






Patrons	From the Chief Editor's Desk
 <p><b>Dr.N.B.R.Prasad</b> Chairman</p>  <p><b>Dr.T.V.Hanumantha Rao</b> Principal</p> <p><b>R. Govardhan Rao</b> Director Admin</p>	 <p>I am delighted at the release of this 3<sup>rd</sup> Annual Issue of Civil Engineering News, Newsletter published by Department of Civil Engineering, ANITS.</p> <p>As a matter of practice, this Annual issue is published to update all the stakeholders of the B.Tech. (Civil Engineering)</p> <p>This issue contains Department news such as Department Profile, Professional Society Activities, Faculty Publications, Workshops/ Seminars / Symposia organized, R&amp;D and Consultancy Projects in the Department, Faculty Achievements, Seminars/ Workshops/ Conferences attended by Faculty and Student Achievements for the year 2016-17.</p> <p>I congratulate the Editorial Board on this occasion.</p> <p>We are grateful to the Management, Principal and Dean, Academic Affairs for their continuous inspiration, encouragement, and support extended for the release of this “Civil Engineering News”</p> <p>~ Dr.B.N.D.Narasinga Rao</p>

## Courses Offered

The Department of Civil Engineering, ANITS, offers the following AICTE approved courses:

- **B.Tech. (Civil Engineering)** - 4 Years duration

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## Department Profile

### ANITS

Anil Neerukonda Institute of Technology & Sciences (ANITS) was founded by Anil Neerukonda Educational Society (ANES), in the fond memory of Anil Neerukonda, son of its chairman Dr. B.R.Prasad, Neerukonda. The Institute's humble journey started in 2001 with four B.Tech. Programmes. Within 14 years of its establishment, the Institute registered phenomenal growth and is accredited by NAAC with A grade and by NBA twice. It is permanently affiliated to Andhra University and achieved Autonomous status by UGC in 2015.

### Vision

*ANITS envisions to emerge as a world-class technical institution whose products represent a good blend of technological excellence and the best of human values.*

### Mission

*To train young men and women into competent and confident engineers with excellent communicational skills, to face the challenges of future technology changes, by imparting holistic technical education using the best of infrastructure, outstanding technical and teaching expertise and an exemplary work culture, besides moulding them into good citizens.*

### Department of Civil Engineering

The Department of Civil Engineering, established in 2011, offers the following programs

- B.Tech. Civil Engineering

Programme is approved by AICTE and affiliated to Andhra University.

### Vision

*Our Vision is to be among the preeminent Civil Engineering Departments of the Country and the World for building future Civil Engineers characterized by technological excellence and human values.*

### Mission

*Our Mission is Education. We achieve this mission through teaching, research, and consultancy in Civil Engineering with creativity, quality, sustainability, service and values as the foundational hall marks.*

### Program Educational Objectives (PEOs)

*The Program is expected to enable the students, within 3 to 5 years of their graduation, to:*

1. *Engage successfully in the practice of civil engineering profession within industry, government, or through private practice, post-graduate studies or alternate career paths.*

2. *Analyze, design and build safe, sustainable and economical civil engineering structures by applying their knowledge in one or more of the major areas of civil engineering, including environmental, geotechnical, structural, transportation, and water resources.*
3. *Apply the knowledge of mathematics, basic science, core and civil engineering to the formulation and solution of complex engineering problems as members of multidisciplinary teams.*
4. *Develop their communication skills and leadership skills and become competent, ethical and responsible professionals*
5. *Engage in life-long learning and service to their profession for betterment of society and environment*

### Program Outcomes (POs)

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

## Department Profile

11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### Program Specific Outcomes (PSOs)

1. **Civil Engineering Knowledge:** Analyse & design solutions to complex problems by applying fundamentals of sciences and civil engineering in one or more of its major areas such as structural, geo-technical, water resources, transportation and environmental engineering.
2. **Conduct investigations of complex civil engineering problems:** Use modern techniques and tools to design and conduct experiments, prepare and interpret plans and reports with valid conclusions and recommendations.
3. **Civil engineer and society:** Develop civil engineering solutions based on societal, health, safety, legal, cultural and environmental considerations for sustainable development.

### Infrastructure

All laboratories in the department are well established with latest and modern equipment. The Department has Computer Centre, A/c Seminar hall, Department library etc. The Department also has, STAAD Pro and 25 other civil engineering licensed software.

### Faculty

The Department is headed by Dr.B.N.D. Narasinga Rao, having 23 years of Teaching, Research and Consultancy experience. The Department is supported by qualified and experienced faculty, including Prof. A.Ramamohana Rao and Prof.Venkateswara Rao former Professor of Andhra University as well as skilled technicians and non-teaching staff. The Department has well equipped laboratories and spacious classrooms.



Triaxial Compression Test equipment



Compression Testing equipment



Los Angeles Abrasion testing machine



Total Station



Consolidation equipment



Laboratory Concrete Mixer



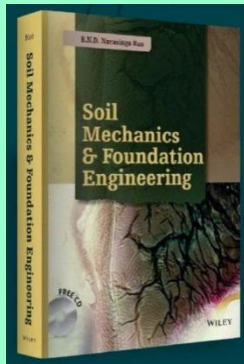
Relative density equipment



Infra-red Moisture meter

## Department Profile

He is also the Principal Investigator for UGC Minor Research Project on Fly ash utilization. Dr. B.N.D. Narasinga Rao, Professor & Head, Civil authored Text Book on Soil Mechanics and Foundation Engineering, Wiley International Publishers. This book is prescribed by 10 universities and Autonomous colleges across AP, Tamilnadu, Odisha, Rajasthan and UP. Also the book was cited as the Best Book in Soil Mechanics for GATE2017, by the Websites 'Entrances of India' and 'Indiatown.in'.



*Text Book on Soil Mechanics, Wiley Publications, being released by Prof. M.R.Madhav Visiting Professor, IIT, Hyderabad*

### Centre for Industrial Consultancy and Sponsored Research (ICSR)

The Centre for Industrial Consultancy and Sponsored Research (ICSR) was established at ANITS to be an effective Interface with the Industry in fostering technology development, technical consultancy, collaborative R&D for mutual benefits. The key agenda of the IC&SR is to showcase and transfer the Institute's intellectual ware to industry and also inject industrial relevance in teaching and research at ANITS. The uniqueness lies in the wealth of expertise and modern facilities of the Department, manned by qualified teaching faculty with wide-ranging areas of specialization.

### Consultancy Services

#### Geotechnical Engineering

- Geotechnical Investigations and Reports
- In-situ and laboratory testing of soil and rock
- Soil & Rock Sample collection & Lab Testing
- Recommendation of suitable foundation and Solutions to Foundation problems

#### Structural Engineering

- Design of Structures
- Tests on cement, concrete, steel
- Concrete Mix design
- Tests on aggregates, bricks, stones
- Tests on other building materials

#### Transportation Engineering

- Highway materials testing
- Pavement design and maintenance
- Traffic and Transportation Planning

#### Environmental Engineering

- Water Quality analysis
- Sewage analysis

#### Surveying

- Surveying with total station;
- preparation of maps/ plans in AutoCAD



## Professional Society Activities

The Department hosts Institution of Engineers (India) ANITS Civil Engineering Students chapter and ASCE ANITS chapter and a number of events are organized by these chapters such as Workshops, Guest lectures, Engineers Day, KLRao memorial Lecture, Civil Engineering Model contest, industrial visit as well as Vinirmithi, the National level students technical symposium.



*Inauguration of American Society of Civil Engineers (ASCE) ANITS Students Chapter by Dr. G L Siva Kumar Babu, IISc, Bangalore*



*Sri B. Jayarami Reddy, Chief Engineer, GVMC, delivering the IEI Students chapter Inaugural address*



*Sri D. Kasi Visvesvara Rao, Chief Engineer, CRDA, Amaravathi, addressing students*



*Sri Mohan Fernando, L&T Chennai*



*Civil Engineering Model contest and Exhibition*

### **Faculty Publications (2016-17)**

1. Dr. B.N.D. Narasinga Rao (2016) "Properties Of Parawada Fly Ash Concrete" in International Journal of Advances In Civil And Structural Engineering, Mantech Publications, 2016, Volume 1, Issue 3, pp 8-25.
2. Dr. B.N.D. Narasinga Rao (2016) "Utilization of Fly ash from Simhadri Thermal Plant in concrete" in National Conference on Civil Engineering for Sustainability, Sep, 16.
3. MKSSK Chaitanya, (2016) "Experimental Study On Mechanical & Durability Properties Of Conventional Concrete As A Partial Replacement Of Iron Ore With & Without Use Of Glass Fibres" in International Journal of Research in Science & Technology, Dec, 16, Volume 6, Issue 4, pp 138-143.
4. Sravya P.V.R, (2016) "A Study of Quality of water supplied by GVMC at Various Distribution Points in Visakhapatnam" in National Conference on Civil Engineering for sustainability, Sep, 16.
5. Sravya P.V.R, (2016) "An Experimental Study on Parametric variations during composting of Municipal Solid Waste", in International Journal of Innovative Research in Science, Engineering and Technology, Oct, 16, Volume 5, Issue 10, pp 18483-18491.

### **Vinirmithi'17 – 3<sup>rd</sup> National Level Students' Technical Symposium**

Vinirmithi'17, Third National level students' technical symposium was organized by the Department of Civil Engineering in association with Institute of Engineers (India) ANITS students' chapter during February 14-15, 2017. The symposium was inaugurated by the chief Mr R. Nageswara Rao, Superintending Engineer, Water Resource Circle, Visakhapatnam. Events like Paper Presentation, Auto CAD, Bridge Contest, Technical Quiz, Memory Retention, JAM and Story Framing; are conducted to encourage students to think different and update themselves in the future innovations. A total of 300 students from various colleges have participated in these events.

### **R&D and Consultancy Projects in the Department**

1. UGC Minor Research Project on “Wealth from Waste: Fly ash characterization for its bulk utilization in Geotechnical Engineering Applications” with Dr.B.N.D. Narasinga Rao as the Principal Investigator; Amount Sanctioned: Rs.3.1 lacs
2. Successfully completed the Consultancy project, “Geotechnical investigations for Waste to Energy Power plant at Kapuluppada Municipal dump site” with Dr.B.N.D.Narasinga Rao as the Principal Investigator, worth Rs.1.64 lacs including laboratory testing worth Rs.10,500 at ANITS and drilling of 5 bore holes and in-situ testing by Simhadri bore wells for M/s Jindal Urban Waste Management (Visakhapatnam) Ltd. during August-October 2016.
3. The Department undertakes consultancy services in the following areas
  - a) *Material Testing: Soil, aggregate, cement, concrete, steel, brick, bitumen, water etc.*
  - b) *Soil investigations and foundation selection, including Safe Bearing capacity, depth and type of foundation and its design*
  - c) *Planning and Design of all Structures*
  - d) *Surveying for all purposes using Total Station*
  - e) *Transportation and Traffic surveys etc*



### **Industrial Visits (2016-17)**

An Industrial Visit was organized to IV year Civil Students accompanied by P.V.R.Sravya, Asst. Professor, ANITS, M.K.S.S.K.Chaitanya, Asst. Professor, ANITS, Ch.Vineel, Asst. Professor, ANITS to Water and Sewage Treatment Plants at Narava and Town kotha road, Visakhapatnam.



In addition to the above, the students are exposed to the various construction works in ANITS campus.



## **Delivery details of Contents beyond Syllabus (2016-17)**

### **Faculty Seminars**

1. Dr. B.N.D. Narasinga Rao, Professor and Head, Civil, ANITS has delivered a lecture on the topic "Clay mineralogy and soil structure (Geotechnical Engineering-I)" on 05-07-2016.
2. Sri. Ch.Vineel, Asst. Professor, Civil, ANITS has delivered a lecture on the topic "Rain water harvesting, Rain gauge stations in and around Visakhapatnam (Water Resources Engineering - I)" on 24-06-2016.
3. Sri. Ch.Vineel, Asst. Professor, Civil, ANITS has delivered a lecture on the topic "Estimation of Septic tank (Estimating & Quantity Surveying" on 09-08-2016.
4. Sri. M K S S K Chaitanya, Asst. Professor, Civil, ANITS has delivered a lecture on the topic "Loads on braced members (Steel Structures- I)" on 20-09-2016.
5. Sri. T Kiran Kumar, Asst. Professor, Civil, ANITS has delivered a lecture on the topic "Traffic Signal Design and Marshall Mix Design (Transportation Engineering - I)" on 21-09-2016.
6. Mr. J Vikranth, Assoc. Professor, Civil, ANITS has delivered a lecture on the topic "Introduction to working stress method (Reinforced Concrete Structures - I)" on 13-10-2016.
7. Sri. M K S S K Chaitanya, Asst. Professor, Civil, ANITS has delivered a lecture on the topic "Gantry girders (Steel Structures – II)" on 17-12-2016.
8. Sri. M K S S K Chaitanya, Asst. Professor, Civil, ANITS has delivered a lecture on the topic "Wind load calculations for gable frames (Steel Structures – II)" on 05-01-2017.
9. Sri. Ch.Vineel, Asst. Professor, Civil, ANITS has delivered a lecture on the topic "Bar bending schedule for Reinforcement in Cages of Pile Foundations (Geotechnical Engineering – II)" on 30-01-2017.
10. Sri. Ch.Vineel, Assoc. Professor, Civil, ANITS has delivered a lecture on the topic "Fundamentals of Radiometry (Remote Sensing and Geographical Information Systems)" on 11-02-2017.
11. Mr. T Kiran Kumar, Asst. Professor, Civil, ANITS has delivered a lecture on the topic "Breakwater curves (Transportation Engineering - II)" on 23-02-2017.
12. Mr. J Vikranth, Assoc. Professor, Civil, ANITS has delivered a lecture on the topic "Design of masonry retaining wall (Reinforced Concrete Structures – II)" on 07-03-2017.
13. Ms. P. Vandana Rao, Asst. Professor, Civil, ANITS has delivered a lecture on the topic "Soil Nailing, Soil Distribution in India (Ground Improvement Techniques)" on 09-03-2017.

### Seminars/ Workshops/ Conferences Attended by Faculty (2016-17)

1. Mr.Dr. B.N.D.Narasinga Rao, Professor, Civil has attended a national conference on “Civil Engineering for Sustainability” organized by AUCE (A) on 15<sup>th</sup> September, 2016.
2. Mrs. P.V.R.Sravya, Assistant Professor, Civil has attended a Workshop on “Conservation and Management of Water Resources” organized by AUCE (A) on 18<sup>th</sup> August, 2016.
3. Mr. Ch. Vineel, Assistant Professor, Civil, has attended a Two Day national Workshop on “Significance of Geotechnical Engineering in Hydraulic Structures” organized by AUCE (A) on 1<sup>st</sup> – 2<sup>nd</sup> October, 2016.
4. Mr. T.V.Viswa Teja, Assistant Professor, Civil, has attended a Two Day national Workshop on “Significance of Geotechnical Engineering in Hydraulic Structures” organized by AUCE (A) on 1<sup>st</sup> – 2<sup>nd</sup> October, 2016.
5. Mr. T.V.Viswa Teja, Assistant Professor, Civil, has attended a national Workshop on “Finite Element Application in Engineering Analysis” organized by NIT Warangal on 10<sup>th</sup> – 12<sup>th</sup> March, 2017.
6. Mr. M.K.S.S Krishna Chaitanya, Assistant Professor, Civil, has attended a national Workshop on “Research Facilities for Studies on Soil Liquefaction, Fire Affected Structures and Coast Protection Structures” organized by AUCE (A) on 27<sup>th</sup> March, 2017.
7. Mr. M.K.S.S Krishna Chaitanya, Assistant Professor, Civil, has attended a national conference on “Civil Engineering for Sustainability” organized by AUCE (A) on 15<sup>th</sup> September, 2016.
8. Ms.P.Vandana Rao., Assistant Professor, Civil, has attended a Two Day national Workshop on “Significance of Geotechnical Engineering in Hydraulic Structures” organized by AUCE (A) on 1<sup>st</sup> – 2<sup>nd</sup> October, 2016.
9. Ms.P.Vandana Rao., Assistant Professor, Civil, has attended a Workshop on “Research Facilities for Studies on Soil Liquefaction, Fire Affected Structures and Coast Protection Structures” organized by AUCE (A) on 27<sup>th</sup> March, 2017.

### GATE 2017 Achievers

List of GATE 2017

Qualified Students

S. No.	Student Name	Rank
1	SALEPU TRINADH	1830
2	BALINA VENKATA SUNIL	3994
3	GUMMADI SUDHA KAR REDDY	6352
4	KOSURU ANANTHA SAIRAM	8475
5	VELUCHURI SAI CHANUKYA	9000
6	BOBBILI SAIKUMAR	9100
7	GODA VARTHI RAJINI	12427
8	VANKA YALA SATYA CHAKRADHAR	16987
9	VINJAMURI SWETHA MADHURI	21764

### **Placements (2017-18)**

List of the Selected Students

#### **Tech Mahindra**

<b>S.No.</b>	<b>Regd.No.</b>	<b>Name</b>
1	313126508004	Balina Venkata Sunil
2	313126508018	Godavarthi Rajani
3	313126508032	Kosuru Ananta Sairam
4	313126508061	Narimi Harish Kumar

#### **Infosys**

<b>S.No.</b>	<b>Regd.No.</b>	<b>Name</b>
1	313126508007	Bankuru Prathima Lilly
2	313126508009	Bobbili Sai Kumar
3	313126508012	Chavvakula Divya Sirisha
4	313126508017	Gidda Hari Kamal Dutt
5	313126508018	Godavarthi Rajani
6	313126508054	V. Satya Chakradhar
7	313126508058	Vyakaranapu Bhuvana

### Academic Toppers (2012-16)

#### Gold Medal Winner 2012-16



D.Lavanya (312126508063) Daughter of Sri. Donka Srinivas Rao and Smt. Donka Uma- Gold Medal Winner for the admitted batch 2012-2016. She has topped B.TechCivil with 9.21 CGPA (under Andhra University R14 Scheme).

#### List of Class Toppers

Year/Semester	I Semester	II Semester
IV Year	Ms. B Koumudhi (312126508015) 9.20 CGPA	Mr. K Pola Raju (312126508028) 9.64 SCGPA
III Year	Ms. G Aparna (313126508067) 9.14 CGPA	Ms. G Rajani (313126508018) 8.86 CGPA
II Year	Mr. K Manikantha Reddy (314126508023) 8.64 CGPA	Mr. D R Sai Muthu (314126508013) 8.69 CGPA
I Year	Mr. V Viswanath (315126508053) 9.59 CGPA	Mr. V Viswanath (315126508053) 9.22 CGPA

#### Student Achievements (2016-17)

1. D.Joy, S.Sarvani has won 1<sup>st</sup> Prize in Tech Expo conducted at Vignan Institute of Technology, Visakhapatnam.
2. R.Manasa, G. Neeharika has won 3<sup>rd</sup> Prize in Paper presentation Contest conducted at Vignan Institute of Technology, Visakhapatnam.
3. B.Sumalatha, M.Manasa, D.Joy, S.Sarvani, R.Manasa has won 2<sup>nd</sup> Prize in Treasure Hunt conducted at Vignan Institute of Technology, Visakhapatnam.
4. N. Mounika, A. Vaghna has won 2<sup>nd</sup> Prize in Paper presentation Contest conducted at J.N.T.U. Kakinada.
5. J. Swetha has won 1<sup>st</sup> Prize in Just A Minute contest conducted at S.R.K.R.College of Engineering.
6. D.Dhana Lakshmi has won 1<sup>st</sup> Prize Quiz competition conducted at S.R.K.R.College of Engineering.
7. G. Sai Lakshmi has won 1<sup>st</sup> Prize in Table Tennis (Women) conducted at AUCE (A).
8. B.Sumalatha, M.Manasa, S.Sarvani, S. Bhavani has won 1<sup>st</sup> Prize in Tech Expo conducted at Mech UTSA V Tech FEST, GITAM, and Visakhapatnam.





## Board of Studies (Civil Engineering)

1. Prof. G. Appa Rao, Professor, Civil, I.I.T., Chennai, Member
2. Dr. B.V.S. Viswanadham, Professor, Civil, I.I.T., Bombay, Member
3. Dr. T.V.Praveen, Professor, Civil, Andhra University, Visakhapatnam, Member
4. Sri. R. Nageswara Rao, Superintending Engineer, Irrigation & CAD Member
5. Prof. A. RamamohanRao, Professor, Civil, ANITS, Member
6. Mr. J. Vikranth, Associate Professor, Civil, ANITS, Member
7. Mr. M.K.S.S. Krishna Chaitanya, Assistant Prof., Civil, ANITS, Member
8. Mr. T. Kiran Kumar, Assistant Prof., Civil, ANITS, Member
9. Ms. P.V.R. Sravya, Assistant Prof., Civil, ANITS, Member
10. Mr. T.V. Viswateja, Assistant Prof., Civil, ANITS, Member
11. Dr. B.N.D. Narasinga Rao, Professor & Head, Chairman

## Editorial Board

### Chief Editor:

Dr. B.N.D. Narasinga Rao, Professor & Head, Civil Engineering

### Members:

1. J. Vikranth, Associate Professor, Civil
2. M.K.S.S. Krishna Chaitanya, Assistant Professor, Civil
3. Ch. Vineel, Assistant Professor, T & P Coordinator, Civil
4. P. Vandana Rao, Assistant Professor, Civil
5. V. Leela Manusha, Assistant Professor, Civil

### Student Members:

1. V. Chakradhar, 313126508054 (IV/IV Civil)
2. G. Rajani, 313126508018 (IV/IV Civil)
3. B. Prathima Lilly, 313126508021 (IV/IV Civil)
4. A Sai Revathi, 314126508002 (III/IV Civil)
5. G Sai Lakshmi, 314126508018 (III/IV Civil)
6. K. Manikantha Reddy, 314126508023 (III/IV Civil)
7. A. Vaghna, 315126508001 (II/IV Civil)
8. G. Omkar, 315126508020 (II/IV Civil)
9. J. Swetha, 315126508021 (II/IV Civil)
10. N. Mounika, 315126508036 (II/IV Civil)