

INTEGRAL UNIVERSITY, LUCKNOW
INTEGRAL INSTITUTE OF ALLIED HEALTH SCIENCES
DEPARTMENT OF PARAMEDICAL SCIENCES
BACHELOR OF SCIENCE IN FORENSIC SCIENCE
(B.Sc.FS)
SYLLABUS AND EVALUATION SCHEME
YEAR/ SEMESTER
II/III & II/IV
&
PEOs-POs-PSOs



Program: B.Sc. FS **Semester-III** 

S. N.	Course code	Course Title	Type of Paper	Period	Per hr/wo	eek/sem		Evaluatio	n Scheme	Sub. Tota		Credit	Total Credit
	code			L	T	P	СТ	TA	Total	ESE			
					THEOR	RIES							
1	FS201	Forensic Medicine	Core	2	1	0	40	20	60	40	100	3:1:0	4
2	FS202	Forensic Physics- I	Core	2	1	0	40	20	60	40	100	2:1:0	3
3	FS203	Forensic Biology-I	Core	2	1	0	40	20	60	40	100	2:1:0	3
4	FS204	Forensic Psychology	Core	2	1	0	40	20	60	40	100	2:1:0	3
5	CH219	Forensic Chemistry-I	Core	2	1	0	40	20	60	40	100	3:1:0	4
6	ES101	Environmental Study	Core	2	1	0	40	20	60	40	100	2:1:0	3
					PRACTI	CAL							
1	FS205	Forensic Medicine-Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
2	CH220	Forensic Chemistry –I-Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
3	FS206	Forensic Physics-I – Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
4	FS207	Forensic Biology-I - Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
5	FS208	Forensic Psychology-Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
		Total		12	06	10	440	220	660	440	1100	25	25

C			Tr			A	ttributes				United Nation
S. N.	Course code	Course Title	Type of Paper	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	Sustainable Development Goa (SDGs)
				Ti	HEORIES						
1	FS 201	Forensic Medicine	Core	<b>√</b>	$\sqrt{}$	V	$\checkmark$		<b>√</b>	$\checkmark$	3,4
2	FS 202	Forensic Physics- I	Core	√	$\sqrt{}$	√			<b>√</b>	$\checkmark$	3,4
3	FS 203	Forensic Biology-I	Core	<b>√</b>	$\sqrt{}$	√			<b>√</b>	$\checkmark$	3,4
4	FS 204	Forensic Psychology	Core	$\checkmark$	$\sqrt{}$	√			√	$\checkmark$	3,4
5	CH219	Forensic Chemistry-I	Core	√	V	√			√	V	3,4
6	ES 101	Environmental Study	Core	<b>√</b>	$\sqrt{}$	√		V	<b>√</b>	$\checkmark$	3,4
				PR	ACTICAL						
1	FS 205	Forensic Medicine-Lab	Core	<b>√</b>	V	√	$\sqrt{}$		√	V	3,4
2	CH220	Forensic Chemistry –I-Lab	Core	<b>√</b>	$\sqrt{}$	√			<b>√</b>	$\checkmark$	3,4
3	FS 206	Forensic Physics-I – Lab	Core	V	V	√			V	V	3,4
4	FS 207	Forensic Biology-I - Lab	Core	<b>√</b>	V	√			√	V	3,4
5	FS 208	Forensic Psychology-Lab	Core	√	V	√			√	<b>√</b>	3,4

L: Lecture

T: Tutorials

P: Practical

CT: Class Test TA: Teacher Assessment ESE: End Semester Examination,

AE= Ability enhancement, DSE- Discipline Specific Elective, Sessional Total: Class Test + Teacher Assessment

**Subject Total:** Sessional Total + End Semester Examination (ESE)



#### Integral University, Lucknow Department of Paramedical Sciences Study and Evaluation Scheme

Program: B.Sc. FS Semester-IV

S. N.	Course code	Course Title	Type of Paper	Period I	Per hr/we	ek/sem		Evaluatio	n Scheme		Sub. Total	Credit	Total Credits
	code		•	L	T	P	CT	TA	Total	ESE			
					THEOR	IES							
1	FS 209	Forensic Anthropology	Core	3	1	0	40	20	60	40	100	31:0	4
2	FS210	Forensic Physics-II	Core	2	1	0	40	20	60	40	100	2:1:0	3
3	FS211	Forensic Biology-II	Core	2	1	0	40	20	60	40	100	2:1:0	3
4	FS212	Digital and Cyber Forensic- I	Core	2	1	0	40	20	60	40	100	2:1:0	3
5	FS213	Quality management in Laboratory	Core	2	1	0	40	20	60	40	100	2:1:0	3
6	CH227	Forensic Chemistry-II	Core	3	1	0	40	20	60	40	100	3:1:0	4
					PRACTIO	CAL							
1	FS214	Forensic Anthropology-Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
2	FS215	Forensic Physics II-Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
3	FS216	Forensic Biology –II- Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
4	FS217	Digital and cyber forensic-I -Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
5	CH228	Forensic Chemistry-II- Lab	Core	0	0	2	40	20	60	40	100	0:0:1	1
		Total		14	06	10	440	220	660	440	1100	25	25

C	le Course Title	Type of Paper		United Nation Sustainable						
Course code			Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	Development Goal (SDGs)
THEORIES										
FS209	Forensic Anthropology	Core	V	√	$\checkmark$	<b>V</b>		<b>V</b>	$\sqrt{}$	3,4
FS210	Forensic Physics-II	Core	√		V			V	$\sqrt{}$	3,4
FS211	Forensic Biology-II	Core	√		V			V	$\sqrt{}$	3,4
FS212	Digital and Cyber Forensic- I	Core		V	√			V	$\sqrt{}$	3,4
FS213	Quality management in Laboratory	Core	√	√	<b>√</b>	<b>V</b>	√	V	√	3,4
CH227	Forensic Chemistry-II	Core		V	√			V	$\sqrt{}$	3,4
			PR	ACTICAL						
FS214	Forensic Anthropology-Lab	Core	√	V	<b>√</b>	<b>V</b>		V	<b>√</b>	3,4
FS215	Forensic Physics II-Lab	Core		V	√			V	$\sqrt{}$	3,4
FS216	Forensic Biology –II- Lab	Core	<b>√</b>	√	√			V	<b>√</b>	3,4
FS217	Digital and cyber forensic-I -Lab	Core	√	√	<b>√</b>			V	<b>√</b>	3,4
CH228	Forensic Chemistry-II- Lab	Core	√	√	√			V	√	3,4
	FS210 FS211 FS212 FS213 CH227 FS214 FS215 FS216 FS217	FS209 Forensic Anthropology FS210 Forensic Physics-II FS211 Forensic Biology-II FS212 Digital and Cyber Forensic- I FS213 Quality management in Laboratory CH227 Forensic Chemistry-II  FS214 Forensic Anthropology-Lab FS215 Forensic Physics II-Lab FS216 Forensic Biology –II- Lab FS217 Digital and cyber forensic-I -Lab	FS209 Forensic Anthropology Core FS210 Forensic Biology-II Core FS211 Forensic Biology-II Core FS212 Digital and Cyber Forensic- I Core FS213 Quality management in Laboratory Core CH227 Forensic Chemistry-II Core  FS214 Forensic Anthropology-Lab Core FS215 Forensic Physics II-Lab Core FS216 Forensic Biology -II- Lab Core FS217 Digital and cyber forensic-I -Lab Core	Course Titleof PaperEmployabilityTHFS209Forensic AnthropologyCore $\sqrt{}$ FS210Forensic Physics-IICore $\sqrt{}$ FS211Forensic Biology-IICore $\sqrt{}$ FS212Digital and Cyber Forensic- ICore $\sqrt{}$ FS213Quality management in LaboratoryCore $\sqrt{}$ CH227Forensic Chemistry-IICore $\sqrt{}$ FS214Forensic Anthropology-LabCore $\sqrt{}$ FS215Forensic Physics II-LabCore $\sqrt{}$ FS216Forensic Biology -II- LabCore $\sqrt{}$ FS217Digital and cyber forensic-I -LabCore $\sqrt{}$	$ \begin{array}{ c c c c c c } \hline \textbf{Course Title} & \textbf{of Paper} \\ \hline \hline \textbf{Employability} & \textbf{Entrepreneurship} \\ \hline \hline \textbf{FS209} & Forensic Anthropology & Core & \checkmark & \checkmark \\ \hline FS210 & Forensic Physics-II & Core & \checkmark & \checkmark \\ \hline FS211 & Forensic Biology-II & Core & \checkmark & \checkmark \\ \hline FS212 & Digital and Cyber Forensic-I & Core & \checkmark & \checkmark \\ \hline FS213 & Quality management in Laboratory & Core & \checkmark & \checkmark \\ \hline CH227 & Forensic Chemistry-II & Core & \checkmark & \checkmark \\ \hline \hline \textbf{FS214} & Forensic Anthropology-Lab & Core & \checkmark & \checkmark \\ \hline FS215 & Forensic Physics II-Lab & Core & \checkmark & \checkmark \\ \hline FS216 & Forensic Biology -II- Lab & Core & \checkmark & \checkmark \\ \hline FS217 & Digital and cyber forensic-I -Lab & Core & \checkmark & \checkmark \\ \hline \hline \textbf{FS217} & Digital and cyber forensic-I -Lab & Core & \checkmark & \checkmark \\ \hline \hline \textbf{Core} & \checkmark & \checkmark & \checkmark \\ \hline \hline \textbf{Core} & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS217} & Digital and cyber forensic-I -Lab & Core & \checkmark & \checkmark \\ \hline \hline \textbf{Core} & \checkmark & \checkmark & \checkmark \\ \hline \textbf{Core} & \checkmark \\ \hline \textbf{Core} & \checkmark & \checkmark \\ \hline Cor$	$ \begin{array}{ c c c c c c } \hline \textbf{Course Title} & \textbf{of Paper} \\ \hline \textbf{Employability} & \textbf{Entrepreneurship} & \textbf{Skill} \\ \hline \textbf{Development} \\ \hline \textbf{FS209} & \textbf{Forensic Anthropology} & \textbf{Core} & & & & & & & \\ \hline \textbf{FS210} & \textbf{Forensic Physics-II} & \textbf{Core} & & & & & & & \\ \hline \textbf{FS211} & \textbf{Forensic Biology-II} & \textbf{Core} & & & & & & & \\ \hline \textbf{FS212} & \textbf{Digital and Cyber Forensic-I} & \textbf{Core} & & & & & & & \\ \hline \textbf{FS213} & \textbf{Quality management in Laboratory} & \textbf{Core} & & & & & & & \\ \hline \textbf{COre} & & & & & & & & \\ \hline \textbf{FS214} & \textbf{Forensic Chemistry-II} & \textbf{Core} & & & & & & & \\ \hline \textbf{FS215} & \textbf{Forensic Anthropology-Lab} & \textbf{Core} & & & & & & & \\ \hline \textbf{FS215} & \textbf{Forensic Physics II-Lab} & \textbf{Core} & & & & & & & \\ \hline \textbf{FS216} & \textbf{Forensic Biology-II- Lab} & \textbf{Core} & & & & & & & \\ \hline \textbf{FS217} & \textbf{Digital and cyber forensic-I-Lab} & \textbf{Core} & & & & & & & \\ \hline \textbf{FS217} & \textbf{Digital and cyber forensic-I-Lab} & \textbf{Core} & & & & & & \\ \hline \end{tabular} $	$ \begin{array}{ c c c c c c } \hline \textbf{Course Title} & \textbf{of Paper} \\ \hline \textbf{Employability} & \textbf{Entrepreneurship} & \textbf{Skill} \\ \hline \textbf{Development} & \textbf{Equality} \\ \hline \hline \textbf{FS209} & \textbf{Forensic Anthropology} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS210} & \textbf{Forensic Physics-II} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS211} & \textbf{Forensic Biology-II} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS212} & \textbf{Digital and Cyber Forensic-I} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS213} & \textbf{Quality management in Laboratory} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{CH227} & \textbf{Forensic Chemistry-II} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS214} & \textbf{Forensic Anthropology-Lab} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS215} & \textbf{Forensic Physics II-Lab} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS216} & \textbf{Forensic Biology-II- Lab} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS217} & \textbf{Digital and cyber forensic-I-Lab} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS217} & \textbf{Digital and cyber forensic-I-Lab} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS217} & \textbf{Digital and cyber forensic-I-Lab} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS217} & \textbf{Digital and cyber forensic-I-Lab} & \textbf{Core} & \checkmark & \checkmark & \checkmark & \checkmark \\ \hline \textbf{FS217} & \textbf{Digital and cyber forensic-I-Lab} & \textbf{Core} & \checkmark & \checkmark & \checkmark & 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\checkmark & \checkmark \\ \hline \textbf{FS210}$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Course Title of Paper $  color   colo$	Course Code  Course Title  Course Title  Core  C

L: Lecture T: Tutorials P: Practical CT: Class Test TA: Teacher Assessment ESE: End Semester Examination,

AE= Ability enhancement, DSE- Discipline Specific Elective, **Sessional Total:** Class Test + Teacher Assessment Examination (ESE) **Subject Total:** Sessional Total + End Semester

# BACHELOR OF SCIENCE IN FORENSIC SCIENCE (B.Sc. FS)



Program Educational Outcomes (PEOs)

### **Program Educational Outcomes (PEOs)**

The PEOs are broad statements that describe the career and professional accomplishments that the program is preparing its graduates to achieve in few years subsequent to receiving the degree. The PEO's of the forensic science program are as follows and the graduates of the Integral University forensic science program will be expected to:

PEO1:	Forensic graduates will be well prepared for successful careers in the profession or in research & innovation at an industry
	and/or in government in one or more of discipline of forensic science and /or sub disciplines of forensic science.
PEO2:	Forensic graduates will make skilled in implementing current and emerging technologies and software practices for
	detection, analyses, and evaluation of forensic evidence.
PEO3:	Forensic graduates will be successful in leading the multidisciplinary teams with professional competencies to extend his
	experiences, abilities and dexterities in scientific investigations to give unbiased and firm scientific opinions in the courts.
PEO4:	Forensic graduates will serve the society not solely as forensic expert but as a contributor towards healthy, secure and
	vibrant society by making people alert about various methods adopted by the criminals for committing the crimes.
PEO5:	Forensic graduates will be successful in higher education in forensic science or criminology, if pursued.

# BACHELOR OF SCIENCE IN FORENSIC SCIENCE (B.Sc.FS)



# PROGRAMME OUTCOMES (POs)

### BACHELOR OF SCIENCE IN FORENSIC SCIENCE (B.Sc. FS) PROGRAMME OUTCOMES (POs)

### PROGRAMME OUTCOMES (POs) POs and its Attributes: -

Program Outcomes (POs) are attributes of the graduates of the Programme that are indicative of the graduates' ability and competence to work as a forensic scientist upon graduation. Program Outcomes are statements that describe what students are expected to know or be able to do by the time of graduation. They must relate to knowledge and skills that the students acquire from the Programme. The achievement of all outcomes indicates that the student is well prepared to achieve the program educational objectives down the road. The following 12 POs have been chosen by the Department of Paramedical Sciences Integral University. The Forensic Science Program curriculum at Integral University has been designed to fully meet all the 12 Program Outcomes:

PO-1:	Apply the knowledge of forensic and its different specializations to identify the modus operandi of criminals and investigate complex crimes.
PO-2:	Demonstrate team leadership skills through ability to set directions and teamwork skill for achieving the desired goals.
PO-3:	Apply reasoning within the conceptual knowledge to serve as an expert with integrity and high professional ethics that can deliver clear, objective, and unbiased opinions.
PO-4:	Communicate effectively to direct and guide interdisciplinary team members.
PO-5:	Function effectively to communicate and express himself in the society with learning zeal and to deliver clear and firm eye witness in any proceeding that may be referred in future in similar cases.
PO-6:	Recognize and execute research-based methods including targeted experiments, analysis and interpretation of data and synthesis of information leading to logical conclusions for combating the crime.
PO-7:	Apply selected knowledge to work on complex analytical instruments so as to present accurate and complete data in reports based on good scientific practices and validated methods.
PO-8:	Stay abreast of new findings and researches and along with lifelong learning in the field.
PO-9:	Create and Innovate ideas that can lead to a powerful breakthrough in criminal and civil investigations.
PO-10:	Function effectively to serve the society not solely as forensic professional but as a contributor towards healthy, secure and vibrant society by making people alert about various methods adopted by the criminals for committing the crimes.
PO-11:	Enhance and adopt new skills for future employability in teaching and research through seminar, internship.
P0-12:	Function effectively to serve the society not solely as forensic professional but as a contributor towards healthy, secure and vibrant society by making people alert about various methods adopted by the criminals for committing the crimes.

## BACHELOR OF SCIENCE IN FORENSIC SCIENCE (B.Sc. FS)



Program Specific Outcomes (PSOs)

## BACHELOR OF SCIENCE IN FORENSIC SCIENCE (B.Sc. FS) PROGRAMME SPECIFIC OUTCOME (PSOs)

Program Specific Objectives (PSOs) are specific statements that describe the professional career accomplishment that the program is designed. The PSO's of the B. Sc. Forensic science program are as follows:

PSO1:	The students will be able to know about the different concepts, skills and techniques of the sciences (Chemistry, Physics, Biology, Psychology, and Computer Science etc.) Related to Forensic Science and Criminal Justice system.
PS02:	The students will be able to develop understanding about need &nature of different divisions of forensic Science, Crime and Criminal law, forensic science laboratories and structural and functional aspects of various law enforcement agencies (NCB, NIA, CBI, BPR&D, INTERPOLE, RAW etc.)
PS03:	The students will able to develop critical thinking, reasoning abilities and selecting appropriate technique required during handling, analyzing and interpretation of diverse evidences like digital, chemistry, anthropological, toxicological, biological, documents, audio/videos, s etc.
PS04:	Students will able to detect and opine on the evidences recovered from various crime scenes that may involve exhibit of biology, digital, question document, anthropological, photographic etc. before the judiciary or criminal justice system.
PSO5:	Student learns applying quality control, safety measures & maintenance procedure of laboratory equipment and will be able to apply ethical principles and commit to professional ethics and responsibilities of forensic science.