**GPVALSAD** 

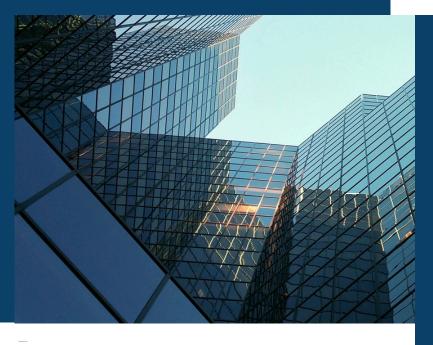
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'SARJAN'
CIVIL ENGINEERING
DEPARTMENT

NEWSLETTER Volume #2024-2



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# **ADVENTURE BOY**



Mr. Ronak Dama, Student civil of engineering department, Government Polytechnic Valsad attended and completed the basic course in rock climbing ,organized by Swami Vivekanand Mountaineering Institute, Mount Abu from 10th to 19th February 2024 (10 Days). He participated in the camp along with 130 other students from all over institutes of Gujarat State. He received his participation certificate from Shri Gaurav Salunkhe, IAS, Sub Divisional Magistrate, Mt. Abu on successful completion of the training.

## SEWAGE TREATMENT PLANT VISIT



A visit was organized for the students studying in the 6th semester of civil 01/04/2024 engineering department on (10:30 am to 12:30 pm) under Water Supply & Engineering subject at Treatment Plant & Pipe Fitting Site, Near Valsad Railway station, Valsad.

In which faculty memberS Mrs. Nidhi.C.Pandya,Mr.Kayomerze Billimoria, Mr. Dhaval Saniawala and 62 Students participated. In which the students were shown various processes for Sewage treatment units. Through such visits students get practical knowledge of the field process.





# VALSAD RAILWAY STATION VISIT

On 04/04/2024, a visit was organized at Valsad railway station for the students of semester 4 under Basics of Transportation Engineering subject to get information about railway station, track, yard, signaling. In which the visit of the students was managed by the faculty Mr. A.J Patel, Mr. A K Gamit and Mrs. A .K Shah.The visit was conducted by the railway engineer , he give very good information about the railway operations.





# **TACHOMETRIC SURVEY**

An Advance survey project visit was organized by Mr.Kayomerze Billimoria, Mr.Ajay Gamit and Mr Ashish Patel for Advance Surveying subject date on 05/04/2024 at Parnera, Pardi Road. Students studying in 4th semesters were taken to the site and do practice for Tachometric survey.







# WASTE COLLECTION, REUSE AND RECYCLE WORKSHOP

The civil engineering department students participated in a week cleanliness drive from 1st to 6th April 2024 comprising waste collection, reuse and recycle. They collected and recycled glass, plastic, waste water, construction, kitchen and garden waste during the drive. The total waste collected was more than 1000 kgs. On 8th April a one day Workshop was organized for the students to learn from the experienced community servants and NGO operating in the Valsad area. Mrs. Khushbu Vaidya, Environmentalist and Administrative officer of Traayaam Foundation and Shri Bakul Rajgor, Deputy Sarpanch Bhagdawada Village were the guest speakers for the workshop who shared their varied experience with the students in the morning session. While in the afternoon session the student groups presented their work



### WEEK WASTE RECYCLING DRIVE 1/4/2024 TO 6/4/2024

Recycling provides many benefits to our environment. By recycling our materials, we create a healthlier planet for ourselves and future generations. Conserve natural resources: Recycling reduces the need to extract resources such as imber, water, and minerals for new products. Civil regimeering Department, Government Polytechnic / Alsad has taken a step to create awareness for the same by reusing/recycling some of the waste products generated in the campus, the waste products considered are as below.

Waste 1: Construction waste

Waste 1: Construction waste
Construction waste will be collected by the
students and will be reused/recycled in the various civil engineering projects

Waste 2: Glass Waste
s Waste will be collected from the campus
will be reused as partial replacement of

and will be reused as parual reprocurrent or sand in concrete.

Waste 3: Plastic Waste
Plastic waste will be collected by the students and will be reused/recycled in the various civil engineering projects.

Waste 4: Waste Water

Waste water from the outlet of washbasin will be reused for gardening

Waste 5: Kitchen and Garden Waste

### **About Institute**

#### **About Department**

PATRON: Smt. Rinku R Shukla CONVENER: Dr. Nidhi C Pandya

Coordinators

Const. Waste: A.J.Patel, G.K.Patel Glass Waste: K.P.Billimoria, H.P.Oza Plastic Waste: P.V.Mehta, H.A.Mistry Waste Water: N.C.Pandya, D.R.Saniawala Kitchen Waste: A.K.Gamit. A.K.Shah

Garden Waste: K.C.Patel, B.P.Patel





**Dharmeshbhai Patel** Sarpanch Bhagdawada, Valsad) Ms. Khushbu Vaidva (AO, Trrayaam Foundation)

Venue: Civil Seminar Hall Time: 11:00 AM onwards





# BRIDGING THE GAP BETWEEN STUDENTS AND LABORATORIES

Date: 09/04/2024 (1:00 pm) Students of Semester 4 and 6 participated in a Virtual Lab Practice session . Advanced Surveying, Basics of Transportation Engineering, Water Supply and Sanitary Engineering subjects practical practice was organized in Virtual Lab at computer lab of LRUC building .Mr.Kayomerze Billimoria, Mr.Ajay Gamit ,Mrs.Aditi Shah and Dr.N.C.Pandya deliver this session.





# STTE VISTT: SSASTT COLLEGE, VARACHHA ROAD, SURAT





Date: 12/04/2024, Demonstration of Water Supply and Sanitary Engineering subjects practicals organized in Shree Swami Atmanand Saraswati Institute at Surat for students studying in semester 6.

Dr. N.C. Pandya,Mr. Kayomarze Bilimoria, Mr. Pratik Mehta conducted those students. A hands-on demonstration was given to the students by Dr.Digant.Pastagia (Associate Professor) Civil Engineering Department,SSASIT

# VOTER AWARENESS PROGRAM

Thursday, 18th April 2024. On the occasion of upcoming Lok Sabha Elections, awareness program was organized by NSS unit Government Polytechnic Valsad. The first-time voter students of all departments enthusiastically took the oath that: Mera Vote Meri Duty. Under the chairmanship of Smt. Rinku Principal, Shukla, Government Polytechnic, Valsad and the guest speaker of the event was Shri. Hitesh Bhai Patel, Chief Palika. Engineer, Valsad Nagar encouraged the students to vote and also encouraged their friends, neighbors and family members to exercise their right to vote. A selfie booth was set up in the college premises where the students enthusiastically clicked selfies for their social media accounts.





### **EXPERT LECTURE: FIRE SAFETY AND EQUIPMENT DEMONSTRATION**



Date: 25/04/2024 Fire Safety and Equipment Demonstration was organized for the students Semester 6 and 2 under the subject of Building Services and Civil Engineering Drawing. In which the students were guided by Mr. Nikunj Patel of MD fire organization. which 42 students managed by Mr. K.C.Patel, Mr.D.R.Saniawala & Mrs.H.P.Oza.

## **AWARENESS RALLY ON "CATCH THE RAIN"**

On 23rd April 2024, the student volunteers of NSS Local unit Government Polytechnic Valsad organized an awareness rally on "Catch the rain" at nearby adopted village Bhagdawada. The location was selected near a local water body, Bhagdawada talav. During evening hours as the village residents gathered to buy the groceries for their homes, our volunteers spread "Catch the rain", "Save Water" messages among them with slogans in Hindi and Gujarati. Some of them were, पानी के लिए तरस जायेगे, अगर व्यर्थ में इसे गवाएंगे, जल संरक्षण करना है, धरती का रक्षण करना है, है बिक रहा बाजार में, जो था कभी तालाब में, पानी है कितना कीमती, जाके पूछ रेगिस्तान में!, આવો વરસાદનું પાણી બચાવો, અને તમારી આવતી કાલ સજાવો. The public gathered responded to the catchy slogans and the students told them about the ongoing water crisis in many locations across the world and country and the water conservation measures we can take as citizens to avoid the water crisis.







### **SPOKEN TUTORIAL EXAM**





On 24/04/2024, an online test was organized for the students of Semester 2 and 4 for "Introduction Computers" to Mrs. Bhavini Patel, course by Lecturer of Civil Department under Spoken Tutorial.In which students of semester 2 and students of semester 4 passed. Who received course competition certificate from Spoken Tutorial, IIT Bombay.

# **MICRO PROJECT EXHIBITION**

Date: 30/04/2024, Micro project prepared by the students of 6th semester for the subjects of Building Services, Construction Project Management, WSSE etc. was exhibited in the civil seminar hall from 1:00 to 2:00 pm. Micro project was evaluated by staff members.









### FEILCITATIONS PROGRAM

A program was organized to congratulate and encourage the top ten students of semester 1, 3, 5. In which trophies were distributed by the principal madam and staff of the civil engineering department.

_		chnological University, FPOLYTECHNIC COLLE			29
	JO V ERCHIVIER	CIVIL ENGINEERING	GL VIII	LOTID 0	
	DIP	L SEM 1 - Regular (DEC	2023)		
Lava	Top 10 S	tudents. (Branch Wise	CPI Wi	se)	t.
r.No	Enrollment number	name	CPI	CGPA	SPI
1	236290306009	BHARAMBE RITESH SUNIL	7.45	0.00	7.45
2	236290306122	PATEL PURVIBEN AMBUBHAI	7.4	0.00	7.4
3	236290306139	PATEL VEDANT AJAYBHAI	7.35	0.00	7.35
4	236290306146	PATEL ZEEL VIJAY	7.3	0.00	7.3
5	236290306149	POOJAKUMARI RAKESHKUMAR KU	7.3	0.00	7.3
6	236290306020	GOHIL PARTH ASHOKKUMAR	7.2	0.00	7.2
7	236298306001	BHUMI GANESHBHAI PATEL	7.18	7.55	6.8
8	236290306118	PATEL PRINCEKUMAR SURESHBHAI	7.15	0.00	7.15
9	236290306032	LAD DISHABEN UTTAMBHAI	6.95	0.00	6.95
10	236298306015	PATEL YAMINI NAVNITBHAI	6.85	6.95	6.75
	DIP	L SEM 3 - Regular (DEC	2023)		
r.No	Enrollment number	name	CPI	CGPA	SPI
1	226290306024	MISTRY KRUPA YOGESHBHAI	9.13	8.75	8.75
2	226290306050	PATEL HETVIKUMARI RAMESHBHAI	8.39	8.95	8.95
3	226290306016	JAINI LAL	8.35	8.95	8.95
4	226290306002	AKSH TANMAY PANCHAL	8.31	8	8
5	226290306078	PATEL SMITKUMAR DIPAKBHAI	7.65	7.25	7.25
6	236298306001	BHUMI GANESHBHAI PATEL	7.55	7.55	7.55
7	226290306077	PATEL SMIT DHARMENDRAKUMAR	7.18	7.05	7.05
8	226290306071	PATEL RIYA NAVINBHAI	6.95	7.3	7.3
9	236298306015	PATEL YAMINI NAVNITBHAI	6.95	6.95	6.95
10	226290306094	TANDEL KHUSHI LALJIBHAI	6.61	6.35	6.35
		L SEM 5 - Regular (DEC			
r.No	Enrollment number		CPI	CGPA	SPI
1	216290306032	THAKUR ADARSHKUMAR ADITIYA	8.88	8.97	8.75
2	216290306011	KHAN MOHD RAYYAN	8.8	8.4	8.2
3	216290306064	PATEL HEER VIJAYKUMAR	8.41	8.33	8.1
4	216290306030	DINESH KUMAR	8.39	8.08	7.75
5	216290306012	Afaf Zulfikar Motorwala	8.28	8.37	8.05
6	216290306025	KUBER SHAILE NAYAN	7.91	7.72	8.25
7	216290306071	TANDEL KRUTIKA SATISHBHAI	7.66	7.72	7.8
8	216290306071	TANDEL BHOOMI RAMESHBHAI	7.59	7.38	7.1
9	216290306008	PATEL MEET SURESHBHAI	7.52	7.6	7.9
9	216290306002	PATEL YESHA SANJAYBHAI	7.52	7.92	7.85





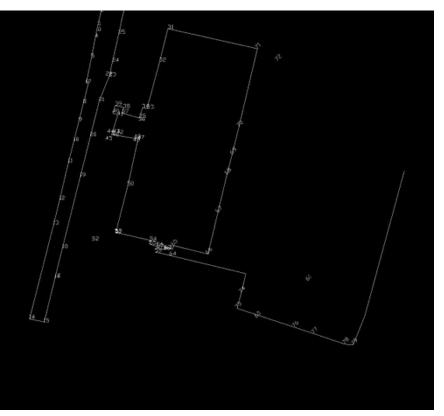








## TRAVERSE SURVEY USING TOTAL STATION



A project on traverse survey using TOTAL STATION was conducted on 17th May 2024 at G.P.VALSAD campus by the students of 4th semester, Civil Engineering Department under the guidance of lecturer Ashish Patel, lecturer Kayomarze Billimoria and lecturer Hiren Mistry.



# **SURVEY USING DGPS**

An expert lecture and hands-on session on "Survey using DGPS" was conducted on 18th May 2024 at G.P.VALSAD campus by the students of 4th semester, Civil Engineering Department, under the expertise of Mr Manoj Patel and his team (Accutape Engineers) and guidance of lecturer Bhavini Patel and lecturer Hiren Mistry.







## **IMPACT LECTURE SERIES 2024**





A series of Expert lectures were organized by the IIC team of G.P.Valsad under the sponsorship and guidance of MoE and AICTE by the name of Impact lecture series 2024 on 22nd May 2024.

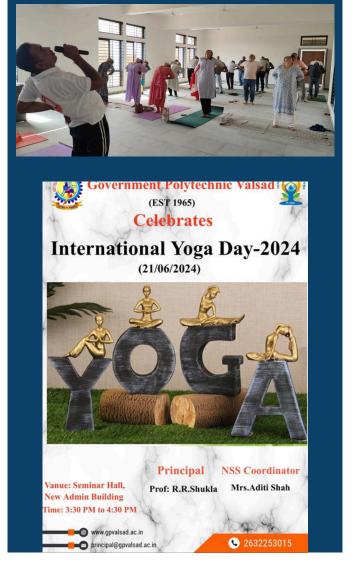
The 1st eminent speaker was Mr. Rahul Sharma, Proprietor Dominaar engineering, who spoke on "Developing Entropropourship, skills, and Design

Entrepreneurship skills and Design Thinking" (11:00 to 12:30) And the 2nd eminent speaker was Mr. Chandramouli Pachauri, IPR Expert at Meril life sciences, Vapi who spoke on "IPR and its management" (1:00 to 3:30) Around 230 students and Faculty members participated in both the lectures

### YOGA DAY CELEBRATION (21/6/2024)

On 21st of June 2024, International day of yoga was celebrated at the Government Polytechnic Valsad campus at the new admin building seminar hall. Dr. Vipulaben Doshi was the chief guest for the event and Mrs. Purvisha Patel from Art of living demonstrated the yog practices during the shibir. Shri Nileshbhai Kosia from Gujarat Rajya Yog Board conducted the common yog protocol decided by the yog board.







### WHAT ARE ADVANCED CONSTRUCTION TECHNIQUES?

ADVANCED CONSTRUCTION TECHNIQUES ENCOMPASS A WIDE ARRAY OF INNOVATIVE METHODS THAT GO BEYOND TRADITIONAL CONSTRUCTION PRACTICES.

THESE TECHNIQUES LEVERAGE CUTTING-EDGE TECHNOLOGY AND MATERIALS TO STREAMLINE THE CONSTRUCTION PROCESS, MAKING IT MORE EFFICIENT, SUSTAINABLE, AND COST-EFFECTIVE.

#### 1. PREFABRICATION AND MODULAR CONSTRUCTION

PREFABRICATION INVOLVES THE ASSEMBLY OF BUILDING COMPONENTS IN A CONTROLLED ENVIRONMENT, AWAY FROM THE CONSTRUCTION SITE.

THESE ARE THEN TRANSPORTED AND ASSEMBLED ON-SITE. MODULAR CONSTRUCTION TAKES THIS CONCEPT FURTHER BY CREATING ENTIRE SECTIONS OR MODULES OFF-SITE, WHICH ARE THEN BROUGHT TOGETHER TO CREATE A COMPLETE STRUCTURE.

#### RENEFITS:

THEY SIGNIFICANTLY REDUCE CONSTRUCTION TIME AND WASTE.

THEY ALLOW FOR BETTER QUALITY CONTROL AND PRECISION IN BUILDING COMPONENTS.

HELP IN QUICKER PROJECT COMPLETION AND ENHANCED STRUCTURAL INTEGRITY

#### 2. 3D PRINTING

3D PRINTING IN CONSTRUCTION, ALSO KNOWN AS "CONTOUR CRAFTING," INVOLVES USING LARGE-SCALE 3D PRINTERS TO CREATE BUILDING COMPONENTS.

THESE PRINTERS CAN PRODUCE INTRICATE SHAPES AND DESIGNS, OFFERING ARCHITECTS AND BUILDERS UNPARALLELED DESIGN FLEXIBILITY.

#### RENEFITS .

REDUCING LABOUR COSTS, MATERIAL WASTE, AND CONSTRUCTION TIME.

HELP CREATE COMPLEX, CUSTOMIZED ARCHITECTURAL DESIGNS.

#### 3. GREEN BUILDING PRACTICES

GREEN BUILDING PRACTICES PRIORITIZE SUSTAINABILITY AND ENVIRONMENTAL RESPONSIBILITY. THIS INCLUDES USING ECO-FRIENDLY MATERIALS, IMPLEMENTING ENERGY-EFFICIENT DESIGNS, AND REDUCING A BUILDING'S CARBON FOOTPRINT.

#### BENEFITS:

HELP REDUCE THE ENVIRONMENTAL IMPACT OF CONSTRUCTION.

THEY LEAD TO ENERGY SAVINGS, LOWER OPERATIONAL COSTS, AND CONTRIBUTE TO A HEALTHIER PLANET.

#### 4. ADVANCED BUILDING MATERIALS

ADVANCED BUILDING MATERIALS INCLUDE INNOVATIVE SUBSTANCES LIKE CARBON FIBER-REINFORCED CONCRETE, AEROGELS, AND SELF-HEALING MATERIALS. THESE MATERIALS OFFER ENHANCED STRENGTH, DURABILITY, AND INSULATION PROPERTIES.

#### BENEFITS:

REDUCE MAINTENANCE COSTS.

ESSENTIAL FOR CREATING MORE RESILIENT AND SUSTAINABLE BUILDINGS.

#### **5. BIM (BUILDING INFORMATION MODELING)**

BIM IS A DIGITAL MODEL OF A BUILDING'S PHYSICAL AND FUNCTIONAL CHARACTERISTICS. IT ALLOWS FOR A COMPREHENSIVE VIEW OF A CONSTRUCTION PROJECT, FROM DESIGN TO MAINTENANCE.

#### **BENEFITS:**

IMPROVES COLLABORATION AMONG PROJECT STAKEHOLDERS.

REDUCES ERRORS IN DESIGN AND CONSTRUCTION.

**ENHANCES PROJECT EFFICIENCY** 

BEST TOOL FOR MANAGING COMPLEX CONSTRUCTION PROJECTS.

### 6. DRONES AND UAVS (UNMANNED AERIAL VEHICLES)

DRONES AND UAVS ARE BEING USED FOR SITE SURVEYS, INSPECTIONS, AND AERIAL MAPPING IN CONSTRUCTION PROJECTS. THEY PROVIDE REAL-TIME DATA AND IMAGERY, AIDING IN DECISION-MAKING AND PROJECT MONITORING.

### **BENEFITS:**

INCREASE SAFETY BY REDUCING THE NEED FOR PERSONNEL TO WORK AT HEIGHTS.

ENHANCE PROJECT OVERSIGHT, HELPING TEAMS IDENTIFY AND ADDRESS ISSUES MORE EFFICIENTLY.

### 7. IOT (INTERNET OF THINGS) AND SMART CONSTRUCTION

IOT INVOLVES CONNECTING CONSTRUCTION EQUIPMENT, MACHINERY, AND EVEN BUILDING COMPONENTS TO THE INTERNET. THIS CONNECTIVITY ENABLES REAL-TIME MONITORING, DATA COLLECTION, AND AUTOMATION OF VARIOUS CONSTRUCTION PROCESSES.

### **BENEFITS:**

ENHANCES EFFICIENCY, SAFETY, AND PROJECT MANAGEMENT.

IT ALLOWS FOR PREDICTIVE MAINTENANCE, REDUCES DOWNTIME, AND OPTIMIZES RESOURCE ALLOCATION.

THE CHALLENGES WITH ADVANCED CONSTRUCTION TECHNOLOGIES

WHILE ADVANCED CONSTRUCTION TECHNIQUES OFFER NUMEROUS ADVANTAGES, THEY COME WITH THEIR FAIR SHARE OF CHALLENGES.

### **OVERCOMING THE SKILLS GAP**

IMPLEMENTING ADVANCED TECHNOLOGY REQUIRES A WORKFORCE WITH THE NECESSARY SKILLS. BRIDGING THE SKILLS GAP THROUGH TRAINING AND EDUCATION IS CRUCIAL.

### COST CONSIDERATIONS

INITIAL INVESTMENTS IN ADVANCED TECHNOLOGY CAN BE HIGH. HOWEVER, THE LONG-TERM COST SAVINGS OFTEN OUTWEIGH THE UPFRONT EXPENSES.

### REGULATORY HURDLES

REGULATIONS IN THE CONSTRUCTION INDUSTRY MAY NOT ALWAYS KEEP PACE WITH TECHNOLOGICAL ADVANCEMENTS. NAVIGATING THESE REGULATORY CHALLENGES CAN BE COMPLEX

### BENEFITS OF INTEGRATING ADVANCED CONSTRUCTION TECHNIQUES

THE BENEFITS OF INCORPORATING ADVANCED CONSTRUCTION TECHNIQUES INTO PROJECTS ARE SUBSTANTIAL.

ENHANCED EFFICIENCY: PROJECTS ARE COMPLETED FASTER AND WITH FEWER ERRORS, SAVING TIME AND RESOURCES.

SUSTAINABILITY AND ENVIRONMENTAL IMPACT: REDUCED WASTE AND ENERGY-EFFICIENT PRACTICES CONTRIBUTE TO A MORE SUSTAINABLE CONSTRUCTION INDUSTRY.

COST SAVINGS: ADVANCED TECHNIQUES LEAD TO COST SAVINGS IN LABOR, MATERIALS, AND MAINTENANCE.

### WRAPPING UP

ADVANCED CONSTRUCTION TECHNOLOGY AND NEW CONSTRUCTION MATERIALS ARE AT THE FOREFRONT OF THE INDUSTRY'S TRANSFORMATION. ADOPTING THESE ADVANCED CONSTRUCTION MATERIALS AND TECHNOLOGIES IS NOT MERELY AN OPTION BUT A NECESSITY FOR CONSTRUCTION COMPANIES LOOKING TO STAY COMPETITIVE AND REDUCE THEIR ENVIRONMENTAL FOOTPRINT.

THE USE OF ADVANCED CONSTRUCTION MATERIALS AND EQUIPMENT, INCLUDING ADVANCED BUILDING MATERIALS AND CONSTRUCTION TECHNOLOGY, HAS BECOME A HALLMARK OF FORWARD-THINKING CONSTRUCTION FIRMS.

THESE INNOVATIONS OFFER A PATHWAY TO GREATER EFFICIENCY, SUSTAINABILITY, AND COMPETITIVENESS IN A RAPIDLY CHANGING WORLD. AS TECHNOLOGY CONTINUES TO ADVANCE, CONSTRUCTION COMPANIES THAT ADAPT AND EVOLVE WILL BE THE ONES BUILDING A BRIGHTER, MORE SUSTAINABLE FUTURE WITH ADVANCED CONSTRUCTION TECHNIQUES AND EQUIPMENT.