

Sir JJ College of Architecture,
Mumbai, India

Center of Excellence -
Customer Success Story

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Prof Rajan Lakule, Principal of Sir J.J. College of Architecture

Sir J.J. College of Architecture, Mumbai, India

Teaching excellence

Autodesk provides faculty and students with multi-disciplinary courseware and 3D design skills to meet real world challenges

School / Project Summary

The Sir JJ College of Architecture in Mumbai has long established itself in year 1913 as the premier institution for architecture in India. With up to 400 students at the undergraduate level, and a postgraduate strength of up to 24 students, the school offers Bachelor degrees in Architecture, and Masters degrees in Architecture (Research).

As the oldest college of architecture in Asia, the school has educated chief founders of the architectural movement in India, along with thousands of other architects practicing all around the globe.

"As the Department of The University of Mumbai, we strive to set the benchmark for architecture education in India and are in the position to contribute to the curriculum at the university's other

affiliated colleges in Mumbai, which have up to 3,000 students in total,” said Prof. Rajan Lakule, Principal, Sir JJ College of Architecture.

Challenge

With the Indian government’s renewed focus on infrastructure development as a means to spur the growth of the economy, the country is facing a growing need for qualified architects who are trained in inter-disciplinary areas of urban design and building technology.

“The real world is interdisciplinary and students need to understand the concept and importance of design technology, industry practices and standards. For example, an architect needs to not only understand conceptual design, but also how a project is being managed and how a structural or MEP engineer works” said Prof. Lakule.

In order to push the boundaries in the way architecture is taught and raise the standard of projects produced by students, the College decided it needed to work with an industry leader in design software to develop a curriculum that would equip the next generation of architects with world-class design skills to stay at the forefront of the industry.

The Solution



The Sir JJ College of Architecture and Autodesk formed a strategic partnership and developed a Center of Excellence in April 2006.

Comprising state-of-the-art computer laboratory with cutting-edge 2D and 3D model-based design technologies from Autodesk, the Center of Excellence has helped the College’s professors and students alike to redefine traditional design and industry processes in Architecture, Structural Engineering, MEP Engineering, GIS and Industrial Design.

“We are committed to supporting excellence through academic achievement,” said Tom Joseph, Director – Education Programmes, Autodesk Asia Pacific. *“Apart from working closely with Sir JJ College of Architecture’s faculty to design and implement new and innovative approaches to teaching design and engineering, Autodesk is also helping to develop multi-disciplinary courseware that directly addresses the concepts of 3D design and engineering supported by Autodesk software”.*

The multi-disciplinary curriculum developed together with Autodesk takes a modular approach and includes Instructor Lecture Notes, Student Workbook and Datasets, and introduces students to concepts such as building information modeling (BIM), dynamic civil modeling and digital prototyping. This curriculum serves as a template for the formal exploration of the utility and efficacy of design methods and tools, and supports the critical thinking students need to prepare themselves for the integrated practice of design.

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The Result

Influencing the influencers

As the first of its kind in India, the Centre of Excellence acts as a hub for hands-on training and seminars by industry stalwarts in India. The pioneering interdisciplinary approach adopted at the Center also means that experts from different fields can be brought together to discuss how architectural, GIS and industrial design software can be used to drive qualitative change in the urban planning and built design environment.

Designing in 3D for the first time



With full access to Autodesk 3D design solutions at the Center of Excellence, 3D has become an essential element of the curriculum developed by faculty and projects created by students at the College.

“Each student at our College completes a compulsory project in their 1st to 4th year of study that requires them to create architectural drawings of India’s major historical landmarks,” said Prof. Lakule.

“In the past, they were only able to do this in 2D. Now with the cutting-edge solutions provided by Autodesk at the Center of Excellence, students can create 3D digital models of these monuments to better visualize, simulate and analyze the change of these historical sites over time.”

This has helped facilitate the students’ transition from 2D drafting to key areas of inter-disciplinary focus such as building information modeling, civil modeling and lifecycle management, and the time taken by students to complete their designs has decreased as well. These 3D works developed by the students will be compiled into a book by the College, and the digital archives are accessible by industry professionals and public works departments as well.

Better quality designs in less time

“Today’s students are tomorrow’s professionals, and they must be encouraged to dream and stretch the limits of their imagination in the realms of architecture, mechanical design, civil/geospatial engineering,” said Prof. Lakule.

"These possibilities were limited before when forced to design in 2D, and we saw a need to leverage the industry's advances in 3D design technologies to inspire innovation and creativity amongst both our faculty and students."

With the Autodesk 3D design tools and supporting courseware provided at the Center of Excellence, students are able to engage and explore new design alternatives and what-if scenarios. This makes the learning experience richer, and the learning environment closer to that experienced in the industry. The state of the art laboratory further provides an innovative learning environment as faculty can mimic real industry scenarios, and students can solve practical challenges through teamwork and collaboration.

As a result, faculty at the College have observed that the quality of drawing and detailing has improved amongst students, and the exchange of thoughts and evaluation has become more scientific and impressive.

The positive feedback that the school has received has also led the College to introduce this multi-faceted curriculum developed together with Autodesk to The University of Bombay's other affiliated colleges, thereby cementing the school as a thought leader in architecture and raising the bar for architectural education in Mumbai as well.

"The results speak for themselves. Our first batch of students who were trained in the CoEs graduated in 2006, and 100% were employed within 3 months" said Prof. Lakule.

Call to Action

To learn more about Autodesk's academic solutions and programs, including Autodesk Design Academy, visit www.autodesk.com/education.

To download free Autodesk 3D software, including Inventor Professional, VIZ and Revit Architecture and free curriculum, join the Autodesk Online Community at www.autodesk.com/school.

To learn more about Sir JJ School of Architecture, visit www.sirjjarchitecture.org/.

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