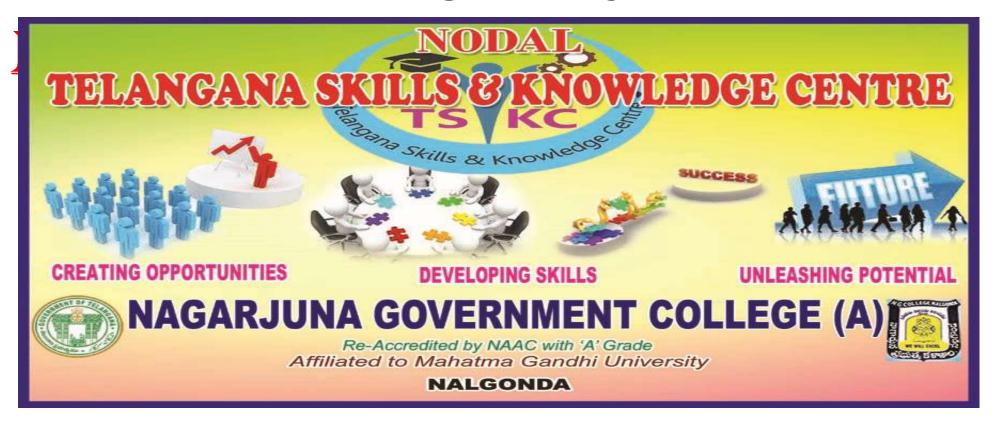
# NAGARJUNA GOYT. COLLEGE (A) IIT BOMBAY SPOKEN TUTROAL AYADEMIC YEAR: 2019-20

**Organized by** 



# CellDesinger<sup>TM</sup>

# CERTIFICATE

COURSE

### The Spoken Tutorial project

- Self explanatory uses simple language
- Audio-video uses multisensory approach
- Small duration has better retention
- Learner-centered learn at your own pace
- Learning by doing learn and practice simultaneously
- Empowerment learn a new FOSS

### **Target group**

- School students
- Undergraduates / Postgraduates
- Research scholars
- Teachers

### **Workshops**

The Spoken Tutorial Project Team conducts work-shops on CellDesigner and other FOSS using spoken tutorials and gives certificates to those who pass an online test.

For more details, please write to contact@spoken-tutorial.org

The Spoken Tutorial Project
is funded by the
National Mission on Education
through Information and
Communication Technology, Ministry of
Human Resource Development,
Government of India.

### Contact Us

Email : contact@spoken-tutorial.org

info@spoken-tutorial.org

Website: http://spoken-tutorial.org



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# CellDesigner<sup>™</sup>

National Mission on Education through Information and Communication Technology (NMEICT)

www.sakshat.ac.in An MHRD intiative

http://spoken-tutorial.org

### Introduction

- CellDesigner is a modeling tool of biochemical networks with graphical user interface.
- It is designed to be Systems Biology Work bench compliant, and support Systems Biology Markup Language format.
- CellDesigner is developed by the Systems Biology Institute (SBI), Tokyo, Japan.
- Latest version is 4.4
- Details about CellDesigner are available at this link http://www.celldesigner.org/index.html

### **Features of CellDesigner**

- Biochemical Gene Regulatory Networks Modeling with GUI.
- Visual Representation of Biochemical Semantics.
- Comprehensive Graphical Notation: SBGN Process Diagram.
- Is a Systems Biology Markup Language compliant software.
- Direct integration with SBML ODE Solver and Copasi
- Smooth linkage to SBWpowered simulation module.
- Database Connections.
- Export image to image files including PDF and SVG format.

### **System Requirements**

The current version of CellDesigner requires Java2 Runtime Environment (JRE1.6.0 or later).

### **Pathway Databases**

- Directly accessible from CellDesigner's database menu:
  - PANTHER Pathway database
  - BioModels.Net
- Other databases using CellDesigner for Pathway building
  - iPAVS
  - NaviCell
  - BioPP

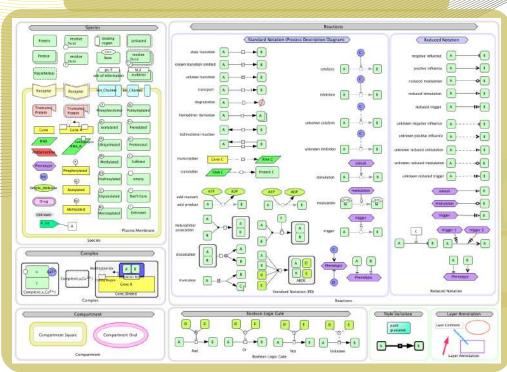
### **Plugins**

- CellDesigner Plugins allow developers to extend the function of CellDesigner.
- CellDesignerTM 4.0 onwards support Plugin functions.

### **Uses of CellDesigner**

- Easy data exchange is possible with other SBML compliant applications.
- SBML is the computer-readable format for representing models of biochemical reaction networks.
- Calling SBML ODE Solver and Copasi directly from CellDesigner via the ControlPanel enables us
  - to specify details of parameters
  - conduct parameter search and
  - in interactive simulation in intuitive manner.
- CellDesigner complies with Systems Biology Workbench, which enables the seamless linkage to SBWpowered simulators.

**Graphical notation of CellDesigner (ver4.2)** 



### NAGARJUNA GOVT. COLLEGE (A) NALGONDA TELANGANA SKILLS & KNOWLEDGE CENTRE

# **Cell Designer Certificate Course**

in collaboration with

## **IIT Bombay Spoken Tutorial**

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### Report:

Telangana Skills & Knowledge Centre (TSKC) conducted a certificate course on Cell Designer from 01-03-2020. In this course 76 Life Science students (BZC ,BZG,BBC, BTZC) were enrolled and successfully completed their course.

### **Course outcome:**

Cell Designer is a process diagram editor for drawing gene-regulatory and biochemical networks. Cell Designer is used for user-friendly visualization Modelling and Simulation of genetic regulatory networks, Protein networks and metabolic networks. Intuitive user-interface helps you to draw a diagram in rich graphical representation with your own design.

### NAGARJUNA GOVT. COLLEGE (A) NALGONDA TELANGANA SKILLS & KNOWLEDGE CENTRE

Date: 17-02-2020

### **NOTICE**

All the B.Sc, B.Com & B.A students are hereby informed that, who are not registered in the IIT Bombay Spoken Tutorial for the Academic Year 2019-20, register immediately by scanning the QR Code. Last date for registration is 24-02-2020.



### Note:

- 1. It is free of cost & remote learning training
- 2. After completion of the course you will get a certificate from IIT Bombay Spoken Tutorial
- 3. Course will be allotted and will intimate on 26-02-2020
- 4. Already registered student no need to register again

TSKC Co-Ordinator (Nodal)
N.G. College (A), NALGONDA

### NAGARJUNA GOVT. COLLEGE(A) NALGONDA

### TELANGANA SKILL & KNOWLEDGE CENTRE

### **IIT BOMBAY SPOKEN TUTORIAL**

### **CellDesigner-Student Enrollment**

Sl.No	Name	Roll Number	Group	Year	Email	Gender
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2	MD. ASMA	17044028445005	BZC	III	ashasma14@gmail.com	Female
3	BEPANGI PRADEEPTHI	17044028445009	BZC	III	pradeepthibepangi@gmail.com	Female
4	BOLUGURI SOWJANYA	17044028445010	BZC	III	sowjanayaboluguri@gmail.com	Female
5	CHINNAPAGU JACOB	17044028445013	BZC	III	chinnapagujacob@gmail.com	Male
6	DANTHURI VIKAS	17044028445014	BZC	III	vikasdanthuri99@gmail.com	Male
7	DENKANI DANIEL	17044028445015	BZC	III	d.danieljoy7@gmail.com	Male
8	GURRAM POOJA	17044028445019	BZC	III	gurrampooja67@gmail.com	Female
9	KESANI MAMATHA	17044028445021	BZC	III	kesanimamatha964@gmail.com	Female
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11	KOTESH KUKKALA	17044028445023	BZC	III	koteshidhaiah@gmail.com	Male
12	MALLEPALLY AKANKSHA	17044028445025	BZC	III	akankshamallepally@gmail.com	Female
13	ESTHERURANI MEDI	17044028445027	BZC	III	estherurani447@gmail.com	Female
14	PINBAPUREDDY DIVYA	17044028445034	BZC	III	divyareddy19992000@gmail.com	Female
15	RUDRA KRISHNA GAYATHRI	17404028445037	BZC	III	rudrakrishnagayathri4@gmail.com	Female
16	SHRIPADA GAYATHRI	17044028445038	BZC	III	gayathrisripada1@gmail.com	Female
17	SIDRA TAHSEEN	17044028445039	BZC	III	sidratahseen1234@gmail.com	Female
18	SURA HARI PRIYANKA	17044028445040	BZC	III	haripriyanka2310@gmail.com	Female
19	TAYYABA TAYYABA	17044028445041	BZC	III	nk2519366@gmail.com	Female
20	SHIVA PRASAD THIRUGUDU	17044028445043	BZC	III	shivaprasad1319.t@gmail.com	Male
21	VALLAPU SAMPOORNA	17044028445045	BZC	III	sampuvallapu@gmail.com	Female
22	VEERAMALLA TULASI	17044028445047	BZC	III	tulasiveeramalla5392@gmail.com	Female
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### NAGARJUNA GOVT. COLLEGE(A) NALGONDA

### TELANGANA SKILL & KNOWLEDGE CENTRE

### **IIT BOMBAY SPOKEN TUTORIAL**

### **CellDesigner-Student Enrollment**

Sl.No	Name	Roll Number	Group	Year	Email	Gender
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44	KORIVI SHIREESHA	17044028572014	BBC	III	korivishireesha@gmail.com	Female
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56	IRUGU MAHENDER	18044028572022	BBC	II	mahender.irugu@gmail.com	Male
57	JANAPATI MADHU	18044028572023	BBC	II	madhujanapati365@gmail.com	Male
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### NAGARJUNA GOVT. COLLEGE(A) NALGONDA

### TELANGANA SKILL & KNOWLEDGE CENTRE

### **IIT BOMBAY SPOKEN TUTORIAL**

### **CellDesigner-Student Enrollment**

Cempesigner Student Em omment							
Sl.No	Name	Roll Number	Group	Year	Email	Gender	
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60	KOTHA PUSHPANJALI	18044028572027	BBC	II	kothaanjali60366@gmail.com	Female	
61	JAYANTH GOUD	18044028572046	BBC	II	panthangijayanth123@gmail.com	Male	
62	PAVAN KALYAN SANDA	18044028572051	BBC	II	jesus7032454474@gmail.com	Male	
63	SHAIK SHAILANI BABA	18044028572052	BBC	II	shaikshailani800@gmail.com	Male	
64	VANAM GANESH GANESH	18044028572054	BBC	II	vanamganeshganesh@gmail.com	Male	
65	GANDHASIRI NAVYA	18044028572017	BBC	II	g.nandhu398@gmail.com	Female	
66	NALLAVELLY ANJIBABU	18044028572037	BBC	II	nallavellyanjibabu@gmail.com	Male	
67	MIDATHAPALLY REVATHI	18044028572035	BBC	II	midathapallirevathi@gmail.com	Female	
68	POTHALA VICTORIA RANI	18044028572049	BBC	II	pothalavictoriarani@gmail.com	Female	
69	RAVULA BHAGYALAXMI	18044028572050	BBC	II	ravulabhagyalaxmi@gmail.com	Female	
70	GADEPAKA YAMUNA	18044028572015	BBC	II	yamunashivarla143@gmail.com	Female	
71	POTHALA VICTORIA RANI	18044028572049	BBC	II	victoriaranipothala@gmail.com	Female	
72	GANGADARI KAVYA	18044028572018	BBC	II	kavyagangadhari4066@gmail.com	Female	
73	TAMMALI DAMAYANTHI	18044028489052	BTZC	II	deepupothulapati@gmail.com	Female	
74	NIKHIL TEJA GOUD SAMALA	18044028489043	BTZC	II	tejagoud2009@gmail.com	Male	
75	ASHWAN DATH KOMPELLY	18044028489024	BTZC	II	kompellyashwan@gmail.com	Male	
76	PARVATHAPURAM VAMSHHI	18044028489042	BTZC	II	vamshhipavan@gmail.com	Male	

### NAGARJUNA GOVT. COLLEGE (A) NALGONDA TELANGANA SKILLS & KNOWLEDGE CENTRE

Date: 26-02-2020

### **NOTICE**

All the below mentioned groups of IIT Bombay Spoken Tutorial registered students hereby informed that, TSKC allotted your course for the Academic year 2019-20 are shown below. In this regard instructed that complete your course before 31-03-2020.

Sl.No	Group	Year	Allotted Course	Duration
1	MBC	III		1 Month
2	MZC	III	Dianythan	
3	MBC	II	Biopython	
4	MZC	II		
5	MSCS	II		
6	MPCS	II	C and Cpp	
7	BCOM CA	III		
8	BZC	III		
9	BZG	III		
10	BBC	III	CellDesigner	
11	BBC	II		
12	BTZC	II		
13	MPC	II		
14	MPC	III		
15	MCIC	III	GeoGebra 5.04	
16	MPG	III		
17	MPG	II		
18	MPCS	III	HTML	

Note: Any doubts contact @ TSKC Lab, NG College(A) Nalgonda

TSKC Co-Ordinator (Nodal) N.G. College (A), NALGONDA



### Instruction Sheet for CellDesigner Spoken Tutorial Team IIT Bombay



### 1 Online / Offline content

- 1. The online content of Spoken Tutorials can be accessed from :
  - http://spoken-tutorial.org/tutorial-search/
- 2. You can also download the Spoken Tutorials for offline learning from: http://spoken-tutorial.org/cdcontent/
- 3. From this link download the FOSS categories in the language you wish to learn.
- 4. The Spoken Tutorial content will be downloaded as a zip file on your machine.
- 5. Extract the contents of the zip file & access them

### 2 The procedure to practise

- 1. You have been given a set of spoken tutorials and files.
- 2. You will typically do one tutorial at a time.
- 3. You may listen to a spoken tutorial and reproduce all the commands shown in the video.
- 4. If you find it difficult to do the above, you may consider listening to the whole tutorial once and then practise during the second hearing.

### 3 CellDesigner

- 1. Click on "Select FOSS" or "All FOSS Categories" drop-down and choose "CellDesigner".
- 2. Click on "Select Language" or "All Languages" drop-down and choose the language (English, Hindi, Marathi ...) in which you wish to learn.
- 3. Click on "Submit" button.
- 4. You will see a list of tutorials based on your selection.
- 5. Start with the first tutorial in the displayed list.

### 4 First tutorial: Installation of CellDesigner

1. Please locate the topic Introduction to CellDesigner and click on it.

- 2. To view the tutorial, click on the Play icon which is located in the player.
- 3. The Pre-requisite will be visible below the player (only for Online contents).
- 4. Outline, Assignments, Code Files and Slides are available below the player.
- 5. Adjust the size of the browser in such a way that you are able to practice in parallel.
- 6. These tutorials are created on Ubuntu Linux 14.04
- 7. From 0.00 min to 13.03 min the tutorial shows how to open CellDesigner

### 4.0.1 Opening CellDesigner on Ubuntu Linux

- (a) If you are unable to open CellDesigner as demonstrated, go to the Terminal
- (b) To do so, press the CTRL, ALT and T keys simultaneously
- (c) On the Terminal, type CellDesigner and press Enter. This will open CellDesigner

### 4.1 Instructions to practise

- (a) Create a folder on the "Desktop" with your "Name-RollNo-Component". (Eg. "Priya-09-CellDesigner").
- (b) Give a unique name to the files you save, so as to recognize it next time. (Eg. "Practice-1-Priya").
- (c) Remember to save all your work in your folder.
- (d) This will ensure that your files don't get over-written by someone else.
- (e) Save your work from time to time, instead of saving it at the end of the task.

# 4.2 Common instructions for Assignments

- (a) Attempt the Assignments as instructed in the tutorial.
- (b) Save your work in your folder.

## 4.3 Common instructions to use Code files

- (a) Click on the link "Code files" located below the player and save it in your folder.
- (b) Extract the downloaded zip file.
- (c) You will see all the code/source files used in the particular tutorial.
- (d) Use these files as per the instructions

given in the particular tutorial.

- 8. Play-pause-practise the whole tutorial.
- 9. Once the tutorial is complete, choose the next tutorial from the playlist which is located on the right side or below the player.
- 10. Follow all the above instructions, till you complete all the tutorials in the series.



This is to certify that **CHANDANA AMBATI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that MD. ASMA participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **BEPANGI PRADEEPTHI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **BOLUGURI SOWJANYA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **CHINNAPAGU JACOB** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **DANTHURI VIKAS** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **DENKANI DANIEL** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **GURRAM POOJA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **KESANI MAMATHA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **DIVYASRI KODIDALA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **KOTESH KUKKALA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that MALLEPALLY AKANKSHA participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **ESTHERURANI MEDI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **PINBAPUREDDY DIVYA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **RUDRA KRISHNA GAYATHRI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that SHRIPADA GAYATHRI participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that SIDRA TAHSEEN participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **SURA HARI PRIYANKA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **TAYYABA TAYYABA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that SHIVA PRASAD THIRUGUDU participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that VALLAPU SAMPOORNA participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **VEERAMALLA TULASI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **SWATHI VUPPULA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **DEEPTHI YANNA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **ABBAGONI SRILATHA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **CHANDA PAVANI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **DHANDU BALAKRISHNA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **DHARA SHIREESHA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that ITHARAJU MANJULA participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **KASAPARAJU SHANKAR** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **NEELAM ASHWINI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **GOSKONDA MOUNIKA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that ITHARAJU MANJULA participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **GUNDABOINA RAMANA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **GUNDE GOWRI SRI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **AMAROJU SAICHAND** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **BONGARALA MANOHAR** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **CHALLA SRILATHA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **KASANI NEERAJA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **THALLA NARESH** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that MAHESH VUYYALA participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **CHINTHA SRILEKHA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **ANUMULA CHAITANYA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **KORIVI SHIREESHA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that MUNAVATH SUMAN participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that NAGASHETTI DHANALAXMI participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **NEELAKANTAM KARTHIK KUMAR** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that REBECA POLE participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **VANAM RAJESH** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **VEMULA SRILEKHA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **KUNDURI SONIYA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that NAROJU KRISHNAVENI participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **BHUKYA ANJIBABU** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **BOMMIDI SHYAM PRASAD** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **DANDY MANOJ KUMAR** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that IRUGU MAHENDER participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that JANAPATI MADHU participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **KAVYA SRI RADHAM** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **KOPPULA VINAY** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **KOTHA PUSHPANJALI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that JAYANTH GOUD participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **PAVAN KALYAN SANDA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **SHAIK SHAILANI BABA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **VANAM GANESH GANESH** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **GANDHASIRI NAVYA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that NALLAVELLY ANJIBABU participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that MIDATHAPALLY REVATHI participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **POTHALA VICTORIA RANI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that RAVULA BHAGYALAXMI participated in the CellDesigner training organized at Nagarjuna Government College (Autonomous), Nalgonda in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **GADEPAKA YAMUNA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **POTHALA VICTORIA RANI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **GANGADARI KAVYA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous)**, **Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **TAMMALI DAMAYANTHI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to CellDesigner were covered in the training.

March 1st 2020



This is to certify that **NIKHIL TEJA GOUD SAMALA** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **ASHWAN DATH KOMPELLY** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020



This is to certify that **PARVATHAPURAM VAMSHHI** participated in the **CellDesigner** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **CellDesigner** were covered in the training.

March 1st 2020