

Annamacharya Institute of Technology and Sciences

(An Autonomous Institution)

NewBoyanapalli,Rajampet-516126 Kadapa(Dt),Andhra Pradesh.

Approved by AICTE, New Delhi, Affiliated to JNTUA, Anantapuramu, Accredited by
NAAC, IEI & ISO 9001:2015)

Recognized by UGC, New Delhi under section 2(f) & 12(B)

Department of Civil Engineering



About Us:

Annamacharya Institute of Technology & Sciences, Rajampet is an AUTONOMOUS institution and is affiliated to JNTUA, Anantapuramu. The institute was started in the year 1998 under the auspices of Annamacharya Educational Trust in picturesque surrounding on a spacious 30-acre campus near Tallapaka, the birth place of Annamacharya, the renowned saint poet.

Our Vision:

We impart futuristic technical education and instill high patterns of discipline through our dedicated staff who set global standards, making our students technologically superior and ethically strong, who in turn shall improve the quality of life of the human race.

Our Mission:

Our mission is to educate students from the local and rural areas, and from other states so that they become enlightened individuals, improving the living standards of their families, industry and society. We provide individual attention, world-class quality of technical education and take care of character building.

Civil Engineering

Vision:

The Department of Civil engineering strives to help its graduates to become technically sound and ethically strong engineers and to be recognized as one of the best Civil Engineering programs in the country through its pursuit of excellence in teaching, research and service activities, besides imparting basic knowledge.

Mission:

- The mission of AITS's Department of Civil Engineering is:
- To impart training to the students in order to make themselves suitable for the changing technologies in Civil Engineering field.
- To provide an environment which inspires the students to enhance their analytical thinking and creativity to solve the problems of rural public and problems of the world related to Civil Engineering.
- To nurture leadership and team work in the students so as to make them good leaders, entrepreneurs and responsible citizens.

Programme Educational Objectives

The following Program Educational Objectives are consistent with the College and Department Missions. Graduates of our Civil Engineering program are expected with in four years of graduation to have:

- PEO1** To apply a broad, fundamental-based knowledge and up-to- date skills required in performing professional work in Civil Engineering and related disciplines.
- PEO2** To design the works pertaining to Civil Engineering, incorporating the use of design standards, realistic constraints and consideration of the economic, environmental, and social impact of the design.
- PEO3** To use modern computer software tools to solve Civil Engineering problems and explain and defend their solutions and communicate effectively using graphic, verbal and written techniques to all audiences.
- PEO4** To demonstrate their ability to deal effectively with ethical and professional issues, taking into account the broader societal implications of Civil Engineering.

Programme Outcomes:

- PO1 Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2 Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3 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.
- PO4 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.
- PO5 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO6 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.

- PO7 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.
- PO8 Ethics: Apply** ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9 Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10 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.
- PO11 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.
- PO12 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:

PSO1 Graduates will be able to apply technical skills and Modern engineering tools for Civil Engineering Day to day practice.

PSO2 Graduates will be able to participate in critical thinking and problem solving of Civil Engineering field that requires analytical and design requirements.

About Department



In the year 2012, the Civil Engineering department was formed. The department, which is one of the Institute's key engineering departments, has expanded enormously and is now acknowledged as one of the major engineering departments. Undergraduate civil engineering program contain not just civil engineering studies, but also value education, industrial training, placement training, and computer training, all of which are required to be a successful civil engineer in today's world. The department provides field and technical visits for scholars to get practical experience. The department also provides a post graduated gree in structural engineering, which includes both core and elective courses (inter and intra department). Students can obtain practical experience through summer internships.

So, why wait? Come and join us now and build the Nation!

.... DR .T. Naresh Kumar
HOD CE

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Student achievement's

- Mr. G. Kiran Kumar, of IV B. Tech Civil Engineering has won the GOLD MEDAL in Ist A.P State Grappling (Wrestling) championship 2023 held at KVK Indoor Stadium, Anantapuramu on 2nd and 3rd August 2023.
- Mr.K. Lalitha of IV-year A sec has won 1st prize Essay writing competition contest conducted in Aits in republic day from Civil engineering department.
- Mr. I.Venusree of IV -C Sec has won 2nd prize in SPICES logo design competition contest conducted by AITS student welfare club from Civil engineering department.
- Mr. K. Bavana of III-B Sec has won 2nd prize in SPICES logo design competition contest conducted by AITS student welfare club from Civil engineering department.
- Miss K. Sai deepika III-year A- sec has won 2st prize Essay writing competition contest conducted in Alts in republic day from Civil engineering department.
- Anil II year has won 2st prize Essay writing competition contest conducted in Aits in Independences Day from Civil engineering department.
- K. karthikeya II year has won 3st prize Essay writing competition contest conducted in Aits in Independences Day from Civil engineering department.

Faculty achievements:

- Dr. T Naresh Kumar Associate professor, HOD of CE has attended a 2 days FDP on online "Research Methodology" from Greeter Kolkata college of Engineering and Management, JIS Group Educational Initiatives, from 04-07-2022 to 08-07-2022
- Mr. K. Vishnu Vardhan Assistant Professor Dept. of CE has attended a 4 days webinar series on online "Research Methodology from Greater Kolkata college of Engineering and Management, JIS Group Educational Initiatives, from 04-07-2022 to 08-07-2022.
- Dr. T. Naresh Kumar Associate professor, HOD of CE has attended a 6 days FDP on online "Latex" from 5.5.1. College of Arts and Commerce, Vidyanagar, Mumbai, Thane, from 18-07-2022 to 24- 07-2022
- Dr. D. GousePeera Associate professor, Dept of CE has attended a 5 days FDP on online "3D Printing Tech International longies" Vernu Institute of Tech international logy, P. Kothakota, Tirupati, Chittoor Dist., from 18-07-2022 to 24-07-2022.
- Dr. T haresh Kumar Associate professor, HOD of CE has attended a 6 days FDP on online "Amazon Web Services" from Vellore Institute of Tech International logy Chennai, from 22-08-2022 to 26- 08-2022.
- Dr. T haresh Kumar Associate professor, HOD of CE has attended a 6 days FDP on online "Amazon Web Services" from Vellore Institute of Tech International logy Chenna, from 22-08-2022 to 26- 08-2022.
- Dr. D. Gouse Peera Associate professor, Dept of CE has attended a 6 days FDP on online "Application of RS and GIS for groundwater management studies, Chennai, from 23-06-2022 to 29-07-2022.
- Mr. S. Venkata Vara Prasad Assistant Professor Dept. of CE has attended a 1-day FDP on online "Performance as the criteria in concrete mix proportioning from ICI, QCRETE Ready mix (INDIA) PVT LTD, on 23-08-2022.
- Dr, D. GousePeera Associate professor, Dept of CE has attended a 5 days FDP or online "Current Trends & Research in Civil Engineering, Mature Venkata Subba Rao (MVSR) Engineering College (A)(Estb-1981), Nader Gul, Hyderabad-501510, from 26- 08-2022 to 31-07-2022.

- Mrs. Rashmi Kham be international Assistant professor Dept. of CE has attended a 5 days FDP on online "Faculty Development Programme on Structural Design with STAAD PRO from Civil Engineering Department, NETTTK Chandigarh, from 19-09-2022 to 24-09-2022
- Mr. Shaik Ashraf All Assistant Professor Dept. of CE has attended days FDP on online "Faculty Development Programme on Structure Design with STAAD PRO" from Civil Engineering Department, NITT Chandigarh, from 19-09-2022 to 24-09-2022.
- Mr. K. Vishnu Vardhan Assistant Professor Dept. of CE has attended a 5 days FDP on online "Faculty Development Programme on Structural Design with STAAD PRO" from Civil Engineering Department, NITTER Chandigarh, from 19-09-2022.

Student Activities:

- N. Mahesh Babu II Student Year has attended 1 day seminar on Entrepreuship from Pulla Reddy Engineering College Kurnool.20/02/2023
- M. Lavanya II Student Year has attended 1 day seminar on Entrepreuship from Pulla Reddy Engineering College Kurnool.20/02/2023
- U. Teja III A-Sec Student Year has attended 1 day seminar on Entrepreuship from Pulla Reddy Engineering College Kurnool.20/02/2023
- S. Mahammad all IV Student Year has attended 1 day seminar on Entrepreuship from Pulla Reddy Engineering College Kurnool.20/02/2023.
- K. Vani IV Student Year A-Sec has attended 5-day seminar Entrepreuship Sri Venkateshwara to18/03/2023. University Tirupati from. 15/03/2023 on
- C. Sai Kumar IV Student Year A-Sec has attended 5-day seminar on 2023 Entrepreuship Sri Venkateshwara university Tirupati. from. 15/03/20 to18/03/2023.

Faculty activities:

- Dr. D. Sreenivasulu Associate Professor in Dept. of CE was Appointment as External Examiner IV B.Tech II Semester (R15) Supplementary project, Viva voice Examination in Acharya College of Engineering, Badvel, YSR Kadapa 28/12/2023.
- Dr. D. Sreenivasulu Associate Professor in Dept. of CE was Appointment as External Examiner for conducting practical exams of August 2023 in pulla Reddy 28/12/2023.
- Dr. T. Naresh Kumar Associate Professor in Dept. of CE was Appointment as External Examiner Siddartha institute of sciences & Technology, Puttur 04/08/2023.

Student Articles:

The Mumbai Trans Harbour In the 1990s, keeping the future of the Mumbai Metropolitan Region in mind, the Mumbai Metropolitan Region Development Authority (MMRDA) began studies on how to decongest the rising traffic and congestion in Mumbai, and accidents and mishaps as their direct consequences. There are currently six bridges connecting Mumbai and Navi Mumbai across the Thane Creek, but, they are too narrow and outdated to handle future traffic. As a result, all of them are constrained and are carrying traffic beyond their limits, also increasing the commute time between the two cities. So, the MMRDA planned to build a comprehensive link between the two cities so to handle more traffic and make travel easier, faster, safer and hassle-free. The proposal was sent to the Government of Maharashtra for consideration in 2012.



In 2015, the project was approved by the Government of India and the Ministry of Road Transport and Highways (MORTH). Hence, the foundation stone for the construction of the project was laid by Prime Minister Narendra Modi on 24 December 2016. Initially, it was expected to be completed by 2021. Then, the MMRDA awarded contracts for the project in November 2017, and construction began in April 2018, which was scheduled to be completed within 4.5 years, by 2022. However, the construction was delayed by around 8 months due to the COVID-19 pandemic, and was expected to be completed by August 2023, then again by December 2023. The construction was finally completed in December 2023, and was inaugurated by Prime Minister Narendra Modi on 12 January 2024.

PLANNING: Transportation and traffic planning for Greater Bombay (now Mumbai) was commissioned for Wilbur Smith and Associates (WSA) (now (CDM Smith) in mid-1962. The firm's report, based on extensive studies conducted over 18 months, was handed over to the Ministry of Road Transport and Highways (MoRTH) on 19 December 1963. Among other projects, the report proposed the construction of a sea link, known as the Uran Bridge, to connect Mumbai with the mainland near the town of Uran. However, WSA was unsure of the link's feasibility. Citing poor traffic expectations in Uran even in 1981, WSA's report advised a more detailed study of this connection and recommended waiting until the Trans-Thane area would develop further and more community services would be extended to Uran."In 1973, the Vashi Bridge linking Mankhurd in Mumbai with Vashi in Navi Mumbai was opened.

**Prepared by
C. Sai Deepika III – A Student**

Faculty Articles:

Konark Sun Temple is a 13th-century CE (year 1250) Sun temple at Konark about 35 kilometres (22 mi) northeast from Puri city on the coastline in Puri district, Odisha, India. The temple is attributed to king Narasimhadeva I of the Eastern Ganga dynasty about 1250 CE. Dedicated to the Hindu Sun God Surya, what remains of the temple complex has the appearance of a 100-foot (30 m) high chariot with immense wheels and horses, all carved from stone. Once over 200 feet (61 m) high, much of the temple is now in ruins, in particular the large shikara tower over the sanctuary; at one time this rose much higher than the mandapa that remains. The structures and elements that have survived are famed for their intricate artwork, iconography, and themes, including erotic kama and mithuna scenes. Also called the Surya Devalaya, it is a classic illustration of the Odisha style of Architecture or Kalinga architecture.



The cause of the destruction of the Konark temple is unclear and still remains a source of controversy. Theories range from natural damage to deliberate destruction of the temple in the course of being sacked several times by Muslim armies between the 15th and 17th centuries. This temple was called the "Black Pagoda" in European sailor accounts as early as 1676 because it looked like a great tiered tower which appeared black. Similarly, the Jagannath Temple in Puri was called the "White Pagoda". Both temples served as important landmarks for sailors in the Bay of Bengal. The temple that exists today was partially restored by the conservation efforts of British India-era archaeological teams. Declared a UNESCO World Heritage Site in 1984, it remains a major pilgrimage site for Hindus, who gather here every year for the Chandrabhaga Mela around the month of February.

Prepared by
N.Kusuma Asst Professor

➤ EVENTS IN CIVIL DEPARTMENT:

Guest lecture on information to technology:

A Guest lecture was conducted by department of civil engineering on 5th Aug 2023. Sri. Acharya Ajith Kumar Motivational Speaker and Life Teacher, VDM INDIA ON THE MOVE. He delivered a lecture on the development of India. He said that economy has grown to become one of the world's largest, driven by industries such as IT, Services manufacturing. The country has made advancements and education more over challenges like poverty, inequity and environmental. Almost 250 students and faculty members were highly benefitted by his lecture. Dr. S M V. Narayana Principal and Dr. T. Naresh Kumar, Head of the Department and all faculty numbers were present.



Independence Day:

In the month of August, the events conducted on Elocution, Essay Writing, the Test of English, Aptitude & Reasoning competition by the Department of civil engineering on 11th of this month. On this month of 15th. The prizes were given by the vice chairman of the institute Sri C. Rama Chandra Reddy Garu, Dr. SMV. Narayana Principal and Dr. T. Naresh Kumar Head of the Department. Winners of the event with institute vice chairman Sri C. Rama Chandra Reddy Garu, Principal Dr. SMV. Narayana and Head of the Department Dr. T. Naresh Kumar and coordinators Mr. S.V.V. Prasad and Mr.A. Anil Kumar Asst professors.



One week FDP on Cloud Infrastructure:

Department of Civil Engineering organized a one-week FDP program conducted on 21st Aug 2023 through online mode Sri T. Naresh Kumar organized the program. The brain vision speakers are Mr. Ganesh Nag D Founder &CEO and Ms. Ysaswi resource person collaborated with Department. All the faculty numbers and also 160 numbers attended from other institution.

Guest lecture on Entrepreneurship:

A Guest lecture was conducted by the department of civil engineering on 30th Sep 2023. Sri C. Chandra Mouli Incubation manager, delivered a power point presentation on Entrepreneurship. As the part of the program, He Said that Economy is grown in gradual process and He also explained various ways of income growth. The Participants at the event with institute Dr. S M V. Narayana Principal and Dr. T. Naresh Kumar Head of the Department, and coordinators are Mr. M. Hari Krishna Asst professor.



Inauguration program on BIS (Bureau of Indian standards)

Inauguration program was conducted by the department of civil engineering on 14th Oct 2023. Bureau of Indian standards was organized in Sri T. Naresh Kumar Garu Head of the Department. As the part of the program, He said that developing and maintaining standards for various construction techniques and services. In that services marks construction techniques with the ISI Marks. This helps consumers make informed choices and ensures the quality of the any construction projects. The Participants at the event with institute Dr. S M V. Narayana Principal, all faculty number and students attended the program.



Invitation from Engineers days:

Sri T. Naresh Kumar Head of the Department was Invited from engineering's Day on 15thSep 2023 at Visvesvaraya bhavan, IEI, Kadapa local center. In that ceremony he has gave small speech on engineering's day. He delivered that all construction building materials are stronger, smarter and safer. They Involves advancements in technology, Infrastructure and overall development to enhance resilience, efficiency and security in various aspects. All most 150 members presented in this program were highly benefitted by his lecture.

**Invitation from Institute of engineering:**

Sri T. Naresh Kumar Head of the Department was Invited from Institute of engineering's (INDIA) at Kadapa local center on 2thOct 2023. He delivered on artificial intelligences impact on enhance project management. He said that development of computer systems that can be perform tasks that typically require human intelligences. These tasks include thing learning, reasoning, problem solving. The encompasses a wide range of techniques and technologies, including machine learning and computer vision. All most 250 members attended the program.

**Online guest lecture on development and evaluation fly-ash and slag binders:**

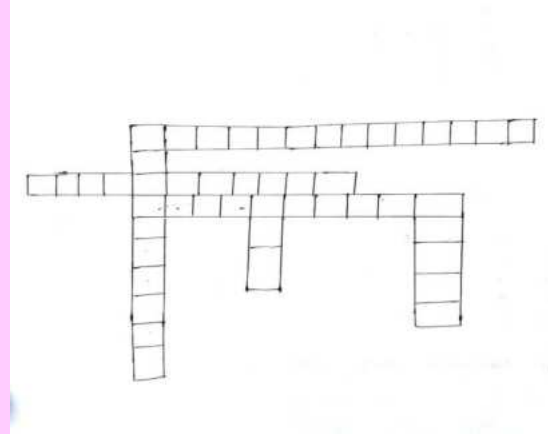
A online guest lecture is conducted by the department of civil engineering on nov 2023. Sri K. Chiranjeevi Reddy, professor, civil department as the resource person delivered a power point presentation on the topic development and evaluation fly-ash and slag binders. He explains when the concrete strength increases to the adding of GGBS (Ground granulated blast ballast slag) in the silicate and alkali activators. And also increases the high capacity of energy releases in X-rays



Diffraction. Dr. N.R. Gouthami and B. Raghu Nath Reddy is the co-ordinates of the program, The Participants at the event with institute Dr. S M V. Narayana Principal, T. Naresh Kumar Head of the department and all faculty number and students attended the program.

CROSS WORDS:

1. Material used to bind aggregates in concrete
2. Measurement of soil density
3. Device used to measure ground acceleration during earthquakes
4. Type of foundation for tall buildings
5. Material used to reinforce concrete
6. Type of structure used to divert water flow
7. Measurement of energy absorbed by a material during deformation

**Fun facts:**

The Big Pineapple is a heritage-listed tourist attraction at Nambour Connection Road, Woombye, Sunshine Coast Region, Queensland, Australia. It was designed by Peddle Thorp and Harvey, Paul Luff, and Gary Smallcombe and Associates. It is also known as Sunshine Plantation. It was added to the Queensland Heritage Register on 6 March 2009. The 2-level Big Pineapple is 16 metres (52 ft) high and was originally opened on 15 August 1971. It is situated on a 165-hectare (410-acre) site. Under new ownership the owners are facilitating new attractions such as the Big Pineapple Music Festival and the Big Pineapple was also selected to host Midnight Oil within their reunion concert series in 2017. The owners are also embarking on a master planning process through community consultation to further rejuvenate the Big Pineapple experience, with a range of new attractions and services proposed



Prepared by
E. Lokesh Gowd IInd Student

General facts:

It is the architectural wonders of a pyramid consisting of four floors. Each floor themselves were platforms on columns with a height of 50 cubic (Le. 27 meters about). The lower floor had the shape of an irregular quadrangle. It is constructed by clay bricks. To prevent water from seeping down, the surface of each platform was first covered with louver



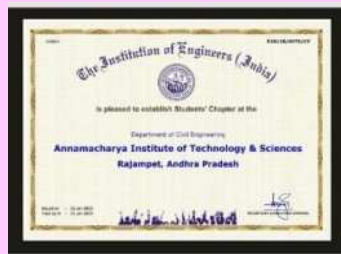
of reed mixed with natural asphalt, the two rows of bricks placed on the top built with gypsum mortar and lead plates were placed above everything to seal it all together. PARK ROYAL HOTEL, SINGAPORE. It is constructed by pre fabricated structure. It is same like a hanging gardens. It is constructed by WOHA architects. It is a sustainable building. It is highly awarded like winning the prestigious worlds leading green city hotel. Hanging gardens are also known as roof top plantation or irrigation in present days. There is an archeological evidence of water engineering. One of the scriptural panels and a drawing of another are held in British Museum. The potential flora and fauna of the gardens in the Babylonian literature traditions and ecological features of the area.

MODERN HANGING GARDENS:

These are the gardens built in the vertical structures such as wall or roof tops. The way to create the green space in area with limited land availability.

**Prepared by
O.Sai Praveen IV – I (A-SEC) Student**

IEI Student Chapter:



Preamble:

The Civil Engineering Department IEI Students' Chapter at Annamacharya Institute of Technology and Sciences (Autonomous) Rajampet is formed on 30th January 2023 to focus on overall development of Students and imbining qualities of leadership, strategic development, teamwork, marketing, publicity, and so on. The goal is to motivate students to disseminate theoretical knowledge in the context of actual applications and to learn new techniques with professional application.

- Responsibilities:
 - Establishment of Chapters (staff and students)
 - Updating the member list
 - Organization of activities
 - Establishment of student club
- Various Students' Chapters:
 - Institute of Engineers (India), IEI
- Various Students' Clubs:
 - Structural Engineering and Design Club
 - Water Resources Engineering Club
 - Transportation Engineering Club
 - Environmental Engineering Club
 - Geotechnical Engineering Club

Various technical activities are organized under the aegis of this chapter in above engineering programs.

- Following activities are carried out in this Students' Chapter.
- Guest/expert lectures
- Workshops for students
- Seminars
- Industrial visits/Technical visits for students
- Short Term Training Programs
- Social Program
- National Level Technical Symposium and Exposition (Annamacharya Talent Meet, ATM)
- Science Exhibition (Technical Projects in all the Departments)
- Intra and Inter Department Competitions
- Career Counselling and Competitive Examinations
- Soft-skill/leadership programs
- Programs on Entrepreneurship Development
- GATE Mock Test, Aptitude Test, Group Discussion, Technical Test and Mock Personal interviews for students on campus recruitment
- Student's clubs (Institute Level)

Most of these activities involve interaction with industry personnel, notable academicians and alumni.



Annamacharya Institute of Technology and Sciences