 0 | 2 |
| Total | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 4 | 0 | 2 |
| Average | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 4 | 0 | 2 |

| | | | | | | | | | | | |
|--|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Fermentation Technology (SEC) | | | | | | | | | Course Code: SE 633 | | |
| Semester: VI | | | | | | | | | Year: III | | |
| Academic Year: 21-22 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 1 | 3 | 2 | 2 | 2 | 3 | 3 | 0 | 2 |
| CO2 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 0 | 0 |
| Total | 6 | 4 | 4 | 5 | 4 | 5 | 4 | 6 | 6 | 0 | 2 |
| Average | 3 | 2 | 2 | 2.5 | 2 | 2.5 | 2 | 3 | 3 | 0 | 1 |

| | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Inbreeding, Breeding techniques and Genome Evolution | | | | | | | | | Course: GT632 | | |
| Semester: VI | | | | | | | | | Year: III | | |
| Academic Year: 21-22 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 2 | 3 | 2 | 1 | 1 | 3 | 0 | 3 | 0 |
| CO2 | 3 | 2 | 1 | 3 | 1 | 3 | 2 | 3 | 2 | 3 | 0 |
| CO3 | 3 | 2 | 1 | 3 | 1 | 2 | 1 | 3 | 2 | 3 | 0 |
| CO4 | 3 | 1 | 2 | 0 | 1 | 1 | 1 | 3 | 2 | 3 | 0 |
| Total | 12 | 7 | 6 | 9 | 5 | 7 | 5 | 12 | 6 | 12 | 0 |

| | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Inbreeding, Breeding Techniques and Genome Evolution | | | | | | | | | Course Code: GT632P | | |
| Semester: VI | | | | | | | | | Year: III | | |
| Academic Year: 21-22 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 3 | 2 | 1 | 0 | 1 | 3 | 0 | 3 | 0 |
| Total | 3 | 2 | 3 | 2 | 1 | 0 | 1 | 3 | 0 | 3 | 0 |
| Average | 3 | 2 | 3 | 2 | 1 | 0 | 1 | 3 | 0 | 3 | 0 |

| | | | | | | | | | | | |
|---|-------------------------|------------|------------|------------|------------|------------|------------|------------|----------------------------------|-------------|-------------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Human Genetics & Biostatistics | | | | | | | | | Course Code: GT632A | | |
| Semester: VI | | | | | | | | | Year: III | | |
| Academic Year: 21-22 | | | | | | | | | Batch: 2019-22 | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 1 | 1 | 2 | 3 | 1 | 0 | 0 | 1 | 1 | 3 | 0 |
| CO2 | 1 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 3 | 2 |

| | | | | | | | | | | | |
|----------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|
| CO3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 |
| CO4 | 1 | 3 | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 3 | 0 |
| Total | 6 | 10 | 9 | 9 | 7 | 3 | 5 | 7 | 7 | 11 | 4 |
| Average | 1.5 | 2.5 | 2.25 | 2.25 | 1.75 | 0.75 | 1.25 | 1.75 | 1.75 | 2.75 | 1 |

| | | | | | | | | | | | |
|---|-------------------------|----------|----------|----------|----------|-----------------------------|----------|----------|----------------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Human Genetics & Biostatistics | | | | | | Course Code: GT632AP | | | | | |
| Semester: VI | | | | | | Year: III | | | | | |
| Academic Year:21-22 | | | | | | Batch:2019-22 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO(P) | 1 | 3 | 2 | 1 | 2 | 0 | 1 | 1 | 2 | 3 | 0 |
| Total | 1 | 3 | 2 | 1 | 2 | 0 | 1 | 1 | 2 | 3 | 0 |
| Average | 0.5 | 3 | 2 | 1 | 2 | 0 | 1 | 1 | 2 | 3 | 0 |

| | | | | | | | | | | | |
|---|-------------------------|----------|----------|----------|----------|----------------------|----------|----------|----------------------------------|----------|----------|
| Name of the Program: BtGC | | | | | | | | | | | |
| Name of the Course: Medicinal Plants | | | | | | Course: SE632 | | | | | |
| Semester: VI | | | | | | Year:III | | | | | |
| Academic Year:21-22 | | | | | | Batch:2019-22 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 3 | 2 | 1 | 3 | 2 | 2 | 1 | 3 | 2 | 1 | 3 |
| CO2 | 3 | 2 | 1 | 3 | 2 | 2 | 1 | 3 | 2 | 1 | 3 |
| Total | 6 | 4 | 2 | 6 | 4 | 4 | 2 | 6 | 4 | 2 | 6 |
| Average | 3 | 2 | 1 | 3 | 2 | 2 | 1 | 3 | 2 | 1 | 3 |

| | | | | | | | | | | | |
|---|-------------------------|----------|------------|----------|------------|---------------------------|----------|------------|----------------------------------|----------|----------|
| Name of the Program: BCom,BA,BBA,BSc Physical Sciences | | | | | | | | | | | |
| Name of the Course: Wine making | | | | | | Course Code: GE632 | | | | | |
| Semester: VI | | | | | | Year: III | | | | | |
| Academic Year:21-22 | | | | | | Batch:2019-22 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CO1 | 2 | 2 | 1 | 0 | 1 | 2 | 2 | 2 | 3 | 1 | 1 |
| CO2 | 2 | 2 | 2 | 0 | 2 | 1 | 2 | 1 | 2 | 1 | 1 |
| Total | 4 | 4 | 3 | 0 | 3 | 3 | 4 | 3 | 5 | 2 | 2 |
| Average | 2 | 2 | 1.5 | 0 | 1.5 | 1.5 | 2 | 1.5 | 2.5 | 1 | 1 |

| | | | | | | | | | | | |
|---|-------------------------|--|--|--|--|---------------------------|--|--|----------------------------------|--|--|
| Name of the Program: BTGC | | | | | | | | | | | |
| Name of the Course: Organic, General And Physical Chemistry-IV | | | | | | Course Code: CT635 | | | | | |
| Semester: VI | | | | | | Year: III | | | | | |
| Academic Year:21-22 | | | | | | Batch:2019-22 | | | | | |
| | Program Outcomes | | | | | | | | Program Specific Outcomes | | |

| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
|----------------|----------|-------------|-------------|----------|------------|------------|----------|-------------|-------------|-------------|----------|
| CT635.CO1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| CT635.CO2 | 3 | 3 | 2 | 3 | 1 | 2 | 1 | 2 | 0 | 0 | 3 |
| CT635.CO3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| CT635.CO4 | 3 | 2 | 1 | 3 | 1 | 2 | 1 | 3 | 3 | 1 | 3 |
| AVERAGE | 3 | 2.75 | 2.25 | 3 | 1.5 | 2.5 | 2 | 2.75 | 2.25 | 1.75 | 3 |
| CT635P.CO | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 1 | 3 |

| Name of the Program:BTGC | | | | | | | | | | | |
|--|----------|----------|----------|----------|----------|----------|------------|----------|----------------------------------|-------------|----------|
| Name of the Course: Drugs,Pesticides,Macromolecules | | | | | | | | | Corse Code:CT635A | | |
| Semester: VI | | | | | | | | | Year:3rd year | | |
| Academic Year:21-22 | | | | | | | | | Batch:2019-22 | | |
| Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| CT635A.CO1 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| CT635A.CO2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| CT635A.CO3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| CT635A.CO4 | 3 | 3 | 3 | 3 | 1 | 3 | 1 | 3 | 1 | 0 | 3 |
| AVERAGE | 3 | 3 | 3 | 3 | 2 | 3 | 2.5 | 3 | 2.5 | 2.25 | 3 |
| CT635AP.CO | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 2 | 3 |

| SKILL ENHANCEMENT COURSE(SEC) | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------------|------|------|
| Name of the Course : Chemistry Of Cosmetics & Perfumes | | | | | | | | | Course Code:SE635 | | |
| Semester: VI | | | | | | | | | | | |
| Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| SE335 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

| Generic elective(GE) | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------------|------|------|
| Name of the Course : Cheminformatics | | | | | | | | | Course Code:GE635 | | |
| Semester: VI | | | | | | | | | | | |
| Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| SE335 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

PROGRAM ATTAINMENT MATRIX

Name of the Program: BtGC

Batch: 2019-22

| COURSE | Program Outcomes | | | | | | | | Program Specific Outcomes | | |
|---|------------------|--------|-------|--------|--------|-------|-------|--------|---------------------------|--------|--------|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| ENGLISH | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 3 | 0 | 0 | 0 |
| SECOND LANGUAGE | 0 | 0 | 0 | 0.0625 | 2.8125 | 1.625 | 2.875 | 2.75 | 0.0625 | 0 | 0.0625 |
| TRANSMISSION GENETICS | 0.833 | 0.5833 | 0.833 | 0.166 | 0.33 | 0.833 | 0.66 | 0.833 | 0.5833 | 1 | 0 |
| TRANSMISSION GENETICS P | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 3 | 3 | 0 |
| CELL BIOLOGY AND GENETICS | 3 | 1.5 | 2.25 | 1.5 | 1.25 | 0 | 1.5 | 2.75 | 2.25 | 2 | 0.5 |
| CELL BIOLOGY AND GENETICS P | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 |
| CHEMISTRY | 1 | 0.833 | 0.66 | 0.66 | 0.833 | 0.5 | 0.66 | 0.9166 | 0.5833 | 0.4166 | 1 |
| CHEMISTRY P | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | 3 |
| AECC1 | 2 | 2 | 2 | 3 | 1 | 3 | 2 | 2 | 2.5 | 2.5 | 2 |
| ENGLISH | 0 | 0 | 0 | 0 | 3 | 2.5 | 3 | 3 | 0 | 0 | 0 |
| SECOND LANGUAGE | 0 | 0 | 0 | 0.0625 | 2.8125 | 1.625 | 2.875 | 2.75 | 0.0625 | 0 | 0.0625 |
| GENETIC ANALYSIS | 2.5 | 2.25 | 2.25 | 0.5 | 1.5 | 0.25 | 2 | 1.25 | 0.5 | 3 | 0 |
| GENETIC ANALYSIS P | 2 | 2 | 2 | 1 | 2 | 0 | 2 | 1 | 1 | 3 | 0 |
| NUCLEIC ACIDS, BIOSTATISTICS AND BIOINFORMATICS | 3 | 1.75 | 2.25 | 1.75 | 1.25 | 1 | 2 | 4 | 2.25 | 1.75 | 0.25 |
| NUCLEIC ACIDS, BIOSTATISTICS AND BIOINFORMATICS P | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 |
| CHEMISTRY | 1 | 1 | 0.833 | 0.833 | 0.75 | 0.583 | 0.583 | 0.833 | 0.4166 | 1.66 | 1 |
| CHEMISTRY P | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 3 |
| AECC-2 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 |
| ENGLISH | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 3 | 0 | 0 | 0 |
| SECOND LANGUAGE | 0 | 0 | 0 | 0.05 | 3 | 1 | 2.875 | 2.75 | 0 | 0 | 0 |
| GENE STRUCTURE, ORGANIZATION AND EXPRESSION | 2 | 0.75 | 2.5 | 1 | 0.5 | 1.25 | 1.25 | 1.75 | 2.5 | 2 | 2.75 |
| GENE STRUCTURE, ORGANIZATION AND EXPRESSION P | 2 | 3 | 3 | 1 | 1 | 2 | 2 | 3 | 3 | 1 | 2 |
| BIOCHEMISTRY | 3 | 2 | 2.5 | 2 | 2.25 | 1.75 | 1.75 | 2.75 | 2.5 | 1 | 2.25 |
| BIOCHEMISTRY P | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 0 | 3 |
| CHEMISTRY | 3 | 3 | 3 | 2 | 1.5 | 2.5 | 2 | 2.5 | 0.5 | 0.75 | 3 |
| CHEMISTRY P | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| SEC | 2.8 | 2.8 | 2.9 | 2.2 | 1.75 | 2.05 | 2.35 | 2.85 | 2.4 | 1.15 | 2.65 |
| ENGLISH | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 3 | 0 | 0 | 0 |
| SECOND LANGUAGE | 0 | 0 | 0 | 0 | 3 | 1 | 2.875 | 2.75 | 0 | 0.05 | 0 |
| MOLECULAR GENETICS | 1.33 | 1.33 | 1.33 | 1.166 | 1 | 0.833 | 1 | 1.66 | 0.886 | 1.5 | 1 |
| MOLECULAR GENETICS P | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 |

| | | | | | | | | | | | |
|--|-------|-------|-------|------|--------|------|-------|-------|--------|------|-------|
| MICROBIOLOGY AND BIOPHYSICAL TECHNIQUES | 3 | 3 | 2.75 | 2.5 | 2.75 | 2.25 | 2.25 | 2.75 | 2.5 | 1.25 | 1.5 |
| MICROBIOLOGY AND BIOPHYSICAL TECHNIQUES P | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| CHEMISTRY | 2.75 | 2.25 | 2 | 1.5 | 1.5 | 0.75 | 1 | 1.5 | 0.5 | 0.5 | 2 |
| CHEMISTRY P | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| SEC | 2.25 | 2.25 | 2.15 | 1.8 | 1.65 | 1.8 | 1.65 | 1.85 | 1.8 | 1.75 | 1.9 |
| POPULATION GENETICS: | 2 | 1.66 | 1.833 | 1.5 | 1.166 | 1.33 | 0.66 | 2 | 0.66 | 2 | 0.33 |
| POPULATION GENETICS:P | 3 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | 3 | 0 |
| ADVANCED TECHNIQUES IN GENOME ANALYSIS AND GENETIC ENGINEERING OF THE COURSE: | 2.75 | 2.75 | 2.75 | 2 | 1.25 | 1.25 | 2 | 3 | 3 | 2.75 | 1.25 |
| ADVANCED TECHNIQUES IN GENOME ANALYSIS AND GENETIC ENGINEERING OF THE COURSE:P | 2 | 3 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 3 |
| MOLECULAR BIOLOGY | 3 | 1.5 | 1.75 | 1 | 2.5 | 1.75 | 3 | 3 | 3 | 2.25 | 1.5 |
| MOLECULAR BIOLOGY P | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| ANIMAL AND PLANT BIOTECHNOLOGY | 3.25 | 3.75 | 3.75 | 2 | 3 | 2 | 3.75 | 3 | 3.75 | 1.75 | 0.5 |
| ANIMAL AND PLANT BIOTECHNOLOGY P | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 |
| CHEM V | 0.916 | 1 | 0.66 | 0.75 | 0.4166 | 0.66 | 0.25 | 0.91 | 0.4166 | 0.33 | 1 |
| CHEM P | 3 | 3 | 3 | 3 | 1 | 2 | 3 | 3 | 1 | 1 | 3 |
| CHEM V A | 3 | 3 | 3 | 3 | 2.75 | 3 | 3 | 3 | 2.75 | 2.75 | 3 |
| CHEM P | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 |
| SEC | 2.9 | 3.15 | 2.55 | 2.3 | 2.8 | 2.35 | 2.6 | 2.4 | 3.1 | 2 | 1.7 |
| GE | 2.875 | 2.375 | 2.125 | 3 | 2.5 | 2.25 | 2.125 | 1.875 | 2.625 | 1.75 | 1.125 |
| INBREEDING, BREEDING TECHNIQUES AND GENOME EVOLUTIONNAME NAME OF THE COURSE: | 3 | 1.75 | 1.5 | 2.25 | 1.25 | 1.75 | 1.25 | 3 | 1.5 | 3 | 0 |
| INBREEDING, BREEDING TECHNIQUES AND GENOME EVOLUTIONNAME NAME OF THE COURSE:P | 3 | 2 | 3 | 2 | 1 | 0 | 1 | 3 | 0 | 3 | 0 |
| HUMAN GENETICS & BIostatisticsCOURSE: | 1.5 | 2.5 | 2.25 | 2.25 | 1.75 | 0.75 | 1.25 | 1.75 | 1.75 | 2.75 | 1 |
| HUMAN GENETICS & BIostatisticsCOURSE P | 0.5 | 3 | 2 | 1 | 2 | 0 | 1 | 1 | 2 | 3 | 0 |
| GENETIC ENGINEERING AND IMMUNLOGY | 3 | 2 | 2.5 | 2.5 | 2 | 2 | 2 | 2.25 | 3 | 2.75 | 2 |
| GENETIC ENGINEERING AND IMMUNLOGY P | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 |
| INDUSTRIAL AND ENVIRONMENTAL BIOTECHNOLOGY | 4 | 2.5 | 2.75 | 3 | 2 | 3 | 2 | 3 | 4 | 1.25 | 2 |
| INDUSTRIAL AND ENVIRONMENTAL BIOTECHNOLOGY P | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 4 | 0 | 2 |

| | | | | | | | | | | | |
|-----------|------|------|------|------|-------|------|------|------|------|-------|------|
| CHEM VI | 3 | 2.75 | 2.25 | 3 | 1.5 | 2.5 | 2 | 2.75 | 2.25 | 1.75 | 3 |
| CHEM P | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 1 | 3 |
| CHEM VI A | 3 | 3 | 3 | 3 | 2 | 3 | 2.5 | 3 | 2.5 | 2.25 | 3 |
| CHEM P | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 2 | 3 |
| SEC | 3 | 2.4 | 2 | 2.5 | 2.2 | 2.1 | 2 | 2.5 | 2.8 | 1.3 | 1.8 |
| GE | 3 | 2.4 | 2 | 2.5 | 2.2 | 2.1 | 2 | 2.5 | 2.8 | 1.3 | 1.8 |
| AVG | 2.34 | 2.12 | 2.10 | 1.85 | 1.976 | 1.76 | 2.16 | 2.57 | 1.87 | 1.676 | 1.49 |

Course attainment Matrix

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
|---|------|-------|-------|--------|--------|-------|-------|-------|--------|-------|--------|
| ENGLISH | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 3 | 0 | 0 | 0 |
| SECOND LANGUAGE | 0 | 0 | 0 | 0.0625 | 2.8125 | 1.625 | 2.875 | 2.75 | 0.0625 | 0 | 0.0625 |
| TRANSMISSION GENETICS | 2.5 | 1.75 | 2.5 | 0.5 | 1 | 0.25 | 2 | 2.5 | 1.75 | 3 | 0 |
| TRANSMISSION GENETICS P | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 3 | 3 | 0 |
| CELL BIOLOGY AND GENETICS | 3 | 1.5 | 2.25 | 1.5 | 1.25 | 0 | 1.5 | 1.75 | 2.25 | 2 | 0.5 |
| CELL BIOLOGY AND GENETICS P | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 |
| CHEMISTRY | 1 | 0.833 | 0.666 | 0.666 | 0.8333 | 0.5 | 0.666 | 0.916 | 0.58 | 0.416 | 1 |
| CHEMISTRY P | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | 3 |
| AECC1 | 2 | 2 | 2 | 3 | 1 | 3 | 2 | 2 | 2.5 | 2.5 | 2 |
| ENGLISH | 0 | 0 | 0 | 0 | 3 | 2.5 | 3 | 3 | 0 | 0 | 0 |
| SECOND LANGUAGE | 0 | 0 | 0 | 0.0625 | 2.8125 | 1.625 | 2.875 | 2.75 | 0.0625 | 0 | 0.0625 |
| GENETIC ANALYSIS | 0.83 | 0.75 | 0.75 | 0.16 | 0.5 | 0.083 | 0.666 | 0.416 | 0.16 | 1 | 0 |
| GENETIC ANALYSIS P | 2 | 2 | 2 | 1 | 2 | 0 | 2 | 1 | 1 | 3 | 0 |
| NUCLEIC ACIDS, BIostatISTICS AND BIOINFORMATICS | 3 | 1.75 | 2.25 | 1.75 | 1.25 | 1 | 2 | 4 | 2.25 | 1.75 | 0.25 |
| NUCLEIC ACIDS, BIostatISTICS AND BIOINFORMATICS P | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 |
| CHEMISTRY | 3 | 3 | 2.5 | 2.5 | 2.25 | 1.75 | 1.75 | 2.5 | 1.25 | 0.5 | 3 |
| CHEMISTRY P | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 3 |
| AECC-2 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 |
| ENGLISH | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 3 | 0 | 0 | 0 |
| SECOND LANGUAGE | 0 | 0 | 0 | 0.05 | 3 | 1 | 2.875 | 2.75 | 0 | 0 | 0 |
| GENE STRUCTURE, ORGANIZATION AND EXPRESSION | 2 | 0.75 | 2.5 | 1 | 0.5 | 1.25 | 1.25 | 1.75 | 2.5 | 2 | 2.75 |
| GENE STRUCTURE, ORGANIZATION AND EXPRESSION P | 2 | 3 | 3 | 1 | 1 | 2 | 2 | 3 | 3 | 1 | 2 |
| BIOCHEMISTRY | 1 | 0.66 | 0.83 | 0.66 | 0.75 | 0.583 | 0.583 | 0.916 | 0.833 | 0.333 | 0.75 |

| | | | | | | | | | | | |
|--|------|------|------|------|------|------|-------|------|------|------|------|
| BIOCHEMISTRY P | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 0 | 3 |
| CHEMISTRY | 3 | 3 | 3 | 2 | 1.5 | 2.5 | 2 | 2.5 | 0.5 | 0.75 | 3 |
| CHEMISTRY P | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| SEC | 2.8 | 2.8 | 2.9 | 2.2 | 1.75 | 2.05 | 2.35 | 2.85 | 2.4 | 1.15 | 2.65 |
| ENGLISH | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 3 | 0 | 0 | 0 |
| SECOND LANGUAGE | 0 | 0 | 0 | 0 | 3 | 1 | 2.875 | 2.75 | 0 | 0.05 | 0 |
| MOLECULAR GENETICS | 2 | 2 | 2 | 1.75 | 1.5 | 1.25 | 1.5 | 2.5 | 2 | 2.25 | 1.5 |
| MOLECULAR GENETICS P | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 |
| MICROBIOLOGY AND BIOPHYSICAL TECHNIQUES | 3 | 3 | 2.75 | 2.5 | 2.75 | 2.25 | 2.25 | 2.75 | 2.5 | 1.25 | 1.5 |
| MICROBIOLOGY AND BIOPHYSICAL TECHNIQUES P | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| CHEMISTRY | 2.75 | 2.25 | 2 | 1.5 | 1.5 | 0.75 | 1 | 1.5 | 0.5 | 0.5 | 2 |
| CHEMISTRY P | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| SEC | 2.25 | 2.25 | 2.15 | 1.8 | 1.65 | 1.8 | 1.65 | 1.85 | 1.8 | 1.75 | 1.9 |
| POPULATION GENETICS: | 3 | 2.5 | 2.75 | 2.25 | 1.75 | 2 | 1 | 3 | 1 | 3 | 0.5 |
| POPULATION GENETICS:P | 3 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | 3 | 0 |
| ADVANCED TECHNIQUES IN GENOME ANALYSIS AND GENETIC ENGINEERING OF THE COURSE: | 2.75 | 2.75 | 2.75 | 2 | 1.25 | 1.25 | 2 | 3 | 3 | 2.75 | 1.25 |
| ADVANCED TECHNIQUES IN GENOME ANALYSIS AND GENETIC ENGINEERING OF THE COURSE:P | 2 | 3 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 3 |
| MOLECULAR BIOLOGY | 3 | 1.5 | 1.75 | 1 | 2.5 | 1.75 | 3 | 3 | 3 | 2.25 | 1.5 |
| MOLECULAR BIOLOGY P | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| ANIMAL AND PLANT BIOTECHNOLOGY | 3.25 | 3.75 | 3.75 | 2 | 3 | 2 | 3.75 | 3 | 3.75 | 1.75 | 0.5 |
| ANIMAL AND PLANT BIOTECHNOLOGY P | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 |
| CHEM V | 2.75 | 3 | 2 | 2.25 | 1.25 | 2 | 1.75 | 2.75 | 1.25 | 1 | 3 |
| CHEM P | 3 | 3 | 3 | 3 | 1 | 2 | 3 | 3 | 1 | 1 | 3 |
| CHEM V A | 3 | 3 | 3 | 3 | 2.75 | 3 | 3 | 3 | 2.75 | 2.75 | 3 |
| CHEM P | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 |
| SEC | 2.9 | 3.15 | 2.55 | 2.3 | 2.8 | 2.35 | 2.6 | 2.4 | 3.1 | 2 | 1.7 |

| | | | | | | | | | | | | |
|---|------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|--|
| GE | 2.87 | | | | | | | | | | | |
| | 5 | 2.375 | 2.125 | 3 | 2.5 | 2.25 | 2.125 | 1.875 | 2.625 | 1.75 | 1.125 | |
| INBREEDING, BREEDING TECHNIQUES AND GENOME EVOLUTION NAME OF THE COURSE: | 3 | 1.75 | 1.5 | 2.25 | 1.25 | 1.75 | 1.25 | 3 | 1.5 | 3 | 0 | |
| INBREEDING, BREEDING TECHNIQUES AND GENOME EVOLUTION NAME OF THE COURSE:P | 3 | 2 | 3 | 2 | 1 | 0 | 1 | 3 | 0 | 3 | 0 | |
| HUMAN GENETICS & BIOSTATISTICS COURSE: | 1 | 1.666 | 1.5 | 1.5 | 1.166 | 0.75 | 0.833 | 1.166 | 1.166 | 1.833 | 0.666 | |
| HUMAN GENETICS & BIOSTATISTICS COURSE P | 0.5 | 3 | 2 | 1 | 2 | 0 | 1 | 1 | 2 | 3 | 0 | |
| GENETIC ENGINEERING AND IMMUNOLOGY | 3 | 2 | 2.5 | 2.5 | 2 | 2 | 2 | 2.25 | 3 | 2.75 | 2 | |
| GENETIC ENGINEERING AND IMMUNOLOGY P | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | |
| INDUSTRIAL AND ENVIRONMENTAL BIOTECHNOLOGY | 4 | 2.5 | 2.75 | 3 | 2 | 3 | 2 | 3 | 4 | 1.25 | 2 | |
| INDUSTRIAL AND ENVIRONMENTAL BIOTECHNOLOGY P | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 4 | 0 | 2 | |
| CHEM VI | 3 | 2.75 | 2.25 | 3 | 1.5 | 2.5 | 2 | 2.75 | 2.25 | 1.75 | 3 | |
| CHEM P | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 1 | 3 | |
| CHEM VI A | 3 | 3 | 3 | 3 | 2 | 3 | 2.5 | 3 | 2.5 | 2.25 | 3 | |
| CHEM P | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 2 | 3 | |
| SEC | 3 | 2.4 | 2 | 2.5 | 2.2 | 2.1 | 2 | 2.5 | 2.8 | 1.3 | 1.8 | |
| GE | 3 | 2.4 | 2 | 2.5 | 2.2 | 2.1 | 2 | 2.5 | 2.8 | 1.3 | 1.8 | |
| AVERAGE | 2.25 | 2.0 | 2.01 | 1.795 | 1.90 | 1.72 | 2.10 | 2.495 | 1.815 | 1.607 | 1.435 | |

| Name of the Program: BtGC | | | | | | | | | PO TARGET | | |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------------------|----------------|----------------|
| Program Outcomes | | | | | | | | | Program Specific Outcomes | | |
| PROGR AM | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 |
| BtGC progra m attain ment | 2.34882 8125 | 2.12695 3125 | 2.10117 1875 | 1.85117 1875 | 1.97617 1875 | 1.7640 625 | 2.16757 8125 | 2.57773 4375 | 1.87734 375 | 1.6765 625 | 1.4937 5 |
| BtGC Course attain ment | 2.25242 1875 | 2.0435 | 2.01907 8125 | 1.79235 9375 | 1.90194 2188 | 1.72275 9375 | 2.10114 0625 | 2.49826 5625 | 1.81857 8125 | 1.6075 3125 | 1.4338 4375 |
| GAP | 0.096 | 0.083 | 0.082 | 0.059 | 0.074 | 0.037 | 0.066 | 0.098 | 0.059 | 0.069 | 0.06 |