



**Course Components of Academic Programme**

**B. Sc. (Hons.) Forensic Science**

<b>Name of the Program</b>	<b>B. Sc. (Hons.) Forensic Science</b>
<b>Duration</b>	<b>Eight semester (4 years)</b>
<b>Department</b>	<b>Biotechnology</b>
<b>Eligibility</b>	<b>10+2 PCM/PCB from any recognized Central/State Board</b>
<b>Total Number of Credits</b>	<b>176</b>
<b>Total Marks</b>	<b>7400</b>

<b>NHE OF LEVEL</b>	<b>QUALIFICATION TITLE/NOMENCLATURE</b>	<b>CREDIT REQUIREMENT</b>
<b>Level 5</b>	UG Certificate in the field of learning / discipline for those who exit after successful completion of Semester II. (Program duration: 2 semesters of the undergraduate program)	<b>44</b>
<b>Level 6</b>	UG Diploma in the field of learning/discipline for those who exit after successful, completion of Semester IV. (Programme duration: 4semestersof the undergraduate program)	<b>88</b>
<b>Level 7</b>	Bachelor's Degree (Honours) for those who opt for single discipline core courses and exit after successful completion of Semester VI. (Programmeduration:6semesters)	<b>132</b>
<b>Level 7</b>	Bachelor's Degree for those who opt for core courses of more than one discipline and exit after successful completion of Semester VI. (Programmeduration:6semesters)	<b>132</b>
<b>Level 7</b>	Bachelor of Vocation (B.Voc.) (Programme duration: VI semesters).(Programmeduration:6semesters). To be introduced.	<b>132</b>
<b>Level 8</b>	Bachelor's Degree (Honours) with Research/Academic Project/Entrepreneurship for those for those who opt for single discipline core courses and exit after successful completion of Semester VIII. (Programmeduration:8semesters)	<b>176</b>



## DEPARTMENT OF BIOTECHNOLOGY

### VISION

Vision of Department of Biotechnology is to make industry ready competent, ethically engaged, professionals that can transform the world with a potential to innovate, invent and disseminate knowledge for the benefit of society and environment as per the needs and challenges.

### MISSION

- M1:** Regular updating of course curriculum as per the demand of Biotechnology Industry academia.
- M2:** Be recognized as Centre of Excellence in teaching, learning and research.
- M3:** Entrepreneurship skill development.



### PROGRAM OUTCOMES (POs)

PO1	<b>Basic and Discipline specific Knowledge:</b> Apply the knowledge of basic and applied sciences, engineering, social sciences and arts in various forensic problems.
PO2	<b>Problem Analysis:</b> Identify and analyze forensic problems using standard methods based on scientific approach.
PO3	<b>Modern tool usage:</b> Understand, select and apply appropriate techniques, resources and modern scientific techniques with an understanding of its merits and limitations.
PO4	<b>Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the forensic practices.
PO5	<b>Effective Communication:</b> Speak, read, write, and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
PO6	<b>Forensic practices for society and criminal Justice setup:</b> Understand and analyze the impact of forensic solutions to the society and criminal justice setup.
PO7	<b>Individual/team work and lifelong learning:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in a multidisciplinary setting. Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

### PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1	<b>Basic and discipline specific knowledge:</b> Apply the knowledge of basic and applied sciences, engineering, social sciences and arts in various forensic problems.
PSO2	<b>Problem Analysis:</b> Identify and analyze forensic problems using standard methods based on scientific approach
PSO3	<b>Modern tool usage:</b> Understand, select, and apply appropriate techniques, resources and modern scientific techniques with an understanding of its merits and limitations.
PSO4	<b>Design/ Develop research-based solutions:</b> Design novel solution of regular or complex problems based on research outcomes.



**PROGRAM EDUCATIONAL OBJECTIVES (PEOs)**

<b>PEO1</b>	Forensic graduates will be skilled in implementing current and emerging techniques for detection, analyses, and evaluation of forensic evidence, which will prepare them for successful careers as professional or in innovation and research at an industry and/or in government.
<b>PEO2</b>	Forensic graduates will be successful in leading the multidisciplinary teams with professional competencies to extend his experiences, knowledge, and capabilities in scientific investigations to give unbiased and firm scientific opinions in the courts.
<b>PEO3</b>	Forensic graduates will contribute towards healthy, secure, and vibrant society by making people alert about various methods adopted by the criminals for committing the crimes.



**POOL OF ELECTIVES:**

**DISCIPLINE SPECIFIC CORE COURSES**

Course Code	Course Title	Semester
<b>SEMESTER-I</b>		
BFSC 101	Introduction to Forensic Science	I
BFSC 102	Questioned Document Examination	I
BFSC 103	Forensic Science, Police and Crime Investigative Agencies	I
BFSC 104	Questioned Document Examination Lab	I
BFSC 105	Forensic Science, Police and Crime Investigative Agencies Lab	I
<b>SEMESTER- II</b>		
BFSC 201	Basics of Forensic Physics	II
BFSC 202	Criminal Law and Criminology	II
BFSC 203	Forensic Dermatoglyphics	II
BFSC 204	Basics of Forensic Physics Lab	II
BFSC 205	Forensic Dermatoglyphics Lab	II
<b>SEMESTER- III</b>		
BFSC 301	Crime Scene Investigation and Management	III
BFSC 302	Basics of Forensic Chemistry & Toxicology	III
BFSC 303	Basics of Forensic Biology	III
BFSC 304	Crime Scene Investigation and Management Lab	III
BFSC 305	Basics of Forensic Chemistry & Toxicology Lab	III
BFSC 306	Basics of Forensic Biology Lab	III
<b>SEMESTER- IV</b>		
BFSC 401	Ethics and Practices of Forensic Science	IV
BFSC 402	Basics of Digital and Cyber Forensic	IV
BFSC 403	Forensic Psychology	IV
BFSC 404	Basics of Digital and Cyber Forensic Lab	IV
BFSC 405	Forensic Psychology Lab	IV
<b>SEMESTER-V</b>		
BFSC 501	Advanced Forensic Biology	V
BFSC 502	Advanced Forensic Toxicology	V





BFSC 503	Forensic Physical Anthropology and Medicine	V
BFSC 504	Advanced Forensic Biology Lab	V
BFSC 505	Advanced Forensic Toxicology Lab	V
BFSC 506	Forensic Physical Anthropology and Medicine Lab	V
<b>SEMESTER- VI</b>		
BFSC 601	DNA Forensics	VI
BFSC 602	Advanced Computer Forensics	VI
BFSC 603	Forensic Ballistics and Explosives	VI
BFSC 604	DNA Forensics Lab	VI
BFSC 605	Advanced Computer Forensics Lab	VI
BFSC 606	Forensic Ballistics and Explosives Lab	VI
<b>SEMESTER- VII</b>		
BFSC 701	Advanced Forensic Chemistry	VII
BFSC 702	Advanced Forensic Chemistry Lab	VII
<b>SEMESTER- VIII</b>		
BFSC 801	Advanced Forensic Serology	VIII
BFSC 802	Advanced Forensic Serology Lab	VIII

**DISCIPLINE SPECIFIC ELECTIVE COURSES**

Course Code	Course Title	Semester
<b>SEMESTER-III</b>		
BFSC 308	Police Organization in India	III
<b>SEMESTER-IV</b>		
BFSC 408	Cyber Security	IV
BFSC 410	Cyber Security Lab	IV
<b>SEMESTER- V</b>		
BFSC 507	Forensic Accounting and Fraud Examination	V
<b>SEMESTER-VI</b>		
BFSC 607	Mobile and Cloud Forensics	VI
BFSC 607	Mobile and Cloud Forensics Lab	VI
<b>SEMESTER-VII</b>		
BFSC 703	Advanced Forensic Physics & Ballistics	VII
BFSC 704	Advanced Forensic Physics & Ballistics Lab	VII
BFSC 705	Forensic Clinical Anatomy and Physiology	VII
BFSC 706	Forensic Clinical Anatomy and Physiology Lab	VII
<b>SEMESTER- VIII</b>		
BFSC 803	Narcotics and Drug Analysis	VIII
BFSC 804	Entrepreneurship and Forensic Science	VIII
BFSC 805	Narcotics and Drug Analysis Lab	VIII



**POOL OF GENERAL ELECTIVES FOR OFFERING MINOR DEGREE IN FORENSIC SCIENCE TO STUDENTS  
OF OTHER DEPARTMENT**

Course Code	Course Title	Semester
<b>SEMESTER-I</b>		
BFSC 101	Introduction to Forensic Sciences	I
<b>SEMESTER- II</b>		
BFSC 203	Forensic Dermatoglyphics	II
BFSC 205	Forensic Dermatoglyphics Lab	II
<b>SEMESTER-III</b>		
BFSC 301	Crime Scene, Investigation and Management	III
BFSC 304	Crime Scene, Investigation and Management Lab	III
<b>SEMESTER-IV</b>		
BFSC 401	Ethics and Practices of Forensic Sciences	IV
<b>SEMESTER- V</b>		
BFSC 507	Forensic Accounting and Fraud Examination	V
<b>SEMESTER- VI</b>		
BFSC 601	DNA Forensics	VI
BFSC 604	DNA Forensics Lab	VI
<b>SEMESTER- VII</b>		
BFSC 703	Advanced Forensic Physics & Ballistics	VII
BFSC 704	Advanced Forensic Physics & Ballistics Lab	VII



**GENERIC ELECTIVE COURSES**

Course Code	Course Title	Semester
<b>SEMESTER-I</b>		
BFSC 106a/ BFSC 106b	Applied Psychology/ Elementary Forensic Sciences	<b>I</b>
<b>SEMESTER- II</b>		
BFSC 206	Food Adulteration and Toxicology	<b>II</b>
<b>SEMESTER-III</b>		
BFSC 307	Human Values and Professional Ethics	<b>III</b>
<b>SEMESTER-IV</b>		
BFSC 407	Forensic Biotechnology	<b>IV</b>
BFSC 409	Forensic Biotechnology Lab	<b>IV</b>
<b>SEMESTER- V</b>		
BFSC 508	Basic Biochemistry	<b>V</b>
BFSC 509	Basic Biochemistry Lab	<b>V</b>
<b>SEMESTER- VI</b>		
BFSC 608	Bioterrorism and National Security	<b>VI</b>
<b>SEMESTER- VII</b>		
BFSC 707	Research Ethics and Methodology	<b>VII</b>
<b>SEMESTER-VIII</b>		
BFSC 806	Project Development	<b>VIII</b>



### SKILL ENHANCEMENT COURSES

Course Code	Course Title	Semester
BFSC 108	Technological Methods in Forensic Sciences	I
BFSC 207	Biosafety, Bioethics, and Intellectual Property Rights	II
BFSC 310	Finger Print Examination	III
BFSC 412	Hand Writing Identification	IV
BFSC 510	Forensic Examination of Electronic Evidence	V
BFSC 609	Molecular Diagnostic Technique	VI

### VALUE ADDITION COURSES

Course Code	Course Title	Semester
BFSC 109	Healthy Living and Fitness	I
BFSC 208	Physical Education and Yoga on Forensic Inpatients	II
BFSC 312	First Aid and Health	III
BFSC 414	Biostatistics	IV

### ABILITY ENHANCEMENT COURSES

Course Code	Course Title	Semester
BFSC 107	Professional Communication	I
BFSC 209	Career Skills	II
BFSC 309	Forensic Accounting and Fraud Examination	III
BFSC 411	Accident investigation	IV





**INTERNSHIP/ APPRENTICESHIP/ PROJECT/ COMMUNITY RESEARCH**

Course Code	Course Title	Semester
BFSC 311	Internship/Apprenticeship/Project	III
BFSC 413	Internship/Apprenticeship/Project	IV
BFSC 511	Internship/Apprenticeship/Project	V
BFSC 610	Internship/Apprenticeship/Project	VI
BFSC 708	Internship/Apprenticeship/Project	VII
BFSC 807	Major Project/Academic Project/Entrepreneurship	VIII

**DEPARTMENT OF BIOTECHNOLOGY**  
**CURRICULAR STRUCTURE AND EVALUATION SCHEME NEP 2023**

**SEMESTER: I - B.Sc. (HONS.) FORENSIC SCIENCE**

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE EVALUATION			
Category of the Courses	COURSE		Credits	L	T	P	CWS	MTE	ETE	Total
	Code	Title								
DSC	BFSC 101	Introduction to Forensic Science	4	3	1	-	25	25	50	100
DSC	BFSC 102	Questioned Document Examination	3	3	-	-	25	25	50	100
DSC	BFSC 103	Forensic Science, Police and Crime Investigative Agencies	3	3	-	-	25	25	50	100
DSC	BFSC 104	Questioned Document Examination Lab	1	-	-	2	25	25	50	100
DSC	BFSC 105	Forensic Science, Police and Crime Investigative Agencies Lab	1	-	-	2	25	25	50	100
GE	BFSC 106a/ BFSC 106b/	Applied Psychology/ Elementary Forensic Science	4	-	-	4	25	25	50	100
AEC	BFSC 107	Professional Communication	2	-	-	-	-	-	-	100
SEC	BFSC 108	Technological Methods in Forensic Sciences	2	-	-	-	-	-	-	100
VAC	BFSC 109	Healthy Living and Fitness	2	-	-	-	-	-	-	100
<b>Total</b>			<b>22</b>	-	-	-	-	-	-	<b>900</b>

**DEPARTMENT OF BIOTECHNOLOGY**

**CURRICULAR STRUCTURE AND EVALUATION SCHEME NEP 2023**

**SEMESTER: II B. Sc. FORENSIC SCIENCE (HONS.)**

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE EVALUATION			
Category of the Courses	COURSE		Credits	L	T	P	CWS	MTE	ETE	Total
	Code	Title								
DSC	BFSC 201	Basics of Forensic Physics	3	3	-	-	25	25	50	100
DSC	BFSC 202	Criminology and Criminal Law	4	3	1	-	25	25	50	100
DSC	BFSC 203	Forensic Dermatoglyphics	3	3	-	-	25	25	50	100
DSC	BFSC 204	Basics of Forensic Physics Lab	1	-	-	2	25	25	50	100
DSC	BFSC 205	Forensic Dermatoglyphics Lab	1	-	-	2	25	25	50	100
GE	BFSC 206	Food Adulteration and Toxicology	4	3	1	-	25	25	50	100
SEC	BFSC 207	Biosafety, Bioethics, and Intellectual Property Rights	2	2	-	-	25	25	50	100
VAC	BFSC 208	Physical Education and Yoga on Forensic Inpatients	2	2	-	-	25	25	50	100
AEC	BFSC 209	Career Skills	2	2	-	-	25	25	50	100
<b>Total</b>			<b>22</b>							<b>900</b>

**DEPARTMENT OF BIOTECHNOLOGY**  
**CURRICULAR STRUCTURE AND EVALUATION SCHEME NEP 2023**  
**SEMESTER: III B. Sc. FORENSIC SCIENCE (HONS.)**

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE EVALUATION			
COURSE			Credits	L	T	P	CWS	MTE	ETE	Total
Category of the Courses	Code	Title								
DSC	BFSC 301	Crime Scene Investigation and Management	3	3	-	-	25	25	50	100
DSC	BFSC 302	Basics of Forensic Chemistry & Toxicology	3	3	-	-	25	25	50	100
DSC	BFSC 303	Basics of Forensic Biology	3	3	-	-	25	25	50	100
DSC	BFSC 304	Crime Scene Investigation and Management Lab	1	-	-	2	25	25	50	100
DSC	BFSC 305	Basics of Forensic Chemistry & Toxicology Lab	1	-	-	2	25	25	50	100
DSC	BFSC 306	Basics of Forensic Biology Lab	1	-	-	2	25	25	50	100
GE*	BFSC 307	Human Values and Professional Ethics/	4	3	1	-	25	25	50	100
DSE*	BFSC 308	Police Organization in India								
AEC	BFSC 309	Forensic Accounting and Fraud Examination	2	2	-	-	25	25	50	100
SEC	BFSC 310	Finger Print Examination	2	2	-	-	25	25	50	100
IAPC	BFSC 311	Internship/Apprenticeship/Project								
VAC	BFSC 312	First Aid and Health	2	2	-	-	25	25	50	100
<b>Total</b>			<b>22</b>							<b>1000</b>

**DEPARTMENT OF BIOTECHNOLOGY**  
**CURRICULAR STRUCTURE AND EVALUATION SCHEME NEP 2023**  
**SEMESTER: IV B. Sc. FORENSIC SCIENCE (HONS.)**

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE EVALUATION			
COURSE			Credits	L	T	P	CWS	MTE	ETE	Total
Category of the Courses	Code	Title								
DSC	BFSC 401	Ethics and Practices of Forensic Sciences	4	3	1	-	25	25	50	100
DSC	BFSC 402	Basics of Digital and Cyber Forensic	3	3	-	-	25	25	50	100
DSC	BFSC 403	Forensic Psychology	3	3	-	-	25	25	50	100
DSC	BFSC 404	Basics of Digital and Cyber Forensic Lab	1	-	-	2	25	25	50	100
DSC	BFSC 405	Forensic Psychology Lab	1	-	-	2	25	25	50	100
GE	BFSC 407	Forensic Biotechnology	3	3	-	-	25	25	50	100
DSE	BFSC 408	Cyber Security								
GE	BFSC 409	Forensic Biotechnology Lab	1	-	-	1	25	25	50	100
DSE	BFSC 410	Cyber Security Lab								
AEC	BFSC 411	Accident Investigation	2	2	-	-	25	25	50	100
SEC	BFSC 412	Hand Writing Examination	2	2	-	-	25	25	50	100
IAPC	BFSC 413	Internship/Apprenticeship/Project								
VAC	BFSC 414	Biostatistics	2	2	-	-	25	25	50	100
<b>Total</b>			<b>22</b>							<b>1000</b>

**DEPARTMENT OF BIOTECHNOLOGY**  
**CURRICULAR STRUCTURE AND EVALUATION SCHEME NEP 2023**  
**SEMESTER: V B. Sc. FORENSIC SCIENCE (HONS.)**

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE EVALUATION			
COURSE			Credits	L	T	P	CWS	MTE	ETE	Total
Category of the Courses	Code	Title								
DSC	BFSC 501	Advanced Forensic Biology	3	3	-	-	25	25	50	100
DSC	BFSC 502	Advanced Forensic Toxicology	3	3	-	-	25	25	50	100
DSC	BFSC 503	Forensic Physical Anthropology and Medicine	3	3	-	-	25	25	50	100
DSC	BFSC 504	Advanced Forensic Biology Lab	1	-	-	2	25	25	50	100
DSC	BFSC 505	Forensic Toxicology Lab	1	-	-	2	25	25	50	100
DSC	BFSC 506	Forensic Physical Anthropology and Medicine Lab	1	-	-	2	25	25	50	100
DSE	BFSC 507	Forensic Accounting and Fraud Examination	4	3	1	-	25	25	50	100
GE	BFSC 508	Basic Biochemistry	3	3	-	-	25	25	50	100
GE	BFSC 509	Basic Biochemistry Lab	1	-	-	2	25	25	50	100
SEC	BFSC 510	Forensic Examination of Electronic Evidence	2	2	-	-	25	25	50	100
IAPC	BFSC 511	Internship/Apprenticeship/Project								
<b>Total</b>			<b>22</b>							<b>1000</b>

**DEPARTMENT OF BIOTECHNOLOGY**  
**CURRICULAR STRUCTURE AND EVALUATION SCHEME NEP 2023**

**SEMESTER: VI B. Sc. FORENSIC SCIENCE (HONS.)**

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE EVALUATION			
COURSE			Credits	L	T	P	CWS	MTE	ETE	Total
Category of the Courses	Code	Title								
DSC	BFSC 601	DNA Forensics	3	3	-	-	25	25	50	100
DSC	BFSC 602	Advanced Computer Forensics	3	3	-	-	25	25	50	100
DSC	BFSC 603	Forensic Ballistics and Explosives	3	3	-	-	25	25	50	100
DSC	BFSC 604	DNA Forensics Lab	1	-	-	2	25	25	50	100
DSC	BFSC 605	Advanced Computer Forensics Lab	1	-	-	2	25	25	50	100
DSC	BFSC 606	Forensic Ballistics and Explosives Lab	1	-	-	2	25	25	50	100
DSE	BFSC 607	Mobile and Cloud Forensics	3	-	-	-	25	25	50	100
DSE	BFSC 607	Mobile and Cloud Forensics Lab	1	-	-	2	25	25	50	100
GE	BFSC 608	Bioterrorism and National Security	4	3	1	-	25	25	50	100
SEC	BFSC 609	Molecular Diagnostic Technique	2	-	-	-	-	-	-	100
IAPC	BFSC 610	Internship/Apprenticeship/Project								
<b>Total</b>			<b>22</b>	-	-	-	-	-	-	<b>1000</b>

**DEPARTMENT OF BIOTECHNOLOGY**  
**CURRICULAR STRUCTURE AND EVALUATION SCHEME NEP 2023**  
**SEMESTER: VII B. Sc. FORENSIC SCIENCE (HONS.)**

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE EVALUATION			
COURSE			Credits	L	T	P	CWS	MTE	ETE	Total
Category of the Courses	Code	Title								
DSC	BFSC 701	Advanced Forensic Chemistry	3	3	-	-	25	25	50	100
DSC	BFSC 702	Advanced Forensic Chemistry Lab	1	-	-	2	25	25	50	100
DSE	BFSC 703	Advanced Forensic Physics & Ballistics	3	3	-	-	25	25	50	100
DSE	BFSC 704	Advanced Forensic Physics & Ballistics Lab	1	-	-	2	25	25	50	100
DSE	BFSC 705	Forensic Clinical Anatomy and Physiology	3	3	-	-	25	25	50	100
DSE	BFSC 706	Forensic Clinical Anatomy and Physiology Lab	1	-	-	2	25	25	50	100
GE	BFSC 707	Research Ethics and Methodology	4	3	1	-	25	25	50	100
IAPC	BFSC 708	Minor Project/ Review of Literature	6	-	-	12	-	-	-	100
<b>Total</b>			<b>22</b>	-	-	-	-	-	-	<b>800</b>

**DEPARTMENT OF BIOTECHNOLOGY**  
**CURRICULAR STRUCTURE AND EVALUATION SCHEME NEP 2023**  
**SEMESTER: VIII B. Sc. FORENSIC SCIENCE (HONS.)**

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE EVALUATION			
COURSE			Credits	L	T	P	CWS	MTE	ETE	Total
Category of the Courses	Code	Title								
DSC	BFSC 801	Advanced Forensic Serology	3	3	-	-	25	25	50	100
DSC	BFSC 802	Advanced Forensic Serology Lab	1	-	-	2	25	25	50	100
DSE	BFSC 803	Narcotics and Drug Analysis	3	3	-	-	25	25	50	100
DSE	BFSC 804	Entrepreneurship and Forensic Science	4	3	1		25	25	50	100
DSE	BFSC 805	Narcotics and Drug Analysis Lab	1	-	-	2	25	25	50	100
GE	BFSC 806	Project Development	4	3	1		25	25	50	100
IAPC	BFSC 807	Dissertation on Major Project/ Academic Project/ Entrepreneurship	6	-	-	12	-	-	-	200
<b>Total</b>			<b>22</b>	-	-	-	-	-	-	<b>800</b>
<b>GRAND TOTAL</b>			<b>176</b>							<b>7400</b>