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Vidya Vikas Education trust's

UNIVERSAL COLLEGE OF ENGINEERING

Gujarati Linguistic Minority Institution

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#ASHTAG

Applied Science and Humanities Department

VISION

The Department of Applied Science and Humanities is committed to dynamically integrate the components of Science, Humanities and Engineering to groom students to transform them as globally acknowledged professionals.

MISSION

The department is carrying a mission to create and disseminate the knowledge and techniques in intellectual areas of Engineering and other core areas of Applied Science and Humanities for betterment of Eco system.

To inculcate the importance of Applied Science and develop a natural flair for Engineering and Technology which in turn shall mold students into a competent professional.

To be recognized for practicing the best teaching-learning processes to create highly competent, resourceful, and self-motivated young Engineers for the benefit of the society.



Department Activities

Pandemic lockdown did not deter the departments spirit to conduct activities that would benefit the students of the first-year engineering students. The department successfully conducted an online Induction Program and PTI session.

The Induction Program

The induction program for the first-year students of 2020-2021 batch was conducted through online mode on 13 March 2021, to follow covid norms and maintain social distance. The entire program was organized and convened by



Universal college of Engineering on the ICT academy platform. A total of 124 students and 11 faculty members from the Applied Sciences and Humanities Department participated in the session.

The objective of the program was to introduce students to college life, career opportunities, and prospective industry which will help gain clarity in their educational and personal goals. In addition, it would also help to create an anxiety-free atmosphere promoting positive attitudes and stimulating an excitement for learning.



Session started with M Sivakumar, chief exclusive officer, ICT academy, he welcomed the ICT academy “Get Set Go

platform” and addressed the students regarding the importance of self-learning. Vasudevan Raja Gopalan, HR head- business group, addressed the students regarding all the skills such as leadership, courtesy, behavior, characters, positive attitude which need to imbibe to be a successful professional. Mahesh Narayan, senior manager, AI & analytics Accenture addressed the students regarding self-dependency, self & body, self-observation, introduced students



with the proper perspective of success. Visveswaran KN , the chief mentor addressed the students regarding learning from various sources to interact with the world. Sabita J, AVP-human resources personnel addressed the students and

emphasized the importance of training to prepare for the interview and ways to clear interviews and grab job opportunities. She further enlightened the students about future of work and workplace culture, critical skills and critical roles, industry trends, lessons to be learnt from the crisis. The induction program ended with the vote of thanks.

The Parent – Teachers meet

Parent Teacher interaction for the first year students of 2020-2021 batch was conducted through online mode on 3rd April 2021, to follow covid norms and maintain social distance. The entire program was organized and convened by Universal college of Engineering on the Google Meet platform. Parents of 164 students and all faculty members of the department participated in this session.

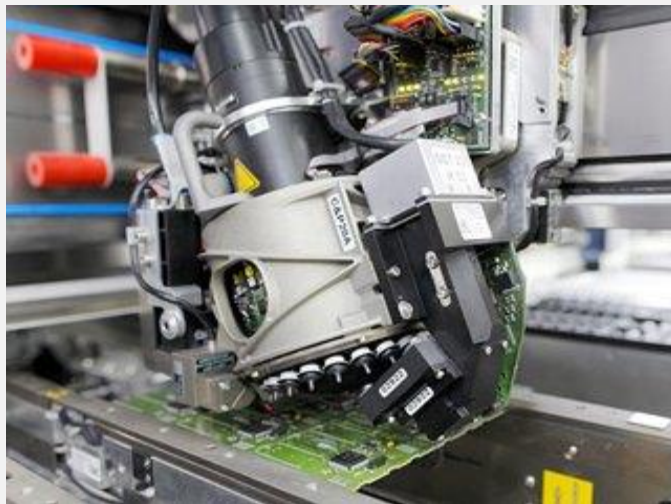
The main purpose of this interaction was to interact with each parent and to access their level of satisfaction with online classes, and to enrich the student’s educational experiences and discuss variety of issues related with the student’s

7 Biggest Trends for Engineering in the 2020s

This article considers the top seven implications of some of Engineering advancements over the next ten years.

1. Autonomy Everywhere

Artificial intelligence is likely to define the coming decade. It has already begun to increase its footprint in engineering software, where generative design applications automatically optimize CAD designs to best fit the functional definition of a part—including how it will be manufactured. Over the next decade, AI will get smarter, faster, and far more accurate. But first, it must overcome an imposing barrier: trust. It will take most of the decade before



anyone trusts a highway full of autonomous cars or a multimillion-dollar factory that makes its own decisions without human backup.

2. More and Better Big Data

Everyone has heard the term “big data” by now, but most applications run on a relative trickle of data limited to a machine, a factory, or feedback from a fleet of products in the field. That is changing rapidly, thanks to the growing proliferation of internet of things (IoT) sensors that make it easier and easier to collect real-time information. Add to those 5G wireless networks, which promise to not only boost data transmission speeds by factors of five to 100, but have much lower latency rates than existing 4G networks. Higher speeds and low latency make it possible to do things in real time that are unthinkable now. They could enable applications to track the location of autonomous vehicles and control their speed and location to optimize citywide traffic. Or they could optimize the utilization of factory equipment and tasks over a wireless network. It is

increasingly likely that over the next decade, engineers and marketers will increase. Plug-and-Play World

Today, technologies like AI, IoT, big data, 5G, autonomous robots, and blockchain are stand-alone solutions. It is no small task to ensure a variety of IoT sensors can speak with a manufacturing execution system, which is in turn able to talk with a cloud-based data analytics package. That leaves producers with two choices: They can either find a vendor who packages all these capabilities together, though this may lock them into a single and often expensive proprietary system. Or, if they want to mix and match best-of-class applications, they must pay programmers to integrate devices and software, so data formats are compatible up and down the system. Singly differentiate their products by the smart use of data they collect.

4. More Complex Products

People want more out of their products and information technology delivers those capabilities. Automobiles are the best example of this trend. Today's cars routinely take over braking when a car starts to skid or comes too close to the vehicle in front of it. They warn drivers when they stray from their lane or if another vehicle is in their blind spot. Some feature fully autonomous highway driving, while others can park themselves. If they think a crash is likely, they may even tighten seat belts and readjust seat position. Those who build them must ensure they are safe for all use cases, and then find ways to test these increasingly complex products.

5. Old Industries Are New Again

“Disruption” is an overused term that can cause brain shutdown, but information technology gives engineers a way to make once-staid products new again. Take, for example, automotive. Ten years ago, who would have imagined that an upstart company like Tesla would be selling upwards of 100,000 cars per quarter and have a stock valuation higher than Toyota, Daimler, or GM? Or

that fast-moving private companies like Space X, Blue Origin, Relativity Space and others would challenge established giants like Lockheed, Orbital, and Arianespace in launch vehicles? In many cases, these new companies have combined new business models with new technologies, such as batteries powerful enough to power a vehicle and 3D printing to radically reduce part count in rockets.

6. Resilient Systems

Complexity is inherently unstable. That makes sense, because the more degrees of freedom in a system, the greater the chance that something will go wrong. This applies equally to global supply chains, factory complexes, telecommunications systems, and the electrical grid, which is growing even more complicated as it stretches to accommodate such intermittent sources of green power as solar and wind.

Two factors compound these inherent instabilities. The first is a changing climate that makes severe weather events more likely. This puts infrastructure and all types of facilities at risk from flooding and wind damage. The second is the breakdown of the trade treaties and alliances that threatens global supply chains. Engineers will increasingly have to take the potential for disruption into their plans.

7. A Changing Profession

Engineers have traditionally been personally responsible for the projects they worked on. Today, as products have grown more complex engineers increasingly work on multidisciplinary teams. While today's engineers are increasingly pressed, younger engineers are also in a position to take big strides in responsibilities and salaries as the Baby Boomers retire.

By Alan S. Brown

Contributed by Mr. Shivam Shukla

Congratulations!!!

Dr. Teena Trivedi received an appreciation letter and Certificate delivering an expert talk in the workshop on “Engineering Mathematics – III”, organized by the Department of Applied Sciences and Humanities, Pillai HOC College of Engineering and Technology, Rasayani, Raigad in collaboration with the 'Engineering mathematics Teachers Society, India (EMTSI), exclusively for the direct second year students.



Edited and compiled by Marina Thomas.

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