



# Kristu Jayanti College

**AUTONOMOUS**

**Bengaluru**

Reaccredited 'A++' Grade by NAAC | Affiliated to Bengaluru North University

## FACULTY OF SCIENCES

Programme Matrix: Bachelor of Science - Biotechnology, Forensic Science [2023 Batch]

### Programme Outcomes

After successful completion of B.Sc. Forensic Science programme, a student will be able to:

PO1: Integrate scientific temper, spirit of enquiry, humanism and reform

PO2: Apply scientific know

ledge and skills ethically for societal development and entrepreneurship

PO3: Use the techniques of physics, chemistry, biology, and computer science while dealing with evidence and investigation of crime

PO4: Write reports on crime scenes and evidence analysed to be presented in court as admissible evidence

Date of Approval: 10/2/23

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FACULTY OF SCIENCE  
KRISTU JAYANTI COLLEGE AUTONOMOUS  
K. Narayanapura, Kothanur PO  
Bengaluru - 560077



**Programme Matrix: Bachelor of Science - Biotechnology, Forensic Science [2023 Batch]**

| <b>I Semester</b>  |                    |  |   |
|--------------------|--------------------|--|---|
| <b>Course Type</b> | <b>Course Code</b> | <b>Course Title</b>                        | <b>Course Outcomes</b>  |
| DSC                | 21FSC2T311         | Introduction to Forensic Science           | <ol style="list-style-type: none"> <li>1. Describe the fundamental concepts in Forensic Science</li> <li>2. Recall the contribution of various scientists to the development of Forensic Science</li> <li>3. Explain the working and functioning of Forensic Science Laboratories</li> <li>4. Connect various agencies to specific protocols in crime investigation.</li> </ol>               |
| DSC                | 21FSC2L211         | Introduction to Forensic Science Practical | <ol style="list-style-type: none"> <li>1. Assess the use of forensic science in criminal cases</li> <li>2. Illustrate the use of the principle of probability in Forensic Science</li> <li>3. Create forensic reports and depict information graphically.</li> </ol>  |
| DSC                | 21FSC2T312         | Basic Forensic Chemistry                   | <ol style="list-style-type: none"> <li>1. Understand the fundamental concepts of forensic chemistry</li> <li>2. Explain the aspects of inorganic chemistry</li> <li>3. Apply the concepts of organic chemistry in Forensic Science</li> <li>4. Integrate fundamental analytical chemistry techniques with Forensic Science.</li> </ol>  |
| DSC                | 21FSC2L212         | Basic Forensic Chemistry Practical         | <ol style="list-style-type: none"> <li>1. Prepare standard solutions for working in forensic chemistry laboratory</li> <li>2. Conduct qualitative analysis of chemical substances</li> <li>3. Assess the density and viscosity of liquids.</li> </ol>   |
| DSC                | 21FSC2T313         | Criminology                                | <ol style="list-style-type: none"> <li>1. Describe the fundamental concepts in criminology</li> <li>2. Summarize the causes and types of crime and criminals</li> <li>3. Assess the types of punishment</li> <li>4. Generalize the fundamentals of victimology.</li> </ol>  |
| AECC               | 22ENG1T312         | Musings in English Literature              | <ol style="list-style-type: none"> <li>1. Articulate the relevant issues of society through the imbibed knowledge of prose</li> <li>2. Identify and appreciate nuances of poetry</li> <li>3. Implement the basic concepts of grammar and its usage.</li> </ol>  |
| AECC               | 21KANIT312         | Saahithya Sangama I                        | <ul style="list-style-type: none"> <li>• ಸಾಹಿತ್ಯದಲ್ಲಿ ಅಡಗಿರುವ ವಿವಿಧ ಸಾಮಾಜಿಕ ಮೌಲ್ಯ ಮತ್ತು ಜವಾಬ್ದಾರಿಗಳನ್ನು ಅರಿಯುವರು.</li> <li>• ಭಾಷಾ ಕೌಶಲವನ್ನು ಅಭಿವೃದ್ಧಿ ಪಡಿಸಿಕೊಳ್ಳುವರು.</li> <li>• ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಜೀವನದ ಸೃಜನಶೀಲತೆಯ ಮಹತ್ವವನ್ನು ಚರ್ಚಿಸುವರು.</li> <li>• ಹದಿಹರೆಯ ವಯಸ್ಸಿನ ನಮಸ್ಕಗಳು ಹಾಗೂ ಪರಿಹಾರಗಳನ್ನು ವಿಶ್ಲೇಷಿಸುವರು.</li> <li>• ಜೀವನದಲ್ಲಿ ಮಾನವ ಪಡೆಯಬೇಕಾದ ಯಶಸ್ಸಿನ ಹಾದಿಯನ್ನು ವಿವರಿಸುವರು.</li> </ul> |

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|      |            |  |   |
|------|------------|--|---|
| AECC | 21HIN1T312 | Hindi Kahani aur Prayajanmulak Hindi   | 1: हिन्दी कहानी विधा का ज्ञान ग्रहण करने की क्षमता का विकास।<br>2: विद्यार्थियों में सामाजिक यथार्थ और मुल्यांकन करने का विकास।<br>3: विद्यार्थियों में कहानी विधा का वर्णन करने की क्षमता का विकास।<br>4: विद्यार्थियों में कहानी का विश्लेषण और भाषा कौशल में प्रवीणता।         |
| AECC | 22AEN1T311 | Listening and Comprehension in English | 1. Identify the barriers to listening and describe the key components that contribute to effective listening<br>2. Use their grammatical knowledge to refine their speech and writing<br>3. Analyse complex human situations and challenges that emerge from the prescribed texts |



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| <b>II Semester</b> |                    |  |   |
|--------------------|--------------------|--|---|
| <b>Course Type</b> | <b>Course Code</b> | <b>Course Title</b>                        | <b>Course Outcomes</b>  |
| DSC                | 21FSC2T321         | Crime Scene Management                     | <ol style="list-style-type: none"> <li>1. Distinguish the types of crime scenes, evidence and the personnel involved in crime scene investigation</li> <li>2. Evaluate a crime scene and conduct the process of investigation of a scene of crime</li> <li>3. Choose the right method of collection and preservation of evidence found at the crime scene</li> <li>4. Prepare a report on the crime scene and reconstruct a crime scene.</li> </ol> |
| DSC                | 21FSC2L221         | Crime Scene Management Practical           | <ol style="list-style-type: none"> <li>1. Demonstrate the techniques of securing and searching of indoor and outdoor crime scenes</li> <li>2. Sketch crime scenes using baseline and triangulation techniques</li> <li>3. Use the best technique for the collection and preservation of evidence from the scene of crime</li> <li>4. Predict the series of events of a simulated crime by performing crime scene reconstruction.</li> </ol>         |
| DSC                | 21FSC2T322         | Basic Forensic Biology                     | <ol style="list-style-type: none"> <li>1. Recall the concepts of plant and animal biology</li> <li>2. Describe the working and functions of the systems of the human body</li> <li>3. Relate the field of microbiology and its application in the field of forensic science</li> <li>4. Illustrate the concepts of genetics and inheritance.</li> </ol>   |
| DSC                | 21FSC2L222         | Basic Forensic Biology Practical           | <ol style="list-style-type: none"> <li>1. Distinguish the features of animal and plant cell</li> <li>2. Examine the characteristics of pollen, bacteria, human epithelial cells, diatoms and plant products</li> <li>3. Recognize human hair and human karyotype.</li> </ol>  |
| DSC                | 21FSC2T323         | Criminal Law                               | <ol style="list-style-type: none"> <li>1. Describe the organizations involved in the criminal justice system</li> <li>2. Point out the provisions of the Indian Penal Code with respect to the offences</li> <li>3. Appraise the provisions of the Code of Criminal Procedure that apply to forensic science</li> <li>4. Summarize the provision of the Indian Evidence Act and some minor acts.</li> </ol>   |
| AECC               | 22ENG1T322         | Glimpses: Readings from English Literature | <ol style="list-style-type: none"> <li>1. Identify the themes and relevant issues through the study of prose and poetry</li> <li>2. Develop the skill to identify the pertinent themes and characters in the novel</li> <li>3. Implement new approaches in speaking and writing skills.</li> </ol>  |
| AECC               | 21KAN1T322         | Saahithya Sangama II                       | <ol style="list-style-type: none"> <li>1: ಸಾಹಿತ್ಯದಲ್ಲಿ ವ್ಯಕ್ತವಾಗಿರುವ ಮಾನವೀಯ ಮೌಲ್ಯಗಳನ್ನು ಅರಿಯುವರು</li> <li>2: ಸಾಹಿತ್ಯದಲ್ಲಿ ಅಡಗಿರುವ ಸಾಮಾಜಿಕ ಮೌಲ್ಯಗಳನ್ನು ಅರಿಯುವರು.</li> <li>3: ಯುದ್ಧದಿಂದಾಗುವ ಅನಾಹುತಗಳನ್ನು ಅರಿಯುವರು.</li> <li>4: ಮಾನ್ಯವಿಲ್ಲದ ಜಾತಿ ಬೇಧಭಾವಗಳ ಬಗ್ಗೆ ಅರಿಯುವರು.</li> <li>5: ಜೀವನ ಕೌಶಲವನ್ನು ಅಭಿವೃದ್ಧಿ ಪಡಿಸಿಕೊಳ್ಳುವರು.</li> </ol>  |

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|      |            |                                   |   |
|------|------------|-----------------------------------|---|
| AECC | 21HIN1T322 | Hindi Kavitha aur Anuvaad Koushal | 1: हिन्दी कविता का विश्लेषण एवं समझने की योग्यता का विकास।<br>2: विद्यार्थियों में सामाजिक यथार्थ और मूल्यांकन करने का विकास।<br>3: कविता में वर्णित कथा का वर्णन एवं काव्य सृजन करने का विकास।<br>4: अनुवाद एवं भाषा कौशल में प्राविण्यता। |
| AECC | 22AEN1T321 | Conversation Practice in English  | 1. Acquaint students with listening skills and grammar.<br>2. Enable students to analyse the prescribed texts based on relevant themes.<br>3. Introduce students to varied genres of writing in English.                                    |
| AECC | 21EVS1T321 | Environmental Studies             | 1. Understand the concept of Environment and ecosystems<br>2. Gain knowledge on various components controlling the stability of ecosystem<br>3. Understand the Policies and laws pertaining to the welfare of life forms.                   |



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| III Semester |             |   |  |
|--------------|-------------|---|--|
| Course Type  | Course Code | Course Title  | Course Outcomes  |
| DSC          | 21FSC2T331  | Forensic Dermatoglyphics                            | <ol style="list-style-type: none"> <li>1. Explain the fundamentals of friction ridges</li> <li>2. Classify fingerprints for purpose of comparison and identification</li> <li>3. Analyze fingerprints obtained in the crime scene</li> <li>4. Evaluate impression evidence obtained from the scene of crime.</li> </ol>  |
| DSC          | 21FSC2L231  | Forensic Dermatoglyphics Practical                  | <ol style="list-style-type: none"> <li>1. Demonstrate collection and analysis of fingerprints</li> <li>2. Compare a disputed print with a standard print</li> <li>3. Analyse the characteristics of footprints and palm prints.</li> </ol>   |
| DSC          | 21FSC2T332  | Advanced Forensic Chemistry                         | <ol style="list-style-type: none"> <li>1. Describe the analysis of exhibits encountered in forensic chemistry</li> <li>2. Analyze arson and petroleum exhibits</li> <li>3. Evaluate evidence related to alcohol.</li> </ol>  |
| DSC          | 21FSC2L232  | Advanced Forensic Chemistry Practical               | <ol style="list-style-type: none"> <li>1. Analyze standard products to determine adulteration</li> <li>2. Evaluate arson and explosive related evidence</li> <li>3. Assess the alcohol in a sample.</li> </ol>   |
| DSC          | 21FSC2T333  | Technological Methods in Forensic Science           | <ol style="list-style-type: none"> <li>1. Explain the working and applications of microscopy</li> <li>2. Differentiate between the types of chromatography</li> <li>3. Appraise the techniques of electrophoresis</li> <li>4. Summarize the types of spectroscopy used in forensic science.</li> </ol>   |
| DSC          | 21FSC2L233  | Technological Methods in Forensic Science Practical | <ol style="list-style-type: none"> <li>1. Analyze evidence using microscopy</li> <li>2. Separate inorganic and organic mixtures using chromatography</li> <li>3. Measure the quantity of substances using spectroscopy.</li> </ol>   |
| AECC         | 21ENG1T332  | Symphony of English Literature                      | <ol style="list-style-type: none"> <li>1. Identify the themes and relevant issues through the study of prose and poetry</li> <li>2. Develop the skill to identify the pertinent themes and characters in the novel</li> <li>3. Implement new approaches in speaking and writing skills.</li> </ol>   |
| AECC         | 21KAN1T332  | Saahithya Sangama III                               | <ol style="list-style-type: none"> <li>1: ಸಾಹಿತ್ಯದಲ್ಲಿ ಅಡಗಿರುವ ವಿವಿಧ ಸಾಮಾಜಿಕ ಮೌಲ್ಯ ಮತ್ತು ಜವಾಬ್ದಾರಿಗಳನ್ನು ಅರಿಯುವರು.</li> <li>2: ಭಾಷಾ ಶೌಶಲವನ್ನು ಅಭಿವೃದ್ಧಿ ಪಡಿಸಿಕೊಳ್ಳುವರು.</li> <li>3: ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಜೀವನದ ವರ್ತಮಾನದ ಘಟನೆಗಳ ಕುರಿತು ಚರ್ಚಿಸುವರು.</li> <li>4: ಹರಿಹರಯ ವಯಸ್ಸಿನಲ್ಲಿ ಅರಿಯಬೇಕಾಗಿರುವ ಶಾಂತಿ-ಸೌಹಾರ್ದತೆಯ ಕುರಿತು ವಿಶ್ಲೇಷಿಸುವರು.</li> <li>5: ಜೀವನದಲ್ಲಿ ಮಾನವನು ಬೆಳೆಸಿಕೊಳ್ಳಬೇಕಾದ ಬಹುಮುಖ್ಯ ಆದರ್ಶ, ತತ್ವಗಳ ಕುರಿತು ಚರ್ಚಿಸುವರು.</li> </ol> |

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|      |            |  |   |
|------|------------|--|---|
| AECC | 21HIN1T332 | Hindi Natak Sahitya aur Sanchar<br>Maadhyam evam Hindi | 1:हिन्दी नाटक विधा को समझना और अभिनय करने की योग्यता का विकास।<br>2:विद्यार्थियों में सामाजिक यथार्थ और मुल्यांकन करने का विकास।<br>3: नाटक लेखन और पठन में रुचि एवं सृजनात्मक कौशल्य का विकास।<br>4: संचार माध्यम कला में प्राविण्यता।   |
| AECC | 21AEN1T331 | Essential English Reading                              | 1. Recognize the techniques of effective reading and demonstrate their competence in comprehension.<br>2. Articulate their thoughts and structure written compositions as needed in official contexts<br>3. Formulate their responses to contemporary challenges that emerge from the prescribed texts. |



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| IV Semester |             |                                     |  |
|-------------|-------------|-------------------------------------|--|
| Course Type | Course Code | Course Title                        | Course Outcomes  |
| DSC         | 21FSC2T341  | Questioned Documents                | <ol style="list-style-type: none"> <li>1. Describe the examination of questioned documents</li> <li>2. Point out the characteristics of signature and handwriting</li> <li>3. Evaluate cases related to questioned document examination</li> <li>4. Compare questioned documents with exemplars.</li> </ol>  |
| DSC         | 21FSC2L241  | Questioned Documents Practical      | <ol style="list-style-type: none"> <li>1. Analyse the class and individual characteristics of questioned documents</li> <li>2. Write questioned document examination reports</li> <li>3. Distinguish genuine and counterfeit currency notes and passports.</li> </ol>  |
| DSC         | 21FSC2T342  | Advanced Forensic Biology           | <ol style="list-style-type: none"> <li>1. Describe the forensic significance of blood and body fluids</li> <li>2. Analyze hair samples encountered in crime investigation</li> <li>3. Appraise the importance of botanical evidence</li> <li>4. Hypothesize the reconstruction of the crime scene using blood pattern analysis.</li> </ol>   |
| DSC         | 21FSC2L242  | Advanced Forensic Biology Practical | <ol style="list-style-type: none"> <li>1. Analyze blood and body fluids as evidence</li> <li>2. Infer the significance of hair evidence</li> <li>3. Assess the evidentiary value of pollen and blood spatter.</li> </ol>   |
| DSC         | 21FSC2T343  | Forensic Psychology                 | <ol style="list-style-type: none"> <li>1. Explain the concepts of psychology</li> <li>2. Illustrate the applications of forensic psychology</li> <li>3. Assess the relationship between psychology and criminal behaviour</li> <li>4. Recommend the tools and techniques for use in forensic psychology.</li> </ol>  |
| AECC        | 21ENG1T342  | Ruminations of English Literature   | <ol style="list-style-type: none"> <li>1. Articulate the relevant social issues and thematic representation in prose and poetry</li> <li>2. Analyse the characters, plot, setting and themes of novel</li> <li>3. Acquire vital employability skills and employment opportunities with in-depth knowledge of writing skills.</li> </ol>  |
| AECC        | 21KANIT342  | Saahithya Sangama IV                | <ol style="list-style-type: none"> <li>1: ಸಾಹಿತ್ಯದಲ್ಲಿ ಅಡಗಿರುವ ವಿವಿಧ ಸಾಮಾಜಿಕ ಮೌಲ್ಯ ಮತ್ತು ಜವಾಬ್ದಾರಿಗಳನ್ನು ಅರಿಯುವರು.</li> <li>2: ಭಾಷಾ ಕೌಶಲವನ್ನು ಅಭಿವೃದ್ಧಿ ಪಡಿಸಿಕೊಳ್ಳುವರು.</li> <li>3: ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಜೀವನದಲ್ಲಿ ಧಾರ್ಮಿಕ ಸಹಿಷ್ಣುತೆಯ ಮಹತ್ವವನ್ನು ಚರ್ಚಿಸುವರು.</li> <li>4: ಶ್ರೀಸಾಮಾನ್ಯನ ಬದುಕಿನ ಸಮಸ್ಯೆಗಳು, ಬವಣೆಗಳು ಹಾಗೂ ಪರಿಹಾರಗಳನ್ನು ವಿಶ್ಲೇಷಿಸುವರು.</li> <li>5: ದಮನಿತ ಲೋಕದ ಶೋಷಣೆಯ ಭಿನ್ನ ರೂಪಗಳ ಕುರಿತು ಚರ್ಚಿಸುವರು.</li> </ol> |

  
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|------|------------|---|--|
| AECC | 21HIN1T342 | Hindi Laghu Upanyas aur Bhasha Ke Vividh Roop | 1: हिंदी उपन्यासों का ज्ञान ग्रहण और समझने की योग्यता का विकास।<br>2: विद्यार्थियों में सामाजिक यथार्थ और मुल्यांकन करने का विकास।<br>3: लघु उपन्यास की कथा का वर्णन और विश्लेषण करने की क्षमता का विकास।<br>4: भाषा के विविध रूपों एवं भाषा कौशल में प्राविण्यता। |
| AECC | 21AEN1T341 | Fundamentals of English Written Communication | 1. Examine the features of effective writing and demonstrate their skills in complex, non-formulaic writing<br>2. Identify and fix common stylistic errors in written English<br>3. Analyze the representation of cross-cutting issues in literary works.          |
| AECC | 21INC1T341 | India and Indian Constitution                 | 1. Evaluate the philosophy of the Constitution and its structure<br>2. Appraise the powers and functions of various offices under the Constitution<br>3. Analyze the Indian values, Ideals and the role of Constitution in a Democracy.                            |

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