

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.



Spoken-tutorial Project, IIT Bombay

E-Brochure



Name of FOSS	Applications	Commercial equivalent	Employability	Department
Linux-Ubuntu	Virus free, robust, Operating System	Windows	Technician or System administrator for Computer Vendors (SME's), Indian Railways, Municipal Corporations, Air India and many SME's	Computer Science, IT, ECE, Electronics
LibreOffice -	Basic computer usage Office suite for documents, spreadsheets, presentations, database etc.	MS-Office	Administration, Data entry personnel, Travel Agency Assistant, Indian Railways, Municipal corporations, Govt. offices	All the departments including Schools
Writer	Word Processing, Documentation	Word		
Calc	Spreadsheets	Excel		
Impress	Presentations	Powerpoint		
Base	Managing Databases	Access		
Draw	Drawing	Windows-based Visio		
Math	Mathematical Operations	MathType		
PHP&MySQL	Web development and Database Management	.NET	Website Developer in all types of small and large enterprises, popular companies hiring PHP & MySQL trained persons are Air-India, Bridge & Roof Co., Media channels, agencies etc.	Computer Science and IT
C/C++, Java, Netbeans and Python	Programming language		Programmer in SMEs working in C, Java, Netbeans and Python, Lab- Assistant in colleges, Popular companies requiring programmers on C / C++, Java and Python are HCL technologies, Wipro, L&T, TCS	Computer Science and IT
Scilab	Scientific computation package for numerical computations	Matlab	Value addition in technical problem solving via use computational methods for engineering problems, Applicable in Chemical, ECE, Electrical, Electronics, Civil, Mechanical, Mathematics, etc.	Computer science, IT, ECE, Electronics, Mechanical
LaTeX	Document markup language and preparation system for Tex typesetting	MS-Word	Value addition to academic Skills set. Essential for International paper presentation and scientific journals.	All the departments
OpenFOAM	For Fluid Mechanics to solve and create fluid movies	Fluent	Companies like AUDI, Tata Steel, Volkswagen, etc. have started using it. Also Indian Govt. agencies like BARC (Bhabha Atomic Research Center) are making use of this free software	Mechanical

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Oscad - now eSIM	EDA tool for circuit design, simulation, analysis and PCB design. It is an integrated tool built using open source software such as KiCad, Ngspice and Scilab.	Orcad	PCB designer in SME's and academic institutions, Lab assistant for Electronic Circuit Lab, Electronic network designer.	ECE, Electronics, EEE, Electrical
Firefox	Web browser	Internet Explorer	System Administrator and Lab assistant in SME's and academic institutes.	All the departments
GIMP	Image Editing and Graphic Design	Photoshop	Self employed photo editor, editor in photostudios, graphic design job in gift stores, advertising agencies, etc.	Arts and Textile designing, Fashion designing, Architecture
Q-CAD	Basic 2D design and drafting	AutoCAD		
Blender	Animation and Computer Graphics	Maya 3D	Animator in graphic and animation media, film etc. Sectors, such as advertising computer games, TV, education, interiordecoration, etc.	Arts, Design
Ruby	Programming language		Ruby was used to implemented the reactive control part for the Siemens service robot. Ruby Web Dialogs based app to manage and track oncall and on-site support for the IT help desk and IT operations teams.	Simulations, 3D Modeling, Business, Robotics, Networking, System Administration, etc.
Perl	High-level programming language		Perl has been called the system administrator's best friend for its ability to make common tasks easy. Perl's process, file, and text manipulation facilities make it particularly well suited for tasks involving quick prototyping, system utilities, software tools, system management tasks, database access, graphical programming, networking, and web programming.	Web developers, system administrators. Mathematicians, geneticists, journalists, managers, etc.
Jmol Application	Jmol applet is used to explore the structure of molecules. Jmol applet is used to depict X-ray structures.		Jmol returns a 3D representation of a molecule that may be used as a teaching tool, or for research e.g. in chemistry and biochemistry. There is a standalone application and a development tool kit that can be integrated into other Java applications.	Chemistry, Biochemistry
CellDesigner	Software for Planning & Designing Wireless Communication Systems, Modeling tool		CellDesigner has fully implemented the Korowajczuk 3D model, capable of performing simultaneously outdoor and indoor multi-floor predictions.	BioScience and Biotechnology

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GChemPaint	GChemPaint is an editor for 2D chemical structures with a multiple document interface.		GChemPaint is currently being developed as part of The Chemistry Development Kit, and a Standard Widget Tool kit-based GChemPaint application is being developed, as part of Bioclipse.	School level Chemistry
Inkscape	Graphic Designing	Adobe Illustrator, Coreldraw	Photo editing, Photo Manipulation and Graphic Design	All the departments including Schools
Bash	Bash is a "Unix shell" commandline interface for interacting with the operating system. Bash has the ability to run an entire script of commands, known as a "Bash Shell script" or "Shell script".		Familiarity with GNU/Linux command lines, and familiarity with basic programming concepts is a prerequisite for learning BASH. System administrators will greatly benefit by learning to automate common tasks using BASH.	System Administrators
Ascend	ASCEND is a free, open source, mathematical modelling system.		Its main uses have been in the field of chemical process modelling, with its novel modelling language conventions and powerful solver.	Chemical Engineering
Joomla	Content Management System		To build Website.	All the Departments
Biopython	Tool for Computational Biology and Bioinformatics.		To access online database such as NCBI. It can perform common operations such as transcription, translation, obtain complements, reverse complements, parsing, running BLAST.	Biology, Biochemistry and Dept. of Bioinformatics.
Java Business Application	To create a business application from scratch. Example : Library Management System		To built the business application and provide domain expertise	Computer Science and IT
Kturtle	An educational programming environment which helps in learning how to build logic and how to program, in an easy manner.		Some of its features are : intuitive syntax highlighting, simple error messages, integrated canvas to make drawings on, integrated help function, slowmotion or step execution, and more.	School level
Ktouch	Typing tutor teaches how to type using an online interactive keyboard		Learn typing at your own pace. Gradually increase your typing speed and along with it, your accuracy.	
FrontAccounting	FrontAccounting (FA) is a free and open source accounting software.	Alternative to Tally	FrontAccounting (FA) is a professional web-based Accounting system, written in PHP.	Commerce, Management

Name of FOSS	Applications	Commercial equivalent	Employability	Department
Avogadro	Avogadro is a free and open source, advanced molecule editor and visualizer designed for cross-platform use in computational chemistry, molecular modeling, material science, bioinformatics, etc.	ChemDraw	Academic positions in Chemistry involving teaching as well as R & D.	Chemistry and Bio-Chemistry
Drupal	Drupal is a free and open source content management system (CMS) written in PHP and distributed under the GNU General Public License		Web developer, Web architect, Computer solutions provider, Web technologies, Information systems, Content Managers, Digital solutions.	MCA, MBA, B.Comm., B.Comm. IT, any Engineering dept.
DWSIM	DWSIM is an open-source CAPE-OPEN compliant chemical process simulator. It allows us to conduct experiments and analyze data using advanced models and operations.	ASPEN Plus, CHEMCAD, PRO/II	As engineer in Power, Petrochemicals, Pharmaceutical, Chemical industry.	Chemical Engineering
Open Modelica	OpenModelica is an open source modelling and simulation environment intended for industrial and academic usage. It is an object oriented declarative multi domain modelling Language for complex systems.	Dymola	As engineer in Power, Automotive, Aerospace industry.	Chemical Engineering, Mechanical, Aerospace.
UCSF Chimera	UCSF Chimera is a program for interactive visualization and analysis of molecular structures and related data. Using Chimera, one can generate high-quality images and animations.	ChemDraw	Academic positions in Chemistry involving teaching as well as R&D. Also in chemical industry R&D.	Chemistry
Arduino	Arduino is open-source hardware, open-source software and microcontroller based kit.		Microcontroller and embedded system manufacturing industry, Robotics.	Electrical, Electronics Physics, and Computer Engineering

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Spoken Tutorial
Project at
IIT Bombay

Certificate of Participation

This is to certify that **KALYANI SALUNKHE** participated in the **BASH** training organized at **Vivekanand College** in **July 2019** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **BASH** were covered in the training. This training is offered by the Spoken Tutorial Project, IIT Bombay.

November 23rd 2019

Prof. Kannan M Moudgalya
IIT Bombay

Credits for the Spoken Tutorial courses are based on our estimates of the work required to complete them. Recipient institutions are required to apply due diligence and get them ratified/modified by their own duly formed academic/assessment body. Spoken Tutorial is a project at IIT Bombay, started with funding from the National Mission on Education through ICT, Ministry of Education (previously MHRD), Govt. of India.