



**Shri Guru Gobind Singhji Institute of Engineering & Technology, Nanded
(Government Aided Autonomous Institute)**

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DEPARTMENT OF CIVIL ENGINEERING NEWSLETTER

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July to December 2019



Message from Director



Dr. Yashwant V Joshi
Director
SGGS Institute of Engineering and Technology
Nanded-431 606

I am very happy and honoured to write director's message for the newsletter of the Civil Engineering Department. I congratulate the faculty and students of the Civil Engineering department for their proactive step in starting the newsletter.

Despite being located in a rural and backward part, this institute plays a pivotal role in engineering education in the state of Maharashtra. After being selected in TEQIP-I in 2003, it came in the national limelight. The institute also got selected in TEQIP-II and then awarded with a centre of excellence in Digital and Signal Processing. The success story continued and Institute is also selected to participate in TEQIP-III. Thus, having attained a good level of UG teaching-learning process and infrastructure development, we aspire to move into a higher orbit of PG/ Doctoral and creation of centre of excellence in various thrust areas with an aim to gain international visibility.

Department of Civil Engineering has always been on the forefront in building this institution. It is indeed a praiseworthy initiative of newsletter taken up this department. I think this is a good platform to understand and exchange the views of each other and use the same for career building of students as well as for building world class institutes. I suggest to have a major theme for the newsletter and thereafter subthemes can evolved for subsequent versions. As education is the cornerstone of nation building and it can only pave the way for economic growth and prosperity the theme of the newsletter can be focusing on creating ability to Learn, Think, and Innovate. Thinking out of the box– should be encouraged amongst the students, learners and researchers. I also suggest the coordinators to have articles related to automation in Civil Industry, usage and training on software used in Civil Engineering, publish motivational articles about megastructures and engineering marvels.

I hope that the interactions between individuals and groups through this activity will be effective and fruitful from the point of view of bringing the desired changes and improvements.

I Wish the publication of newsletter all success and hope that it will be enjoyable to the stakeholders.

With regards

Message from Head of the Department



Dr. L. G. Patil
Professor and HOD Civil Engineering
SGGS Institute of Engineering and Technology
Nanded-431 606

I would like to congratulate all the stakeholders for contributing for the preparation of the newsletter of our department. It really provides a platform to showcase and acknowledge hard work and talent. I am glad to inform all about the addition two more doctorate qualified faculties to our department. In this financial year, we have taken up consultancy work to the tune of 1.8 crores (Project worth of 240 crores). The direct and indirect contribution of alumni and M.Tech students in completing consultancy work is really appreciated. We do believe that change is only constant, hence please do not hesitate to suggest any modification to Vision, Mission, PO, PSO, PEO and also curriculum.



Institute Vision:

“Education of Human Power for Technological Excellence”

Institute Mission

- Dissemination of knowledge by offering world class education
- Right to information for all stakeholders
- Promotion of sustainable industrialization to development of appropriate technologies
- Continuing education programs for reengineering of regional socio-economic system in the light of dynamic, global technological changes
- Contribution to national wealth through innovation

Department Vision:

To be a leader in teaching, research, and consultancy services in Civil Engineering

Department Mission:

- To provide quality education to students in a vibrant environment for a successful career in Civil Engineering
- To attract and encourage students for carrying innovative research by providing them with state-of-art infrastructure and knowledge base
- To provide consultancy services to industries and organizations for resolving real life problems so as to cater societal needs
- Integrate sustainable practices into all aspects of departmental planning and operations, focusing both on the current and future implications

About Department:

The Department of Civil Water Management Engineering was established in the year 1984 with an intake of 30. Subsequently, the intake was increased to 40 in 2002 and Then again increased to 60 in 2015. Change of nomenclature of Civil-Water Management (UG) to Civil Engineering (UG) effected from 2015. The Department has a good academic culture and conducive working environment. The equipment in the laboratories of different subject areas have been procured from the funding of State Government and AICTE funded projects under the category of MODROB and R&D. The infrastructure is sufficient to achieve the academic excellence. In addition to the strong placement, students are getting good ranks in GATE examination.

The Department runs two PG courses namely Water Management since 1991 with an intake of 18 and Structural Engineering since 2015 with intake of 18. The Department is a recognized Research Centre of Swami Ramanand Teerth Marathwada University. The AICTE under QIP has sanctioned two scholarships for full-time research work leading to Ph. D. degree. The M. Tech. and Ph. D. students publish high quality research papers in National and International journals. The department is having close association with the academic institutes like IIT Mumbai, VNIT Nagpur, NIT Warangal and BITS Pilani, Hyderabad campus etc.

Faculty Development Programmes (FDP):

AICTE-QIP short term course on “Advances in Water Engineering”

Coordinator: Dr. M.L.Waikar, Co-coordinator: Dr. N. H. Kulkarni

Duration: 11th March to 15th March 2019 (1 week)

Department of Civil Engineering, SGGS IE &T, Nanded successfully conducted a one-week AICTE QIP funded FDP during 11-15 March 2019 on Advances in Water Engineering. The inauguration of this FDP was held on 11/03/2019. Dr. M L Waikar, Course Coordinator, gave welcome address and opening remarks regarding the course. Dr. Y. V. Joshi, Director of the Institute delivered inaugural address and discerned the importance of topic and need of such courses. Experts from local Institute, faculty from reputed engineering colleges and industry were invited to deliver expert session. About 25 faculty from engineering colleges and polytechnics selected from all over Maharashtra took benefit of this interdisciplinary course.



AICTE-QIP short term course on “Overview of Structural Design Industry and Design of Buildings using Software”**Coordinator: Dr. L. G. Patil, Co-coordinator: Dr. P. B. Ullagaddi****Duration: 25th May 2019 to 29th May 2019 (1 week)**

Department of Civil Engineering, SGGS IE &T, Nanded successfully conducted a one-week AICTE QIP funded FDP during 25-29 May 2019 on Overview of Structural Design Industry and Design of Buildings using Software. The inauguration of this FDP was held on 25/05/2019. Dr. L. G. Patil and Dr. P. B. Ullagaddi, Course Coordinators, gave welcome address and opening remarks regarding the course. Dr. Y. V. Joshi, Director of the Institute delivered inaugural address and discerned the importance of topic and need of such courses. Experts from local Institute, faculty from reputed engineering colleges and industry were invited to deliver expert guidance. About 22 faculty from engineering colleges and polytechnics selected from all over Maharashtra took benefit of this interdisciplinary course.



AICTE-QIP short term course on “Project Management for Engineers: Recent Trends”**Coordinators Dr. M.L.Waikar, Co-coordinator: Mr. A. P. Nilawar****Duration:** 21st to 25th September 2019 (1 week)

Department of Civil Engineering, SGGS IE &T, Nanded successfully conducted a one-week AICTE QIP funded interdisciplinary FDP during 21-25 sept 2019 on 'Project Management for Engineers: Recent Trends'. The inauguration of this FDP was held on 21/09/2019. Dr. M L Waikar, Course Coordinator, gave welcome address and opening remarks regarding the course. Dr. Kumthekar, Principal, GCoE, Nagpur, delivered inaugural address and congratulated coordinator and Institute for the initiative. Dr. Y. V. Joshi, Director of the Institute discerned the importance of topic and need of such courses. Experts from local Institute, faculty from reputed engineering colleges and industry were invited to deliver expert guidance. About 25 faculty from engineering colleges and polytechnics selected from all over Maharashtra took benefit of this interdisciplinary course.



AICTE-QIP short term course on “Advances in Structural Engineering: Recent Trends”**Coordinators Dr. M.L.Waikar Co-coordinator: Dr. G. D. Awchat****Duration:** 1st to 5th October 2019 (1 week)

Department of Civil Engineering, SGGSI&T., Nanded recently organized AICTE-QIP short term course on “Advances in Structural Engineering: Recent Trends” from 1st to 5th October 2019. Total 14 outside participants, 16 in-house faculty members registered for the said program and they were all present for 15 sessions including inaugural session planned for them. The course started with inauguration function with the agile presence of Hon. Director, Y. V. Joshi, Dean Academics, Dr. R. S. Holambe, Head of Civil Engineering Department, Dr. L. G. Patil, and Course Coordinator Dr. M. L. Waikar. Dr. L. G. Patil gave detailed information about department activities. Dr. R. S. Holambe addressed QIP activities and academics in the institute. Hon. Director, Y. V. Joshi addressed the presidential message to the gathering. Dr. M. L. Waikar proposed vote of thanks of this one week short term course.



Value Added Course: (Total Station)

Coordinator: Dr. M.L.Waikar, Co-coordinator: Mr. A. P. Nilawar

The department of Civil Engineering successfully conducted a four-day training (30 hrs) on surveying equipment Total Station for 2nd year B.Tech. students from 22.09.2019 - 23.09.2019 and from 28.09.2019 - 29.09.2019. The expert from the industries, Mr. Vishal Dhore and Mr. Someshwar Tandale provided hands on training on the equipment. For the training students were divided into 4 groups (20 students per group) and each group performed the task to use total station in the college campus. After practical work students, learned to conclude all the practical work on a map using Auto Plotter and Auto CAD. This training provided an opportunity to the students to use Total Station.



Guest Lectures:

A guest lecture on Project Management was conducted on 18 & 19 October 2019. The lecture was addressed by Mr. Sunil Lokare, Project Manager at Singapore. The lecture covered various topics of Project Management which are also included in syllabus like scientific management, leadership, controlling etc. It was very informative and interactive that the students were able to know about the various trends in Project Management. The lecture was even more interesting with the examples he gave related to each topic. It was wonderful knowledge sharing and gaining information about, the Project Management. Student responded politely to this lecture.



A guest lecture on subject Engineering Geology was conducted on 11 September 2019 by Mr. Gaurav Kokandkar in Civil Engineering Department. He is pursuing his Ph.D. from SRTMU Nanded in the field of geology. He shared his valuable knowledge and experience with students. Along with this, he covered various topics regarding Engineering Geology which are including in syllabus like Mineralogy, Petrology, Structural Geology etc. Student also responded politely to this lecture. After feedback, students said this lecture was very useful for them. They learned many things like identification of different types of rock and its related application in Civil Engineering field.



TEQIP-III Activity (M.Tech. Structure Visit to G. B. Pant University of Agriculture and Technology, Uttarakhand)

The College of Technology, Pantnagar, Uttarakhand invited our Students of First Semester M.Tech. of Structural Engineering of SGGSI&T., Nanded to attend three days' workshop on "Advances in Structural Engineering" from 24th September to 26th September 2019 under twinning arrangement of Technical Education Quality Improvement Programme-III (TEQIP-III).

Total 19 students of First Semester M.Tech. Structural Engineering and Dr.G.D.Awchat, Mr. Sandeep Potdar attended the said workshop. We started journey to Pantnagar on 21/09/2019 via Manmad & Mathura and reached to the destination on 23/09/2019 evening.

Course Content: This course covers above mentioned topics:

- Non-destructive testing & evaluation of concrete structures (T)
- Non-destructive testing & evaluation of concrete structures (P)
- Application of FEM (software) in Structural Engineering (P)
- Concrete Mix Design (T)
- Concrete Mix Design (P)
- Effect of high temperature and its duration on recycled coarse aggregate concrete (P)
- Experimental behaviour of concrete filled steel tubes in axial compression (P)
- Wind loads on Building & Structures (T)
- Software Application in Structural Engineering- I & II (P)

Dr. Arun Kumar, Coordinator, TEQIP-III, Dr.S.S.Gupta, Chairman of workshop & Head of Civil Engineering and Mr. S.K. Saini, Course Coordinator of College of Technology, Pantnagar, Uttarakhand were present during the inaugural session of the program.

Dr.V.K.Verma delivered the session on "Non-destructive testing & evaluation of concrete structures (T)" as session 1 of day 1 and post lunch session on "Non-destructive testing & evaluation of concrete structures (P)" was conducted by Dr.V.K.Verma as session 2 of day 1. Dr.V.K.Verma conducted session 3 of day 1 as "Application of FEM (software) in Structural Engineering (P).

Dr.S.K.Sharma delivered session on "Concrete Mix Design (T)" as the first session of day 2. Post lunch session 2 was conducted by Dr.S.K.Sharma and delivered the session on "Concrete Mix Design (P)". Sessions 3 & 4 of day 2 after tea break was addressed by Mr.S.K.Katariya on

“Effect of high temperature and its duration on recycled coarse aggregate concrete (P)” and
“Experimental behaviour of concrete filled steel tubes in axial compression (P)”

Dr. Astha Verma delivered session 1 of day 3 on “Wind loads on Building & Structures (T)”
and session 2 & 3 on “Software Application in Structural Engineering- I& II (P)” was
conducted by Dr. Vaneeta Devi & Mr.S.K.Saini.

Dr. Arun Kumar, Coordinator, TEQIP-III, Dr.S.S.Gupta, Chairman of workshop & Head of Civil
Engineering and Mr. S.K. Saini, Course Coordinator of College of Technology, Pantnagar,
Uttarakhand were present during valedictory session.

All 19 students & 2 faculty started return journey on 27th September 2019 and reached to
the college campus on 28th September 2019 at 23.45 pm.

The primary objective of the workshop is fulfilled in the following aspects:

- 1) Expose the participants to the fundamentals of structural engineering.
- 2) Build capacity amongst the participants in the application of structural engineering
concepts and exposure of different subjects to solve real life problems.
- 3) Provide exposure to practical problems and their solutions through case studies.
- 4) Expose the participants to software application.
- 5) Learn application of advanced construction materials for evaluation of concrete
structures.



Environmental Awareness Activity: (PPT and Poster Presentation)

Coordinator: Mr. A. P. Nilawar

Department of Civil Engineering, SGGS IE &T, Nanded successfully conducted Awareness and Cleanliness Drive on 12th October 2019 from 9 am to 11:30 am. Dr. Y. V. Joshi, Director of the Institute inaugurated and congratulated Coordinators for the initiative. About 350 first year students were participated in the activity. One group of 175 students presented ppt and posters for various environment related current issues. Another group of 175 students created awareness for cleanliness inside as well as outside of the campus. Dr. R. S. Holambe, Dr. R. R. Manthalkar, Dr. M. L. Waikar and Dr. L. G. Patil interacted with the students and discerned the importance of topic and need of such drive.



Board of Studies Meeting:

Board of studies meeting were held on 27/07/2019 at Civil Engineering Department. The following members were present for the meeting.

1. Dr. M.L. Waikar, Professor, SGGS IE& T, Nanded
2. Dr. P.D. Dahe, Professor, SGGS IE& T, Nanded
3. Dr. P.B. Ullagaddi, Professor, SGGS IE& T, Nanded
4. Dr.L.G. Patil, Chairman, BOS , Civil Engineering and HOD, Civil Engineering, SGGS IE&T, Nanded
5. Dr. N.H Kulkarni, Associate Professor, Nanded

(Subject Expert & BOS member)

6. Dr. N. V. Umamahesh, Professor NIT Warangal,
7. Dr. P. Ratish Kumar, Associate Professor NIT Warangal,
8. Dr. K.Shrinivas Raju, Professor BITS Pilani, Hyderabad

(Expert from Industry & BOS member)

9. Mr. Sandeep Zade Asst. General Manager, Hiranandani Communities, Powai, Mumbai and
10. Mr. Chatrapal Somkuwar Vice President, Fortress Pvt. Ltd. Mumbai

At the onset, The Chairman, BOS, Civil Engineering welcomed all the BOS members and briefed them about the proposed syllabus of T.Y and Final Year B.Tech. The comparison of structure of undergraduate engineering programme suggested by AICTE, New Delhi and already sanctioned curriculum structure of F.Y and S.Y. along with proposed T.Y and Final Year B.Tech of SGGS IE &T, Nanded was also presented before subject expert, expert from industries and faculty members of Civil Engineering. At the end of presentation, opinion, views, suggestions, modifications were received by the members of Board of studies. The meeting ended with thanks by Chairman, BOS, Civil Engineering and Head Civil Engineering.




Alumini Meet:

A Alumni meeting of 1995 pass out batch was held on 21st and 22nd December 2019 at SGGGS IE &T, Nanded. Mr. N. A. Kelkar, Mr. S.S. Satpute, Mr. Sarang D. R., Mr. M.D. Tavhare and Ms Meena Adgaonkar attended the meet. Dr. N.H. Kulkarni gave a welcome speech and Dr. L. G. Patil, HOD, Civil Department felicitated all the alumni. Dr. M.L. Waikar, Dr. P.B. Ullagaddi, Dr.P.D. Dahe and many other teachers were also present for the occasion. Most of alumni shared their experience and expressed their sincere gratitude to the teaching and non-teaching staff who were working in this college at that time. An interactive session was kept for the second year, third year and final year student to know the current opportunities in public as well as in private sector. The vote of thanks was given by Mr. Khandu Gavane and Mr. Mahendra Deshpande. The entire programme came to an end by a photo session.



Students Extra Curricular Activities:

Sports Activities:

|  | Sr. No. | Student Name | Year | Name of the Event | Event level |
|---|---------|---|-------------------|-------------------|-------------|
| | 1. | Gitanjali D. Matalkar (Bronze Medal) | III rd | Kabbaddi | Zonal Level |

Undergraduate - Civil Engineering:

Program Education Objectives (PEOs)

The Graduates will be able to:

| | |
|-------------|--|
| PEO1 | Pursue a successful career in the diversified sectors of the engineering industry and/or higher studies by acquiring knowledge in mathematical, scientific and engineering fundamentals. |
| PEO2 | Analyze and design Civil Engineering systems with social awareness and responsibility. |
| PEO3 | Exhibit professionalism and ethical approach through leadership, team work, good communication skills, and adapt to modern trends by engaging in lifelong learning. |

Program Outcomes (POs)

On successful completion, graduates will be able to:

| | |
|-------------|---|
| PO1 | Apply knowledge of mathematics, science and engineering to Civil Engineering problems. |
| PO2 | Identify, formulate and solve Civil Engineering problems. |
| PO3 | Design various structures or particular system that meets desired specifications and requirements. |
| PO4 | Design and conduct experiments, interpret and analyze data, synthesize the information to derive conclusions. |
| PO5 | Select and use appropriate engineering techniques and software tools to analyze Civil Engineering problems with understanding of their applicability and limitations. |
| PO6 | Assess local and global impact of societal issues on Civil Engineering profession. |
| PO7 | Able to understand the impact of engineering solutions on society and demonstrate the knowledge for sustainable development. |
| PO8 | Demonstrate their professional and ethical responsibilities. |
| PO9 | Able to function as a member or a leader on engineering and science teams in various areas of Civil Engineering. |
| PO10 | Communicate effectively in both verbal and written forms. |
| PO11 | Understand and practice engineering and management principles. |
| PO12 | Adapt transformations in industry through independent and lifelong learning. |

Program Specific Outcomes

| | |
|-------------|---|
| PSO1 | Establish a Civil Engineering career in industry, government or academic field and achieve professional expertise as appropriate. |
|-------------|---|

| | |
|-------------|---|
| PSO2 | Execute innovation and excellence in Civil engineering problem solving and design in global and societal contexts. |
| PSO3 | Commit to lifelong learning and professional development in the Civil Engineering field to stay updated in technology, research topics and contemporary issues. |
| PSO4 | Understand the fundamentals of Civil Engineering in commercial contexts and in expediting construction projects. |

Postgraduate – M.Tech. Water Management:

Program Education Objectives (PEOs)

The Post-Graduates will be able to:

| | |
|--------------|---|
| PEO 1 | Apply water management knowledge in all phases of water resources planning and management. |
| PEO 2 | Develop an ability to analyse and design integrated natural and engineered water management systems to develop economically, socially and environmentally sustainable infrastructure. |
| PEO 3 | Think critically and to envisage the technical and social consequences of their actions. |
| PEO 4 | Inculcate team spirit, interpersonal, and mass communication skills so as to coordinate and lead multidisciplinary engineering teams in addressing water management issues. |
| PEO 5 | Imbibe spirit of inquiry in order to promote keen interest in pursuing higher studies, research and innovations. |

Program Outcomes (POs)

On successful completion, graduates will be able to:

| | |
|-------------|---|
| PO 1 | Capability to apply in-depth engineering knowledge and use of modern technology in developing water management systems and facilities. |
| PO 2 | Plan and conduct necessary experiments for use in analysis and design of water management systems. |
| PO 3 | Recommend economically sustainable solutions and alternatives for water management problems by including considerations of risk, uncertainty, sustainability, life-cycle principles, and environmental impacts. |
| PO 4 | Use modern/advanced techniques, tools, and skills for water management practice and research. |
| PO 5 | Communicate effectively, to function with and lead/direct multidisciplinary teams and communities to achieve the goals. |
| PO 6 | Understand concepts of professional practice, project management, and the roles and responsibilities of public institutions and private organizations pertaining to water management and regulations. |
| PO 7 | Understand ethical and societal responsibilities as water management engineer. |
| PO 8 | Recognize the need for, and an ability to engage in independent and reflective life-long learning. |

Program Specific Outcomes

| | |
|--------------|--|
| PSO 1 | Excel in the research, innovation, design and problem solving in Water Management domain |
| PSO 2 | Interact with stakeholders effectively and execute quality work within the stipulated resources. |

Postgraduate – M.Tech. Structure:

Program Education Objectives (PEOs)

The Post-Graduates will be able to:

| | |
|-------------|---|
| PEO1 | Impart concepts of Structural Engineering through the use of analytical techniques, experiments, computer simulation methods, and other modern engineering tools in the analysis and effective design of variety of civil engineering structures. |
| PEO2 | Imbibe critical thinking in analyzing a complex problem in Structural Engineering field. |
| PEO3 | Develop skills of communicating structural design effectively and undertake research in upcoming areas. |

Program Outcomes (POs)

On successful completion, graduates will be able to:

| | |
|-------------|--|
| PO1 | Acquire and be able to evaluate, analyze and synthesize current body of knowledge in Structural Engineering. |
| PO2 | Be able to identify, formulate and solve complex Structural Engineering problems with independent judgment. |
| PO3 | Be able to conceptualize and design Civil Engineering structures with appropriate consideration for public health and safety, environmental, cultural and societal considerations. |
| PO4 | Be able to explore and extract information of complex problems including design of experiments and tools, analyze and interpret data for development of technical knowledge in Structural Engineering. |
| PO5 | Be able to apply appropriate resources, techniques & tools to various problems in Structural Engineering. |
| PO6 | Be able to function effectively as an individual as well as a member or leader of a multi-disciplinary team. |
| PO7 | Be able to understand critical issues for professional practice such as detailing work and the interaction with various agencies during project life cycle. |
| PO8 | Be able to communicate effectively on complex engineering problems by written oral and visual means to the stake holders. |
| PO9 | Be able to recognize the need and have an ability to engage lifelong learning process. |
| PO10 | Be able to understand and commit to professional ethics and responsibilities while carrying out research and design activities. |
| PO11 | Be able to critically analyze, scrutinize and rectify one's decisions and actions and apply self-corrective measures |
| PO12 | Be able to communicate effectively on complex engineering problems by written oral and visual means to the stake holders. |

Program Specific Outcomes

| | |
|-------------|--|
| PSO1 | Excel in the research, innovation, design and problem solving in Structural Engineering domain. |
| PSO2 | Interact with stakeholders effectively and execute quality work within the stipulated resources. |

Publications:

A. P. Nilawar, & M. L. Waikar (2019), "Impacts of climate change on streamflow and sediment concentration under RCP 4.5 and 8.5: A case study in Purna river basin, India". Science of The Total Environment, Elsevier, 650, 2685-2696.

Ansari U S & Dr.L.G. Patil (2019), "Flow over side weirs with experimental and CFD results", Internatinal Journal of Engineering and Advanced Technology, ISSN.2249-8958(online), volume-9 Issue-1, October 2019, Page No. 1315-1319

R. S. Bhasme & M. L. Waikar, "Regionalization of Precipitation Using Clustering Technique – A Case Study of Nanded District" Journal of Indian Water Works Association, ISSN 0970-275X, Vol. LI, July-September 2019.

A. S. Parlikar, P. D. Dahe & M. Sharma, (2019), "Optimal Operation Study of Reservoir System Using Optimization and Simulation Techniques-A Case Study of Uduthorehalla Reservoir in India" Water and Energy International, 61(11), 47-51.

Shubham Borkar & Dr.G. D. Awchat (2019), "Analysis & design of G+6 building in different seismic zones by using software" International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 7, (5)2019.

Editorial Board:

Chief Editor: Dr. L.G. Patil, Professor & Head, Department of Civil Engineering.

Associate Editors: Mr. A. P. Nilawar, Assistant Professor, Department of Civil Engineering.