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Dr. N. S. Naik  
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Prof. S. S. Kolapkar  
Prof. A. S. Jape  
Miss. Tejal Sonawane  
Mr. Anurag Pagar  
Mr. Pranav Kulkarni  
Mr. Gaurav Game

### Vision of the Institute

To develop world class professionals through quality education.

### Mission of the Institute

To create Academic Excellence in the field of Engineering and Management through Education, Training and Research to improve quality of life of people.

## Sanjivani College of Engineering, Kopargaon

(An Autonomous Institute)

Affiliated to Savitribai Phule Pune University, At Sahajanandnagar,  
Post Shingnapur-423603, Ta:  
Kopargaon, Dist.: Ahmednagar  
(MS)

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# Structural Engineering Newsletter

Volume 1

Aug 2021

### Vision of the Department

To achieve national and international recognition in structural engineering education.

### Mission of the Department

- To nurture graduates as problem solvers who develop innovative solutions for industry related problems.
- To create graduates who possess the knowledge and skills for future challenges and lifelong learning as a structural engineer.
- To maintain healthy environment in the department which encourage our graduates and faculty to achieve their best in academics and research.

## Hod's desk



Sanjivani Rural Education Society's (SRES) Sanjivani College of Engineering, Kopergaon established in the year 1983 is pioneer in providing quality education in rural part of Maharashtra. Due to high demand of structural engineering jobs in India and abroad, the institute has come up with the B. Tech. and M. Tech. degree in Structural Engineering from the academic year 2020-2021.

Besides quality teaching at B.Tech and M.Tech level the department is actively involved in basic and applied research and consultancy services. There are experienced and well qualified teaching staff members who carry out the regular academic activities as well as curricular and extracurricular activities as per the plans prepared in advance at the beginning of every semester.

The department has successfully completed first year of B.Tech. and M.Tech. Structural Engineering and achieved many good things for the future development of the department such as F.Y. B.Tech. and F.Y. M.Tech. result of 2020-21 are 100 %. The department has got recognition as a life time member of Indian Society of Structural Engineers.

## Faculty strength

1.	<b>Dr. A. S. Sayyad</b> (Professor & Head) Ph.D., 15 Yrs. Experience
2.	<b>Dr. N. S. Naik</b> (Associate Professor) Ph.D., 25 Yrs. Experience
3.	<b>Prof. S. M. Gunjal</b> (Asst. Prof.) M.E., 11 Yrs. Experience
4.	<b>Prof. B. M. Shinde</b> (Asst. Prof.) M.E., 11 Yrs. Experience
5.	<b>Prof. P. N. Shinde</b> (Asst. Prof.) M.E., 15 Yrs. Experience

6.	<b>Prof. S. S. Kolapkar</b> (Asst. Prof.) M.E., 06 Yrs. Experience
7.	<b>Prof. A. S. Jape</b> (Asst. Prof.) M.E., 06 Yrs. Experience

## Laboratories

Department has well equipped laboratories such as Engineering Mechanics Lab, Testing of Material Lab, Structural Analysis and Design Lab, Structural Audit and Health Monitoring Lab, etc.



## Professional Society Membership

In this academic year, the department of structural engineering has registered as a lifetime member of Indian Society of Structural Engineers. Under this banner, all the students of the department will get a chance to learn from eminent personality/industry people from structural engineering domain.



## Admission (2020-21)

- F.Y. B.Tech. – 26/60
- F.Y. M.Tech. – 20/20

### GATE Qualified M.Tech. Students

Name of Student	GATE Score
Game Gaurav	32.12
Rajendra Betkar	30.66
Priyanka Gunjal	29.46
Deepak Gawali	26.32

## F.Y. 1st Semester result

- F.Y. B.Tech. – 100 %
- F.Y. M.Tech. – 100 %

### List of Subject Toppers (1st Semester, F.Y. B.Tech.)

Subject code	Name of Student	Marks Obtained
LA101	Rakshe Priyanka A.	95/100
	Sonawane Tejal V.	95/100
EP102	Sonawane Tejal V.	93/100
CF105	Dawange Saurav R.	81/100
EM110	Sonawane Tejal V.	93/100
BM108	Sonawane Tejal V.	48/50



**Sonawane Tejal V.**  
F.Y. B. Tech. (Structural Engineering)  
Heartily Congratulations for securing 1<sup>st</sup> position in the Semester-I examination

### List of Subject Toppers (1st Semester, F.Y. M.Tech.)

Subject code	Name of Student	Marks Obtained
ST601	Pranav Kulkarni D.	80/100
	Ajay Randhav	80/100
	Abhijit Shinde	80/100
ST602	Pranav Kulkarni	93/100
ST603A	Rajkumar Betkar	89/100
ST603B	Abhijit Shinde	80/100
ST604B	Saraubh Bhor	94/100
ST604C	Pranav Kulkarni	92/100
ST605	Rajkumar Betkar	40/50



**Pranav Kulkarni D.**  
F.Y. M. Tech. (Structural Engineering)  
Heartily Congratulations for securing 1<sup>st</sup> position in the Semester-I examination.

## Industry programs

Department has organized three guest lectures by industry people in this academic year 2020-21 for F.Y. B.Tech. Structural Engineering Students. Experts have given lectures on Career Opportunities for Structural Engineers in Private and Government Sectors.

### 1. Mr. Rajkumar Betkar

An Expert lecture by Er. Rajkumar Betkar, Junior Engineer, Toyo Engineering India Pvt. Ltd, on “Future Job opportunities for Structural Engineers” was delivered on 22nd May 2021, for the F.Y. B.Tech. Structural Engineering students under Sanjivani I-connect.




Sanjivani Rural Education Society's  
**Sanjivani College of Engineering, Kopergaon**  
An Autonomous Institute, Affiliated to SPPU, Pune  
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Accredited by NAAC (A Grade) and NBA



**Department of Structural Engineering**  
Civil Engineering Students Association (CESA)



Organizes  
(Under CESA I Connect)  
An Expert Talk (Online Mode) on



**“Future Job opportunities for Structural Engineers”**  
By  
**Mr. Rajkumar Betkar**  
Junior Engineer,  
Toyo Engineering India Pvt. Ltd

Date – 22/05/2021  
Time – 01:00 PM

Prof. A.R.Pabale	Dr. A.S.Sayyad	Dr. A.G.Thakur	Hon. Shri Amit N Kolhe	Hon. Shri Nitin S Kolhe
Event Coordinator	HOD Structural Dept.	Director	Managing Trustee	Executive Trustee

### 2. Mr. Amit Kaushik

An Expert lecture by Mr. Amit Kaushik, Business Development and CRM Head, knest Verticals, Former VP of Mayra Aluminum Formwork on “Future opportunities for Structural Engineers in Private Sectors” was delivered on 3rd July 2021, for the F.Y. B.Tech. Structural Engineering students under Sanjivani I-connect.

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**Department of Structural Engineering**  
Structural Engineering Student Association  
Organizes (Under My Story Board)  
An Expert Talk (online mode) on  
"Future Opportunities for Structural Engineer in Private Sector"  
By  
**Er. Amit Kaushik**  
Business Development and CRM Head, knest Verticals  
Former VP of Mayra Aluminium Formwork

Date – 03/07/2021  
Time – 11:00 AM

Prof. B M Shinde	Dr. A.S.Sayyad	Dr. A.G.Thakur	Hon. Shri Amit N Kolhe	Hon. Shri Nitin S Kolhe
Event Coordinator	HOD Structural Engg. Dept.	Director	Managing Trustee	Executive Trustee

### 3. Mr. Equbal Shaikh

An Expert lecture by Mr. Equbal Shaikh, Executive Engineer, Maharashtra P.W.D., Bridge Design Division, Aurangabad, on "Role of Structural Engineers in Government and Private Sectors" was delivered on 7th Aug. 2021, for the F.Y. B.Tech. Structural Engineering students under Sanjivani I-connect.

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Accredited by NAAC (A Grade) and NBA

**Department of Structural Engineering**  
Organizes (Under i-connect)  
An Expert Talk (online mode) on  
"Role of Structural Engineers in Government and Private Sectors"  
By  
**Er. Equbal Shaikh**  
Executive Engineer, Maharashtra P.W.D.,  
Bridge Design Division, Aurangabad

Date – 07/08/2021  
Time – 05:00 PM

Dr. N. S. Naik	Dr. A. S. Sayyad	Dr. A.G.Thakur	Hon. Shri Amit N. Kolhe	Hon. Shri Nitin S. Kolhe
Event Coordinator	HOD Structural Engg. Dept.	Director	Managing Trustee	Executive Trustee

## Research & Development Activities

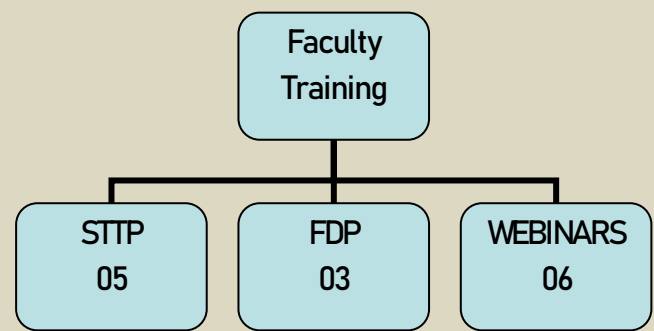
Department Faculties have published 11 research papers last academic year (AY 2020-21) in highly reputed SCI/SCOPUS indexed Journals.

1. **A.S. Sayyad**, Bending, buckling and vibration analysis of functionally graded nanobeams using an inverse trigonometric beam theory, International Journal of Nano Dimension, Vol. 12(2), pp. 164-174, 2021.
2. **A.S. Sayyad**, A unified five degree of freedom theory for the bending analysis of softcore and hardcore functionally graded sandwich beams

and plates, Journal of Sandwich Structures and Materials, Vol. 23(2), pp. 473-506, 2021.

3. **A.S. Sayyad**, Interlaminar stress analysis of orthotropic laminated doubly-curved shells on rectangular planform under concentrated force, ASCE Journal of Aerospace Engineering, Vol. 34(2), pp. 04020116, 2021.
4. **A.S. Sayyad**, Thermomechanical bending analysis of FG sandwich plates using a Quasi-Three-Dimensional theory, ASCE Journal of Aerospace Engineering, Vol. 34(3), pp. 04021007, 2021.
5. **N.S. Naik**, Higher-Order Displacement Model for Cylindrical Bending of Laminated and Sandwich Plates Subjected to Environmental Loads. Mechanics of Advanced Composite Structures, 8(1), 185-201.
6. **A.S. Sayyad**, On the buckling analysis of functionally graded sandwich beams using a unified beam theory, Journal of Computational Applied Mechanics, Vol. 51(2), pp. 443-453, 2020.
7. **A.S. Sayyad**, On the static deformation of FG sandwich beams curved in elevation using a new higher order beam theory, Sadhana Journal, Vol. 45(1), pp. 1-16, 2020.
8. **B. M. Shinde**, A new higher-order theory for the static and dynamic response of sandwich FG plates, Journal of Computational Applied Mechanics, 52 (1), 102-125 DOI: 0.22059/JCAMECH.2020.313152.569, 2020.

## STTP/FDP/Webinars Attended by the Faculty



## Faculty interaction with outside world

Dr. A. S. Sayyad has delivered an expert lecture as resource person in 5 days faculty development program "Basic Principles and Process to write an Ideal Research Paper" organized by D. Y. Patil School of Engg. Lohegaon, Pune on 22nd May, 2021 at 11:00am



Dr. D. Y. Patil Group of Institutions' Technical Campus  
**Dr. D. Y. PATIL SCHOOL OF ENGINEERING**  
 Dr. D. Y. Patil Knowledge City, Charholi Bk., Via. Lohegaon, Pune - 412 105.  
 Department of Civil Engineering

APPRECIATION LETTER

To,

Dr. A S Sayyad,  
 Professor & Head,  
 Structural Engineering Department,  
 Sanjivani College of Engineering, Kopargaon.

Dear Sir,

1. Please accept our sincere thanks for the excellent guest lecture given by you on the topic 'Basic Principles and Process to write an Ideal Research Paper' on 22<sup>nd</sup> May, 2021 at 11:00am.
2. Your guidance will motivate all those who wish to tread the path of research and beyond. We are indebted to you for the valuable insights on the difficult path of research which I am sure lot of participants will take, after listening to your lecture.
3. We once again thank for sparing your valuable time and enlightening the participants.

Thanks, with regards.

Yours Sincerely,

Lt. Col. Sanjay Karodpati (Retd.)  
 Head of Civil Department,  
 Dr D Y Patil School of Engineering, Lohegaon,  
 Pune.

## Student articles



**Mr. Anurag Pagar**  
 F.Y. B.Tech. Students  
 (Structural Engineering)

"Education is not just about learning new things but it is rather the training of our mind to think."

A structural engineer has knowledge about Civil, Architecture etc. I have selected the structural engineering branch after my 12th standard because I

always wanted to learn something new and create a unique. Structural Engineering branch focuses on analysis and design of engineering structures, which includes bridges, flyovers, dams, building. Structural Engineer makes sure all our structures are safe to use. To fulfill my dream I have chosen Structural Engineering at one of the most premier college in Maharashtra i.e. 'Sanjivani College of Engineering, Kopargaon (An Autonomous Institute). I am really very happy to admit here.



**Miss. Tejal Sonawane**  
 F.Y. B.Tech. Students  
 (Structural Engineering)  
 F.Y. (Sem-I) Topper

Sanjivani Group of Institutes is the best institution from which I can make my dreams true. I have chosen the Structural Engineering as my carrier. Structural Engineers are accountable for engineering design and structural analysis. It is an excellent opportunity for me where I can learn planning, inspection, monitoring, management etc.

I am very happy and excited to fly as a Structural Engineer.



**Mr. Gaurav Game**  
 F.Y. M.Tech. Students  
 GATE Qualified Student  
 GATE Score -32.12

Structural engineering is one of the most prestigious and respected branch in construction industry. Structural engineer plays an important role in construction industry as most of the construction works require the service of structural engineers. Structural engineers are often specialize in areas such as engineering of bridges, buildings, industrial structure and foundation of structures. Without skills and technical knowledge of the structural

engineering, buildings will not be able to withstand weight, pressure and seismic activity. Structural engineer can find employment in wide variety of venues and firms specialized in architectural, engineering and construction for supervisory or administrative positions. Another option is to work as a self-employed contract engineer or as consultants. One can opt for research or teaching positions in universities too.



**Mr. Pranav Kulkarni**

F.Y. M.Tech. Students  
F.Y. (Sem-I) Topper

One of the very significant aspects of constructing a building is Structural Engineering. Structural engineering is the heart and backbone of all structures small or large. Structural engineers play an important role in all stages of design and construction to ensure that the structure can be built with durability and stability. So when it comes to building your dream home, structural engineering and design are both very important. Structural engineer can play an important role in the industry. Structural engineer can include a variety of services for the analysis and design of the renovation of existing arrangements, new structures and foundation systems. As well, services can consist of auditing of structures.

### Future Plans of the Department

**Industry based internship:** The department has planned to give industry based internship to 100 percent students so that they will be aware of advanced technologies used in the industry as well as skills required to get good jobs in industry.

**Industry base projects:** The Department has established MOUs and linkages with many industries to provide industry sponsored projects to all students in final year.

**100 percent placement:** The department is working on all the skillsets and technical knowledge required to make our students employable in the government sectors as well as private industries. The main focus of the department is to give campus placement to 100 percent students in well reputed companies /industries.

**Software Training:** The department has included advanced software based subjects in the curriculum so that students need not to take extra training of these softwares after their graduation. The department will give training to all students on AutoCAD, STADD Pro., ETABs and many other softwares used in the design of structures.

**Professional Society Membership:** The Department has taken lifetime membership of Indian Society of Structural Engineers (ISSE). Under this banner, all the students will get a chance to learn from eminent personalities of the structural engineering area.

**Patents and Copyrights:** The Department has initiated mini projects and major projects concepts where students are working on innovative ideas and filing patents or copyrights on their work. The department is providing funding to file patent or copyrights.

**Competitive Services Guidance Center:** Sanjivani College of Engineering has established competitive services guidance center where students are preparing for MPSC, UPSC and other competitive services examinations as well as GATE examination.



Thanks

Regards

**Dr. A. S. Sayyad (Professor & head, Department of Structural Engineering)**



### Program Educational Objectives (PEOs)

- PEO1:** To impart basic and advanced knowledge of structural engineering so that graduates are able to analyze and solve the industrial problems.
- PEO2:** To provide hands on training to the graduates on latest equipment and latest software to make them suitable for industries and consultancies.
- PEO3:** To equip the graduates with basic professional skills to work as a team member or leader for the socio-economical growth of the nation.
- PEO4:** To motivate the graduates to pursue research, higher education and entrepreneurship in the structural engineering field.

### Program Specific Outcomes (PSOs)

- PSO1:** Graduates will be able to provide the best possible solutions for the analysis and design problems using conventional and modern engineering tools for the sustainable development related to the structural engineering.
- PSO2:** Graduates will be able to identify societal and industrial needs through allied courses such as planning and drawing, infrastructural engineering, project management, materials, mechanics, etc.

