

**Annamacharya Institute of Technology and Sciences
(An Autonomous Institution)**

New Boyanapalli, 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 surroundings 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 within 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.
- 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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Staff In charge

N. Kusuma- Assistant professor.

S.No.	Contents	Pages'no's
1.	Student achievement's	5
2.	Faculty achievement's	5-7
3.	Student articles	7-8
4.	Faculty articles	8
5.	Events	9
6.	Technical crosswords	9
7.	Fun facts	10
8.	General facts	11

STUDENT ACHIEVEMENT'S:

- Mr. M. Ganesh II YEAR A-Sec has won first prize in drawing competition ina national level competition on the eve of national pollution control day.
- Mr. N. Basha,Mr. H.Pavan Kalyan,Mr. M.Bala Krishna Reddy, III YEAR A-Sec has won first prize in quiz Competition on Mathematics Day.
- Mr. O. Deepak has won the III b-sec has won the best screenplay award in the short film contest on national short film day.
- Mr. K. Gowtham has won the II -sec has won the best editor award in the short film contest on national short film day.

FACULTY ACHIVEMENTS:

- Dr. T Naresh Kumar Associate professor, HOD of CE has attended a 2 days FDP on online "Research Methodology" from Greater 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 S.S.T. College of Arts and Commerce, Ulhasnagar, Mumbai, Thane, from 18-07-2022 to 24-07-2022.
- Dr. D. Gouse Peera Associate professor, Dept of CE has attended a 5 days FDP on online “3D Printing Tech International loggias” Venu Institute of Tech International logy, P.Kothakota, Tirupati, Chittoor Dist., from 18-07-2022 to 24-07-2022.
- Dr. T Naresh 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. 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, Vel Tech, Chennai, from 23-08-2022 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.Gouse Peera Associate professor, Dept of CE has attended a 5 days FDP on online “Current Trends & Research in Civil Engineering, Maturi Venkata Subba Rao (MVSR) Engineering College (A)(Estb1981), Nader Gul, Hyderabad-501510, from 26-08-2022 to 31-07-2022.
- Mrs. Rashmi. K 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, NITTTR Chandigarh, from 19-09-2022 to 24- 09-2022.
- Mr. Shaik Ashraf Ali 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, NITTTR 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, NITTTR Chandigarh, from 19-09-2022 to 24-09-2022.
- Mr. Araveti Anil Kumar 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, NITTTR Chandigarh, from 19-09-2022 to 24-09-2022.
- Mr. Raghunath Reddy 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, NITTTR Chandigarh, from 19-09-2022 to 24-09-2022.
- Mrs. Rashmi. K 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 Ali Assistant professor Dept. of CE has attended days FDP on online "Faculty Development programmed 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 programmed on Structural Design with STAAD PRO" from Civil Engineering Department, NITTER Chandigarh, from 19-09-2022 to 24-09-2022.
- Mr. Anil Kumar Assistant professor Dept. of CE has attended a 5 days FDP on online "Faculty Development Programmer on Structural Design with STAAD PRO" from Civil Engineering Department, NITTER Chandigarh, from 19-09-2022 to 24-09-2022.
- Mr. Raghunath Reddy Assistant professor Dept. of CE has attended a 5 days FDP on online "Faculty Development programmed on Structural Design with STAAD PRO" from Civil Engineering Department, NITTTR Chandigarh, from 19-09-2022 to 24-09-2022.
- Dr. D. Gouse peera Associate professor, Dept of CE has attended a 5 days FDP on online "Tools for Engineering Research", Electrical Engineering Department, NITTTR Chandigarh, from 19-09-2022 to 24-09-2022.
- Mr. G. Naveen Kumar 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, NITTTR Chandigarh, from 19-09-2022 to 24-09-2022.
- Mr. V. Haneef Assistant Professor Dept. of CE has attended a 5 days FDP on online "Faculty Development programmed on. Structural Design with STAAD PRO" from Civil Engineering Department, NITTTR Chandigarh, from 19-09-2022 to 24-09-2022.

STUDENT ARTICLES:

Jantar Mantar is located in the modern city of New Delhi. "Jantar Mantar" means "instruments for measuring the harmony of the heavens". It consists of 13 architectural astronomy instruments. The site is one of five built by Maharaja Jai Singh II of Jaipur, from 1723 onwards, revising the calendar and astronomical tables. Jai Singh, born in 1688 into a royal Rajput family that ruled the regional kingdom, was born into an era of education that maintained a keen interest in astronomy. There is a plaque fixed on one of the structures in the Jantar Mantar observatory in New Delhi that was placed there in 1910 mistakenly dating the construction of the complex to the year 1710. Later research, though, suggests 1724 as the actual year of construction. Its height is 723 feet (220 m).

The primary purpose of the observatory was to compile astronomical tables, and to predict the times and movements of the sun, moon and planets. Some of these purposes nowadays would be



classified as astronomy. Completed in 1724, the Delhi Jantar Mantar had decayed considerably by 1857 uprising. The Ram Yantra, the Samrat Yantra, the Jai Prakash Yantra and the Misra Yantra are the distinct instruments of Jantar Mantar. The most famous of these structures, the Jaipur, had also deteriorated by the end of the nineteenth century until in 1901 Maharaja Ram Singh set out to restore the instrument.

History

Jantar Mantar located in New Delhi is built by Maharaja Jai Singh II of Jaipur in the year 1724. The maharaja built five observatories during his ruling time in the 18th century. Among these five the one in Delhi was the first to be built. The other four observatories are located in Ujjain, Mathura, Varanasi, and Jaipur.

The objective behind the construction of these observatories was to assemble astronomical data and to accurately predict the movement of the planets, moon, sun, etc. in the solar system. It was one of its kind at the time it was built. By the year 1867, when India was under the British Raj, the observatory had undergone considerable decay.

**Prepared by
E. Pavan kumar Goud III-I (B – SEC)**

FACULTY ARTICLES:

The scenic beauty of Wayanad is not just limited to its greenery and hills but also includes the glass bridge. The Glass Bridge is a 100-foot glass bridge situated on the top of a hill at 900 Kandi, Wayanad, Kerala. It is South India's first glass bridge. Constructed by a private company, this structure has captured the attention of many tourists as it looks very attractive and beautiful. This is because it has been made up of glass and has a unique design. Hence this glass bridge became a tourist attraction for people of all ages. It offers an amazing view of the valley below and the mountains around it. The idea behind constructing this bridge was to help visitors get a better view of the surrounding area while crossing over an otherwise inaccessible area filled with thick forestation. However, tourists are allowed to use the glass walkway only during daytime hours as there is no lighting on it at night time due to safety reasons. The bridge at 900 Kandi is one of the most popular tourist destinations in Wayanad. The bridge is made of glass and is surrounded by mountains on all sides. This makes it a perfect place to enjoy the beauty of nature and also to spend some time alone. Venue: 900 Kandi, Wayanad, Kerala, India.



**Prepared by
V. Haneef Asst.professor**

EVENTS CONDUCTED IN DEPARTMENT:**National film day:**

short film contest is held for the students on the of National Short film Day on 28thDec2021. Students had participated very eagerly and directed many short films. Principal of the institute Dr.S.M.V Narayana has attended the event and awarded the winners and participants at the Civil Engineering Departmental seminar hall.

Participants at the event with institute Principal Dr.S.M.V. Narayana and Head of the Department Dr.T. Naresh Kumar, coordinators Mr.A.Anil Kumar, N. Siri Chandana and department faculty.

**CROSS WORDS:**

1. Bridge component that supports the roadway:

Answer - **Pier**

2. Material used to reinforce concrete:

Answer - **Rebar**

3. Measurement of soil's ability to transmit water:

Answer - **Permeability**

4. Structural element used to distribute loads horizontally:

Answer - **Beam**

5. Process of compacting soil to increase its density:

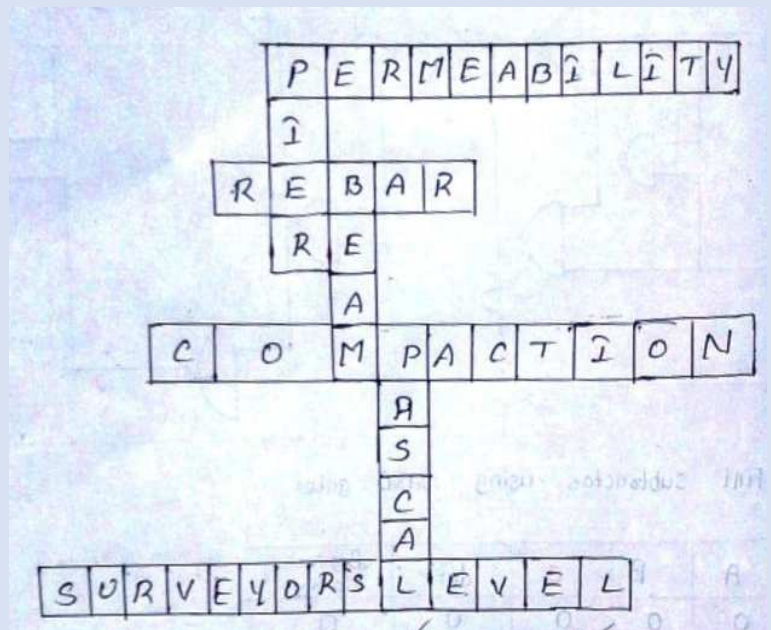
Answer - **Compaction**

6. Device used to measure distance:

Answer - **Surveyor's level**

7. Unit of measurement for pressure:

Answer - **Pascal**



FUN FACTS:

The Headington Shark (proper name Untitled 1986) is a rooftop sculpture located at 2 New High Street, Headington, Oxford, England, depicting a large shark embedded head-first in the roof of a house. It was protest art, put up without permission, to be symbolic of bombs crashing into buildings.

The shark first appeared on 9 August 1986, having been commissioned by the house's owner Bill Heine, a local radio presenter. The sculpture was inspired by Heine hearing American warplanes flying from Upper Heyford near Oxford on their way to bomb



Libya in retaliation for its attacks on American troops, and it was put up as a protest against the bombing, as well as a statement against nuclear weapons, with the shark being used as a metaphor for falling bombs. The shark was designed by sculptor John Buckley and constructed by Anton Castiau, a local carpenter and friend of Buckley. Heine said, "The shark was to express someone feeling totally impotent and ripping a hole in their roof out of a sense of impotence and anger and desperation... It is saying something about CND, nuclear power, Chernobyl and Nagasaki". The sculpture was erected on the 41st anniversary of the dropping of the Fat Man atomic bomb on Nagasaki. The painted fibreglass sculpture weighs 4 long hundredweight (200 kg; 450 lb), is 25 feet (7.6 m) long, and is named Untitled 1986 (written on the gate of the house). It took three months to build. The structure is in deliberate contrast with its otherwise ordinary suburban setting.

For the occasion of the shark's 21st anniversary in August 2007, it was renovated by the sculptor following earlier complaints about the condition of the sculpture and the house.

On 26 August 2016, Heine's son Magnus Hanson-Heine bought the house in order to preserve the shark. In July 2017, Bill Heine was diagnosed with leukaemia; he died on 2 April 2019. The property has been run as an Airbnb guesthouse since 2018. Magnus also runs a website for general information and inquiries about the shark

**Prepared by
V. Vishnu IV-I (B-SEC)**

GENERAL FACTS:

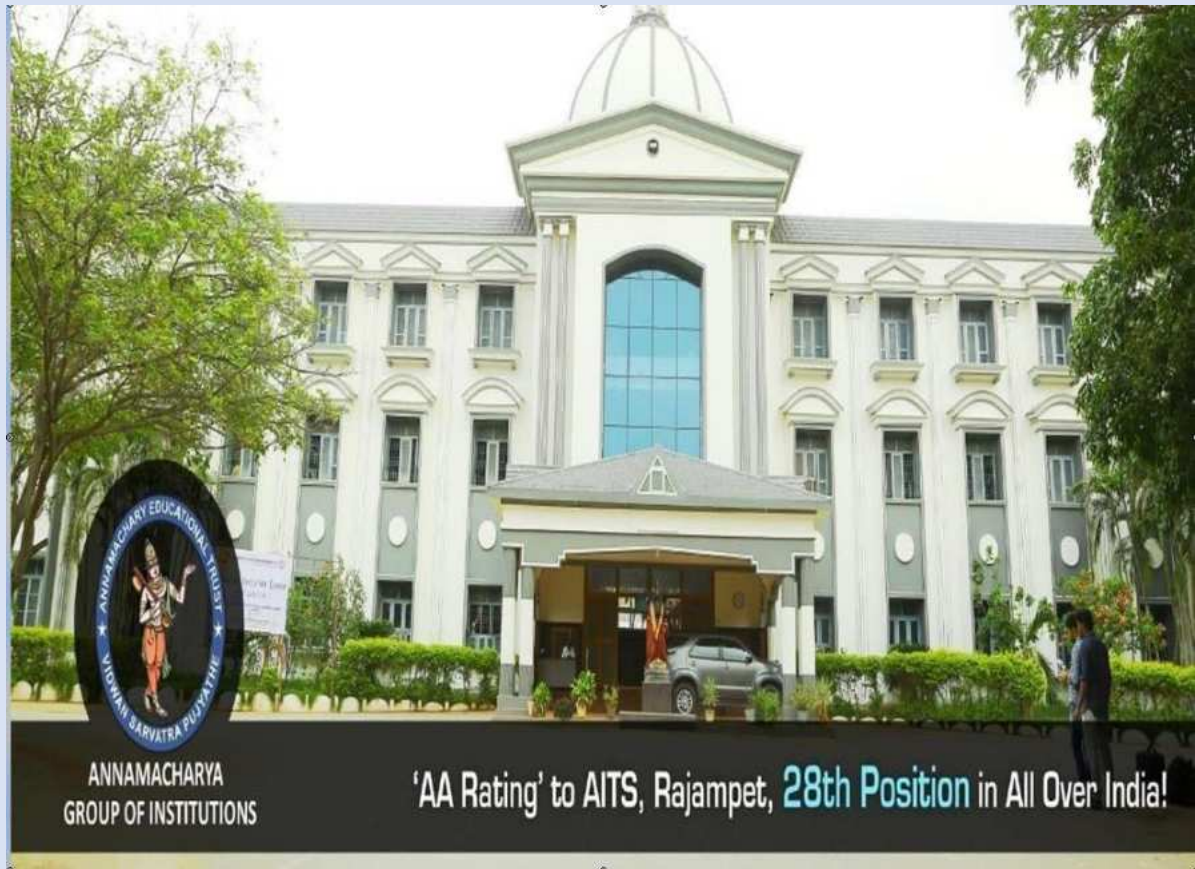
The Burj Khalifa (known as the Burj Dubai prior to its inauguration) is a skyscraper in Dubai, United Arab Emirates. It is the world's tallest structure. With a total height of 829.8 m (2,722 ft, or just over half a mile) and a roof height (excluding antenna, but including a 242.6 m spire) of 828 m (2,717 ft), the Burj Khalifa has been the tallest structure and building in the world since its topping out in 2009, surpassing Taipei 101, the previous holder of that status.

Construction of the Burj Khalifa began in 2004, with the exterior completed five years later in 2009. The primary structure is reinforced concrete and some of the structural steel for the building originated from the Palace of the Republic in East Berlin, the former East German parliament. The building was opened in 2010 as part of a new development called Downtown Dubai. It was designed to be the center piece of large-scale, mixed-use development. The decision to construct the building was based on the government's decision to diversify from an oil-based economy, and for Dubai to gain international recognition.[citation needed] The building is named in honor of the former president of the United Arab Emirates, Khalifa bin Zayed Al Nahyan. Abu Dhabi and the UAE government lent Dubai money to pay its debts. The building broke numerous height records, including its designation as the tallest building in the world.

Burj Khalifa was designed by a team led by Adrian Smith of Skidmore, Owings & Merrill, the firm that designed the Sears Tower in Chicago, a previous record holder for the world's tallest building. Hyder Consulting was chosen to be the supervising engineer with NORR Group Consultants International Limited chosen to supervise the architecture of the project. The design is derived from the Islamic architecture of the region, such as in the Great Mosque of Samarra. The Y-shaped tripartite floor geometry is designed to optimize residential and hotel space. A buttressed central core and wings are used to support the height of the building. Although this design was derived from Tower Palace III, the Burj Khalifa's central core houses all vertical transportation except egress stairs within each of the wings. The structure also features a cladding system which is designed to withstand Dubai's hot summer temperatures. It contains a total of 57 elevators and 8 escalators.



**Prepared by
K. Nandhini IV-I (A-SEC)**



Annamacharya Institute of Technology and Sciences