Shri Swami Vivekanand Shikshan Sanstha

VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)
Department of Computer Science

"IIT Bombay Spoken Tutorial MOOC Courses"

Vivekanand College, Kolhapur has been at the forefront of providing quality education and fostering a culture of continuous learning. In collaboration with IIT Bombay Spoken Tutorial, the college has been offering a diverse range of Massive Open Online Courses (MOOCs) to empower students with cutting-edge skills. These courses include Cell Designer, Web Development - HTML, Python 3.4.3, PHP, and MySQL etc.

Course Structure: The IIT Bombay Spoken Tutorial courses are designed to meet the evolving needs of the industry and equip students with practical skills. The courses cover a spectrum of topics, including the intricacies of Cell Designer, the fundamentals of web development using HTML, and proficiency in programming languages like Python 3.4.3, PHP, and MySQL.

Online Sessions: Conducted by experts from IIT Bombay, the online sessions offer an interactive and engaging learning experience. Students have the opportunity to interact with seasoned professionals, clarifying doubts and gaining insights into real-world applications of the concepts they are learning. The virtual format ensures flexibility, allowing students to access the sessions at their convenience, fostering a conducive learning environment.

Examinations at Vivekanand College, Kolhapur: One of the unique aspects of this collaboration is the provision for examinations conducted online at Vivekanand College, Kolhapur. This not only adds a layer of convenience for students but also ensures a seamless transition from online learning to the evaluation process. The examinations are designed to assess the practical application of the skills acquired during the course.

Benefits for Students:

- **Skill Enhancement:** The courses cater to the demands of contemporary industries, enhancing the employability of students by providing them with relevant skills.
- **Flexibility:** The online format allows students to balance their academic commitments while acquiring valuable skills.
- **Certification:** Successful completion of the courses results in certification from IIT Bombay, a testament to the students' proficiency in the respective domains.
- **Community Impact:** By establishing an IIT Bombay Spoken Tutorial Courses center, Vivekanand College has not only elevated the learning experience for its students but has also contributed to the larger goal of creating a skilled workforce. This initiative aligns with the national agenda of fostering digital literacy and technological proficiency.

The collaboration between Vivekanand College, Kolhapur and IIT Bombay Spoken Tutorial has proven to be a commendable effort in providing quality education to students. The combination of online learning and localized examinations ensures a holistic educational experience. As students continue to benefit from these courses, the college remains committed to its mission of nurturing well-rounded and skilled individuals ready to excel in the professional landscape.

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

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INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

IIT Bombay

Spoken Tutorials

CellDesigner™

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
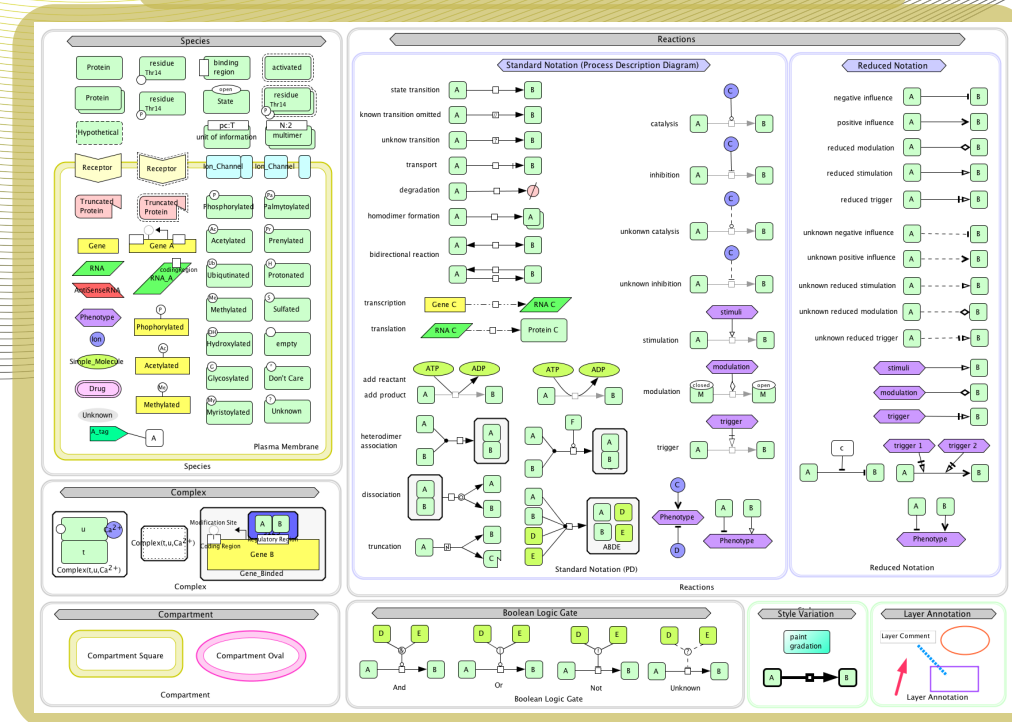   - NaviCell
    - BioPP

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)

Courses and Participants List

Academic Year 2018-19

January - June, 2018Total : 7

#	Semester Start Date	Software Course	Department	Participant List Status	Action
1	Feb. 18, 2019	Linux	B.Sc. Computer Science	29	| Participant List | Participation certificates available |
2	Feb. 18, 2019	PHP and MySQL	B.Sc. Computer Science	29	| Participant List | Participation certificates available |
3	Feb. 27, 2019	Biopython	B.Sc Biosciences	33	| Participant List | Participation certificates available |
4	Feb. 27, 2019	CellDesigner	B.Sc Biosciences	33	| Participant List | Participation certificates available |
5	Feb. 6, 2019	Introduction to Computers	B.A Batch 1	18	| Participant List | Participation certificates available |
6	Feb. 15, 2019	Java	B.C.A(Cloud Technology & Information Security)	33	| Participant List | Participation certificates available |
7	Feb. 15, 2019	Python	B.C.A(Cloud Technology & Information Security)	33	| Participant List | Participation certificates available |

Linux

CellDesigner

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Certificate of Participation

Spoken Tutorial
Project at
IIT Bombay

This is to certify that **RUTUJA PATIL** participated in the **CellDesigner** training organized at **Vivekanand College** in **January 2019** 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. This training is offered by the Spoken Tutorial Project, IIT Bombay.

April 28th 2019

Prof. Kannan M Moudgalya
IIT Bombay