



Vidya Vikas Education Trust's

# Universal College of Engineering

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ITS



YTES

*An Initiative By*

**ITSA**

*Department of Information Technology*

## #SATYAVACHAN

*The secret  
to life is  
knowing  
how to  
make the  
bad times good,  
and the  
good times  
unforgettable.*

**Staff Coordinators:**

- Mrs. Sanketi Raut
- Mr. Akshay Agrawal

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## Virtual Private Network

Businesses today have various work locations and access information and data, various employees and stakeholder while accessing these data open a threat vector for hackers to enter network using such an opportunity, thus, maintaining a secured connectivity while connecting with the organization's network is essential to protect from a data breach attempt. The Data Security Firewall creates virtual private network (VPN) which is a network that is completely isolated from the rest of the Internet. VPN provides a functionality to people, businesses, military and governmental organizations to remotely use network resources in a secured manner. Virtual private networks use site-to-site as well as remote access methods to function and are free to use for the most part. VPNs consist of an array of encryption services that allow a secured connection to be formed. A virtual private network (VPN) extends a private network across a public network and enables the users to send and receive the data across shared or public networks as if their computing devices were directly connected to the private network. As a result of this, Applications running across VPN benefit hugely from the functionality, security and management of the private network. VPNs are extremely beneficial to organizations that are especially situated across multiple geographical locations. VPNs also allow employees to securely access a corporate intranet while they are located outside the office. This feature could be extremely beneficial to Road-warriors who are always moving.



Additionally, VPNs are used to securely connect geographically separated offices of an organization, to create one cohesive network. A VPN is created by establishing a virtual point-to-point connection through the use of dedicated connections, traffic encryption or virtual tunneling protocols. If we consider a user's perspective, the resources available within the private network can be accessed remotely. VPN facilitates privacy because the user's initial IP address is replaced with the one from the VPN provider. This process allows the subscribers to attain an IP address from any gateway city that the VPN service provides. For instance, you may be situated in San Francisco, but with a VPN, you can appear to live in Mumbai, New York, or anywhere.

## Security with VPN:

Security is the main reason why corporations have preferred the use of VPNs for years. There are increasingly simple methods to intercept data traveling to a network. VPNs use advanced encryption protocols and secure tunneling techniques to encapsulate all online data transfers. Most savvy computer users wouldn't dream of connecting to the Internet without a firewall and up-to-date antivirus.

## VPN Protocols PPTP:

The main selling point of PPTP is that it can be simple to setup. PPTP tunnels form a point-to-point connection over the GRE protocol. Unfortunately, the security of the PPTP protocol has been called into question in recent years. It is strong, but not the most secure. L2TP/IPsec - L2TP over IPsec is more secure than PPTP and offers more security features. L2TP/IPsec is a way of implementing two protocols together in order to gain the best features of each. In this case, the L2TP protocol is used to create a tunnel and IPsec provides a secure channel. This makes for an impressively secure package. It is a client to site VPN.

*Source:* <https://gajshield.com/index.php/solutions/virtual-private-network>

- MR. AKSHAY AGARWAL  
(Assistant Professor)

## What could be causing your sore throat? Bacteria or Virus

### Symptoms of Viral Sore Throat

- Cough
- Runny nose
- Hoarseness or changes in your voice that make you sound breathy, raspy, or strained
- Conjunctivitis or pink eye
- May last for 5-7 days

### Symptoms of Bacterial Sore Throat

- Sore throat that can start very quickly
- Red and swollen tonsils, sometimes with white patches or streaks of pus
- Tiny red spots on the roof of the mouth
- Swollen lymph nodes in the front of the neck
- Pain when swallowing
- Fever

## Sore Throat



### 5 easy and practical ways to soothe a sore throat

1. Drink plenty of water and fluids like warm herbal tea to keep your throat hydrated. Drinking warm water with honey and lemon may also help soothe the itchiness.
2. Dissolve 1/4 teaspoon salt in 1 cup of warm water<sup>2</sup>. Use this water to gargle as this can help reduce inflammation and pain.
3. Avoid smoking as it can irritate your throat further.
4. Adults may find relief by sucking on lozenges and hard sweets. Avoid giving it to kids as lozenges and hard sweets may get stuck in their throats.
5. Use a humidifier or vaporizer to add moisture to the air in your room, especially when you're asleep.

- MR. AKSHAY AGARWAL  
(Assistant Professor)

## Exoplanets

An exoplanet is any planet beyond our solar system. Most orbit other stars, but free-floating exoplanets, called rogue planets, orbit the galactic center and are untethered to any star.

Most of the exoplanets discovered so far are in a relatively small region of our galaxy, the Milky Way. We know from NASA's Kepler Space Telescope that there are more planets than stars in the galaxy. By measuring exoplanets' sizes (diameters) and masses (weights), we can see compositions ranging from very rocky (like Earth and Venus) to very gas-rich (like Jupiter and Saturn). Exoplanets are made up of elements similar to those of the planets in our solar system, but their mixes of those elements may differ. Some planets may be dominated by water or ice, while others are dominated by iron or carbon. We've identified lava worlds covered in molten seas, puffy planets the density of Styrofoam and dense cores of planets still orbiting their stars.

The first exoplanets were discovered in the 1990s and since then we've identified thousands using a variety of detection methods. It's pretty rare for astronomers to see an exoplanet through their telescopes the way you might see Saturn through a telescope from Earth.

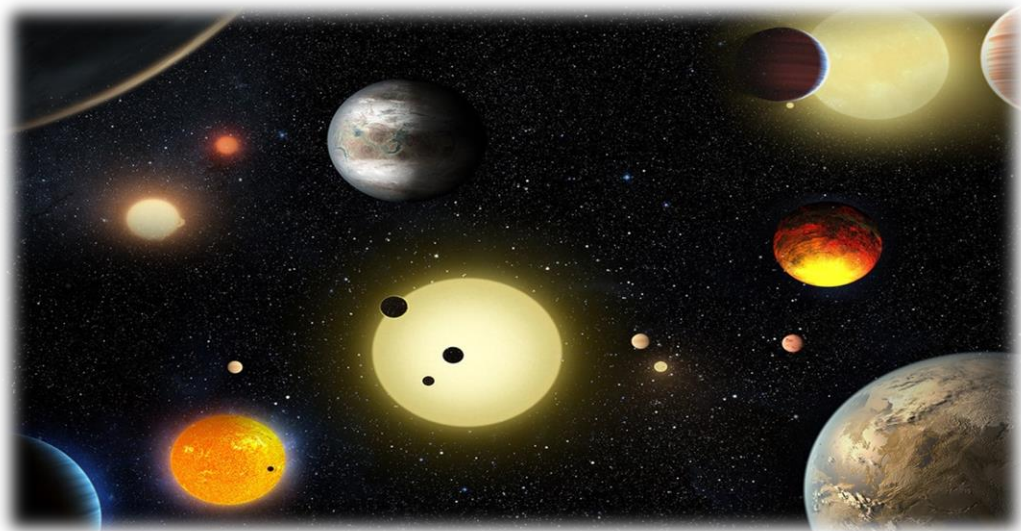
That's called direct imaging, and only a handful of exoplanets have been found this way (and these tend to be young gas giant planets orbiting very far from their stars).

Now we live in a universe of exoplanets. The count of confirmed planets is in the thousands and rising. That's from only a small sampling of the galaxy as a whole. The count could rise to the tens of thousands within a decade, as we increase the number, and observing power, of robotic telescopes lofted into space.

Most exoplanets are found through indirect methods: measuring the dimming of a star that happens to have a planet pass in front of it, called the transit method, or monitoring the spectrum of a star for the tell-tale signs of a planet pulling on its star and causing its light to subtly Doppler shift. Space telescopes have found thousands of planets by observing "transits," the slight dimming of light from a star when its tiny planet passes between it and our telescopes. Other detection methods include gravitational lensing, the so-called "wobble method."

But when multiple methods are used together, we can learn the vital statistics of whole planetary systems – without ever directly imaging the planets themselves. The best example so far is the TRAPPIST-1 system about 40 light-years away, where seven roughly Earth-sized planets orbit a small, red star.

The TRAPPIST-1 planets have been examined with ground and space telescopes. The space-based studies revealed not only their diameters, but the subtle gravitational influence these seven closely packed planets have upon each other; from this, scientists determined each planet's mass.



**Source:** <https://exoplanets.nasa.gov/what-is-an-exoplanet/overview/>

**- MS. MALIHA MOMIN  
(TE IT)**

## The last day of the dinosaurs

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The asteroid which killed nearly all of the dinosaurs struck Earth during springtime. This conclusion was drawn by an international team of researchers after having examined thin sections, high-resolution synchrotron X-ray scans, and carbon isotope records of the bones of fishes that died less than 60 minutes after the asteroid impacted. The team presents its findings in the journal *Nature*.

The researchers from Uppsala University in Sweden, Vrije Universiteit (VU) in Amsterdam, Vrije Universiteit in Brussels (VUB), and the European Synchrotron Radiation Facility (ESRF) in France turned to the unique Tanis locality in North Dakota (United States) to find fossilised paddlefishes and sturgeons which were direct casualties of the so-called Chicxulub meteorite impact that also marked the last day of the dinosaurs. The impact rocked the continental plate and caused massive standing waves in water bodies. These mobilised enormous volumes of sediment that engulfed fishes and buried them alive while impact spherules rained down from the sky, less than an hour after impact.

Fossil fishes in the Tanis event deposit were pristinely preserved, with their bones showing almost no signs of geochemical alteration. The synchrotron X-ray data, which are made available for anyone to explore, confirms that filtered-out impact spherules are still stuck in their gills. Even soft tissues have been preserved!

Selected fish bones were studied for the reconstruction of latest Cretaceous seasonality. "These bones registered seasonal growth very much like trees do" says Sophie Sanchez of Uppsala University and the ESRF.

"The retrieved growth rings not only captured the life histories of the fishes but also recorded the latest Cretaceous seasonality and thus the season in which the catastrophic extinction occurred," states senior author Jeroen van der Lubbe of the VU in Amsterdam.

An additional line of evidence was provided by the distribution, shapes and sizes of the bone cells, which are known to fluctuate with the seasons as well. "In all studied fishes, bone cell density and volumes can be traced over multiple years. These were on the rise but had not yet peaked during the year of death," says Dennis Voeten of Uppsala University.

One of the studied paddlefishes was subjected to stable carbon isotope analysis to reveal its annual feeding pattern. The availability of zooplankton, its prey of choice, oscillated seasonally and peaked between spring and summer.

"This temporary increase of ingested zooplankton enriched the skeleton of its predator with the heavier  $^{13}\text{C}$  carbon isotope relative to the lighter  $^{12}\text{C}$  carbon isotope," explains Suzan Verdegaal-Warmerdam of the VU Amsterdam. "The carbon isotope signal across the growth record of this unfortunate paddlefish confirms that the feeding season had not yet climaxed -- death came in spring," infers Melanie During from Uppsala University and the VU Amsterdam and lead author of the publication.

The end-Cretaceous mass extinction represents one of the most selective extinctions in the history of life that saw the demise of all non-avian dinosaurs, pterosaurs, ammonites, and most marine reptiles, while mammals, birds, crocodiles, and turtles survived. Because we now know that the extinction must have abruptly started during northern-hemisphere spring, we start to understand that this event took place during particularly sensitive life stages of Latest Cretaceous organisms, including the onset of reproduction cycles. And because southern-hemisphere autumn coincides with spring in the Northern Hemisphere, the preparation for winter may have just protected organisms in the Southern Hemisphere.

"This crucial finding will help to uncover why most of the dinosaurs died out while birds and early mammals managed to evade extinction," concludes Melanie During.

**Source:** <https://www.sciencedaily.com/releases/2022/02/220223111235.htm>

**- MS. LAVANYA DEIVAKARUNATHAN  
(TE IT)**

## Webinar on NFT (Non Fungible Token)

An online session was conducted on – **Non Fungible Token** by CSI UCoE student chapter on Saturday 05<sup>th</sup> February, 2022. Total 50 participants have attended the session. Speaker was Mr. Tarangan Patil : early engaged member of Metaverse and an asset creator on THE SANDBOX metaverse in form of NFT.

### Participants were will be able to learn:

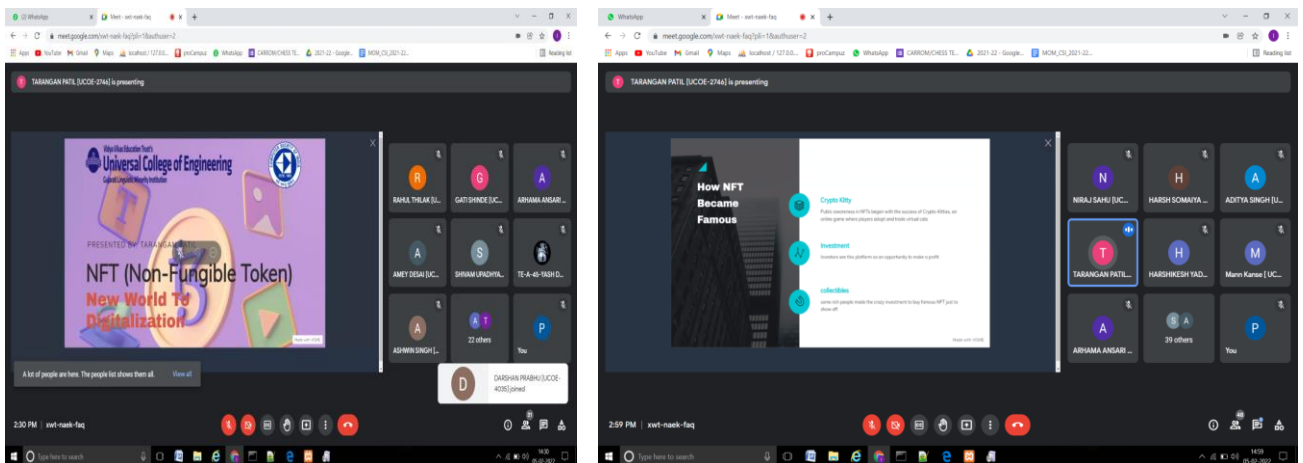
What is NFT and how it is created and used.

How NFT became popular.

How NFT is created on technical terms.

How NFT is used and how it can change digitalization.

Future scope of NFT.



## A session on - Is a good Competitive Programming record beneficial in the Employment sector.

An online session was conducted on – Is a good Competitive Programming record beneficial in the Employment sector by CodeChef UCoE student chapter on Saturday 05<sup>th</sup> February, 2022. Total 65 participants have attended the session. Speaker was Mr. Abhishek Thakur: Software Engineer at Morgan Stanley, Ex Infosys (Joined as System Engineer Specialist).

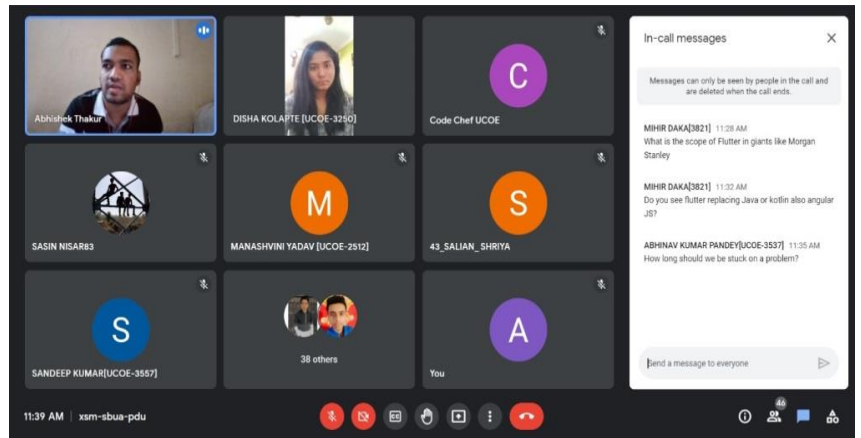
### Participants were will be able to learn:

Learn about the importance of competitive programming in the industry.

Learn how is competitive programming and bagging a good job related.

Indulge in an interactive session with the speaker regarding time constraints on solving problems and how to approach solving problems.





## A session on - Identifying the Target.

A session was conducted on – Identifying the Target by Codechef & Ncrpyted – Cyber Security Club of UCoE on Thursday February 17th, 2022 from 11.00 a.m. – 12.30 p.m. (IST). Total 70 participants have attended the session. Speaker was Mst. Harsh Parekh, Co-founder of Securze, cyber security researcher and blogger & Mst. Het Vikam, Technical Head at Ncrpyted, Founder of Securze, cyber security researcher, bug bounty hunter and ctf player

### **Participants were will be able to :**

Interact with the Core Team Members of both the clubs offline.

Identify the live Target in ethical hacking with the help of Presentation and demonstration.

Indulge in an interactive session with the Speakers.



## Convocation Ceremony for 2020-2021 students.

The annual graduation ceremony is a day devoted to celebrating an important point in students' lives. The graduation ceremony for the batch of 2020-2021 was held in the UCoE campus, on Saturday 05th March 2022. The ceremony started with a welcome address for esteemed dignitaries on the dais, parents, students and faculty members. The Ceremony was graced with blessings of Goddess Saraswati with lighting of the lamp and recitation of the Saraswati Vandana. The dignitaries on the dais were felicitated. The function proceeded with sharing some pearls of wisdom by the chief guest to the graduating students. The speech was followed by prize distribution ceremony starting with distinction followed by certificate distribution to the graduates by all the dignitaries on the dais. Finally, the ceremony of transition of students into further phases of their lives was concluded with a vote of thanks by thanking the dignitaries, parents, faculty for their presence in making this ceremony a success and wished a wonderful life journey to the graduates filled with success and learning. This was followed by pledging honor to our country by singing the national anthem and later with refreshments. The graduation Ceremony ended with a joy that is sure to inspire the students to achieve great heights.



Wishing you all the  
best for  
Your future  
endeavors.



## AURORA 2K22

Finally the wait is over... presenting to you the AURORA 2K22 Fight for the shield will again be a thrill and fun at the same time. Register yourself on the below link:

Sports: <https://forms.gle/7TKSgLph42eVV5tp6>

Cultural: <https://forms.gle/JNEntXUSDvuikLSX8>



## VYRO 2K22

VYRO is BACKKKKKK...!!!

After a long and exhausting wait for almost two years now, we couldn't be more delighted to inform you that our annual inter college fest VYRO is back with a bang.

Date: 1st- April,2022.

We are hoping you are equally excited and enthusiastic to make this event a pure success as this time it's bigger and better! Expecting great support and coordination from your end to make our dream into a great reality!



### Thousands of Indian Students' Futures at Stake as 3 Canadian Colleges Shut Down Abruptly

The hapless students and their parents, who have spent roughly around Rs 16 to 17 lakh on their child's education in Canada are disturbed.

The last option is that the students appear for IELTS exam again, pay the fees and join some new college, which is not a practical idea.

**BEWARE OF SUCH FRAUDS!!**

- MR. SAHIL KOLI  
(TE IT)

While any day makes for a great opportunity to celebrate the women in your life, **International Women's Day** gives you one more reason to do exactly that. **International Women's Day** is on **March 8th**, that recognizes women's incredible achievements, raises awareness and encourages others to advocate for gender equality.

Scan for previous edition



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