Vidya Vikas Education Trust's
Universal College of Engineering
Kaman - Bhiwandi Road, Vasai, Maharashtra
Accredited with 'B+' grade by NAAC, approved by AICTE, DTE
Recognised as Gujrati Linguistic Minority

CURRENT WAVES

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College Profile

Everything you need to know about us.

Embraced by lush greenery and scenic beauty, Universal College of Engineering is a treasured place for aspiring engineers to leave their imprints towards success.

As a college within the wider network frame, we are one of the fastest growing institutions in India. Our institute has been accredited by National Assessment and Accreditation Council (**NAAC**) with **B+ grade** in the first cycle of accreditation. Times of India Survey **Ranked No. 1** in India among Top Emerging Private Engineering Institutes for 6 consecutive years 2015, 2016, 2017, 2018, 2019 and 2020 and the saga of accolades still continues.

In response to the expectations of quality technical education, our college is approved by the All India Council for Technical Education (**AICTE**), New Delhi; recognized by the Directorate of Technical Education (**DTE**), Government of Maharashtra; affiliated to Mumbai University.

Our college is also associated with professional bodies like IEEE, IETE, ISA and CSI to update the revolutionary technological advancements.

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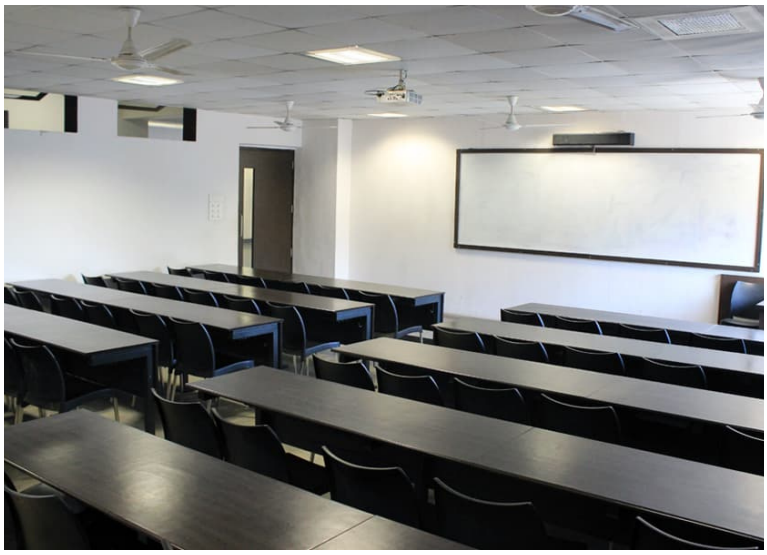
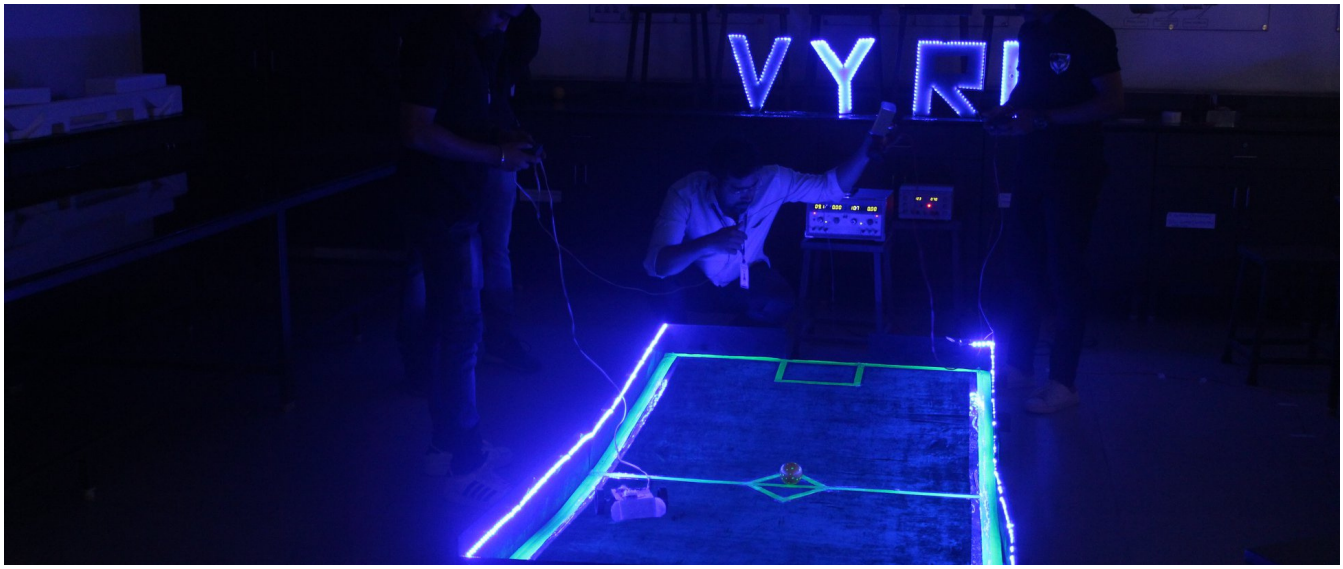
We offer 4 years full-time Bachelor of Technology in Computer Engineering, Civil Engineering, Artificial Intelligence & Machine Learning, Information Technology Engineering and Data Engineering.

The unique state-of-the-art facility of the institute has been carefully designed to accommodate the needs of the students. Laboratories are equipped with world-class facilities based on the latest technology of different sectors. Our smart classrooms are well ventilated, spacious and equipped with overhead and LCD projectors along with the public address system. College library provides a rich collection of specialist library resources and services to support students' academic work and enrich their research skills.



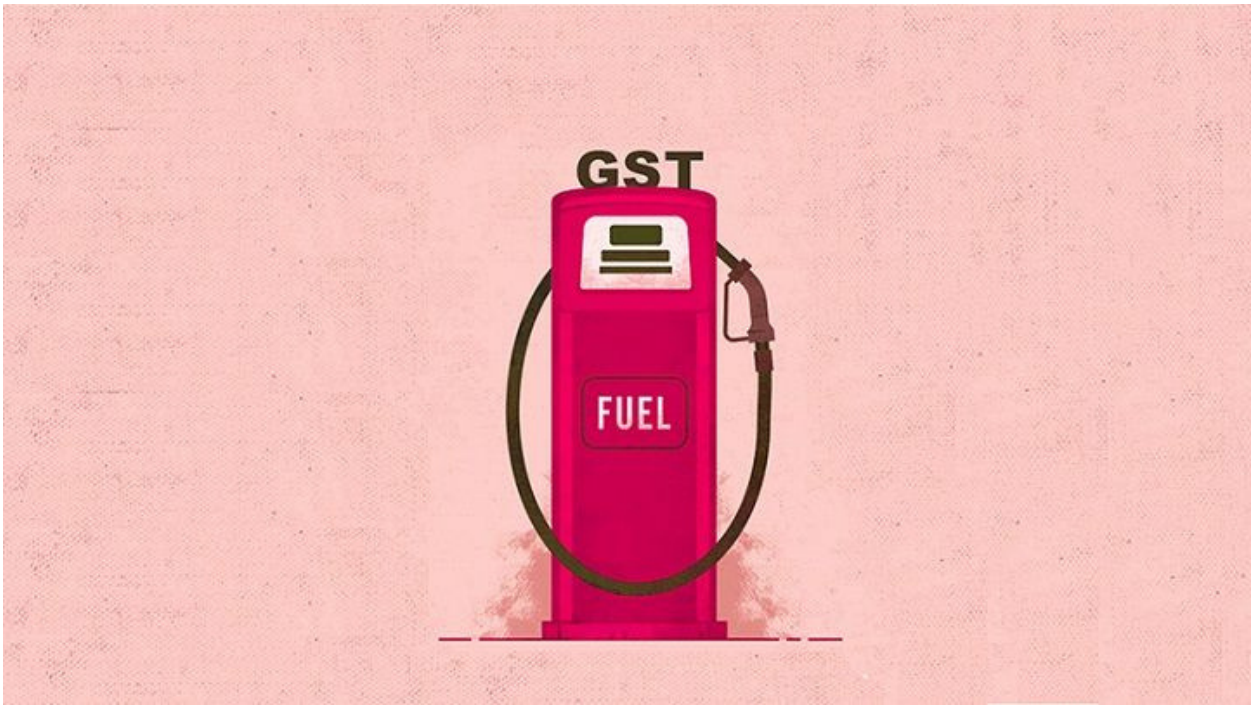
We are obliged to equip our students to get placed in highly reputed companies by mentoring their necessary skill set for cutting-edge technologies. The core highlighted areas are helping students with their technical competency, communication skills along with career guidance and counselling.

Universal College of Engineering has produced a large number of successful alumni who are working in reputed organisations in India and abroad and have contributed immensely to the cause of nation-building and society. We welcome all engineering aspirants to create an incredible legacy in the field of engineering.



Why isn't fuel under GST?

A few days ago, the union minister for petroleum and natural gas said that he would like to see petrol and diesel included under the ambit of the GST. The reason being that it would probably bring down fuel prices. And while the suggestion does deserve merit, we have to ask - What's really stopping us from actually implementing this?
So in this newsletter we discuss this and more



Policy

The Story

Back when GST was originally introduced (in 2017), the tax legislation had one big problem. It was a consumption-based tax. Meaning states with higher consumption figures were ideally expected to benefit more than producer states. For instance, Karnataka would collect taxes on biscuits consumed in its state, even if the biscuits were manufactured in Tamil Nadu. And for states like Tamil Nadu, this was a no-go. They had made massive investments on roads, highways, and ports in a bid to incentivize manufacturing.

They had deployed this money in the hopes of extracting a return on their investment by claiming taxes at the point of origin i.e. where the goods were being manufactured. However, with GST this was no longer tenable, as tax revenues were being apportioned to consumer states.

It would have severely dented their prospects.

And although the central government kept insisting that the likes of Tamil Nadu would still have many avenues to shore up tax revenues, manufacturing states wanted guarantees. So a bargain was struck. The centre promised to compensate them until they could work out alternatives.

The idea was to create a projection for five years and tally it with actual GST revenues. Each year a state's tax revenue was expected to grow at 14% (from the base 2015–16) and then, if actual collection fell short of these projections, the centre promised to make up the shortfall. To this end, they created a GST compensation fund and began extracting a cess (a tax over and above GST) from the sale of certain products including tobacco. They hoped to pay states using money from this fund.

But here's the interesting bit. The central government was expecting state tax revenues to grow at 14% when GDP in most states was still languishing in the single digits. These projections were completely out of whack and yet the centre agreed to shoulder such a monumental burden when they had no reason to do so.

So you have to ask—Why was the compensation fixed at such a high level when they could have driven a hard bargain.
Well…

The answer is pretty interesting.
See, there was absolutely no way the states were ever going to accept this proposition. So the central government had to do something radical. They had to make an offer the states couldn't refuse. And when they proposed to compensate states based on those lofty projections, the states had no choice but to give in. After all, most state governments were only worried about short-term prospects. Their political ambitions rarely ever let them focus on the bigger picture.
And considering they were cash strapped at the time, this promise was too good to pass up. So they took the deal.
And with this introduction out of the way, we can actually focus on today's story. As of today, the centre levies a tax on fuel, and then the state adds a VAT (Value added tax) on top. The state can exercise control on deciding the VAT rates and it should come as no surprise, they rely on this income pretty heavily. So if you were to subsume all the taxes under a single umbrella, you have to deal with a whole bunch of problems, starting with taxation rates.

What are you going to charge?

A 5% GST, 12% GST, 18% GST or a 28% GST?

Just for context, Maharashtra levies a 25 % VAT on petrol and 21 % VAT on diesel, including an extra cess of Rs 10 per liter on petrol and Rs 3 per liter on diesel. So they'll probably want the highest rates employed. But other states don't charge as much. So they could hypothetically see fuel prices rising in their jurisdiction, which honestly, nobody likes to see. And it's safe to say states will squabble over this because they're looking out for their own interests.
Secondly, if the centre is going to implement this program, how are they going to share GST revenues with the states? If this were to affect the states' financial prospects (which everybody believes it will) they'll want to be adequately compensated. So the centre will have to dangle a juicy carrot the same way they did back in 2017. However, it can't be any ordinary carrot. It probably has to be the juiciest carrot on planet earth.

How Covid is now threatening to disrupt the Electronics Industry?

In this newsletter, we talk about how Covid may exacerbate the global semiconductor shortage

Business

The story

There's a global chip shortage— the kind that affects the production of phones, gaming consoles, and cars. And while we've already written about it rather extensively, here's some context for all the people in a hurry.

Semiconductor chips are hard to produce. If you're doing it at scale, you probably need to invest billions and wait years before you can expect to see them roll off the assembly line. So you can't just ramp up supply overnight. You have to be patient. The problem is further compounded by the fact that we only have 3 major companies producing most of the important stuff.

So if they can't get their forecasts right, then the supply crunch will hurt multiple industries at the same time.

That's the supply side equation.

On the demand side, we've been seeing a lot of interest in new electronic products considering most people are now working from home. This further compounded the mismatch in demand and supply giving rise to what is now being heralded as the greatest crisis in the semiconductor industry. But that's not just all. We have a bunch of smaller known chip companies who may not necessarily be the big power punchers but are an essential cog in this gargantuan machine.

As one article pointed out—a small support chip "tied to basic vehicle functions, such as windshield wiper motors and infotainment features" could put the whole supply chain in jeopardy. You can't push out a vehicle that doesn't have a wiper. And when you have no alternatives, you are forced to wait out the crisis.

Which is kind of what is happening right now with King Yuan Electronics—a chip company based out of Taiwan. If you haven't heard of them, well, join the pack. Because nobody really hears about them. Until something happens to them.

These people are responsible for testing chips. They also do some assembly work, but by and large, they offer back-end support to major chip companies. If they don't do their job right, you're going to have phones that don't work and King Yuan is really the king of testing. According to the company's website, it is the second-largest firm in terms of testing revenue and the largest professional pure-play testing company worldwide.
Unfortunately, they've had to shutter production for two days after several workers contracted Covid. And the company's management only recently stated that this temporary disruption could reduce their monthly output by about 4–6%. Now bear in mind, a lot of people didn't think this would ever happen considering Taiwan has had a near stellar record in keeping the pandemic at bay—reporting zero cases for eight months straight. But Covid has its ways and considering chip companies employ migrants who routinely travel in and out of the country, you can see how the near-impenetrable fortress could have been breached. But it also alludes to something else.

As one article points out—

In Zhunan (a township in Taiwan) there is a small shopping mall that is a magnet for the towns around it. King Yuan workers go there to enjoy themselves, and to a large market where they go to buy food. They go out to the same restaurants, stay at the same hotels and shop in the same popular chain stores as the locals. Who hasn't seen the Sunday trains filled with workers going traveling across Taiwan to meet friends and relatives? Same as the locals…

The migrant worker communities are thus heavily networked and can easily spread the virus from one place in Taiwan to another.

Meaning the entire population could be at risk. Especially considering only 3 % of Taiwan's 23 million population have been vaccinated. Most of them have only received the first dose. And the migrant population—Well, we don't know anything about them. What we do know however is that if they don't manage to curb the spread of Covid, it's going to impact each one of us in some way or another. Because Taiwan is one of the biggest semiconductor exporters in the world. And if they don't get things under control, this semiconductor shortage could spiral out of control soon enough.

How to go green?

In this newsletter, we talk about renewable purchase obligations, India's clean energy initiatives and how we might soon see new investments in Green Hydrogen as well

Policy

The story

The Paris Climate Agreement was a watershed moment for all of earth's inhabitants. It marked a turning point in the fight against climate change. It was the culmination of years of negotiations during which 196 countries pledged to up the ante against climate change, greenhouse emissions, global warming, and all that bad stuff. The goal of the agreement was simple. All countries big and small had to meet certain targets. They had to curb greenhouse gas emissions, pollute less, and do their best in adopting green energy before the whole problem became irreversible. Overall, the plan was to limit the rise in global temperature to 2 degrees, or possibly even 1.5 degrees Celsius, compared to pre-industrial levels.

So, the world made a few promises, deadlines were set and everybody got to work, including India. But let's not mince words here. Our targets were pretty stiff. First, we pledged to reduce the emissions intensity by 33%-35% before 2030. Now if you don't know what that is—It's the volume of emission per unit of GDP. Sort of like the amount of pollutants India pumps out in a bid to foster growth. We all know economic progress hinges on producing new energy. But if you're constantly doing it by burning dirty fuel, then you're likely going to have a higher emission intensity.

India for its part though has already reduced the emission intensity of its GDP by about 21 % compared to the levels from

2005 (which is our benchmark). However that being said, we still have a fair bit of work to do. Next, we vowed to source around 40% of the nation's electric power from non-fossil fuel-based energy resources before 2030. And finally, we promised the world we'd create a new carbon sink that would extract about 2.5 to 3 billion tonnes of carbon dioxide from the air. How would we do this? Well, we promised to do it by growing additional forest and tree cover. But technically, anything would classify as a carbon sink so long as it absorbed more CO2 from the atmosphere than it put out.

And truth be told, we've made some progress. But going green isn't always easy. We can't just flip a switch and adopt clean energy overnight. The coal and thermal plants (despite their drawbacks) still power the country in many ways. So the next logical approach is to gradually ween away from these sources by increasing the share of renewables in our energy mix. Basically making sure that we achieve our targets without breaking the economic engine.

So how do you promote the adoption of renewables and disincentivize the use of fossil fuels?

Well, one idea is to enforce renewable purchase obligations (RPO). It's a diktat that mandates Discoms (power distribution companies) and large electricity consumers to source a certain percentage of their energy requirement from renewable energy sources. They could do this by setting up their own renewable power plants or buying them from other renewable energy producers. In other cases, they could even meet their obligations by purchasing Renewable Energy Certificates (REC).

Think of it this way. RECs are issued to folks who produce renewable energy. However, these people can then choose to trade these certificates with those who may have trouble meeting their clean energy quotas. The object here is to penalize institutions that refuse to mend their ways and get them to act quickly. For instance, if you are a large electricity consumer and you're still sourcing most of your energy needs from coal plants, then making you pay extra will inevitably get you to adopt the clean energy mandate sooner or later.

VidyaVikas Education Trust's

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