

FOSSEE

Free and Open Source Software in Education (<http://fossee.in>) provides free support on FOSS (free and open source software) to eliminate the use of proprietary/commercial software packages in Science and Engineering Education across India. The shift to FOSS packages will help educational institutions monetarily.

The flagship activities promoted by the FOSSEE team are:

1. **SELF Workshops** are Spoken Tutorial (ten minute audio-video tutorial suitable for self learning) based workshops. FOSSEE has created various FOSS Spoken Tutorials that are used for Self workshops conducted remotely from IIT Bombay. Students and faculty across the country undertake these workshops where they learn different FOSS tools. FOSSEE offers domain expertise for these workshop(s) and also set online exams that are conducted at the end of the workshop. During the last one year, a total of 695 SELF workshops on various FOSS tools have been conducted, training about 22,000 students and faculty members. Post workshop(s), students post queries, if any, on **Spoken Tutorial Forum** (<http://forums.spoken-tutorial.org/>) for any of the existing FOSS series and are given quick answers from FOSSEE domain experts.
2. One of the major shortcomings of FOSS tools is the lack of documentation. FOSSEE addresses this important issue by promoting **Textbook Companion** activity by creating codes for solved examples of standard textbooks using FOSS. It is available online for free download and use and the contributors are students and the faculty of colleges from different parts of India.
3. Lab Migration: As long as a college uses proprietary tools as part of their lab curriculum, we cannot eliminate the use of commercial software. To address this issue, we have started the **Lab Migration** activity that aims to migrate college labs using proprietary software to a FOSS only lab. The FOSS code created by a student/teacher is released in open source code for public use.

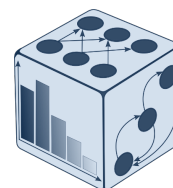
Students and faculty involved in Textbook Companion and Lab Migration are given honorarium for their efforts.

4. **Conference**: Scipy India - an international conference on scientific computing with Python, is organized every year by FOSSEE since 2009. One of the goals of the conference is to combine education, engineering, and science with computing through the medium of Python.

Currently, FOSSEE team promotes the following software extensively:



Scilab is a free and open source software for numerical computation developed by Scilab Enterprises, France. It is a FOSS alternative to MATLAB. It also includes Xcos which is an open source alternative to Simulink. The Scilab team have successfully created more than 275 Textbook Companions and ported 12 labs through the Lab Migration activity till date. To increase ease of executing Textbook Companion code online, FOSSEE has ported TBC on GARUDA cloud (<http://scilab.in/scilab-on-cloud>). Please visit <http://scilab.in> for more details.



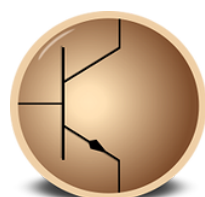
COIN-OR or **CO**mputational **IN**frastructure for **Operations RE**search is a project to build and support an open-source software for operations research and its applications. **Simpy** (Simulation in Python) is an open source, Python-based, discrete-event simulation software. OR Tools at FOSSEE is promoting COIN-OR, Simpy and other FOSS by developing tutorials, textbook companions and software interfaces in Scilab and Python. For more details please visit <http://or.fossee.in>



OpenFOAM is a free, open source CFD software package developed by OpenCFD Ltd and distributed by the OpenFOAM Foundation. Tutorials in the form of web-casts, for self learning OpenFOAM have been developed by our team. These are available free of cost at <http://cfd.fossee.in>.



Python is a general-purpose interpreted, high-level, object-oriented programming language that is used in a wide variety of application domains. The Python team promotes the use of the language through Python Textbook Companion. Under Python Textbook Companion, 53 textbook companions have been completed. For more information visit <http://python.fossee.in/>



Oscad is developed by the FOSSEE team at IIT Bombay it is an EDA tool for circuit design, simulation, analysis and PCB design. Free tutorials of Oscad are available at <http://oscad.in/resources/tutorials>.