

**Certificate course**

**on**

**“Introduction to Bio informatics”**

**Organized by**

**Department of Microbiology, Osmania University, Hyderabad**

**Government Degree College, Khairatabad**

**During 08.03.2023 to 08.04.2023**



**Department of Microbiology**

**Government Degree College, Khairatabad, Hyderabad**

**Government Degree College, Khairatabad**

**Department of Microbiology**

**Certificate course entitled "Introduction to certificate course"**

**During 8 March to 8 April 2023**

**Introduction:**

Bioinformatics is the application of tools of computation and analysis to the capture and interpretation of biological data. Bioinformatics is essential for management of data in modern biology and medicine. Bioinformatics is branch of science that deals with the biological data, DNA, RNA and proteins information. As an interdisciplinary field of science, bioinformatics combines biology, chemistry, physics, computer science, information engineering, mathematics and statistics to analyze and interpret the biological data. Bioinformatics has been used for *in silico* analyses of biological queries using computational and statistical techniques.

Bioinformatics has variety of applications as follows:

- In Gene therapy.
- In Evolutionary studies.
- In Microbial applications.
- In Prediction of Protein Structure.
- For the Storage and Retrieval of Data.
- In the field of medicine, used in the discovery of new drugs.
- In Biometrical Analysis for identification and access control for improvising crop management, crop production and pest control.

**Objectives:**

- To give insights about the introduction of bioinformatics and applications
- To learn about the databases and their importance

- To make awareness about the sequence comparison by BLAST, Multiple sequence alignment
- To know about the phylogenetic tree construction and applications
- To learn about the protein secondary and tertiary structure of protein
- To make awareness about the homology modelling protein structure prediction
- To get awareness about the molecular docking for drug discovery

**Expected outcome:**


- Participants will learn about the hands on experience about the bioinformatics data analysis
- Participant get acquaint with retrieval of data from data bases
- Participant learn about the procedure for sequence comparison with online tools such BLAST and CLUSTALW and MUSCLE and phylogenetic tree construction with the MEGA XI software
- Usage of swiss model for production of protein tertiary structure with hands on experience.

**Brief Report about the certificate course:**

Certificate entitled “Introduction to Bioinformatics ” was organised by the Department of Microbiology. A total of 35 students were registered and participated actively. A total of 30 classes were conducted by the Dr. N. Harikrishna, Assistant Professor of Microbiology. In this certificate course following content was discussed and practical’s hands on experience are conducted.

1. Introduction to bioinformatics: History of Bioinformatics, Introduction, Developement and applications of bioinformatics, DNA and Protein structure
2. Databases: Types of databases- sequence, structural, metabolic, primary and secondary databases, retrieval of data from databases
3. Sequence alignment: Global alignment, local alignment, Pairwise alignment and Multiple sequence alignment. (BLAST, CLUSTALW, MUSCLE)


4. Phylogenetic tree construction: Types of tree, construction and analysis of phylogenetic tree with MEGA software
5. Protein secondary structure properties – composition, occurrence, properties of secondary structure: Hydrophobicity, solvent accessibility, ASA, folding rate, prediction of secondary structure using online tools (PHD, Phyre 2)
6. Protein tertiary structure prediction: Homology modelling, Swiss model generation
7. Molecular docking :

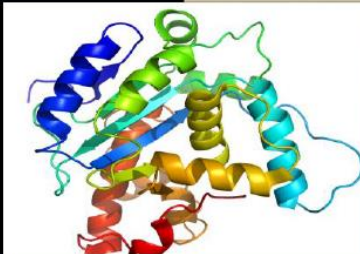


## Certificate course

### on

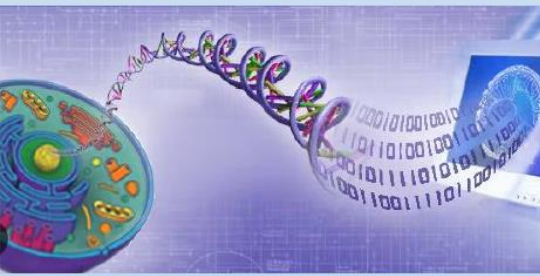
# “Introduction to Bioinformatics”





**Organized by**  
**Department of Microbiology**  
**Government Degree College, Khairatabad, Hyd.**

**Course Schedule:** 8<sup>th</sup> March to 6<sup>th</sup> April, 2023  
**Timings :** 2:00 PM to 3.00 PM



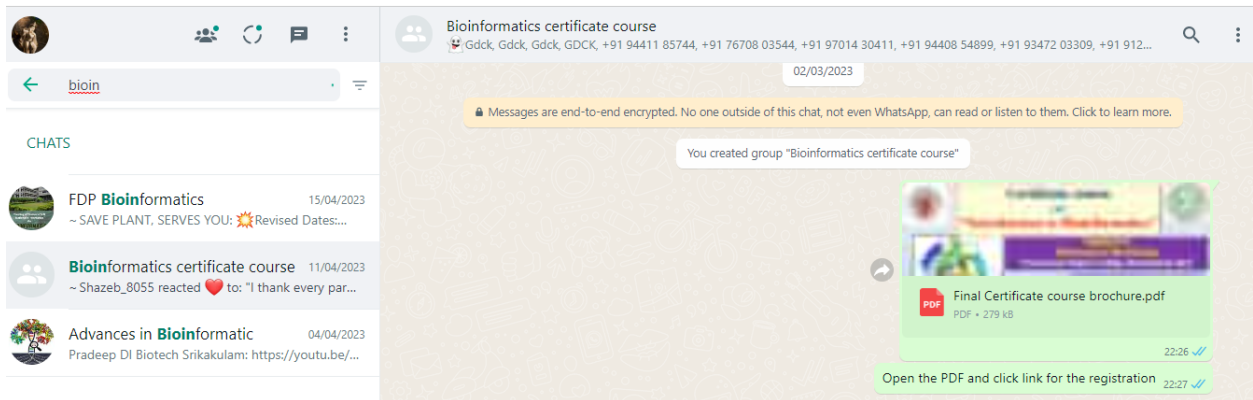
**Convener**  
**Dr. N. Harikrishna**  
 Asst. Prof. of Microbiology

**Principal**  
**Dr. B. Rajendra Kumar**

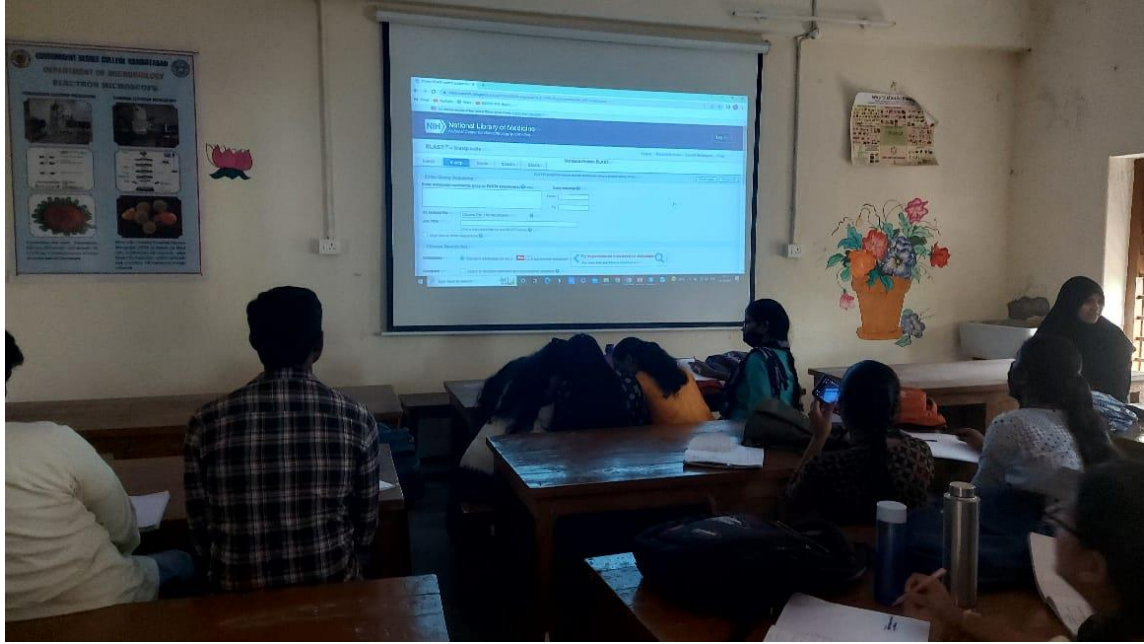
**Link to register :** <https://forms.gle/wpfvErXdZjYhC8Yn6>

The classes of certificate conducted in the department of Botany laboratory. Practical hands on experience classes conducted in collaboration with the department of Computer Science Department. For sharing of notes and other information a Whatsapp group was created. Students were actively involved in the theory and practical classes. At the end of the course examination was conducted and all of them secured more than 60% of marks. Feedback forms are collected at end of the course. Finally certificate were distributed to the students on valedictory session.

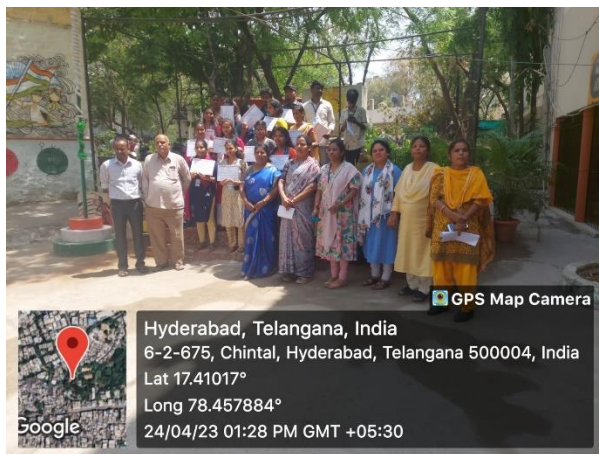




Participants performing Hands on experience on Bioinformatics practical's







Certificate distribution and valedictory session on 25.04.2023

**CERTIFICATE COURSE-2022-23**



**GOVERNMENT DEGREE COLLEGE  
KHAIRATABAD, HYDERABAD  
DEPARTMENT OF PHYSICS  
CERTIFICATE AWARDING CEREMONY**



**Dr. B. RAJENDRA  
KUMAR**  
Principal

*Certificate course*

*on*

**“ELECTRICAL WIRING AND INSTALLATION”**

20.02.2023 – 16.03.2023



**Prof. P. BALABHASKAR**  
Principal  
Govt. City College  
Nayapul

**Chief guest: Prof. P. Bala Bhaskar**

Date and time : 20.03.2023 @ 11:30am

**Dr. CHANDANA. N**  
Convenor & HoD Dept. of Physics

**Venue :**  
Seminar hall

**Sri. A. SUDARSHAN & Smt. K. HARIKA**  
Organizers



**GOVERNMENT DEGREE COLLEGE  
KHAIRATABAD, HYDERABAD  
DEPARTMENT OF PHYSICS**



**CERTIFICATE COURSE**

*on*

**“ELECTRICAL WIRING AND INSTALLATION”**

20.02.2023 – 16.03.2023



**A COMPLETE  
HANDS-ON  
COURSE**

**Venue :**  
Department of Physics

**Dr. CHANDANA. N**  
Convenor & I/C  
Dept. of Physics

**Sri. A. SUDARSHAN  
Smt. K. HARIKA**  
Organizers

**Dr. B. RAJENDRA KUMAR**  
Principal

**GOVERNMENT DEGREE COLLEGE, KHAIRATABAD, HYDERABAD**

**DEPARTMENT OF PHYSICS**

*Certificate Course – “Electrical Wiring and Installation”*

**Certificate presentation ceremony**

**20.03.2023**

**Program schedule**

- Welcoming guests on to the dias @ 11:30am
- Brief report on the certificate course held by Dr.Chandana.N @11:35am
- Principal's message @ 11:40am
- Chief guest introduction by Sri.A.Sudarshan @11:50am
- Chief guest's message @11:55am
- Distribution of certificates to the students @12:10pm
- Felicitations @ 12:30pm
- Feedback from the students @ 12:35pm
- Concluding remarks and Vote of thanks by Dr.Chandana.N @ 12:40pm

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**REPORT:**

The department of Physics has conducted a certificate course on “Electrical wiring and Installation” from 20.02.2023 to 16.03.2023 of 30 hours duration. A total number of 30 students have participated and got certified in the hands on certificate course. Mr. Srinu, Electrician has trained the students for fifteen days. Prof. P. Bala Bhaskar Sir, Principal of Govt. City College has addressed the students as a chief guest for the valedictory session and presented certificates to the students.



## SYLLABUS

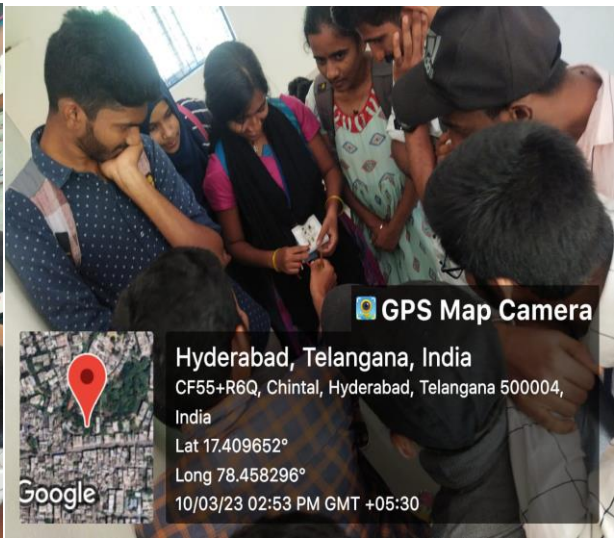
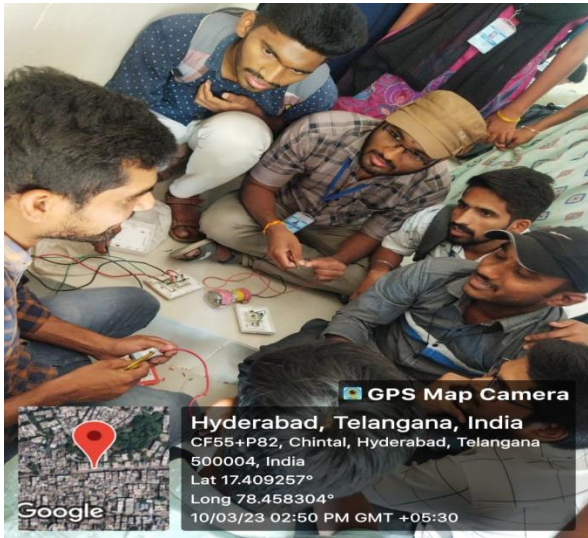
### Contents

Chapter I	<b>BASIC ELECTRICAL &amp; ELECTRONICS</b>	Duration: 4 hours
Chapter II	<b>BASIC ELECTRICAL WORKSHOP</b>	Duration: 5 hours
Chapter III	<b>ELECTRICAL AND ELECTRONIC MEASURING INSTRUMENTS</b>	Duration: 6 hours
Chapter IV	<b>ELECTRICAL CIRCUITS</b>	Duration: 7 hours
Chapter V	<b>CIRCUITS LAB</b>	Duration: 4 hours
Chapter VI	<b>ELECTRICAL INSTALLATION LAB</b>	Duration: 4 hours

**Certificate Course****“Electrical Wiring & Installation”**

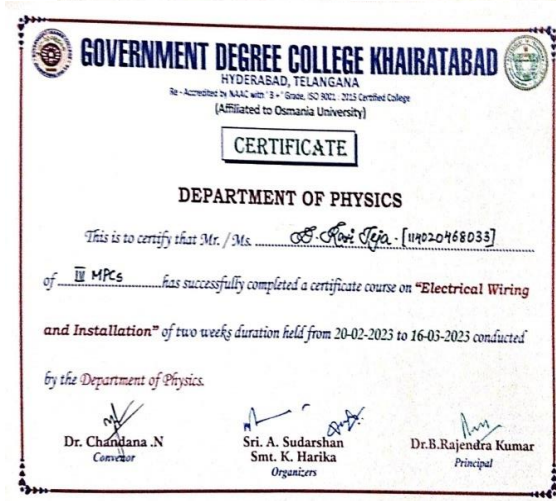
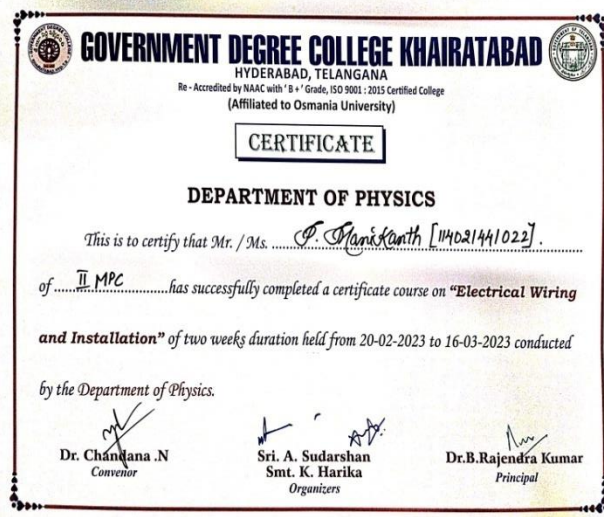
S.NO :	NAME OF THE STUDENT	YEAR/GROUP	ROLL.NUMBER	CELL NUMBER
1	B.Chiranjeevi	III/MPCs	114020468014	7993017467
2	Annesupriya	II/MPCs	114021468008	9014131023
3	B. Manaswini	III/MPCs	114020468021	7386972235
4	Kasa Shiva Kumar	III/MPCs	114020468058	8106229711
5	Dinesh	III/MPC	114020441040	9154422722
6	RAHUL KUMAR YADAV	II/MPCs	114021468098	7702457803
7	K. Santhosh	II/MPCs	114021468057	8801460119
8	Tanguturi prakash	II/MPCs	114021468107	8919790458
9	Manikanth	II/MPC	114021441022	9392401850
10	Mohammed Rahil	III/MPCs	114020468082	9133793313
11	Shaik Dastagir	III/MPCs	114020468120	7386413738
12	V ARAVIND	III/MPCs	114020468128	6300142062
13	GUGULOTHU MAHESH	III/MPC	114020441027	7013685647
14	N Ravindar	II/MPCs	114021468079	8688797180
15	Mohammad Amrez Pasha	III/MPCs	114020468081	9701427880
16	A.Madhav krishna	II/MPCs	114021468009	9494845310
17	D.Raviteja	III/MPCs	114020468033	6260428427
18	M.Naveen	II/MPCs	114021468075	9100742705
19	Lakshmi	II/MPC	114021441021	8074577043
20	G.Sairam	II/MPCs	114021468038	9121741714
21	B Nagaraju	II/MPCs	114021468015	9515905297
22	G sai nath	III/MPC	114020441025	8008549313
23	Prameela	II/MPC	281321441019	9959982636
24	Donda Sriram	III/MPCs	114020468031	6303483985
25	Shaik.sara tabassum	II/MPCs	114021468102	9347456924
26	MARAPUREDDY VINOD KUMAR	II/MPCs	114021468067	9494569096
27	G.Shiva chandra	III/MPCs	114020468122	

28	K. Arvind	III/MPCs	114020468067	
29	B.Nagasai	III/MPCs	114020468006	
30	CH.Bhagya laxmi	III/MPC	114020441015	





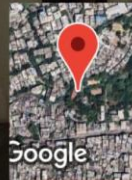






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6-2-675, Chintal, Hyderabad, Telangana 500004,  
India  
Lat 17.410255°  
Long 78.457968°  
20/03/23 12:58 PM GMT +05:30

GPS Map Camera



Hyderabad, Telangana, India  
6-2-675, Chintal, Hyderabad, Telangana 500004,  
India  
Lat 17.410243°  
Long 78.457932°  
20/03/23 12:54 PM GMT +05:30

GPS Map Camera



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6-2-810, Tummala Basthi, Khairtabad, Hyderabad,  
Telangana 500004, India  
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GPS Map Camera



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6-2-810, Tummala Basthi, Khairtabad, Hyderabad,  
Telangana 500004, India  
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Long 78.458228°  
20/03/23 12:59 PM GMT +05:30

GPS Map Camera







Student  
Attendance

20.03.2023

53

S.No.	Roll number	Name of the student	Signature
1.	114020468021	B. Manaswini	B. Manaswini
2.	114021468033(A)	G. Nandini	G. Nandini
3.	114021468116(A)	V. Sarjuna	V. Sarjuna
4.	114022468121	R. Soomya	R. Soomya
5.	114022468122	R. kavasi	R. kavasi
6.	114022468047	G. Chandhu	G. Chandhu
7.	114022468039	G. Namasi	G. Namasi
8.	114021468022 (A)	C. Nagamani	C. Nagamani
9.	114021468004 (A)	A. Anusha	A. Anusha
10.	114021468096 (A)	P. Poornima	P. Poornima
11.	114020441015 (A)	Ch. Bhagyalakshmi	Ch. Bhagyalakshmi
12.	114021468035	G. Sumalatha	G. Sumalatha
13.	114020468108	P. Saritha	P. Saritha
14.	114020468002	A.S.V. Nagaraj	A.S.V. Nagaraj
15.	114020468063	K. Noma	K. Noma
16.	114020468055	M. Meghana (1 <sup>st</sup> year)	M. Meghana
17.	114020468071	K. Sudhanvi (1 <sup>st</sup> year)	K. Sudhanvi
18.	1140224680143	J. Pravalika (1 <sup>st</sup> year)	J. Pravalika
19.	114022468005	A. Sarani (1 <sup>st</sup> year)	A. Sarani
20.	114022576006	R. Bharu Prasad (1 <sup>st</sup> year)	R. Bharu Prasad
21.	114022468037	S. Kama 1 <sup>st</sup> year	S. Kama
22.	114022468100	N. Shankar Yadav	N. Shankar
23.	114022468032	D. Manohar	D. Manohar
24.	114022468148	V. Rakesh	V. Rakesh
25.	114022468016	B. Lakshmana	B. Lakshmana
26.	114022468081	K. Venkatesh	K. Venkat Rathod.
27.	114022468004	A. Padarp	A. Padarp
28.	114022468099	M. Geetha Anil Kumar	M. Geetha
29.	114022468080	K. G. Lingesh	K. G. Lingesh
30.	114022468095	M. Pavankumar	M. Pavankumar
31.	114022468109	Padala. Rajesh	P. Rajesh
32.	114022468070	Kolla. Navleen	K. Navleen
33.	114022468079	M. Durga Prasad	M. Durga Prasad
34.	114021468031	G. Sreeram	G. Sreeram

35)	114021468016	B. BADRI	B. Badri B.
36)	114020468006	B. Nagalai	B. Nagalai
37)	114020468128	V. Aravind	V. Aravind
38)	114020468122	Shiva Chandara	G. Shrinidra
39)	114020468081	D. Siram	D. Siram
40)	114021468015	B. Narpaju	B. Narpaju
41)	114021468011	B. Shiva Kumar	Shiva Kumar
42)	114021468013	B. Hemanth	B. Hemanth
43)	114021468018	G. Sai Ram	G. Sai Ram
44)	114021468108	T. Aravind	T. Aravind
45)	114021468107	T. Prakash	T. Prakash
46)	114021468075	M. Navens	M. Navens
47)	1140-21-468-057	K. Sonthosh	K. Sonthosh
48)	1140-20-468-058	K. Shivakumar	K. Shiva
49)	1140-20-441-027	G. Mahesh	G. Mahesh
50)	1140-21-468-067	R. Vinod Kumar	R. Vinod Kumar
51)	1140-21-468-009	A. Madhav Krishna	A. Madhav Krishna
52)	1140-21-468-042	K. Abhishek	K. Abhishek
53)	1140-20-441-040	K. Aneth	K. Aneth
54)	1140-20-441-031	K. Saij	K. Saij
55)	1140-20-441-025	G. Bairath	G. Bairath
56)	1140-20-468-082	Md. Rohil	Md. Rohil
57)	1140-20-468-120	Shaik. Dastagir	Shaik. Dastagir
58)	1140-20-468-081	Md. Amrez Patha	Md. Amrez Patha
59)	1140-21-468-061	K. Shirisha	K. Shirisha
60)	1140-21-468-094	Pavel Tisha	Pavel Tisha
61)	1140-21-468-099	R. Nandini	R. Nandini
62)	1140-21-468-068	M. Iqbal	M. Iqbal
63)	1140-21-468-017	B. Keerthi	B. Keerthi
64)	1140-21-468-069	M. Lakshmi	M. Lakshmi
65)	1140-20-468-014	B. Chandra	B. Chandra
66)	114020468009	Aravind Yadav	Aravind Yadav
67)	114020468067	K. Arvind	K. Arvind

55

68)	114021468079	N. Ravindan	N. Ravindan
69)	114021468098	Rahul Kumar Yadav	Rahul Kumar Yadav
70)	114020468118	S. Naresh	S. Naresh



**CERTIFICATE COURSE ON TALLY PRIME.**  
**UNDER MOU WITH JAYARATNA CENTER OF EXCELLENCE**  
**2022-23**

63 Students of II B.com (CA) and II B.com (Tax) have joined<sup>25</sup> and attended Tally Essential Course conducted by M/s Jayaratna Centre of Excellence. A memorandum of understanding was entered between New Government Degree College, Khairatabad and M/s Jayaratna Centre of Excellence for conduct of Tally Courses for II B.com for the Academic Year 2022-23. Tally Essential Course classes were conducted for a period of 10 weeks. Classes were conducted in the college from 11:30 AM to 12:50 PM weekly 5 classes were conducted and successful students have received certificates from Jayaratna Centre of Excellence. List of students and their Feed back is enclosed.

### Syllabus

## Tally Essential Level 1

(Recording & Reporting)

Fundamentals of Accounting

Introduction to TallyPrime

Maintaining Chart of Accounts

Recording and Maintaining Accounting Transactions

Banking

Generating Financial Statements and MIS Reports

Data Security

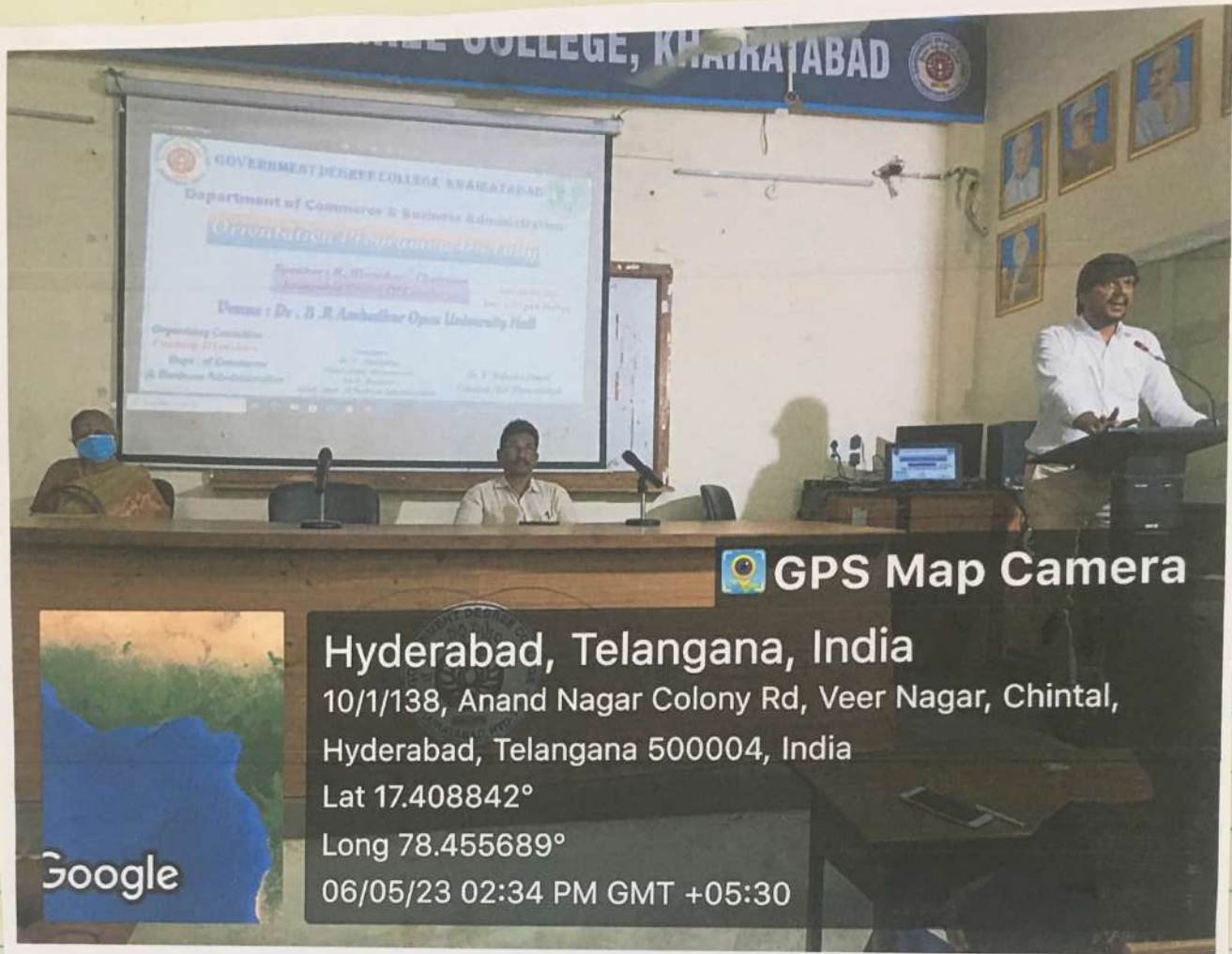
Company Data Management

Goods and Services Tax

For

Signature





**Hyderabad, Telangana, India**  
 10/1/138, Anand Nagar Colony Rd, Veer Nagar, Chintal,  
 Hyderabad, Telangana 500004, India  
 Lat 17.408842°  
 Long 78.455689°  
 06/05/23 02:34 PM GMT +05:30



**Hyderabad, Telangana, India**  
 Chintal Basti, CF55+XFV, beside Ambedkar Plyground,  
 Khairatabad, Hyderabad, Telangana 500004, India  
 Lat 17.41052°  
 Long 78.458265°  
 06/05/23 03:05 PM GMT +05:30















**MEMORANDUM OF UNDERSTANDING (MoU)**

**BETWEEN**

**NEW GOVERNMENT DEGREE COLLEGE  
KHAIRATABAD,  
HYDERABAD DISTRICT, TELANGANA**

**AND**

**JAYARATNA CENTRE OF EXCELLENCE  
JNTU, HYDERABAD**

**FOR**

**SKILL DEVELOPMENT  
UNDER  
"SKILL BRIDGE" PROGRAMME**

Plot No: 31, Jai Bharat Nagar, Nizampet Road, Near JNTU Metro Station, KPHB, Hyderabad – 500085





This Memorandum of Understanding (hereinafter called as 'MoU') is entered into on 26<sup>th</sup> May, 2022 by and between

NEW GOVERNMENT DEGREE COLLEGE, DEPARTMENT OF COMMERCE AND MANAGEMENT, KHAIRATABAD, HYDERABAD DISTRICT, TELANGANA, FIRST PARTY represented herein by Dr. B. Rajendra Kumar, Principal and Dr. R. Praveen Kumar Reddy, Head of the Department, Commerce & Management (hereinafter referred as 'First Party' the institution which expression, unless excluded by or repugnant to the subject or context shall include its successor – in-office, administrators or assigns).

AND

JAYARATNA CENTRE OF EXCELLENCE, JNTU, HYDERABAD, SECOND PARTY represented herein by Mr. Manohar K., Founder (hereinafter referred as 'Second Party' the institution which expression, unless excluded by or repugnant to the subject or context shall include its successor – in-office, administrators or assigns).

**WHERE AS:**

M/s JAYARATNA Centre of Excellence Authorized Training and Assessment Center (TAC) and New Government Degree College, Khairatabad, Hyderabad District, Telangana. We Share the common vision of empowering the students by imparting industry relevant skill sets and increasing their employability.

To achieve our common goal M/S JAYARATNA Centre of Excellence(Authorized Training and Assessment Centre) and College would collaborate on the following framework to execute the students' training.

**Proposed Terms and Conditions:**

**Deliverables from JAYARATNA Centre of Excellence:**

1. Provide training on Licensed TallyPRIME ERP Software (Online Training or Instructor Led Training, can be mutually decided based on the situation)
2. Provide authorized courseware from Tally (Now only Digital Content will be provided)
3. Enroll all students to the TEPL portal
4. Sponsorship of Course Fee
5. Provide assessment and certification to the enrolled students

**Deliverables from TEPL for college and all enrolled candidates:**

1. TallyPRIME ERP Multi-user License on an annual renewable basis on request
2. 2\*2 Tally logo signboard to be affixed outside/ inside the computer lab

Plot No: 31, Jai Bharat Nagar, Nizampet Road, Near JNTU Metro Station, KPHB, Hyderabad – 500085





3. Online Assessment for the certification
4. Digital verifiable Certificate to students who pass the assessment.
5. Access for students to the TEPL Candidate Portal
6. Mock assessments to students in the Candidate Portal to evaluate their progress

**Deliverables from Government Degree College Administration:**

1. Necessary student details for the enrollment of students.
2. Infrastructure for training and assessment
3. Fix Tally logo signboard (as provided by TEPL) to the computer lab
4. Utilize the license provided for training purpose only
5. Minimum of 100 students for certification for the license to be renewed.

**VALIDITY OF MoU:**

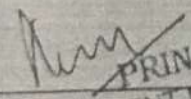
This Agreement will be valid until it is expressly terminated by either party on mutual agreed terms, during which period **JAYARATNA Centre of Excellence**, the Second Party, as the case may be, will take effective steps for implementation of this MoU. Any act on the part of **New Government Degree College, Khairatabad, Hyderabad** or **JAYARATNA Centre of Excellence**, the Second Party after termination of this Agreement by way of communication, correspondence etc., shall not be construed as an extension of MoU.

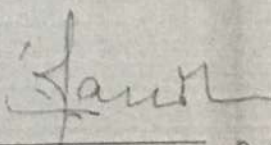
Both parties may terminate this MoU upon 30 calendar days' notice in writing. In the event of termination, both parties have to discharge their obligations.

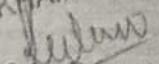
**AGREED:**

For New Government Degree College  
Khairatabad, Hyderabad

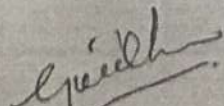
For JAYARATNA Centre of Excellence

  
PRINCIPAL  
GOVERNMENT DEGREE COLLEGE  
KHAIRATABAD, HYDERABAD

  
Authorized Signatory 26/5/22

  
Head of the Department  
Commerce



  
Witnessed by Mr. N. Giridhar  
(Lecturer in Commerce)

Plot No: 31, Jai Bharat Nagar, Nizampet Road, Near JNTU Metro Station, KPHB, Hyderabad – 500085





**Jayaratna**  
Educate Empower Envision



**Partnership Details:**

Name of the College	Name of the Training Centre
New Government Degree College, Khairatabad	JAYARATNA Centre of Excellence
Course: Tally Essential	Course: Tally Essential
Academic Year: 2021-22	Academic Year: 2021-22
Contact Details: 9440890253, 9491844205, 9490807247	Contact Details: 9010218002
Email: gdck2007@gmail.com	Email: contactus@jayaratna.com
Web: <a href="https://gdets.cgg.gov.in/khairatabad.edu">https://gdets.cgg.gov.in/khairatabad.edu</a> <a href="https://gdckhairatabad.ac.in/">https://gdckhairatabad.ac.in/</a>	Web: <a href="http://www.jayaratna.com">www.jayaratna.com</a>
Address: Chintal Basthi, Khairatabad, Hyderabad, Hyderabad District, Telangana - 500004.	Address: Plot No: 31, Jai Bharat Nagar, Nizampet Road, Near JNTU Metro Station, KPHB, Hyderabad - 500085.



Govt, Degree College  
Khairatabad, Hyderabad  
DEPARTMENT OF HINDI  
Certificate Course in Hindi  
2022-2023

**TOPICS:-**

- 1) Introduction to Alphabets
- 2) Introduction to conjunct letters
- 3) Words & Phrases
- 4) Vocabulary
- 5) Formal Conversation
- 6) Normal Conversation
- 7) Pronounce chart
- 8) Hindi Sentence structure

**Objectives:-**

Hindi is our National Language. A large number of people today like to read, write and communicate in Hindi.

In the marketing sector Hindi acts as an important medium to attract consumers.

Students have options for skill development in a special field such as poetry, Functional Hindi, Media studies, Linguistics, Theatre arts and Translation. Hindi is a language of common man. Everyone can understand easily.

These could also help them in competitive examinations and get jobs in Academics and Media Studies, as Translators and Script Writers. Functional Hindi empowers the students to go for various business correspondence, Govt.offices, banks ,Railways and its related jobs.





GOVERNMENT DEGREE COLLEGE, KHAIRATABAD,  
HYDERABAD

DEPARTMENT OF CHEMISTRY  
CERTIFICATE COURSE 2022-23

## GREEN CHEMISTRY



Figure 3. Principles of Green Chemistry.

Date: 02/09/2022

### CIRCULAR

The Department of Chemistry is planning to organize certificate course on GREEN CHEMISTRY For the academic Year 2022-23 to B.Sc final year students. The course consists of 30 hours duration. Interested students can give their names to faculty of department of chemistry on or before 20<sup>th</sup> September 2022.

*[Handwritten signature]*  
V. Lalitha

*[Handwritten signature]*  
Principal 21/9/2022

*[Handwritten signature]*  
*[Handwritten signature]*

RSH  
21/9/22

*[Handwritten signature]*  
*[Handwritten signature]*

*[Handwritten signature]*  
JA  
21/9/22  
*[Handwritten signature]*

**GOVERNEMENT DEGREE COLLEGE, KHAIRATABAD, HYDERABAD**

**DEPARTMENT OF CHEMISTRY**

**CERTIFICATE COURSE – (2022-23)**

**GREEN CHEMISTRY**

**Syllabus:** (30Hours)

**Theory** 20hrs

Introduction: Definition of green Chemistry, need of green chemistry, basic principles of Green chemistry.

**Green synthesis:** Evaluation of the type of the reaction (i) Rearrangements (100% atom economic).

(ii) Addition reaction (100% atom economic) (iii) Pericyclic reactions (no by product).

Selection of solvent:

(i) Aqueous phase reactions (ii) Reactions in ionic liquids (iii) Solid supported synthesis (iv) Solvent free reactions (solid phase reactions)

(ii) Green catalysts: (i) Phase transfer catalysts (PTC) (ii) Biocatalysts

Microwave and Ultrasound assisted green synthesis:

1. Aldol condensation
2. Cannizzaro reaction
3. Diels Alder reactions
4. Strecker synthesis
5. Williamson synthesis
6. Dieckmann condensation.

**(Laboratory Work):** 10hrs

1. Microwave assisted green synthesis of Aspirin
2. Base-catalyzed aldol condensation Synthesis of di benzal propanone
3. Diel's Alder reaction – preparation of adduct from Maleic acid and furan

**GOVERNEMENT DEGREE COLLEGE, KHAIRATABAD, HYDERABAD**

**DEPARTMENT OF CHEMISTRY**

**CERTIFICATE COURSE ON GREEN CHEMISTRY**

**COURSE OVERVIEW:**

Green chemistry is the utilization of principles that reduces or eliminates the use or generation of hazardous substances in the design, manufacture and application of chemical products, including fuels, plastics, polymers, synthetic fibers, pharmaceuticals, food additives, fragrances, pesticides, herbicides, and detergents and cleaning supplies. This course will introduce the principles and fundamental concepts of green chemistry and also synthesis of organic compounds using green methods.

**Objective:** The basic principles of green chemistry addresses various issues related to synthesis of chemical compounds: planning organic synthesis to maximize yield, prevention/minimization of waste, atom economy, the use of less lethal chemicals, use of safer solvents, renewable starting materials, energy efficiency and use of green catalysts. The objective of this study is to elaborate the practical approach of green methods

**Course outcomes:** completion of this course, students will be able to:

1. Apply the principles of green chemistry to chemical-related problems and waste reduction.
2. Able to plan organic synthesis to maximize yield, prevention/minimize waste.
3. Calculate atom economy.
4. Know the use of safer solvents, renewable starting materials, energy efficiency and use of green catalyst
5. Explain how green chemistry principles can be applied for clean and Sustainable Development.





GOVERNMENT DEGREE COLLEGE, KHAIRATABAD  
CERTIFICATE COURSE

GREEN CHEMISTRY EXAM

ATTENDANCE SHEET

DATE: 13-12-2022

S.No.	Name of the student	Hall Ticket Number	Course and Year	Signature of the students
1	Avadutha Mayadevi	114020441004	III MPC	A. Mayadevi
2	Bobbali Madhu	114020441007	III MPC	B. Madhu
3	Chiluguri Bhagya lakshmi	114020441015	III MPC	Ch. Bhagya - lakshmi
4	Chiluveru Nagajyothi	114020441016	III MPC	Ch. Nagajyothi
5	Darapu Mallika	114020441017	III MPC	D. Mallika
6	Godishela Sainath Goud	114020441025	III MPC	G. Sainath
7	Gotike Maheshwari	114020441026	III MPC	G. Maheshwari
8	Gugulothu Mahesh	114020441027	III MPC	G. Mahesh
9	Kanagandula Charan	114020441029	III MPC	K. Charan
10	Kethavath Srikanth	114020441031	III MPC	K. Srikanth
11	Kothakurva Kavitha	114020441032	III MPC	K. Kavitha
12	Kurva Veeresh	114020441033	III MPC	K. Veeresh
13	Lingala Shivaji	114020441035	III MPC	L. Shivaji
14	Nelapatla Madhu Babu	114020441038	III MPC	N. Madhu Babu
15	T. Lavanya	114020441052	III MPC	T. Lavanya
16	Bandari Sowmya Lakshmi	114020445007	III BZC	B. Sowmya
17	B. Uday Raj	114020445014	III BZC	B. Uday Raj
18	C. Harish	114020445016	III BZC	C. Harish
19	Chindam Harika	114020445018	III BZC	Chindam Harika

20	C. Thirumalesh	114020445020	III BZC	C. Thirumalesh
21	Gillala Kavya Sree	114020445027	III BZC	G. Kavya Sree
22	Golla Vamshi Krishna	114020445030	III BZC	G. Vamshi Krishna
23	Kasturi Venkata Harish Chandra	114020445041	III BZC	K. Harish
24	Koukunta Vinod Kumar	114020445050	III BZC	K. Vinod Kumar
25	Maupudi Ajay	114020445064	III BZC	M. Ajay
26	Nappari Ajay Varma	114020445077	III BZC	N. Ajay Varma
27	Peddakota Ramya	114020445086	III BZC	P. Ramya
28	P. Eliyazar	114020445087	III BZC	P. Eliyazar
29	Repalle Manisha	114020445095	III BZC	R. Manisha
30	Sandagalla Sravani	114020445097	III BZC	S. Sravani
31	Shamala Sandeep	114020445101	III BZC	S. Sandeep
32	Thoompally Naresh	114020445105	III BZC	T. Naresh
33	Vangala Sri Alaya Thammay	114020445108	III BZC	V. Sri Alaya
34	W. Sachin	114020445114	III BZC	W. Sachin
35	Madishetty Prithi	114020457011	III MZC	M. Prithi
36	Ramashray Goud	114020457017	III MZC	R. Goud
37	Yalakapati Suma	114020457024	III MZC	Y. Suma
38	G. Bhargavi	114020572002	III Bt BC	G. Bhargavi
39	A. Sampada Reddy	114020487001	III MbBtC	A. Sampada Reddy
40	Kotimedi Madhavi	114020489003	III BtZC	K. Madhavi

PRINCIPAL  
GOVERNMENT DEGREE COLLEGE  
KHAIRATABAD HYDERABAD



GOVERNMENT DEGREE COLLEGE KHAIRATABAD  
CERTIFICATE COURSE : GREEN CHEMISTRY  
2022-23

30/30

Time: 1 hr

Name of the Candidate:

D. Malika

Max: 30 Marks

Hall Ticket No.:

114020441017

Section - I

15 x 2 = 30 Marks

- Which of the following is not a principle of green chemistry  
(a) Green solvents and auxiliaries (b) Use of renewable feedstock (c) Hazardous chemical synthesis [c]  
(d) Design for energy efficiency
- Green chemistry is the design of chemical products that reduce the use and generation of Hazardous substances. Identify the technique used in the area. [c]  
(a) Bio amplification (b) Polymer manufacturing (c) Pesticide synthesis (d) Use of sunlight and Microwave-assisted reaction
- Identify the non-toxic and green solvent [a]  
(a) Liquefied carbon dioxide (b) Benzene (c) Carbon tetrachloride (d) Toluene
- The principles of green chemistry include the eliminating the \_\_\_\_\_ treatments. [a]  
(a) Costly (b) Harmful (c) Hard (d) Easy
- The green synthesis methods should have [c]  
(a) Low efficiency (b) High harmful products (c) Low energy requirements (d) Low atom efficiency
- Which of the following is the universal green solvent [a]  
(a) Water (b) Benzene (c) hydrogen peroxide (d) Carbon tetrachloride
- Incorporation of all the reactants into the products is observed in [d]  
(a) Addition reactions (b) pericyclic reactions (c) Rearrangements (d) All the above
- Which of the following is used as phase transfer catalyst [b]  
(a) Primary amine (b) Quaternary ammonium salt (c) Tertiary nitro alkane (d) secondary amine
- Father of green chemistry [a]  
(a) Paul T. Anastas (b) Linus Pauling (c) Wholer (d) Mandaleef
- How many principles are there in Green chemistry [d]  
(a) 10 (b) 6 (c) 8 (d) 12
- In order to reduce Energy requirements of the chemical reaction we must use [d]  
(a) Acid (b) Base (c) Salt (d) Catalyst
- Which of the following are examples of green chemistry [c]  
(a) Aldol Condensation (b) Cannizzaro reaction (c) Diels alder reaction (d) All the above
- The Green chemical is used in house hold cleaners to remove stains [a]  
(a) Citric Acid (b) Acetic Acid (c) Hydrochloric acid (d) water
- Which one of the following is the greener than the conventional methods. [a]  
(a) Micro waves (b) Electromagnetic waves (c) Ultra violet waves (d) Radio waves
- Green chemistry is also called as [d]  
(a) Life chemistry (b) Environmental chemistry (c) Organic chemistry (d) Sustainable chemistry

GOVERNMENT DEGREE COLLEGE KHAIRATABAD  
CERTIFICATE COURSE : GREEN CHEMISTRY  
2022-23

28/30

Time: 1 hr

Max: 30 Marks

Name of the Candidate:

G. Sainath

Hall Ticket No.:

114020441025

15 x 2 = 30 Marks

Section - I

- Which of the following is not a principle of green chemistry  
(a) Green solvents and auxiliaries (b) Use of renewable feedstock (c) Hazardous chemical synthesis  
(d) Design for energy efficiency [c]
- Green chemistry is the design of chemical products that reduce the use and generation of  
Hazardous substances. Identify the technique used in the area. [d]  
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- Green chemistry is also called as [d]  
(a) Life chemistry (b) Environmental chemistry (c) Organic chemistry (d) Sustainable chemistry





# GOVERNMENT DEGREE COLLEGE, KHAIRATABAD

HYDERABAD, TELANGANA.



(Affiliated to Osmania University)  
Accredited by NAAC with B<sup>+</sup> Grade  
ISO 9001 : 2015 Certified College

## DEPARTMENT OF CHEMISTRY

### CERTIFICATE

This certificate has been awarded to ..... *Kolthakurwa Lavitha, MPC III year* .....

for attending Certificate Course Organized by the Department of Chemistry on

..... *Green Chemistry* ..... for the academic year 2022-2023.

*[Signature]*  
Convenor

*[Signature]*  
HOD-Chemistry

*[Signature]*  
Principal





# **CERTIFICATE COURSE**

1. Title: Mathematics for Competitive Examinations
2. Topics: Average  
Percentage  
Profit and loss
2. Year of offering: 2021-22
3. No. of times offering during the same year:1
- 4.Duration of course: 30hrs (1<sup>st</sup> dec 2021 to 18<sup>th</sup> dec 2021)
5. No. of students enrol in the year: 30
- 6.No. of students completed the course in the year :30
7. Name of the resource persons: N. Jayaleela & S. Vinod

(1<sup>st</sup> feb 2021) to18<sup>th</sup> feb 2021)

SNO	Roll NO	Name of the Students	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
1	114019467001	A. Lekhana	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
2	114019467002	A. Sumanth	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
3	114019467007	B. Navaneetha Kumal	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
4	114019467008	B. Kalankumar	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
5	114019467010	B. Niganjan	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
6	114019467011	B. Sai kishan Singh	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
7	114019467017	C. Sindhu	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
8	114019467019	C. Venu	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
9	114019467021	D. Bapuji	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
10	114019467022	D. Anitha	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
11	114019467023	D. Rahul	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
12	114019467031	G. Shailaja	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
13	114019468012	B. Jayalakshmi	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
14	114019468035	D. Ashok	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
15	114019468058	G. Alwin Kumar	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
16	114019468060	G. veeresh Rao	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
17	114019468066	K. Sravan	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
18	114019468095	Sainath	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
19	114019468097	M. Anusha	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
20	114019468099	M. Seikeethana	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
21	114019468147	S. Seeya	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
22	114019468155	T. Pavan	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
23	114019441004	Achana	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
24	114019441013	C. Kavya	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
25	114019441014	C. Navya	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
26	114019441021	G. Seimath	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	114019441030	K. Sai Kumar	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
28	114019441034	K. Madhu	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
29	114019441047	M. Seekanth	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
30	114019441059	R. Haei	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
31	114019441069	S. Talwin	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
32	114019441072	T. Seikanth	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



ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ  
march-13 to April-24 (30 days)

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Certificate COURSE - 2022-23

H. NO	Name	GROUP	Signature.
1140221004	m. pandu	BA-EPP-I	M. pandu
1005	m. Lokeshwari	BA EPP-I	m. Lokeshwari
1009	N. Pradeep	BA EPP-I	pradeep
1010	N. Nithin Kumar	BA EPP-I	N. Nithin Kumar
1011	R. Ravi	BA EPP-I	R. Ravi
114022555002	D. Anil	HECA-I	E. Venkatesh goud
5003	E. Venkatesh Goud	HECA-I	E. Venkatesh Goud
5005	K. Saibaba	HECA-I	K. Saibaba
5006	M. Prakash	HECA-I	M. Prakash
5007	M. Chandu	HECA-I	M. Chandu
114022441003	C. Sankeetha	mpc-I	C. Sankeetha
1004	C. Kurmaiah	mpc-I	Sudhya
1005	G. Ganesh	mpc-I	G. Ganesh
1007	G. Naresh	mpc-I	G. Naresh
1009	K. Shiva	mpc-I	Krishna
114022445001	B. Madhu	BZC-I	B. Madhu
5002	B. Nithin	BZC-I	Jashine
5004	B. Mohini	BZC-I	B. Mohini
5006	B. Sheshank	BZC-I	B. Sheshank
5007	B. Ganesh	BZC-I	B. Ganesh
5008	B. Praveen	BZC-I	B. Praveen
114021405016	A. Kalpana	B.com CA-II	Kalpana
5021	A. Ajay	B.com CA-II	A. Ajay
5026	B. Lokesh	B.com CA-II	B. Lokesh
5027	B. Samudra	B.com CA-II	B. Samudra
5034	B. Sangeetha	B.com CA-II	Sowmya
5035	B. Madhu	B.com CA-II	B. Madhu
4021406010	G. Saikumar	TAX-II	G. Saikumar
6016	M. Ganesh	Tax-II	M. Ganesh
6020	M. Saiteja	Tax-II	M. Saiteja







తెలుగు భాషా అధ్యయనంలో మెలకువలు

- 1) హల్లులు ఉచ్చారణలో సరికానిదేది ?  
1) చత్రం 2) మేఘం 3) పాతం 4) రుండా
- 2) క్రింది అక్షరాలలో కొమ్ము దీర్ఘం ఏది ?  
1) శూ 2) షూ 3) సూ 4) పై వన్నీయు
- 3) క్రింది వారిలో ప్రాచీన కవికాని వారెవరు ?  
1) మార్కటి 2) నన్నెచోడుడు 3) మొల్ల 4) దాశరథి
- 4) క్రింది వారిలో ఆధునిక కవి ఎవరు ?  
1) ఆరుద్ర 2) సురవరం 3) కాళోజీ 4) పై వారందరు
- 5) రామాయణ సంబంధ పాత్ర కానిదేది ?  
1) ఊర్మిళాదేవి 2) కౌసల్య 3) శ్రీరాముడు 4) ద్రౌపది
- 6) భారతానికి సంబంధం గల పాత్ర ఏది ?  
1) గాంధారి 2) శ్రీకృష్ణుడు 3) అర్జునుడు 4) పై వారందరు
- 7) సంయుక్తాక్షరాల ఉచ్చారణలో తప్పును గుర్తించండి  
1) జ్వలనం 2) త్యాగం 3) త్రయం 4) ఫలం
- 8) రాజకీయ నాయకుడు కానివాడెవరు ?  
1) గాంధీ 2) నెహ్రూ 3) సచిన్ టెండూల్కర్ 4) బాలగంగాధర్ తిలక్
- 9) క్రిందివాటిలో తెలంగాణ జిల్లా కానిదేది ?  
1) జనగాం 2) కామారెడ్డి 3) నిర్మల్ 4) అమరావతి
- 10) ద్విత్వాక్షరాల ఉచ్చారణలో సరిఅయిన పదం ఏది ?  
1) అమ్మ 2) గొయ్యి 3) అయ్య 4) పై వన్నీయు
- 11) సంయుక్తాక్షరాల ఉచ్చారణలో సరికానిపదమేది ?  
1) కృష్ణ 2) వృద్ధి 3) శృంగారం 4) నెయ్యి
- 12) ముఖ్యమంత్రి గారు తెలంగాణ తెలుగులో ఉపన్యాసం ప్రారంభించారు క్రిందివానిలో ఒప్పును గుర్తించండి

- 1) The chief minister has started speech in telangana Telugu
- 2) The chief minister will started speech in telangana Telugu
- 3) The chief minister will have been started speech in Telugu
- 4) Above all

HEAD Department of  
Telugu, Khairatabad

Principal

**GOVERNMENT DEGREE COLLEGE, KHAIRATABAD  
HYDERABAD – 500004**

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**DEPARTMENT OF TELUGU  
Certification of Participation**

This is to certify that ..... Of Class.....  
bearing Roll No..... has successfully completed the certificate course in “Telugu  
Introductory Course” of one month duration held from **13.03.2023 to 24.04.2023** His /Her  
enthusiasm to learn the breeding methods is highly appreciated

*Rauf*

**CONVENOR**

*Nandy*

**PRINCIPAL**