

DR DY PATIL PRATISTHAN'S Dr D Y Patil Institute of Engineering, Management & Research, Akurdi, Pune





Vision

To impart quality education to produce Competent Chemical Engineers

Mission

- 1. To create an effective atmosphere for academic excellence
- 2. Impart quality education in basic and applied areas of Chemical Engineering
- 3. Enable students to explore knowledge through creative learning by industry institution collaboration
- 4. Inculcate values of leadership, teamwork and ethics

About Department

It is a great pleasure to welcome you to the Department of Chemical Engineering at Dr. D Y Patil Institute of Engineering and Management and Research. The Department of Chemical Engineering was started in the year 2012 with an intake of 60 students. The Chemical Engineering Department is proud to have a team of energetic and hardworking staff and we are blessed to have among the finest and talented students admitted into our department recognized for high-quality academic programmes and excellence of its motivated faculty. We are committed to give our students an environment where they can develop critical thinking and problem-solving skills as they advance through the programme. In addition to classroom teaching, the students are guided and motivated to practically implement the principles learnt in classrooms through experimentations in the laboratories, which help students gain confidence and become skilled engineering professionals.

Chemical Engineering Apps For Android

- 1. <u>Chemical Engineering</u> [by Softecks]: This app contains descriptive information about vast topics in the field of chemical engineering. This is a very general app which can be used by all chemical engineering students worldwide to review their knowledge about chemical engineering.
- 2. <u>Chemical Technology</u> [by Kirill Sidorov]: This app features information about myriad chemical engineering technologies such as unit operations and unit processes. It also features various basic terminologies used in the field of chemical engineering.
- 3. <u>Process Engineering Tools</u> [by Sardroid Engineers]: This app can be used for variety of process engineering calculations. It contains calculation sheets for static equipments, rotating equipments, piping systems, etc. Detailed theory and calculation of each equipment is also available.
- 4. <u>Chemical Engineering Interview Question Answers</u> [by Tech Seers Solutions]: This app contains a large collection of interview questions asked in core chemical engineering and also a good collection of general HR questions along with tips on how to approach the question.
- 5. <u>Chemical Engineering Dictionary</u> [by E-Dictionary]: This app is an online dictionary which contains all the keywords used in the field of chemical engineering. It is very handy if one wants to know the meaning of something. A search feature is also provided.
- 6. <u>Chemical Engineering Quiz</u> [by Mobilityappz]: This is a quiz app which contains multiple choice questions to test and review the knowledge of the chemical engineer. It covers all the topics in the field of chemical engineering and indexes them into various sections.
- 7. <u>ACS Mobile</u> [by American Chemical Society Pubs]: This app provides latest update on various research going on in the field of chemical engineering as soon as they are publishable.
- 8. <u>Petrochemical Engineering</u> [by Softecks]: This app covers all the fundamentals, technologies, and terminologies relates to the field of petrochemical engineering.
- 9. <u>Petroleum Engineering</u> [by Softecks]: This app covers all the fundamentals, technologies, and terminologies relates to field of petroleum engineering and refineries.
- 10. Dangerous Goods Manual [by Knorre]: This app contains information on classification of hazardous materials as explosives, gases, flammable materials, oxidisers, toxic substances, corrosive materials, etc. Large list of dangerous goods are listed along with their corresponding hazard number.

Source: Chemical Engineering World Magazine, Android Play Store

II) Heat Recovery Steam Generator (HRSG)

Heat recovery steam generators are equipments which are used to extract heat from process gas or a waste gas streams and use that heat to convert liquid water into steam in order to use that steam in some other process or the HSRG is made part of a power generation unit where it uses the heat from the exhaust gases of turbines to convert liquid water into steam for use in the same power cycle. HRSG is basically a heat exchanger which has very high efficiency. A HRSG system is made up of three major components; the economizer, the evaporator and the superheater. These components are arranged accordingly on order to get a highly efficient thermal exchange system. In some applications, a selective catalyst reduction (SCR) unit is installed with the HRSG in order to reduce the nitrogen content oxide in the exhaust gases of HRSG.



Working of HRSG

HSRG is essentially a large structure of network of pipes. The water is made to flow through the pipes and the hot gases are made to contact the pipes from the other side. The water and the hot gases are separated by the solid boundaries of the pipe material. The pipes are provided with extended fins in order to increase the effective heat transfer area.

The water is first passed through the economizer from where it passes through evaporator and then to super heater. The hot gases first come in contact with the super heater and then with evaporator and then with economizer. The temperature of the super heater section is highest in the system because it is the closest to the input of hot gases. The temperature of the economizer is the lowest among the three major components because it is farthest from the hot gases input.

The liquid water is fed in to the economizer, the function of economizer is to preheat the liquid before it passes to the evaporator section. The preheated liquid water then passes to the evaporator tubes where enough heat exchange occurs for the liquid water to get converted into steam. The steam may be saturated in nature hence it is passed to the super heater section where the temperature of steam increases so much that it becomes a superheated steam from a saturated steam. This superheated steam is then output from the HRSG system and then passed down the line to the next equipment in the process wherever it is required. Source: Chemical Engineering World Magazine



Group Discussion on **Cyber Awareness** was organized by Chemical EngineeringDepartment on 20.04.2022

Participants:10

Coordinator: Dr. Utkarsh Maheshwari, Ms. Asmita Patil, Ms. Priyanka Thakare



Hackathon- It is a great way for aspiring and experienced innvovation to develop new skills.



Students Achievements

Abhishek Bhagat and Prasad Bhandarkar are selecting in Top 24 Teams in the KPIT Sparkle competition 2021-22. The team will receive an initial grant of Rs. 50000/- from Gujrat Government and also invited to submit incubation documents to the COEP BHAU institute for receiving Rs. 3.6 lakh per member.





Placed students of 2021-22with department faculty

Student Success





DR D.Y.PATIL INSTITUTE OF ENGINEERING MANAGEMENT & RESEARCH, AKURDI, PUNE

Accredited By NAAC & ISO 21001:2018 Certified Institute (Institute Code: 6802)

DEPARTMENT OF CHEMICAL ENGINEERING Student Uchievement



Ms. Doha Joshi RMIT Uiversity, Melbourne (BATCH :18-19)

Got selected as Project Coordinator in Morgan Projects, Brisbane, Australia

Congratulations on your achievement!!

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Student Success



Induction Program



Faculty Achievements

Faculty Development Programme Attended /Workshop/Seminar

- Faculties from Department of chemical engineering attended 18 Faculty development programmes
- Faculties from Department of chemical engineering attended 5 Workshops



Mr. D. P. Despande received Best Presentation Award

Dr. Shailesh Ghodke, HoD, Chemical Engineering Chaired the Techincal session at National Conference, LIT, Nagpur



Dr. Shailesh Ghodke, HoD, Chemical Engineering Chaired the Techincal session at International Conference, ACMS, IIChE

Since 1947 Platinum Jubilee Celebration of
International Conference on Advances in Chemical & Material Sciences
ACMS-2022
April 14-16, 2022 at HIT Kolkata
Organised by In Association with
<u>Certificate</u>
This is to certify that Prof./Dr./Mr./Ms. DR. SHAILESH GHODKE
DR. D. Y. PATIL INSTITUTE OF ENGINEERING MANAGEMENT AND RESEARCH
has Chaired a technical session in ACMS-2022, held at Heritage
Institute of 'Jechnology, 'Kolkata, during April 14-16, 2022.
Ditle: na
Co-authored by HA
Andrea Tur? Cahorte
Shri D. M. Butala Shri Praveen Saxena Dr. Avijit Ghosh President, IIChE Honoray Registrar, IIChE Organizing Scoretary, ACMS-2022
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