

To  
The Principal  
Government Degree College  
Rampachodavaram

Rampachodavaram,  
Date:18-07-2025.

Respected Sir/Madam,

Subject: Permission to conduct NPTEL Certificate Course – “Metals in Biology”

I respectfully submit that the Department of Chemistry is planning to enroll and guide the students of II & III B.Sc. Chemistry (Honours) in the NPTEL Online Certificate Course for 2025-26 titled “Metals in Biology” scheduled for a duration of 8 weeks, from 21 July 2025 to 12 September 2025

This course will help students gain valuable knowledge in bioinorganic chemistry and enhance their understanding of the role of metals in biological systems. It will also encourage them to participate in online certification programs and improve their academic performance.

In this regard, I kindly request you to grant permission to conduct and facilitate this certificate course for the benefit of our students.

Thanking you Sir.

Yours faithfully,

Sri.K.G.Venkatesh  
Head of the Department



# **GOVERNMENT DEGREE COLLEGE**

**RAMPACHODAVARAM, POLAVARAM DISTRICT, A.P**  
(Affiliated to Adikavi Nannaya University)



Accredited by NAAC with " B " Grade

## **REPORT ON CERTIFICATE COURSE**

Name of the Institution

Government Degree College, Rampachodavaram

Polavaram District, Andhra Pradesh

(Affiliated to Adikavi Nannaya University)

Department of Chemistry

Title of the Course: NPTEL Online Certificate Course: "Metals in Biology"

Course Duration

Duration: 8 Weeks

Start Date: 21 July 2025

End Date: 12 September 2025

Enrollment Last Date: 28 July 2025

Exam Registration Last Date: 15 August 2025

Examination Date: 20 September 2025

### **Objectives of the Course**

The certificate course "Metals in Biology" was offered to provide students with both fundamental and advanced knowledge in the following areas:

Distribution and role of metals in biological systems

Metal ion regulation and storage in the human body

Oxygen transport proteins

Copper and iron mediated oxygen chemistry

Enzyme catalysis involving metal ions

Photosynthesis and biological oxidation mechanisms

### **Course Structure**

The course was organized over a period of 8 weeks and included:

Video lectures

Weekly assignments

Final online examination through the NPTEL platform

### Major Topics Covered

Introduction and distribution of metals in biology  
Metal storage and regulation  
Hydrolytic enzymes and oxygen transport protein  
Copper–oxygen and iron–oxygen chemistry  
Cytochrome oxidase and P450 enzymes  
Methane monooxygenase  
Photosynthesis and biological redox processes

### Participants

Students from II & III B.Sc. Chemistry (Honours) actively enrolled and participated in the course.

### Performance and Results

A total of 8 students appeared for the course assessment. The performance is as follows:

Students Appeared: 8

Students Passed: 6

Students Failed: 2

Pass Percentage: 75%

### List of Students Passed

S.NO	NAME OF THE STUDENT	REGSTERNUMBER	CONSOLIDATED SCORE	PASS/FAIL
1	BUDDHA.NAGASRI SRAVYA	241017169033	51%	PASS
2	DANIMALINI	241017169035	52%	PASS
3	KALUMULANANDINI	241017169039	53%	PASS
4	SARIYAMPRIYARANI	241017169052	60%	PASS
5	UPPADA.BALASAI	241017169059	56%	PASS
6	VALALA .BHANU	241017169060	58%	PASS
7	SORLAM DEVISURYAKUMARI	241017169054	44%	FAIL
8	PALLALA.THANMAI SRI	231017169045	48%	FAIL

The results indicate satisfactory performance and a good understanding of interdisciplinary concepts in chemistry and biology.

### **Outcome of the Course**

Students gained knowledge in bioinorganic chemistry

Improved understanding of the role of metals in biological systems

Enhanced analytical and conceptual skills

Encouraged participation in online certification programs like NPTEL

### **Conclusion**

The NPTEL certificate course “Metals in Biology” was successfully completed by the students of the Department of Chemistry. The course contributed significantly to their academic enrichment and provided valuable certification, supporting their higher education and career opportunities.



# NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

This certificate is awarded to  
**B NAGA SRI SRAVYA**  
for successfully completing the course

## Metals In Biology

with a consolidated score of **51** %

Online Assignments	21.25/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **353**

**Jul-Sep 2025**  
(8 week course)



*Sridhar*  
**Prof. Sridhar Iyer**  
Head CDEEP & NPTEL Coordinator  
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL25CY61S345600032

To verify the certificate



No. of credits recommended: 2 or 3



# NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

This certificate is awarded to  
**KALUMULA NANDINI**  
for successfully completing the course

## Metals In Biology

with a consolidated score of **53** %

Online Assignments	22.5/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **353**

**Jul-Sep 2025**  
(8 week course)



*Sridhar*  
**Prof. Sridhar Iyer**  
Head CDEEP & NPTEL Coordinator  
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL25CY61S345600037

To verify the certificate



No. of credits recommended: 2 or 3



# NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

This certificate is awarded to  
**DANI MALINI**  
for successfully completing the course

## Metals In Biology

with a consolidated score of **52** %

Online Assignments	22.46/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **353**

**Jul-Sep 2025**  
(8 week course)



*Sridhar*  
**Prof. Sridhar Iyer**  
Head CDEEP & NPTEL Coordinator  
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL25CY61S345600007

To verify the certificate



No. of credits recommended: 2 or 3



# NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

This certificate is awarded to  
**VALALA BHANU**  
for successfully completing the course

**Metals In Biology**

with a consolidated score of **58** %

Online Assignments	22.08/25	Proctored Exam	36/75
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Total number of candidates certified in this course: **353**

**Jul-Sep 2025**  
(8 week course)



*Sridhar*  
**Prof. Sridhar Iyer**  
Head CDEEP & NPTEL Coordinator  
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL25CY61S345600027

To verify the certificate



No. of credits recommended: 2 or 3



# NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

This certificate is awarded to  
**U BALA SAI**  
for successfully completing the course

**Metals In Biology**

with a consolidated score of **56** %

Online Assignments	22.92/25	Proctored Exam	33/75
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Total number of candidates certified in this course: **353**

**Jul-Sep 2025**  
(8 week course)



*Sridhar*  
**Prof. Sridhar Iyer**  
Head CDEEP & NPTEL Coordinator  
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL25CY61S445600094

To verify the certificate



No. of credits recommended: 2 or 3



# Elite NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

This certificate is awarded to  
**SARIYAM PRIYA RANI**  
for successfully completing the course

**Metals In Biology**

with a consolidated score of **60** %

Online Assignments	22.5/25	Proctored Exam	37/75
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Total number of candidates certified in this course: **353**

**Jul-Sep 2025**  
(8 week course)



*Sridhar*  
**Prof. Sridhar Iyer**  
Head CDEEP & NPTEL Coordinator  
IIT Bombay



Indian Institute of Technology Bombay



Roll No: NPTEL25CY61S445600107

To verify the certificate



No. of credits recommended: 2 or 3