

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
CHHATRAPATI SAMBHAJINAGAR.



Circular / Syll. Sec. / A.C. Res. / Curriculum / 2026.

It is hereby inform to all concerned that, on the recommendation of Board of Studies, the Academic Council at it's Meeting held on 28th July, 2026 has accepted the "Curriculum of Pre-Ph.D. Course Work as per Guidelines of University".

This is effective from the Academic Year 2026-27 and onwards as per appended herewith.

All concerned are requested to note the contents of this circular and bring notice to the students, teachers and staff for their information and necessary action.

University campus,
Chhatrapati Sambhajnagar-431 004.
Ref. No. Syll. Sec./A.C. Res./
Curriculum/ 2026/ 2.2.1-2.2.2

**Deputy Registrar
Syllabus Section**

Date: 31/ 07/ 2026.

Copy forwarded with necessary action to:-

- 1] The Head, all concerned departments,
- 2] The Director, University Network & Information Centre, UNIC,
with a request to upload this Circular on University Website.
- 3] The Director, Board of Examinations & Evaluation,
- 4] Public Relation Officer [PRO],

Dr. Babasaheb Ambedkar Marathwada University,
Chhatrapati Sambhajnagar.

Dr.Babasaheb Ambedkar Marathwada University Chhatrpati Sambhajinagar.



Pre.Ph.d.Courses Subject wise curriculum List under the Faculty of Science & Technology

Sr.No.	Curriculum/Subject
1.	Biochemistry
2.	Biotechnology
3.	Botany
4.	Chemistry
5.	Computer Engineering
6.	Computer Science.
7.	Environmental Science
8.	Food Technology
9.	Geology
10.	Mathematics
11.	Microbiology
12.	Pharmacy
13.	Physics
14.	Statistics
15.	Zoology
16.	Civil Engineering
17.	Electronics Engineering
18.	Mechanical Engineering
19.	Nanotechnology
20.	Biophysics
21.	Pharmaceutical and Fine Chemical
✓ 22.	Forensic Science.
23.	Water and Land Managment

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Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajanagar

Course .3 (C-3) Pre-Ph. D. Course Work in **Forensic Science Syllabus**

Subject-Specific Advanced Level Course (Credits: 03)

Unit I: Advanced Crime Scene Investigation and Evidentiary Jurisprudence (1 Credit)

- **Multidisciplinary Crime Scene Management:** Advanced protocols for securing, documenting (3D laser scanning, photogrammetry), and reconstructing dynamic and complex crime scenes.
- **Evidence Identification, Collection, and Preservation:**
 - *Biological & Chemical:* Advanced recovery techniques for trace biological evidence, toxicological samples, and chemical residues from compromised environments.
 - *Physical & Ballistics:* Strategic collection of latent prints, questioned documents, ballistic evidence, and micro-traces (glass, soil, paint).
 - *Digital & Multimedia:* First-responder protocols for digital crime scenes, live data acquisition, and preservation of volatile data from networks, mobile devices, and IoT environments.
- **Legal & Ethical Frameworks:** Chain of custody management, legal provisions governing evidence collection (Indian Evidence Act), and ethical considerations in handling sensitive data.

Unit II: Advanced Analytical Techniques and Forensic Methodologies (1 Credit)

- **Laboratory Workflows & Method Validation:** Processing multi-disciplinary evidence under strict quality assurance and control (QA/QC) protocols. Method validation for forensic research.
- **Analytical Instruments:** PCR Thermal Cyclers, Genetic Analyzers (Capillary Electrophoresis), GC-MS, LC-MS, HPLC, FTIR, VSC (Video Spectral Comparator), ESDA, Stereo/Comparison Microscopes, SEM-EDX.
- **Forensic Hardware & Software:** Hardware Write Blockers, AFIS, IBIS, EnCase, FTK, Autopsy, Cellebrite UFED, Magnet AXIOM, Amped FIVE, Adobe Photoshop,


15/09/2026

GoldWave, Multi-Speech.

- **Advanced Forensic Analysis:**

- *Biological & Toxicological Analysis:* Advanced DNA extraction and profiling techniques, serological markers, and chromatographic/spectroscopic screening of complex biological matrices for poisons and drugs.
- *Physical & Ballistic Examination:* Microscopic and chemical analysis of documents, latent print visualization, and comparative ballistic analysis using automated systems.
- *Digital & Multimedia Forensics:* Advanced data recovery algorithms for solid-state drives (SSD) and damaged media, malware reverse engineering, digital footprint analysis, and algorithmic detection of deepfakes and multimedia tampering.

Unit III: Forensic Data Interpretation, Legal Presentation, and Research Ethics (1 Credit)

- **Interpretation and Report Writing:** Statistical evaluation of forensic data, formulating scientifically sound conclusions, and drafting comprehensive expert reports for legal proceedings and academic peer review.
- **Expert Testimony and Jurisprudence:** Courtroom dynamics, the role of the expert witness, pre-trial preparations, and defending scientific methodologies during cross-examination.
- **Research Trends & Ethics:** Identifying research gaps in forensic science, intellectual property, and ethical guidelines for conducting research on human biological samples and digital data.