

## **ABOUT GVP COLLEGE OF ENGG.**

GAYATRI VIDYA PARISHAD (GVP), a premier educational trust in the east coast of India, started its activities from 1989 and is managed by eminent educationalists, philanthropists and technocrats. The main goal of the trust is to promote establish and assist in maintaining educational and other institutions with a view to impart education to all the branches in general and in advance technology beside management, education and science in particular, and thus to facilitate graduates securing gainful employment. Towards the fulfillment of this aim, the GVP started a degree college in 1989. In 1992, a junior college was started. In the following years a post graduate college was started. As a further step towards promoting technical education, the engineering college was started in 1996 with four branches which were increased to seven in the subsequent years. Also M.Tech courses in all branches of engineering are offered. All seven undergraduate courses are accredited by NBA for 3 and 5 years. The college is accredited by NAAC with 'A' grade. The GVP college of Engineering has successfully completed five years of Autonomy.

### **Chief Patron:**

**Sri D. V. Subba Rao, M.L.**  
Former President . BAR council of India,  
President, Gayatri Vidya Parishad .

### **Patrons:**

**Prof. Dr.-Ing. P.Srinivasa Rao, F.N.A.E.,**  
Director General, GVP-SIRC .

**Prof. P. Soma Raju, M.A., Ph.D.**  
Secretary, Gayatri Vidya Parishad .

**Prof. A. Bala Koteswara Rao, Ph.D.**  
Principal, GVP College of Engineering (A).

### **Organizing Committee:**

**Dr. B. Srinivas** (Professor & Head)

**Prof. G. Murali Dhar**                      **Sri B.L.N. Raju**

**Prof. Aditya Mukherjee**                **Dr. K. Siva Kumar**

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**Dr. B. Sreenivasulu**

**Dr. C.V. Nageswara Rao**

### **CONTACT:**

Head of the Department,  
Department of Chemical Engineering,  
GVP College of Engineering (A)  
Madhurawada, Visakhapatnam-530048.  
E-mail: bsrini\_123@gvpce.ac.in  
Mobile : 09849641714

## GUEST LECTURE ON **Membrane Technology- Solving Industrial Problems**

(27.08.2014)

Under  
Technical Education Quality Improvement Program  
TEQIP-II (S.C.1.2)



COLLEGE OF ENGINEERING  
(AUTONOMOUS)



### **ORGANIZED BY**

**DEPARTMENT OF CHEMICAL ENGINEERING**  
**Gayatri Vidya Parishad College of Engineering**  
(Autonomous)  
Madhurawada, Visakhapatnam - 530 048.  
Andhra Pradesh (India)  
[www.gvpce.ac.in](http://www.gvpce.ac.in)

## ABOUT SPEAKER

- Dr. S. Sridhar is a Principal Scientist in CSIR-IICT, Hyderabad
- He pursued his B.Tech, M.Tech and PhD from O.U College of Technology, Hyderabad.
- After achieving M.Tech degree he joined IICT, Hyderabad as a Junior Research Fellow.
- His PhD thesis titled "Synthesis and Characterization of Novel Polymer Membranes for Separation of Industrial Gas Mixtures".
- After achieving PhD degree, he was a Senior Research Fellow in IICT, Hyderabad.
- He has been working as a Scientist in the area of Membrane Separation Processes at the CSIR-IICT, Hyderabad.
- He handled a number of prestigious projects and published over 100 research papers with a h-index of 25. He has 7 patents and 5 book chapters.
- He guided 200 B.Tech, M.Tech and MSc students from different universities.
- He is a recipient of 14 prestigious awards. Recently he was conferred upon the NASI-Reliance Industries Platinum Jubilee Award-2013 award by His Excellency, The Honorable Governor of Goa.

## ABOUT THE LECTURE:

### **Topic: *Promoting the Development of Industry, Society and Academia through Chemical Engineering***

Membrane Science has become one of most significant research areas in Chemical Engineering due to its inherent advantages of enhanced economy, process safety and environmental benignity in comparison to conventional processes. This lecture illustrates CSIR-IICT's endeavor in applying membranes for practical purposes such as drinking water purification, industrial wastewater management,

solvent recovery, gas purification and energy generation.

A brief introduction on the principles and applications of membrane processes is initially provided followed by an overview of IICT's forays into societal welfare through purification of ground water contaminated by excess fluoride in villages based in Nalgonda, Warangal and Prakasam Districts of Andhra Pradesh and Sethurapatti village in Tamil Nadu. Installation of nine model defluoridation plants of 1000 L/h capacity provides safe drinking water to a rural population of 1 lakh which has been widely appreciated by the press, masses and Governor of A.P.

Development of novel membranes and membrane-based processes to address industrial separation problems which could not be solved by conventional separation methods is dealt with the help of some case studies which highlight design, installation and commissioning of pilot plants/commercial systems including: (i) Commissioning of a nanofiltration plant of 4000 L /day capacity for extraction of impurity-free sodium thiocyanate solvent for acrylic fibre industry (CFCL) at West Bengal (ii) Sweetening of natural gas on a 100 NM<sup>3</sup>/h pilot plant at ONGC, Hazira, Gujarat. Many of these technologies have helped in achieving zero liquid discharge which is mandatory for today's industries.

The group has also installed laboratory RO systems at Kendriya Vidyalaya, Nalgonda and Loyola Academy besides fuel cell set up at NFC school, to spread awareness on new technologies. Finally, future prospects of membrane technology for the betterment of the common man's livelihood is dealt with.

## SCHEDULE

**DATE: 27.08.2014**

**TIME: 11:00 AM**

**VENUE: Mechanical Seminar Hall**

## WHO CAN ATTEND

Faculty, research scholars, PG students and UG student with background in Chemical Engineering

## ABOUT THE DEPARTMENT

Welcome to the Dept. of Chemical Engineering at GVP. It was established in the year 1996 and recognized as one of the India's leading academic institutions. The Department has highly qualified faculty members (7 PhDs out of 15) and experienced from diverse research areas. Since 2004-05, the Department is also offering M.Tech programme in Chemical Engineering with an intake of 18. The Department has completed two projects sanctioned by AICTE, worth of 23 Lakhs. Presently two project from AICTE worth 17.45 lakhs is under progress. The Department is re-accredited by NBA for five years.

## MAJOR EXPERIMENTAL FACILITIES IN THE DEPARTMENT

High pressure Parr Reactor, Gas Chromatograph, UV Photo catalytic reactor, UV Spectrophotometer, Distillation column, CSTR and Absorber with controllers, Brookfield viscometer, High Pressure reactor for mesophase pitch, Conradson Furnace, Muffle Furnace,

## CHEMICAL ENGINEERING SOFTWARE'S

COMSOL, Star, PRO- II, MATLAB, Triangle Simulation software

## RECENT ACTIVITIES under TEQIP-II:

- Guest lecture by Dr. Meenakshi Sundaram, R&D, CPCL, Chennai on 14<sup>th</sup> December-13.
- Guest lecture by Dr. Satyanarayana Chilukuri, Scientist, NCL, Pune on 25<sup>th</sup> November 2013.
- Workshop on Linear and Non linear FEM from 30 Oct-03 Nov 2012 .
- Workshop on Advances in Separation Processes from 12-16 March 2012.