

# CLINICAL CHEMISTRY - 2023 - 2024

## PROGRAM HIGHLIGHTS

The study of microorganisms with particular emphasis on the biology of bacteria, viruses, fungi and protozoan parasites. Demonstrate an understanding of the components of human blood and characteristics, functions, and abnormalities and disease states of each. Demonstrate proficiency in the skills necessary to perform blood cell counts, and evaluation of blood elements within

WATER, AIR AND CLEANNESS ARE THE MAIN ARTICLES IN  
**MY PHARMACY**



Rs.750

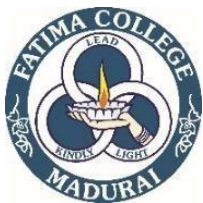
30 hrs

The goal of the this **Course** is to provide students with essential medical knowledge and a broad understanding of human disease. The **Course** emphasizes "the language of disease" as a necessary foundation for self-education and lifelong **learning**.

*Don't miss it.*



FATIMA COLLEGE (AUTONOMOUS), MADURAI



# Fatima College

(Autonomous)

Mary Land, Madurai - 625 018, Tamil Nadu.

## DEPARTMENT OF CHEMISTRY

### VALUE ADDED COURSE-CRASH COURSE

#### CLINICAL CHEMISTRY-2023-2024

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UACH	19UGVACC1	CLINICAL CHEMISTRY	Lecture	2	2

#### Course Description

This paper deals with routine haematological tests, blood groupings, biochemistry, classification of microorganisms and handling microbiological samples.

#### Course Objective:

This course directs the students to apply the principles of organic chemistry in the field of pharmaceutical sciences and train them with various tests performed in clinical laboratories.

#### Course outcome

After successful completion of the course, the students will be able to

- ☐ CO1 Perform routine haematological tests
- ☐ CO2 Identify blood types and blood transfusion.
- ☐ CO3 Know the chemistry of various biologically important compounds.
- ☐ CO4 Classification of microorganisms and learn different staining procedures.
- ☐ CO5 Apply the laboratory tests and analyze various microbiological samples.

**Hours: 30 hours**

#### UNIT I - PATHOLOGY-I

(6 Hrs)

Routine haematological tests- H, Tc, Dc, ESR, anaemia.

#### UNIT II - PATHOLOGY-II

(6 Hrs)

Blood types, grouping, blood transfusion, cross- matching

#### UNIT III - BIOCHEMISTRY

(6 Hrs)

Sugar, urea, creatinine, cholesterol, Bilirubin, Lipid profile, Liver

function tests, Kidney function tests.

#### UNIT IV - MICROBIOLOGY -I

(6Hrs)

Classification of micro organisms, staining procedure,

#### UNIT V-MICROBIOLOGY-II

(6 Hrs)

Type of media, handling the microbiological samples, ECG-technology.

CIA

Scholastic	<b>35</b>
Non Scholastic	<b>5</b>
	<b>40</b>

### EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

*\* The best out of two will be taken into account*

### COURSE CONTENTS & LECTURE SCHEDULE:

ModuleNo.	Topic	No.ofLectures	TeachingPedagogy	TeachingAids
UNIT-1				
1.1	Routine haematological tests- H ,	2	Chalk &Talk	Black Board
1.2	Tc , Dc , ESR, anaemia	2	Chalk &Talk	Black Board

1.3	Practical	2	Chalk &Talk	lab
<b>Unit-2</b>				
2.1	Blood types, grouping,	2	Chalk &Talk	Black Board
2.2	blood transfusion, cross-matching	4	Chalk &Talk	Black Board
<b>Unit-3</b>				
3.1	Sugar, urea, creatinine,	2	Chalk &Talk	Black Board
3.2	cholesterol, Bilirubin, Lipid profile, Liver function tests, Kidneyfunction tests	4	Chalk &Talk	Black Board & lab
<b>Unit-4</b>				
4.1	Classification of micro organisms, staining procedure,	2	Chalk &Talk	Black Board
4.2	practicals	3	Chalk &Talk	Black Board
<b>Unit-5</b>				
5.1	Type of media, handling the microbiological samples,	4	Chalk &Talk	Black Board
5.2	ECG-technology.	3	Chalk &Talk	Black Board

## **COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

<b>NO.</b>	<b>COURSE OUTCOMES</b>	<b>KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S</b>
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		<b>TAXONOMY)</b>
CO 1	To Perform routine harmotological tests	K1
CO 2	To Identify blood types and blood transfusion	K2
CO 3	To Know the chemistry of various biologically important compounds.	K3
CO 4	Classification of microorganisms and learn different staining procedures	K4
CO 5	To Apply the laboratory tests and analyze various microbiological samples.	K2

### Mapping COs Consistency with PSOs

CO / PS O	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9	PSO10	PSO11	PSO12
CO1	3	2	3	3	2	2	2	2	3	3	3	2
CO2	3	2	3	3	2	2	2	2	3	3	3	2
CO3	3	2	3	3	2	2	2	2	3	3	3	2
CO4	3	2	3	3	2	2	2	2	3	3	3	2
CO5	3	2	3	3	2	2	2	2	3	3	3	2

### Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4	PO5
CO1	3	2	2	2	3
CO2	3	2	2	2	3
CO3	3	2	2	2	3
CO4	3	2	2	2	3
CO5	3	2	2	2	3

**Note:** ♦ Strongly Correlated – 3  
 ♦ Weakly Correlated -1

♦ Moderately Correlated – 2

**COURSE DESIGNER:**  
**Dr.B.Vinosa**

வகுப்பு :				பிரிவு :										வருகைப் பதிவேடு																	
வ. எண்	சேர்க்கை எண்	தேர்வு எண்	பெயர்	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	2022001		ABINAYA SURE	a	x	x	x	x	x	a	x	a	x																		
2	2022003		P. AKILA	x	x	x	x	x	x	x	x	x	x																		
3	2022011		M. Dhanya	a	a	x	x	x	x	a	a	a	x																		
4	2022014		M. Gokula	x	x	x	x	x	x	x	a	a	x																		
5	2022023		A. Neenaloshini	x	x	x	x	x	x	x	x	x	x																		
6	2022024		S. Divya	x	x	x	x	x	x	x	x	x	x																		
7	2022025		T. Padmeena	x	x	x	x	x	x	x	x	x	x																		
8	2022026		Jasitha R	x	x	x	x	x	x	x	x	x	x																		
9	2022028		Ranya M	x	x	x	x	x	x	x	x	x	x																		
10	2022031		A. Rizwana	x	x	x	x	x	x	x	x	x	x																		
11	2022032		C. N. Rohini	x	x	x	x	x	x	x	x	x	x																		
12	2022040		S. Suchithra	x	x	x	x	x	x	x	x	x	x																		
13	2022042		S. Thirumala	x	x	x	x	x	x	a	x	x	x																		
14	2022044		B. Anitha	a	x	a	x	x	a	a	a	x	x																		
15	2022046		Ms. Maha	x	x	a	x	x	a	a	a	x	x																		
16	2022047		Haralatha	x	x	a	x	x	a	a	a	x	x																		

தினசரி வருகை	முற்பகல்	பிற்பகல்	தினசரி வருகை	முற்பகல்	பிற்பகல்
ஆசிரியர் கருக்கொப்பம்	முற்பகல்	பிற்பகல்	ஆசிரியர் கருக்கொப்பம்	முற்பகல்	பிற்பகல்

மாநாடு துவக்கத்தில் மாணவன் எண்ணிக்கை :	விடைபெறவில்லை எண்ணிக்கை :	மாநாடு முடிவில் மாணவன் எண்ணிக்கை :	மாநாடு முடிவில் மாணவன் எண்ணிக்கை :
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Mary Land, Madurai - 625 018, Tamil Nadu

## DEPARTMENT OF CHEMISTRY

### Value-added Course- CLINICAL CHEMSITRY

#### Course Teacher Name list

S. No.	Course Title with Course Code	Course Teacher	No. of Hours Taken
1.	CLINICAL CHEMSITRY-19UGVACC1	Dr.B.VINOSHA	30

*S. Pedraa*  
HEAD  
Department of Chemistry  
Fatima College (Autonomous)  
Madurai 18

Signature of the HOD with Seal



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**DEPARTMENT OF CHEMISTRY**  
**Value-added Course – CLINICAL CHEMISTRY**  
**Students' Name list**

S. No.	Register No.	Name of the Student
1.	2022C01	Abinaya Sri. S
2.	2022C03	Akila P
3.	2022C11	Dhivya. M
4.	2022C14	Gokila M
5.	2022C23	Meenalosini. A
6.	2022C24	Oviya S
7.	2022C25	Pandimeena T
8.	2022C26	Pavithra .R
9.	2022C28	Ramya.M
10.	2022C31	Rizwana A
11.	2022C32	Rohini C. M
12.	2022C40	Suchithra Benaticta.S
13.	2022C42	Thirumalar S
14.	2021N04	Anitha B
15.	2021N16	Mahalakshmi .P
16.	2021N11	Hema Prameela. R

*Binisha*

Course Teacher Signature

*S. Nedona*  
HEAD  
Department of Chemistry  
Fatima College (Autonomous)  
Madurai - 625 018

Signature of the HoD with seal





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AFFILIATED TO MADURAI KAMARAJ UNIVERSITY  
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MARY LAND, MADURAI- 625 018

This is to certify that Ms. S. ABINAYA SRI (2022CO1)  
has successfully completed the CRASH  
Course on CLINICAL CHEMISTRY offered by  
THE RESEARCH CENTRE OF CHEMISTRY during the academic year  
2023- 2024 and has been awarded Distinction / First / ~~Second~~ class.

S. S.  
Co-ordinator

S. Tedona  
Head of the Department

Se. G. Lina Sakunthala Mary  
Principal



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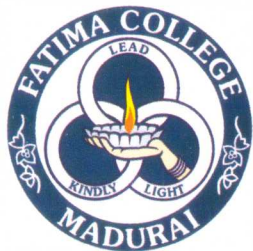
This is to certify that Ms. P. AKILA (2022C03)  
has successfully completed the CRASH  
Course on CLINICAL CHEMISTRY offered by  
THE RESEARCH CENTER OF CHEMISTRY during the academic year  
2023 - 2024 and has been awarded Distinction / First / ~~Second~~ class.

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Co-ordinator

S. Pedraa  
Head of the Department

Se. G. Lini Sahaya Mary  
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This is to certify that Ms. M. DHIVYA (2022C11)  
has successfully completed the CRASH  
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Head of the Department

  
Principal



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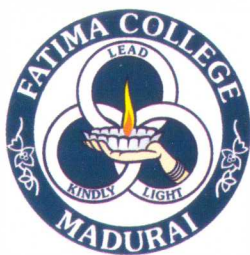
This is to certify that Ms. M. GOKILA (2022C14)  
has successfully completed the CRASH  
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This is to certify that Ms. A. MEENALOSINI (2022C23)  
has successfully completed the CRASH  
Course on CLINICAL CHEMISTRY offered by  
THE RESEARCH CENTRE OF CHEMISTRY during the academic year  
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This is to certify that Ms. S. OVIYA (2022C24)

has successfully completed the CRASH

Course on CLINICAL CHEMISTRY offered by

THE RESEARCH CENTRE OF CHEMISTRY during the academic year

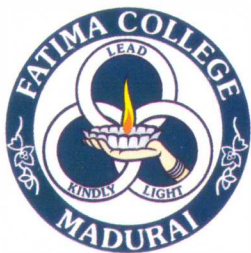
2023-2024 and has been awarded Distinction / First / Second class.

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Head of the Department

Se. G. Lini Sahaya Mary  
Principal





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This is to certify that Ms. T. PANDIMEENA (2022C25)  
has successfully completed the CRASH  
Course on CLINICAL CHEMISTRY offered by  
THE RESEARCH CENTRE OF CHEMISTRY during the academic year  
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Sun S.  
Co-ordinator

S. Tedona  
Head of the Department

Se. G. Lina Sathya Mary  
Principal



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This is to certify that Ms. R. PAVITHRA (2022C26)  
has successfully completed the CRASH  
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This is to certify that Ms. M. RAMYA (2022C28)  
has successfully completed the CRASH  
Course on CLINICAL CHEMISTRY offered by  
THE RESEARCH CENTRE OF CHEMISTRY during the academic year  
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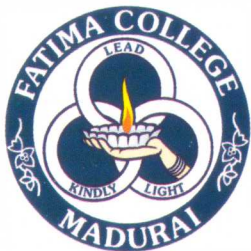
This is to certify that Ms. A. RIZWANA (2022C31)  
has successfully completed the CRASH  
Course on CLINICAL CHEMISTRY offered by  
THE RESEARCH CENTRE OF CHEMISTRY during the academic year  
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Head of the Department

Dr. G. L. S. S. S. S.  
Principal





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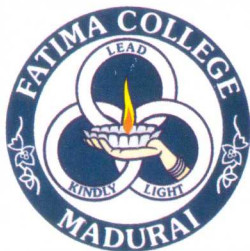
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This is to certify that Ms. C.M. ROHINI (2022C32)  
has successfully completed the CRASH  
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This is to certify that Ms. S. SUCHITHRA BENATICIA (2022C40)  
has successfully completed the CRASH  
Course on CLINICAL CHEMISTRY offered by  
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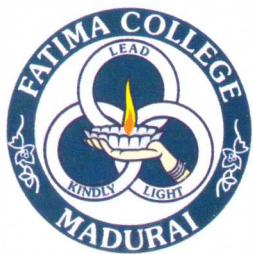
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This is to certify that Ms. S. THIRUNALAR (2022C42)  
has successfully completed the CRASH  
Course on CLINICAL CHEMISTRY offered by  
THE RESEARCH CENTRE OF CHEMISTRY during the academic year  
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Co-ordinator

S. Nedona  
Head of the Department

Se. G. Lina Sathya Mary  
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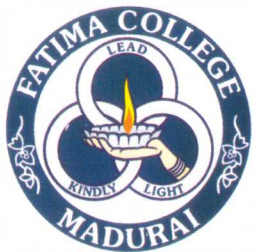
This is to certify that Ms. B. ANITHA (2021N04)  
has successfully completed the CRASH  
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Head of the Department

Se. G. Lina Sahaya Mary  
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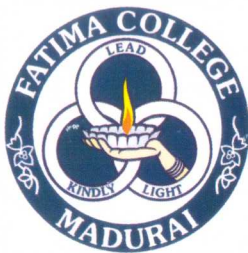
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This is to certify that Ms. R. HENA PRAMEELA (2021N11)  
has successfully completed the CRASH  
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Co-ordinator

S. Tedone  
Head of the Department

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This is to certify that Ms. P. MAHALAKSHMI (2021N16)

has successfully completed the CRASH

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Sus.  
Co-ordinator

*S. Pedraza*  
Head of the Department

Se. G. Chh. Sahaya Manj  
Principal



# DEPARTMENT OF CHEMISTRY

## Crash course

**SUBJECT TITLE : CLINICAL CHEMISTRY ; SUBJECT CODE: 19UGVACC1**

**Course start date: 25.8.2023; Staff in charge : Dr.B.Vinosh**

**TOTAL NO. OF STUDENTS: 16**

S.No.	Reg. No.	Name	Internal marks(40)	External marks(60)	Total(100)
1.	2022C01	ABINAYA SRI. S	32	34	66
2.	2022C03	P. AKILA	30	41	71
3.	2022C11	M.DHIVYA	32	39	71
4.	2022C14	M.GOKILA	22	29	51
5.	2022C23	MEENALOSINI. A	40	53	93
6.	2022C24	OVIYA S	40	51	91
7.	2022C25	T.PANDIMEENA	26	37	63
8.	2022C26	PAVITHRA .R	40	43	83
9.	2022C28	RAMYA.M	40	43	83
10.	2022C31	A.RIZWANA	40	58	98
11.	2022C32	C.M.ROHINI	40	37	77
12.	2022C40	SUCHITHRA BENATICTA.S	40	53	93
13.	2022C42	S.THIRUMALAR	32	46	78
14.	2021N04	B.ANITHA	30	34	64
15.	2021N16	MAHALAKSHMI .P	30	34	64
16.	2021N11	HEMA PRAMEELA. R	28	43	71

*B.Vinosh*  
Staff in-charge

*S. Tedona.*  
HoD Signature