

**DEPARTMENT OF CIVIL ENGINEERING
JAMIA MILLIA ISLAMIA**

PEDAGOGY

Pedagogical initiatives

- Department arranges special lectures for students by experts from industries, other universities in India and abroad and research organizations.
- Our teachers regularly attend refresher courses and Orientation program to enhance their knowledge and to adopt modern teaching practices.
- Central Library of the University has subscribed all the Bureau of Indian Standards (BIS) codes online which can be downloaded from University Library Website.
- The university is fully Wi-Fi campus to promote e-learning during free time and after the classes to access educational curriculum outside of a traditional classroom.
- In addition to above, teachers make use of models to demonstrate the concept for better understanding. Site visits are also conducted to reinforce the class room teaching.

Some of the resources available to the students from India and abroad are given below tables:

Educational Resources from India

Name of the program	Brief Description
UGC TVCs and Radio Jingles regarding SWAYAM initiative https://www.ugc.ac.in/video.aspx	Report on Orientation Workshop along with the road map ahead for UGC Swayam Coordinators (USC)
National Program on Technology Enhanced Learning (NPTEL) Accessible at: http://www.nptel.iitm.ac.in http://nptel.iitk.ac.in https://www.youtube.com/user/nptelhrd	NPTEL provides E-learning through online Web and Video courses in Engineering, Science and humanities streams. The mission of NPTEL is to enhance the quality of Engineering education in the country by providing free online courseware.
Talk to A Teacher Accessible at: http://co-learn.in/	
The following are the initiatives under “Talk to the Teacher”	
(i) Ask a Question	Ask A Question is a unique platform through which students from science and engineering colleges all over India can ask questions and faculty from IIT Bombay

	answers them. Students can ask questions either through an online forum or during an interactive live session, held every Thursday from 4:00 P.M to 5:00 P.M.
(ii) Courses on View http://co-arn.in/coursesonview	Engineering and Science courses recorded live in the classrooms of IIT Bombay are now available for everyone.
(iii) Spoken Tutorial http://www.spoken-tutorial.org/	Portal offers tutorials in multiple languages on various free-and-open-source software. Interested users may add their tutorials in any language of their choice.
(iv) A-View http://aview.amrita.ac.in/ Offers two components:	
A-VIEW Classroom	<p>A-VIEW Classroom is a framework that provides a rich interactive social environment for E-Learning. It is simple, user friendly video conferencing software, which provides a great opportunity to a teacher to teach in a live interactive mode to various geographical locations across India.</p> <p>A-VIEW Classroom provides opportunity to connect several universities together and creates virtual world for students. It also acts as a Knowledge Cafe where students can discuss /chat about the lecture after the live class.</p>
A-VIEW Meeting	<p>A-VIEW Meeting is essentially a conference center where meeting halls have no walls. It enables your colleagues from across the globe to interact face-to-face with you electronically and conduct live meetings, presentations or training from the comfort of their desks. A-VIEW Meeting is currently used by senior officials in the Ministry of Human Resource Development for their communications with organizations all over the world.</p>
Virtual Labs	Accessible at: http://www.vlab.co.in/
	<p>To provide remote-access to Labs in various disciplines of Science and Engineering. These Virtual Labs would cater to students at the undergraduate level, post graduate level as well as to research scholars.</p> <p>To share costly equipment and resources, which are otherwise available to limited number of users due to constraints on time and geographical distances.</p> <p>To provide a complete Learning Management System around the Virtual Labs where the students can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and</p>

	self-evaluation.
Teacher Portal (Class room resources)	http://www.teachersofindia.org/en
National Repository of Open Education	http://nroer.gov.in/home/
Future learn	www.futurelearn.com

Educational Resources from Overseas

Name of the Resource	URL
Coursera	https://www.coursera.org/
Khan Academy	http://www.khanacademy.org/
Open Courseware Consortium	http://www.ocwconsortium.org/home.html
Open Culture	http://www.openculture.com/2007/07/freeonlinecourses.html
Open Learn	http://www.open.ac.uk/openlearn/home.php/
Open Michigan	https://open.umich.edu/
Open Yale Courses	http://oyc.yale.edu/
Webcast.Berkley	http://webcast.berkeley.edu/
World Lecture project	http://www.world-lecture-project.org/index.php?navId=1
Courses for Higher Education	https://www.edx.org/
Lecture fox	http://www.lecturefox.com
MIT	http://techtv.mit.edu http://ocw.mit.edu http://video.mit.edu
Berkeley University	http://ocw.uci.edu
Princeton University	www.princeton.edu/webmedia
John Hopkings University	http://ocw.jhsph.edu
Rice University	http://cnx.org
Carnegie Mellon University	http://www.cmu.edu/oli
Tufts Open Courseware	http://ocw.tufts.edu

University of Notre Dame	http://ocw.nd.edu
Paris Tech Graduate School	http://graduateschool.paristech.org
Open University of Nederland	http://ocw.tudelft.nl
University of Southern Queensland	http://ocw.usq.edu.au/
United Nations University	http://www.ocw.unu.edu
OER Commons	www.oercommons.org
Open learning object repository:(Merlot)	http://merlot.org/merlot/materials.htm?materialType=Learning%20Object%20Repo
Open textbooks: (Connexions)	http://cnx.org/
Aggregated video: Academic Earth	http://www.academicearth.org
Mixed Media: Wikimedia	http://en.wikipedia.org/wiki/Mixed
University of Minnesota: (Open academics textbook catalog)	http://open.umn.edu/opentextbooks/
Open textbooks for K12: (Siyavula)	http://www.siyavula.com/
Excel Tutorial	http://www.excel-easy.com/

- Methodologies to support weak students and encourage bright students.
- The Department has a policy of mentoring the students for which Faculty members are allotted as mentors for each semester.
- The Time Table of B.Tech.(Civil) Program has a slot of one period for mentoring the students.
- The mentor identifies the weak students based on the performance of first sessional test and explores the reasons for poor performance.
- The weak students are directed to meet the mentor and discuss their problems regularly.
- The mentor guides the students to take corrective measures to improve the performance after knowing the problems of individual students.
- The mentor tries to know the interest of bright students to choose the option for their carrier such as higher studies, placement in public sector, PSU's, consultancy or design job etc.
- The bright students who wish to go for higher studies are encouraged to publish research papers by carrying out study under a faculty from specialization of their

interest and also from the study of their major project.

- The bright students are guided for scoring good ranks in competitive examinations.
- Quality of Classroom Teaching (Observation in a class)
- All the class rooms/lecture theatres are equipped with LCD projectors, white board & black board and are fully air-conditioned.
- The lectures are delivered by using conventional as well as innovative teaching pedagogy such as PPT, white board, chalk and talk, NPTEL video lectures and the lectures recorded by the faculty of the other premier institutions of India and abroad.
- Teachers prepare exigent assignments, tutorials and surprise quizzes that are periodically conducted to develop problem solving skills.
- Students are given term projects on current issues in different specializations of civil engineering that entails review of literature, data collection, report preparation, and presentation.
- Conduct of Experiments (Observation in Lab)
- The curriculum includes three to four laboratory/design courses per semester.
- The theoretical ideas are strengthened in these courses as theory and laboratory sessions are conducted in the same semester.
- The detailed instructions are given in the first laboratory class of each semester.
- The class is divided in several small groups to conduct the experiments.
- Continuous Assessment in Laboratory
- The students perform one experiment in each lab class and record the observations which are duly checked by the concerned faculty.
- The students submit the laboratory report in the following week for evaluation.
- Laboratory evaluation is carried out on overall performance of student in each experiment based on observation recording, computation and analysis of results, discussions and report writing.
- The remarks given on each report by the faculty are corrected by the students which are duly checked later for the compliance.