



**RAMAIAH  
UNIVERSITY**  
OF APPLIED SCIENCES

**M.S. Ramaiah University of Applied Sciences**  
**Programme Structure and Course Details**  
**Of**  
**MD Forensic Medicine 2022 onwards**

**M.S. Ramaiah University of Applied Sciences**  
**Ramaiah Medical College**

  
Registrar  
M.S. Ramaiah University of Applied Sciences  
Bangalore - 560 054





Principal and Dean

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Approved by the Academic Council at its 26<sup>th</sup> meeting held on 14 July 2022



**RAMAIAH  
UNIVERSITY**  
OF APPLIED SCIENCES

**M.S. Ramaiah University of Applied Sciences**

**Programme Specifications**

**MD Forensic Medicine Programme 2022**

**onwards**

**Programme Code: MD134**

**M.S. Ramaiah University of Applied Sciences**

**Ramaiah Medical College**



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## University's Vision, Mission and Objectives

The M. S. Ramaiah University of Applied Sciences (MSRUAS) will focus on student-centric professional education and motivates its staff and students to contribute significantly to the growth of technology, science, economy and society through their imaginative, creative and innovative pursuits. Hence, the University has articulated the following vision and objectives.

### Vision

MSRUAS aspires to be the premier university of choice in Asia for student centric professional education and services with a strong focus on applied research whilst maintaining the highest academic and ethical standards in a creative and innovative environment

### Mission

Our purpose is the creation and dissemination of knowledge. We are committed to creativity, innovation and excellence in our teaching and research. We value integrity, quality and teamwork in all our endeavors. We inspire critical thinking, personal development and a passion for lifelong learning. We serve the technical, scientific and economic needs of our Society.

### Objectives

1. To disseminate knowledge and skills through instructions, teaching, training, seminars, workshops and symposia in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences to equip students and scholars to meet the needs of industries, business and society
2. To generate knowledge through research in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences to meet the challenges that arise in industry, business and society
3. To promote health, human well-being and provide holistic healthcare
4. To provide technical and scientific solutions to real life problems posed by industry, business and society in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences
5. To instill the spirit of entrepreneurship in our youth to help create more career opportunities in the society by incubating and nurturing technology product ideas and supporting technology backed business
6. To identify and nurture leadership skills in students and help in the development of our future leaders to enrich the society we live in
7. To develop partnership with universities, industries, businesses, research establishments, NGOs, international organizations, governmental organizations in India and abroad to enrich the experiences of faculties and students through research and developmental programme

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Programme Specifications: MD Forensic Medicine

Faculty	Ramaiah Medical College
Department	Forensic Medicine
Programme	MD – Forensic Medicine
Programme Code	MD134
Dean of Faculty	Dr Shalini C Nooyi
Head of the Department	Dr Girish Chandra Y P

1. Title of the Award: MD in Forensic Medicine
2. Mode of Study: Full-Time
3. Awarding Institution /Body: M. S. Ramaiah University of Applied Sciences, Bengaluru
4. Joint Award: Not Applicable
5. Teaching Institution: Ramaiah Medical College
6. Date of Programme Specifications: September 2022
7. Programme Approval by the Academic Council of MSRUAS: 27<sup>th</sup> September 2022
8. Programme Approving Regulating Body and Date of Approval: National Medical Council of India
9. Rationale for the Programme

The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training.

This Programme is meant to standardize and strengthen Forensic Medicine teaching at the postgraduate level throughout the country so that it will benefit the judiciary and the legal system of the country in providing justice which will ultimately benefit the community at large. It will also help in achieving uniformity in undergraduate teaching.

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. This document was prepared by various subject-content specialists. The Reconciliation Board of Academic Committee has attempted to render uniformity without compromise to purpose and content of the document. Compromise in purity of syntax has been made in order to preserve the purpose and content.

This has necessitated retention of "domains of learning" under the heading "competencies".

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**Programme objectives (PO) for MD Forensic Medicine Postgraduate students**

**PO1.** Develop knowledge of various codes of conduct and ethics in Medical practice. (C)

**PO2.** Acquire knowledge of medical negligence and measures to Prevent negligence. (C)

**PO3.** Be able to identify medico-legal cases, Examine and Certify in Various medico-legal situations, know the legal and medical Responsibilities and exhibit professionalism in handling such Cases, Ethical researcher and teacher (A, C, P)

**PO4.** Be able to conduct post-mortem examination independently and draft a certificate. Skeletal remains examination and draft a Certificate. (A, C, P)

**Programme specific outcome (PSO) for MD Forensic Medicine Postgraduate students**

**PSO1** - To acquire Knowledge of various codes of conduct related to medical practice which evolved from code's of - Hammurabi, Dhanavantri, Charaka's, Sushruta's Hippocratic oath, to the present codes of conduct and ethics adopted by world medical association with respect to biomedical ethics, and guidelines laid down by ICMR regarding Human research. (C)

**PSO2** - To acquire knowledge about various acts of omission and commission which amounts to Medical negligence, its types, liabilities and adopt measures like informed consent, proper documentation, patient rapport etc. to prevent medical negligence. (C)

**PSO3** - To apply skills learnt in casualty, Radiology, Pathology, Psychiatry in identifying various medico legal cases that come to the hospital and the legal formalities to be completed in such scenarios as advocated by the law of land. (A, C, P)

**PSO4** - To exhibit professionalism and Communication skills during treatment, collection, preservation, dispatch of evidence in cases of trauma, sexual assaults, drunkenness, Certification in cases of death, assessment of age and intimation to law enforcing agencies, teaching activities and research (A, C, P)

**PSO5** - To apply skills learnt in Anatomy, Pathology, Forensic Science lab and Autopsy postings for the conduction of post-mortem in various circumstances, preservation of various viscera and body fluids for toxicological and biochemical analysis, microbiological and histopathological examinations and to be able to interpret autopsy findings and results of various test in drafting of post-mortem certificate and similarly in Skeletal remains examination and drafting certificate. (A, C, P)

**PSO6** - To teach and assess medical students, acquire skills to conduct research (Including thesis work independently or as part of a team. (C, P)

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**Note: A- Affective Domain, C- Cognitive Domain & P- Psychomotor Domain:**

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Course- PO-PSO Mapping

Course Code and name	Program Outcomes				Program Specific Outcomes					
	POs				PSOs					
	PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
MDC529A Basics of Forensic Medicine, basic sciences and allied subjects.	3	3	3	3	3	2	3	3	3	3
MDC530A Clinical Forensic Medicine and medical jurisprudence.	2	3	3	3	3	3	3	3	3	3
MDC531A Forensic pathology and toxicology.	3	2	3	3	2	3	3	3	3	2
MDC532A Recent advances in Forensic Medicine	3	3	2	2	2	3	3	3	2	3
MDP508A Thesis - Forensic medicine	3	3	3	3	3	2	3	3	3	3



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**10. Regulations:****(A) Attendance, Progress and Conduct**

1. A candidate pursuing degree course should work in the concerned department of the institution for the full period as a full time student. No candidate is permitted to run or work in clinic/laboratory/nursing home while studying postgraduate course. No candidate shall join any other course of study or appear for any other examination conducted by this university or any other university in India or abroad during the period of study.
2. Each term shall be taken as a unit for the purpose of calculating attendance. Attendance of 80% every year is mandatory for appearing in the final university examination.
3. Every student shall attend symposia, seminars, conferences, journal review meetings, grand rounds, CPC, case presentation, clinics and lectures during each year as prescribed by the department and not absent himself / herself from work without valid reasons.
4. Every candidate is required to attend a minimum of 80% of the training during each academic term of the post graduate course. Provided further, leave of any kind shall not be counted as part of academic term without prejudice to minimum 80% attendance of training period every term.
5. Any student who fails to complete the course in the manner stated above shall not be permitted to appear for the University Examinations.

**(B) Monitoring of progress of Studies**

1. Work diary / Log Book - Every candidate shall maintain a work diary and record of his/her participation in the training programmes conducted by the department such as journal reviews, seminars, etc. as per the model checklists and logbook specimen copy.
2. Special mention may be made of the presentations by the candidate as well as details of clinical or planning procedures, if any conducted by the candidate. The work diary shall be scrutinized and certified by the Head of the Department and Head of the Institution, and presented in the university practical/clinical examination.
3. Procedure for defaulters: There will be a committee constituted by all teachers to review such situations. The defaulting candidate is counselled by the guide and head of the department. In extreme cases of default, the departmental committee may recommend that defaulting candidate will be withheld from appearing the examination, if she/he fails to fulfil the requirements in spite of being given adequate chances to set himself or herself right.

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**11. Teaching Learning Methods:**

**1. Lectures:** Lectures are to be kept to a minimum. They may, however, be employed for teaching certain topics. Lectures may be didactic or integrated.

The course shall be of three years, organized in six units (0-5). This modular pattern is a guideline for the department, to organize training. Training programme can be modified depending upon the work load and academic assignments of the department.

**2. Journal Club & Subject seminars:**

Both are recommended to be held once a week. All the PG students are expected to attend and actively participate in discussion and enter in the Log Book relevant details.

Further, every PG trainee must make a presentation from the allotted journal(s), selected articles and a total of 12 seminar presentations in three years. The presentations would be evaluated and would carry weightage for internal assessment.

**3. Case Presentations:** Minimum of 5 cases to be presented by every PG trainee each year. They should be assessed using check lists and entries made in the log book

**4. Clinico-Pathological correlation \ Conference:** Recommended once a month for all post graduate students. Presentation is to be done by rotation. If cases are not available, it could be supplemented by published CPCs.

**5. Inter-Departmental Meetings:** These meetings should be attended by post graduate students and relevant entries must be made in the Log Book.

**6. Teaching Skills:** The postgraduate students shall be required to participate in the teaching and training programme of undergraduate students and interns.

7. Undertake audit, use information technology tools and carry out research, both basic and clinical, with the aim of publishing his work and presenting his work at various scientific fora.

**8. Continuing Medical Education Programmes (CME):** At least two CME programmes should be attended by each student in 3 years.

**9. Conferences:** The student to attend courses, conferences and seminars relevant to the speciality.

10. A postgraduate student of a postgraduate degree course in broad specialities/super specialities would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him eligible to appear at the postgraduate degree examination

**11. Rotation:** Other than the Department of Forensic Medicine, student may be posted for training in the following clinical disciplines for a given period of time on rotational basis:

	Place of posting	First year	Second year	Third year
1	Trauma & Emergency/Casualty / Emergency medicine department	1 month	15 days	15 days
2	Radiology	7 days	5 days	3 days
3	Psychiatry	5 days	3 days	2 days
4	Forensic science lab	7 days	15 days	Not required
5	Histopathology	7 days	5 days	3 days

12. Department should encourage e-learning activities.

Innovative teaching learning practices: Crime scene visits, Moot court

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**13. Assessment:****FORMATIVE ASSESSMENT**, ie., during the training

## General Principles

Internal Assessment should be frequent, cover all domains of learning and used to provide feedback to improve learning; it should also cover professionalism and communication skills. The Internal Assessment should be conducted in theory and clinical examination. Quarterly assessment during the MD training should be based on following educational activities:

1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities / CMEs

The student to be assessed periodically as per categories listed in postgraduate student appraisal form (Annexure I).

**SUMMATIVE ASSESSMENT**, ie., assessment at the end of training

The Postgraduate examination shall be in three parts: The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.

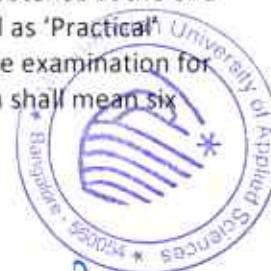
The examination shall be in three parts:

**1. Thesis**

Thesis shall be submitted at least six months before the Theory and Clinical / Practical examination. The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and practical examination. A PG trainee shall be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by the examiners.

**2. Theory:**

The examinations shall be organized on the basis of 'Grading' or 'Marking system' to evaluate and to certify PG trainee's level of knowledge, skill and competence at the end of the training. Obtaining a minimum of 50% marks in 'Theory' as well as 'Practical' separately shall be mandatory for passing examination as a whole. The examination for M.D. shall be held at the end of 3rd academic year. An academic term shall mean six month's training period.



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There shall be four papers each of three hours duration. These are:

**Theory Examination: There shall be four theory papers 400 marks**

There shall be four question papers, each of three hours' duration. Each paper shall consist of 10 short essay questions each carrying 10 marks. Total marks for each paper will be 100. Questions on recent advances may be asked in any or all the papers. Details of distribution of topics for each paper will be as follows.

Name of the course	Course Code	Topics	Marks
Basics of Forensic Medicine, basic sciences and allied subjects.	MDC529A	<ul style="list-style-type: none"> <li>Anatomy, Physiology and Biochemistry, Pathology, Dentistry &amp; Radiology</li> </ul>	100
Clinical Forensic Medicine and medical jurisprudence.	MDC530A	<ul style="list-style-type: none"> <li>Certification in cases of physical assault, suspected drunkenness, sexual offences, consummation of marriage and disputed paternity, age certification.</li> <li>Cases of torture and violation of human rights and issues there to and perform autopsy independently in such cases.</li> <li>History of Forensic Medicine, the legal and medico-legal system in India,</li> <li>Medical ethics and the law in relation to medical practice,</li> <li>Medical ethics and law in relation to organ transplantation, biomedical human research and experimentation</li> </ul>	100
Forensic pathology, and toxicology.	MDC531A	<ul style="list-style-type: none"> <li>Medical negligence as in operative and anesthetic deaths</li> </ul>	100



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		<ul style="list-style-type: none"> <li>• Medico-legal autopsy</li> <li>• Identification</li> <li>• The pathology of wounds,</li> <li>• Ballistics and wound ballistics,</li> <li>• Thermal injuries</li> <li>• Sexual Jurisprudence</li> <li>• Thanatology and asphyxial deaths</li> <li>• Mass disasters</li> </ul>	
Recent advances in Forensic Medicine and Forensic Psychiatry	MDC532A	<ul style="list-style-type: none"> <li>• Forensic ballistics, forensic serology, analytical toxicology, forensic photography, crime scene investigation, Forensic cyber technology, forensic Taphonomy, biohazards, trace evidence, investigation of questioned documents and forgery, DNA profiling, biological stains and ethical aspects of Forensic Procedures including Narco-analysis, Brain mapping and Polygraph.</li> <li>• Basic principles of techniques used in toxicological laboratory namely TLC, GLC, ASS, HPLC and Breath Alcohol Analyzer</li> <li>• Recent amendments in various acts, IPCs, CrPCs.</li> <li>• Forensic importance in Psychiatry and the medico-legal aspects of Psychiatry and mental health</li> </ul>	100
Thesis - Forensic medicine	MDP508A	Approval 6 months before final examination.	



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**3. Practical Examination:**

Practical examination would be spread over two days and should be as follows:

**Day 1****Clinical Cases – 6 x 9 = 54 marks**

1. Age estimation,
2. Injury report,
3. Examination of an insane person to evaluate criminal/civil responsibility,
4. Examination of an intoxicated person,
5. Sexual offences (accused and victim),
6. Skeletal remains examination.

**Spotters: 4 x 9 = 36 marks**

1. Histopathology slides,
2. Photographs,
3. Exhibit material, mounted specimens,
4. Toxicology Exercises - Identification and details of common poisons or chemical tests etc.

**Day 2****Postmortem Examination (Adult/ Fetal) -100 marks**

Thesis/Seminar Presentation - For assessment of research/teaching ability

Discussion on a case for expert opinion – 10 marks

**A. VivaVoice:100 marks****1) Viva-Voce Examination:(80Marks)**

All examiners will conduct viva-voce conjointly on candidate's comprehension, analytical approach, expression and interpretation of data. It includes all components of course contents. It includes discussion on dissertation also.

**2) Pedagogy Exercise:(20Marks)**

A topic be given to each candidate in the beginning of practical examination. He/she is asked to make a presentation on the topic for 8-10 minutes.

**B. Total Marks Distribution:**

Maximum marks for M.D degree course	Theory	Practical	Viva	Grand Total
	400	200	100	700*



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**Annexures**

- Annexure 1\_ Competency list
- Annexure 2\_ Overall course plan year-wise
- Annexure 3\_ Sample of monthly schedules
- Annexure 4\_ PG outside posting policy
- Annexure 5\_ Logbook entry
- Annexure 6\_ Students appraisal form



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Annexure 1 Competency list**SUBJECT SPECIFIC COMPETENCIES**

By the end of the course, the student should have acquired knowledge (cognitive domain), Professionalism (affective domain) and skills (psychomotor domain) as given below:

**A. Cognitive domain**

1. Describe the legal and medico-legal system in India.
2. Acquire knowledge on the philosophy and guiding principles of Forensic Medicine Course.
3. Describe the programme goals and objectives of the Forensic Medicine course.
4. Acquire knowledge on conduct of medico-legal autopsy independently with required Physical assistance, prepare report and derive inferences.
5. Outline the principles and objectives of post-mortem examination.
6. Describe the formalities and procedures of medico-legal autopsies in accordance with Existing conventions and the law.
7. Identify the role of anatomy, physiology, biochemistry, microbiology, pathology, blood Bank, psychiatry, radiology, forensic science laboratory as well as other disciplines of Medical science to logically arrive at a conclusion in medico-legal autopsies and Examination of medico-legal cases.
8. Describe the principles of the techniques used in toxicological laboratory namely TLC (Thin Layer Chromatography), GLC (Gas Liquid Chromatography), AAS (Atomic Absorption Spectrophotometry), HPLC (High Performance Liquid Chromatography) and Breathe Alcohol Analyser.
9. Describe relevant legal/court procedures applicable to medico-legal/medical Practice.
10. Describe the general forensic principles of ballistics, serology, analytical toxicology and Photography.
11. Interpret, analyse and review medico-legal reports prepared by other medical officers at The time of need.
11. Describe role of DNA profile and its application in medico-legal practice.
12. Describe the law/s relating to poisons, drugs, cosmetics, narcotic drugs and Psychotropic substances.
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13. Describe the legal and ethical aspects of Forensic Procedures including Narco-analysis, Brain mapping and Polygraph etc.
14. Describe the medico-legal aspects of Psychiatry, addiction and mental health.

**B. Affective domain**

1. Should be able to function as a part of a team, develop an attitude of cooperation with Colleagues, and interact with the clinician or other colleagues to provide the best Possible opinion.
2. Should be able to follow ethical principles in dealings with patients, police Personnel, relatives and other health personnel and to respect their rights.
3. Follow medical etiquettes in dealing with each other.
4. Develop communication skills to word reports and professional opinion as well as to Interact with patients, relatives, peers and paramedical staff, and for effective teaching.

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**C. Psychomotor domain**

**At the end of the course, the student should acquire following skills and be able to:**

1. Perform medico-legal autopsy independently with required physical assistance, prepare Report and derive inferences.
2. Perform medico-legal examination of users of alcohol, drugs and poisons and prepare Report.
3. Perform medico-legal examination in cases of sexual offences and prepare report.
4. Interpret histo-pathological, microbiological, radiological, chemical analysis, DNA profile and other investigative reports for medico-legal purposes.
5. Perform medico-legal examination of bones, clothing, wet specimens and weapons.
6. Depose as an expert witness in a court of Law on medico-legal matters.
7. Examine, identify, prepare reports and initiate management on medico-legal cases in emergency set up.
8. Identify and discharge all legal responsibilities in medico-legal matters.
9. Plan, organize and supervise medico-legal work in general/teaching/district hospitals and in any health care set up.
10. Collect, preserve and dispatch various samples and trace evidences to the concerned Authorities in appropriate manner.
11. Help and Advise authorities on matters related to medical ethics and medico-legal issues.
12. Discharge duties in respect of forensic, clinical, emergency, environmental, and medico-legal and occupational aspects of toxicology.
13. Plan, organize and manage toxicological laboratory services in any health care set up.
14. Provide information and consultation on all aspects of toxicology to professionals, industry, Government and the public at large.
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15. Manage medico-legal responsibilities in mass disasters involving multiple deaths like fire, traffic accident, aircraft accident, rail accident and natural calamities.
16. Do interaction with allied departments by rendering services in advanced laboratory investigations and relevant expert opinion.
17. Participate in various workshops/seminars/journal clubs/demonstration in the allied departments, to acquire various skills for collaborative research.

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**Annexure 2\_ Overall course plan year-wise  
January –December-2022**

Sl No.	Day and Time	TL-Method	Topic	Faculty/Alt Faculty	Presenter
01	07/01/22 10.30am-11.30am	Journal	Post-mortem CT Lung findings at medico legal institute in SARS VOV-RT PCR Positive case with autopsy correlation	Dr S.Praveen	Dr Ramesh
02.	14/01/22 10.30am-11.30am	Seminar	Forensic Odontology	Dr Girish Chandra YP	Dr Ramesh
03.	28/01/22 10.30am-11.30am	Case discussion	PM.NO-667/21- A case of precipitate labour in a multiparous women in a Nome delivery	Dr Basappa S Hugar	Dr Varsha
04.	04/02/22 10.30am-11.30am	Journal	Decomposition variability between the scene and autopsy examination and implications for postmortem internal	Dr Girish Chandra YP	Dr Varsha
05	11/02/22 10.30am-11.30am	Seminar	Bioterrorism	Dr S.Praveen	Dr Varsha
06	18/02/22 10.30am-11.30am	Case discussion	PM.NO-79/22- A case of burns without any evidence of any flammance products at the crime scene"	Dr Akshith Raj S Shetty	Dr Ramesh
07	04/03/22 10.30am-11.30am	Journal	Effect of postmortem interval and conditions of teeth on STR based DNA profiling from unidentified dead bodies	Dr Girish Chandra YP	Dr Varsha
08	11/03/22 10.30am-11.30am	Seminar	Aviation injuries and other mass disaster	Dr Basappa S Hugar	Dr Ramesh
09	18/03/22 10.30am-11.30am	Case discussion	115-22- A case with alleged H/O sudden natural death but autopsy findings consistent with poisoning	Dr S.Praveen	Dr Varsha
10	01/04/22 10.30am-11.30am	Journal	The hidden aspect of in traffic accident.	Dr Basappa S Hugar	Dr Ramesh



11	08/04/22 10.30am- 11.30am	Seminar	Narcoanalysis/ Brain mapping	Dr Girish Chandra YP	Dr Varsha
12	22/04/22 10.30am- 11.30am	Case discussion	PM.NO-151/22- A case of acute pulmonary hemorrhage in pediatric age group	Dr S.Praveen	Dr Ramesh
13	06/05/22 10.30am- 11.30am	Journal	Examining the age of different sample types following decomposition to estimate year of death using done pulse dating	Dr Girish Chandra YP	Dr Ramesh
14	13/05/22 10.30am- 11.30am	Seminar	Time Since Death and techniques of preservation of body	Dr Basappa S Hugar	Dr Ramesh
15	20/05/22 10.30am- 11.30am	Case discussion	PM.NO-157/22- A case of cardiac arrest due to coronary artery insufficient masquerading RTA	Dr S.Praveen	Dr Ramesh
16	03/06/22 10.30am- 11.30am	Journal		Dr Basappa S Hugar	Dr _____
17	10/06/22 10.30am- 11.30am	Seminar	Designer Drugs & autopsy protocol	Dr S.Praveen	Dr Ramesh
18	17/06/22 10.30am- 11.30am	Case discussion		Dr Akshith Raj S Shetty	Dr Ramesh
19	01/07/22 10.30am- 11.30am	Journal		Dr S.Praveen	Dr Ramesh
20	08/07/22 10.30am- 11.30am	Seminar	Forensic ballistics	Dr Girish Chandra YP	Dr Ramesh
21	05/08/22 10.30am- 11.30am	Case discussion		Dr Akshith Raj S Shetty	Dr Ramesh
22	26/08/22 10.30am- 11.30am	Seminar	Sudden Unexpected Infant Death (SUID) - Sudden Infant Death Syndrome(SIDS), accidental deaths, sudden natural deaths and homicides	Dr S.Praveen	Dr Ramesh
23	02/09/22	Journal		Dr Basappa S	Dr Ramesh



	10.30am-11.30am			Hugar	
24	23/09/22 10.30am-11.30am	Case discussion		Dr Girish Chandra YP	Dr Ramesh
25	14/10/22 10.30am-11.30am	Journal		Dr Girish Chandra YP	Dr Ramesh
26	28/10/22 10.30am-11.30am	Seminar	Forensic Radiology with emphasis on virtual autopsy	Dr Basappa S Hugar	Dr Ramesh
27	04/11/22 10.30am-11.30am	Case discussion		Dr S.Praveen	Dr Ramesh
28	18/11/22 10.30am-11.30am	Seminar	Immunohistochemistry and its applications in forensic medicine	Dr Girish Chandra YP	Dr Ramesh
29	09/12/22 10.30am-11.30am	Journal	The importance of bone sample selection when using radiocarbon analysis in cases of unidentified human remains	Dr Akshith Raj S Shetty	Dr _____* (*First year PG)
30	23/12/22 10.30am-11.30am	Case discussion	620/22-A case of alleged history of sudden natural death but turned out to be a case of manual strangulation	Dr Basappa S Hugar	Dr Ramesh




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**Annexure 3\_ Sample of monthly schedules  
December-2022**

	<b><u>RAMAIAH MEDICAL COLLEGE &amp; HOSPITALS</u></b> <b><u>DEPARTMENT OF FORENSIC MEDICINE</u></b>
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**SEMINAR**

Day:

Time: 10.30AM-11.30AM

Venue: Dept Seminar Hall

Sl. No.	Date	Topic	Speaker	Moderator
1.	-	-	-	-

**JOURNAL CLUB**

Day: Friday

Time: 10.00 AM- 11.00AM

Venue: Dept Seminar Hall

Sl. No.	Date	Presenter	Moderator
1.	09/12/22	The importance of bone sample selection when using radiocarbon analysis in cases of unidentified human remains	Dr. Akshith Raj S Shetty

**CASE PRESENTATION**

Day: Monday

Time: 10.00AM-11.00AM

Venue: Dept Seminar Hall

Sl. No.	Date	Topic	Speaker	Mentors
1	23/12/22	620/22-A case of alleged history of sudden natural death but turned out to be a case of manual strangulation	Dr.Ramesh	Dr.Basappa S Hugar

**Note:** Cases to be showed and discussed with mentors

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## Annexure 4\_ PG outside posting policy

Other than the Department of Forensic Medicine, student may be posted for training in the following clinical disciplines for a given period of time on rotational basis:

	Place of posting	First year	Second year	Third year
1	Trauma & Emergency/Casualty / Emergency medicine department	1 month	15 days	15 days
2	Radiology	7 days	5 days	3 days
3	Psychiatry	5 days	3 days	2 days
4	Forensic science lab	7 days	15 days	Not required
5	Histopathology	7 days	6 days	3 days



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## Annexure 5\_ Logbook entry

Date	
Setting/method	
Presented/attended	
Summary in brief	
Reflection	
Teachers comments	

Student's signature

Guide's Signature



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## Annexure 6\_Students appraisal form

## Postgraduate Students Appraisal Form

Name of the PG Student :

Period of Training Duration : FROM.....TO.....

Sl. No	Particulars	Not satisfactory (1,2,3)	Satisfactory (4,5,6)	More than Satisfactory (7,8,9,10)	Remarks
1	Journal based/recent advances learning				
2	Patient based/Laboratory or skill based learning				
3.	Self-directed learning and teaching				
4.	Departmental and interdepartmental learning activity				
5.	External and Outreach activities/ CMEs				
6.	Thesis/Research work				
7.	Logbook Maintenance				

Publications

Yes/ No

Remarks\*

\*REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.

SIGNATURE OF ASSESSEE SIGNATURE OF CONSULTANT SIGNATURE OF HOD

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## Course Specifications

### MD Forensic Medicine 2022 onwards

Course Code: MDC529A

  
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Course Specifications

Course Title	Basics of Forensic Medicine, basic sciences and allied subjects.
Course Code	MDC529A
Department	MD Forensic Medicine
Faculty	Ramaiah Medical College

Course summary:

This course is designed in such a way that the student will master in various codes of conduct related to medical practice which evolved from code's of - Hammurabi, Dhanavantri, Charaka's, Sushruta's Hippocratic oath, to the present codes of conduct and ethics adopted by world medical association with respect to biomedical ethics, and guidelines laid down by ICMR regarding Human research

Course Outcomes:

**CO 1:** The student should be well versed with Anatomy of parts and organs of the body which are important from the medico-legal aspect.(C)

**CO 2:** The student should have understood the physiology and biochemical aspects of phenomena that are important in the body from the medico-legal viewpoint such as fluid and electrolyte balance, thermoregulation in newborn and adults, endocrine functions, sexual behavior and reproductive system.(C)

**CO 3:** The student should be well versed with Pathophysiology of vital processes and response mechanisms that modulate tissue and organ reaction to all forms of injury and have a bearing on ante mortem and postmortem appearance in medico-legal cases, assessment of the duration of injuries and correlate trauma and disease, pathology of sudden death, patho-physiology of shock, common infections and infestations of medico-legal significance. (C)

**CO 4:** The student should have acquired adequate knowledge of dentistry and forensic radiology for solution of medico-legal problems like injuries, age determination and identification.(C,P)

**CO 5:** Should be introduced to basic research methodology so that he/she can independently conduct fundamental and applied research and he/she should independently write the thesis in accordance with the prescribed instructions as expected of international standards(C,P)

**CO 6:** Have knowledge of biomedical waste management and be familiar with appropriate disposal methods for each specimen, sample, reagents, instruments, autoclaving techniques, recycling of products and e-waste as applicable to the specific courses(C,P)

Course Content:

**A. Anatomy:** Anatomy of parts and organs of the body which are important from the Medico-legal aspect.

1. Describe surface and regional anatomy of head, neck, chest and abdomen.
2. Describe gross anatomy and blood supply of heart, brain, lungs, spleen, liver and kidneys.
3. Describe gross anatomy of male and female genitalia.

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4. Describe the comparative anatomy of male and female skeleton.
5. Perform histological examination of various tissues.
6. Describe the development of foetus.

**B. Physiology and Biochemistry:** Mechanism of phenomena that are important in the Body from the medico-legal viewpoint.

1. Describe mechanism of fluid and electrolyte balance, thermoregulation in new born and adults, endocrine functions.
2. Describe physiology of sexual behaviour.
3. Describe physiological functioning of circulatory system, digestive system, respiratory system, haemopoietic system, central nervous system and reproductive system including pregnancy.

**C. Pathology:** Pathophysiology of vital processes and response mechanisms that modulate tissue and organ reaction to all forms of injury and have a bearing on antemortem and postmortem appearance in medico-legal cases, assessment of the duration of injuries and correlate trauma and disease.

1. Describe pathology of inflammation and repair, immunity and hypersensitivity,
2. Thrombosis and embolism, electric and ionizing radiation injuries, genetic factors in disease, deficiency disorders and malnutrition.
3. Describe pathology of myocardial infarction, congenital heart diseases, tuberculosis of lungs, cirrhosis of liver, diseases of glomeruli and tubules and interstitial; tissues of Kidney, tumours, endocrine disorders, venereal diseases, spontaneous intracranial hemorrhages.
4. Describe the pathology of sudden death.
5. Describe local and systemic response to trauma and patho-physiology of shock.
6. Describe pathology of common infections and infestations of medico-legal Significance.

**D. Dentistry:** Adequate knowledge of dentistry for solution of medico-legal problems like, Injuries, age determination and identification

**E. Radiology:** Adequate knowledge of radiological procedures for solution of medico-legal problems.

**F. Fundamentals of Forensic Medicine:**

7. Describe the general forensic principle of ballistics, serology, analytical toxicology and photography. Interpret the scene of crime.
8. Describe role of DNA profile and its application in medico-legal practice.
9. Examine bloodstains for blood grouping, nuclear sexing, HLA typing, seminal stains and hair for medico-legal purpose.
10. Describe ethical aspects of Forensic Procedures including Narco-analysis, Brain mapping and Polygraph.



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Registration No: 250054

Course Mapping (CO-PO-PSO Mapping)

Course Code and name	Course Outcomes	Program Outcomes				Program Specific Outcomes					
		PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
<b>MDC529A</b> Basics of Forensic Medicine, basic sciences and allied subjects.	CO 1	1	3	2	3	1	2	2	3	3	2
	CO 2	1	3	3	3	1	2	2	3	3	3
	CO 3	2	3	3	3	1	2	3	3	3	3
	CO 4	2	3	3	3	1	2	3	3	3	3
	CO 5	3	2	3	3	3	2	2	3	2	3
	CO 6	2	2	2	3	1	2	2	2	3	2
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution											



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## Course Specifications

### MD Forensic Medicine 2022

onwards

Course Code: MDC530A



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Course Specifications

Course Title	A Clinical Forensic Medicine and medical jurisprudence.
Course Code	MDC530A
Department	MD Forensic Medicine
Faculty	Ramaiah Medical College

Course Summary:

This course is designed in such a way that the student will master in various acts of omission and commission which amounts to Medical negligence, its types, liabilities and adopt measures like informed consent, proper documentation, patient rapport etc. to prevent medical negligence.

Course Outcomes:

**CO 1:** The student should be able to Examine, initiate treatment, assess legal implications and prepare report or certificate in cases of physical assault, suspected drunkenness, sexual offences, consummation of marriage and disputed paternity.(C,P,A)

**CO 2:** The student should be able to Collect, preserve and dispatch the specimen/material to the concerned authority and interpret the clinical and laboratory findings which are reported. (C,P,A)

**CO 3:** The student should be able to determine the age and establish identity of an individual for medico-legal purpose. (C,P,A)

**CO 4:** The student should be able to perform examination and interpret findings for medico-legal purposes in cases pertaining to pregnancy, delivery, artificial insemination, abortion, sterilization, Impotence, AIDS and infectious disease. (C,P,A)

**CO 5:** The student should be able to examine and assess the medical fitness of a person for insurance, government service, sickness and fitness on recovery from illness and disability in industrial accidents and diseases. (C,P,A)

**CO 6:** The student should be able to examine medico-legal problems related to clinical disciplines of medicine and allied subjects, Pediatrics, Surgery and allied subjects, ENT, Ophthalmology, Obstetrics and Gynecology, Dermatology, Anesthesiology and geriatrics. (C,P,A)

**CO 7:** The student should be able to identify the cases of torture and violation of human rights and issues thereto and perform autopsy independently in such cases and show professionalism while dealing with police, public and relatives and in preparing report. (C,P,A)

**CO 8:** The student should know the history of Forensic Medicine, the legal and medico-legal system in India, medical ethics and the law in relation to medical practice, declarations, oath, etiquette, Medical Council of India, disciplinary control, rights and duties of a registered medical

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practitioner's professional misconduct, consent, confidentiality, medical negligence (including all related issues) and Consumer Protection Act. (C)

**CO 9:** The student should be able to describe medical ethics and law in relation to organ transplantation, biomedical human research and experimentation, human rights, cloning, genetic engineering, human genome, citizen's charter and International codes of medical ethics, artificial insemination, abortion, antenatal sex, foetus, genetics and euthanasia. (C)

### Course Content:

#### Clinical Forensic Medicine

1. Examine, assess legal implications and prepare report or certificate in cases of physical assault, suspected drunkenness, sexual offences, consummation of marriage and disputed paternity.
2. Collect, preserve and dispatch the specimen/material to the concerned authority and interpret the clinical and laboratory findings which are reported.
3. Examine injured person, prepare medico-legal report and initiate management.
4. Determine the age and establish identity of an individual for medico-legal purpose.
5. Examine a person and assess disability in industrial accidents and diseases.
6. Perform examination and interpret findings for medico-legal purposes in cases pertaining to pregnancy, delivery, artificial insemination, abortion, sterilization, Impotence, AIDS and infectious disease.
7. Describe normal and abnormal sexual behavior and its medico-legal implications.
8. Examine and assess the medical fitness of a person for insurance, government service, sickness and fitness on recovery from illness.
9. Examine medico-legal problems related to clinical disciplines of medicine and allied subjects, Pediatrics, Surgery and allied subjects, ENT, Ophthalmology, Obstetrics and Gynecology, Dermatology and Anesthesiology
10. Examine medico-legal problems related to children, women and elderly.
11. Identify the cases of torture and violation of human rights and issues thereto

#### Medical Ethics and Law (Medical Jurisprudence)

1. Describe the history of Forensic Medicine.
2. Describe the legal and medico-legal system in India.
3. Describe medical ethics and the law in relation to medical practice, declarations, oath, etiquette, Medical Council of India, disciplinary control, rights and duties of a registered medical practitioner's professional misconduct, consent, confidentiality, medical negligence (including all related issues) and Consumer Protection Act.
4. Describe medical ethics and law in relation to organ transplantation, biomedical human research and experimentation, human rights, cloning, genetic engineering, human genome, citizen's charter and International codes of medical ethics.
5. Describe the ethics and law in relation to artificial insemination, abortion, antenatal sex, foetus, genetics and euthanasia.
6. Interpret the ethics and law applicable to the human (clinical trials) and animal experimentation.
7. Describe ethics in relation to elderly, women and children.
8. Describe medical ethics and law in relation to nursing and other medical services/practices.

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## 9. Understanding about bio-ethics

Course Mapping (CO-PO-PSO Mapping)

Course Code and name	Course Outcomes	Program Outcomes				Program Specific Outcomes					
		PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
MDC530A Clinical Forensic Medicine and medical jurisprudence.	CO 1	2	3	3	2	2	2	3	3	3	3
	CO 2	2	2	3	3	2	3	3	3	3	3
	CO 3	2	2	3	3	2	2	3	3	3	3
	CO 4	2	2	3	3	2	2	3	3	3	3
	CO 5	2	2	3	2	2	2	3	3	2	3
	CO 6	2	3	3	3	2	3	3	3	3	2
	CO 7	2	3	3	3	3	2	3	3	3	2
	CO 8	3	3	3	2	3	3	2	3	2	3
	CO 9	3	3	3	2	3	3	2	3	3	3
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution											



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## Course Specifications

### MD Forensic Medicine 2022

onwards

Course Code: MDC531A



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Course Specifications

Course Title	Forensic pathology and toxicology.
Course Code	MDC531A
Department	MD Forensic Medicine
Faculty	Ramaiah Medical College

Course Summary:

The course is designed in such a way that the student will be able to Identify medico-legal cases, Examine and Certify in various medico-legal situations, know the legal and medical responsibilities and exhibit professionalism in handling such cases, Ethical researcher and teacher

Course Outcomes:

**CO 1:** The student should be able to apply the principles involved in methods of identification of human remains by race, age, sex, religion, complexion, stature, hair, teeth, anthropometry, dactylography, foot prints, hairs, tattoos, poroscopy and superimposition techniques.

**CO 2:** The student should be able to perform medico-legal post-mortem in adults, in infant deaths and to differentiate amongst live birth, still birth and dead born, in special circumstances like death due to alleged medical negligence as in operative and anesthetic deaths and be able to exhume, collect, preserve and dispatch specimens or trace evidence to the appropriate authority

**CO 3:** The student should be able to diagnose and describe the pathology of wounds, mechanical and regional injuries, ballistics and wound ballistics, electrical injuries, lightening, neglect and starvation, thermal injuries, deaths associated with sexual offences, pregnancy, delivery, abortion, child abuse, dysbarism and barotraumas.

**CO 4:** The student should be able to diagnose and classify death, identify the signs of death, post-mortem changes, interpret autopsy findings, artifacts and results of the other relevant investigations to logically conclude the cause, manner (suicidal, homicidal and accidental) and time of death, to describe patho-physiology of shock and neurogenic shock, asphyxia, classification, medico-legal aspects and postmortem findings of different types of asphyxial deaths.

**CO 5:** The student should be able to manage medico-legal responsibilities in mass disasters involving multiple deaths like fire, traffic accident, aircraft accident, rail accident and natural calamities. (C,P,A)

**CO 6:** The student should be able to describe the law relating to poisons, drugs, cosmetics, narcotic drugs and psychotropic substances, to describe the basic principles of pharmacokinetics and pharmacodynamics of poisonous substances, toxic hazards of occupation, industry, environment and the principles of predictive toxicology.

**CO 7:** The student should be able to examine and diagnose poisoning cases and apply principles of general management and organ system approach for the management of poisoning cases and be able to describe the signs, symptoms, diagnosis and management of common acute and chronic poisoning due to Corrosives, Nonmetallic substances, Insecticides and weed killers, Metallic substances, Vegetable and organic irritants, Somniferous compounds, Inebriant substances, Deliriant substances, Food Contamination/adulteration, spinal and cardiac poisons, Asphyxiants, Household toxins, Toxic envenomation, Biological and chemical warfare, Environmental and Occupational intoxicants.

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**CO 8:** The student should be able to collect, preserve and dispatch material/s for analysis, interpret the laboratory findings and perform the Medico-legal formalities in a case of poisoning.

**Course Content:**

**Forensic Pathology**

1. Apply the principles involved in methods of identification of human remains by race,
  - a. age, sex, religion, complexion, stature, hair, teeth, anthropometry, dactylography, foot
  - b. prints, hairs, tattoos, poroscopy and superimposition techniques.
2. Perform medico-legal postmortem and be able to exhume, collect, preserve and
3. dispatch specimens or trace evidence to the appropriate authority.
4. Diagnose and describe the pathology of wounds, mechanical and regional injuries,
  - a. ballistics and wound ballistics, electrical injuries, lightning, neglect and starvation,
  - b. thermal injuries, deaths associated with sexual offences, pregnancy, delivery,
5. abortion, child abuse, dysbarism and barotraumas.
6. Describe patho-physiology of shock and neurogenic shock.
7. Describe patho-physiology of asphyxia, classification, medico-legal aspects and
  - a. postmortem findings of different types of asphyxial deaths.
8. Diagnose and classify death, identify the signs of death, postmortem changes,
9. interpret autopsy findings, artifacts and results of the other relevant investigations to
10. logically conclude the cause, manner (suicidal, homicidal and accidental) and time of
  - a. death.
11. Manage medico-legal responsibilities in mass disasters involving multiple deaths like
12. fire, traffic accident, aircraft accident, rail accident and natural calamities.
13. Demonstrate postmortem findings in infant death and to differentiate amongst live
14. birth, still birth and dead born.
15. Perform postmortem examination in cases of death in custody, torture and violation
16. Of human rights.
17. Perform postmortem examination in cases of death due to alleged medical negligence
18. as in operative and anesthetic deaths

**Forensic Psychiatry**

1. Explain the common terminologies of forensic importance in Psychiatry.
2. Describe the medico-legal aspects of Psychiatry and mental health.
3. Describe medico-legal aspects of drug addiction.
4. Describe role of Psychiatry in criminal investigation, punishment and trial.
5. Describe the civil and criminal responsibilities of a mentally ill person.
6. Describe the role of Psychology in criminal investigation, punishment and trial

**Toxicology**

1. Describe the law relating to poisons, drugs, cosmetics, narcotic drugs and psychotropic substances.
2. Examine and diagnose poisoning cases and apply principles of general management and organ system approach for the management of poisoning cases.
3. Describe the basic principles of pharmacokinetics and pharmacodynamics of poisonous substances.
4. Describe the toxic hazards of occupation, industry, environment and the principles of predictive toxicology.
5. Collect, preserve and dispatch material/s for analysis, interpret the laboratory findings and perform the Medico-legal formalities in a case of poisoning.

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6. Demonstrate the methods of identification and analysis of common poisons
7. Describe the signs, symptoms, diagnosis and management of common acute and chronic poisoning due to:
  - a. Corrosives
  - b. Nonmetallic substances
  - c. Insecticides and weed killers
  - d. Metallic substances
  - e. Vegetable and organic irritants
  - f. Somniferous compounds
  - g. Inebriant substances
  - h. Deliriant substances
  - i. Food Contamination/adulteration.
  - j. Substances causing spinal and cardiac toxicity
  - k. Substances causing asphyxia (Asphyxiants)
  - l. Household toxins
  - m. Toxic envenomation
  - n. Biological and chemical warfare
  - o. Environmental intoxicants
  - p. Occupational intoxicants



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Course Mapping (CO-PO-PSO Mapping)

Course Code and name	Course Outcomes	Program Outcomes				Program Specific Outcomes					
		PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
MDC531A Forensic pathology, Forensic Psychiatry and toxicology.	CO 1	2	2	3	3	2	2	3	3	3	3
	CO 2	2	3	3	3	2	3	3	3	3	2
	CO 3	2	3	3	3	2	3	3	3	3	2
	CO 4	3	3	3	3	2	3	3	3	3	2
	CO 5	3	2	3	3	2	2	3	3	3	2
	CO 6	2	2	3	3	2	2	3	2	3	2
	CO 7	2	2	3	3	2	2	3	2	3	2
	CO 8	2	2	3	3	2	2	3	2	3	2
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution											



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## Course Specifications

**MD Forensic Medicine 2022**

**onwards**

**Course Code: MDC532A**

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Course specifications

Course Title	Recent advances in Forensic Medicine.
Course Code	MDC532A
Department	MD Forensic Medicine
Faculty	Ramaiah Medical College

Course Summary:

The course is designed in such a way that the student will be able to Conduct post-mortem examination independently and draft a certificate.

Course Outcomes:

**CO 1:** The student should have knowledge of general forensic principle of ballistics, serology, analytical toxicology, photography, crime scene investigation, Forensic cyber technology, forensic Taphonomy, biohazards, trace evidence, investigation of questioned documents and forgery, DNA profiling, biological stains and ethical aspects of Forensic Procedures including Narco-analysis, Brain mapping and Polygraph. (C,P)

**CO 2:** The student should describe the basic principles of techniques used in toxicological laboratory namely TLC, GLC, ASS, HPLC and Breath Alcohol Analyzer and to be able to demonstrate the methods of identification and analysis of common poisons. (C,P)

**CO 3:** The student should know about the recent amendments in various acts, IPCs, CrPCs and important court proceedings and judgements pertaining to medical practice (C)

**CO 4:** The student should know about the recent advances in Forensic Medicine as published in national and international journals and knowledge gained by attending CMEs, Updates, Seminars, Workshops at State level and National level conferences. (C)

**CO 5:** The student should be able to explain the common terminologies of forensic importance in Psychiatry and the medico-legal aspects of Psychiatry and mental health and be able to describe medico-legal aspects of drug addiction. (C)

**CO 6:** The student should be able to civil and criminal responsibilities of a mentally ill person. (C)

**Co 7:** The student should be able to describe the role of Psychiatry and Psychology in criminal investigation, punishment and trial (C)

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**Course Content:**

1. General forensic principle of ballistics, serology, analytical toxicology, photography, crime scene investigation, Forensic cyber technology, forensic Taphonomy, biohazards, trace evidence, investigation of questioned documents and forgery, DNA profiling, biological stains and ethical aspects of Forensic Procedures including Narco-analysis, Brain mapping and Polygraph.
2. recent amendments in various acts, IPCs, CrPCs and important court proceedings and judgements pertaining to medical practice
3. recent advances in Forensic Medicine as published in national and international journals and knowledge gained by attending CMEs, Updates, Seminars, Workshops at State level and National level conferences.
4. common terminologies of forensic importance in Psychiatry and the medico-legal aspects of Psychiatry and mental health and be able to describe medico-legal aspects of drug addiction
5. role of Psychiatry and Psychology in criminal investigation, punishment and trial



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Course Mapping (CO-PO-PSO Mapping)

Course Code and name	Course Outcomes	Program Outcomes				Program Specific Outcomes					
		PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
MDC532A Recent advances in Forensic Medicine	CO 1	2	2	3	2	2	2	3	3	3	3
	CO 2	2	2	2	2	2	2	2	3	3	3
	CO 3	3	3	2	3	3	3	2	2	2	3
	CO 4	3	3	3	2	2	3	2	3	2	3
	CO 5	3	2	2	2	2	2	3	2	2	2
	CO 6	3	2	2	2	2	2	3	2	2	2
	CO 7	2	2	2	2	2	2	3	2	2	2
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution											



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## Course Specifications

### MD Forensic Medicine 2022

onwards

Course Code: MDP508A



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Course Specifications

Course Title	Thesis - Forensic medicine
Course Code	MDP508A
Department	MD Forensic medicine
Faculty	Ramaiah Medical College

Course Summary:

The course is designed in such a way that the student will acquire skills to conduct research (Including thesis work independently or as part of a team)

Course Outcome:

**CO 1:** Should be introduced to basic research methodology so that he/she can independently conduct fundamental and applied research and he/she should independently write the thesis in accordance with the prescribed instructions as expected of international standards(C,P)

**CO 2:** The student should demonstrate integrity, accountability, respect, compassion and dedicated patient care and a commitment to excellence, continuous professional development and ethical principles relating to research conduct and research publication as applicable to all the specific courses

Course details:

Every candidate pursuing MD Medicine degree course is required to carry out work on a selected research project under the guidance of a recognised post graduate teacher. The results of such a work shall be submitted in the form of a dissertation. The dissertation is aimed to train a post graduate student in research methods and techniques. It includes identification of a problem, formulation of a hypothesis, search and review of literature, getting acquainted with recent advances, designing of a research study, collection of data, critical analysis, comparison of results and drawing conclusions.

Every candidate shall submit to the Registrar (Academic) of the University in the prescribed proforma, a synopsis containing particulars of proposed dissertation work within six months from the date of commencement of the course on or before the dates notified by the University. The synopsis shall be sent through the proper channel.

Such synopsis will be reviewed and the dissertation topic will be registered by the University. No change in the dissertation topic or guide shall be made without prior approval of the University.

The dissertation should be written under the following headings:

1. Introduction
2. Aims or Objectives of study
3. Review of Literature
4. Material and Methods
5. Results
6. Discussion
7. Conclusion
8. Summary
9. References (Vancouver style)
10. Tables
11. Annexures



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Course Mapping (CO-PO-PSO Mapping)

Course Code and name	Course Outcomes	Program Outcomes				Program Specific Outcomes					
		PO1	PO2	PO3	PO4	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
MDP508A Thesis - Forensic medicine	CO 1	2	3	3	3	3	2	3	3	3	3
	CO 2	3	3	3	3	3	2	3	3	3	3
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution											



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Course Materials:Books

1. Subramanyam BV. Modi's Medical Jurisprudence and Toxicology. Butterworths India, New Delhi.
2. Nundy A. Principles of Forensic Medicine, New Central Book Agency Calcutta.
3. Lyon's Medical Jurisprudence for India. Delhi Law House, Delhi.
4. Reddy KSN. The Essentials of Forensic Medicine and Toxicology, K. Saguna Devi Publishers, Hyderabad.
5. Parikh CK. Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology, CBS Publishers and Distributors, New Delhi.
6. Bernard Knight. Forensic Pathology. Arnold Publishers London.
7. + Di Maio VJ, Di Maio D. Forensic Pathology. CRC Press New York.
8. Camps FE. Gradwohl's legal Medicine. Bristol: John Wright and Sons Ltd.
9. American College of Legal Medicine Textbook Committee. Legal Medicine Mosby Publishers, USA.
10. Di Maio VJM. Gunshot Wounds, CRC Press USA.
11. Gordon I, Shapiro HA, Berson SD. Forensic Medicine – A Guide to Principle. Churchill Livingstone New York.
12. Mant AK. Taylor's Principles and Practice of Medical Jurisprudence, Churchill Livingstone, New York.
13. Parikh CK. Medicolegal Postmortems in India. Medical Publications, Bombay.
14. Gresham GA, Turner AF. Postmortem Procedures An illustrated Text Book. Wolfe Medical Publications.
15. Ludwig J. Current Methods of Autopsy Practice. WB Saunders Company, London.
16. Gordon I, Turner R. Medical Jurisprudence E and S Livingstone Ltd. London.
17. Spitz WU, Fisher RS. Medico-legal Investigation of Death. Charles Thomas Publishers.
18. Schroeder O.C. Dental Jurisprudence. PSG Publishing Company, Littleton, Massachusetts.
19. Stark MM. A Physicians Guide to Clinical Forensic Medicine. Humana Press Totowa, New Jersey.
20. Olshakar JS, Jackson JS. Jackson MC, Smock WS. Forensic Emergency Medicine. Lippincott William and Wilkins, Philadelphia.
21. Norah Rudin, Keith Inman. An introduction to Forensic DNA Analysis. CRC Press, London.
22. Robertson J, Ross AM, Burgoyne LA. DNA in Forensic Science - Theory, Technique and Application. Ellis Horwood, UK
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24. Clement JG, Ranson DL. Craniofacial Identification in Forensic Medicine. Arnold Publishers, London.
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28. Gunn and Taylor. Forensic Psychiatry Clinical, Legal and Ethical issues. Butterworth Heinemann
29. G Gustafson. Forensic Odontology. Staples Press.

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32. Lincoln PJ, Thomas J. Forensic DNA Profiling Protocols. Methods in Molecular Biology, Vol. 98, Humana Press, Totowa, New Jersey.
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37. Bernard Knight. (ed.) The Estimation of Time since Death in the early Post Mortem Period. Arnold Publishers London.
38. Mant AK. Modern Trends in Forensic Medicine 1-3. Butterworth, London.
39. Luntz and Luntz. Handbook for Dental Identification. JB Lippincott. Toronto.
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41. Mason JK. Forensic Medicine- an illustrated reference. Chapman and Hall, London.
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43. Patnaik VP. MKR Krishnan's handbook of Forensic Medicine. Paras Publishing.
44. Lundquist Frank. Methods of Forensic science, vol. II, Interscience publishers.
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46. Gaur's firearms, Forensic Ballistics, Forensic Chemistry and Criminal Jurisprudence. Law Publishers (India) Pvt. Ltd. Allahabad.
47. Tedeschi Eckert. Forensic Medicine Vol. I-IV, WB Saunders Company.
48. Polson, Gee, Knight. The Essentials of Forensic Medicine. Pergomann Press, UK.
49. Redsicker DR. Forensic Photography, CRC Press USA.
50. Krogmann. Human skeleton in Forensic Medicine.
51. Abdullah Fateh. Handbook of Forensic Pathology
52. Simpson K. Taylor's Principle and Practice of Medical Jurisprudence. Vol. I-II.
53. Krishan Vij. Textbook of Forensic Medicine and Toxicology, Churchill Livingstone.
54. Pillay VV. Textbook of Forensic Medicine and Toxicology, Paras Publishing, Hyderabad.
55. Mukherjee JB. Textbook of Forensic Medicine and Toxicology, Arnold's Publishers, London.
56. Henry J, Wiseman H. Management of Poisoning. Published by WHO, UNEP and ILO.
57. Flanagan RJ et al. Basic Analytical Toxicology. Published by WHO, UNEP and ILO.
58. Guidelines for Poison Control. Published by WHO, UNEP and ILO
59. Genetics in Medicine – J. S. Thompson and M.W. Thompson.
60. Research – How to plan, speak and write about it – C. Hawkins and M. Sorgi.

### Journals

03-05 international Journals and 02 national (all indexed) journals



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Medha 9/20

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