

## Overview of the Course

Process Intensification (PI) is increasingly being adopted as an effective way to expand productive capacity and update ageing batch processes without the need for large civil engineering investment. The technology is well-established and as it often achieves yield improvements and waste reductions, the present economic climate is driving the number of applications at a rapid rate of growth. Process Intensification offers: - Higher yields and better product consistency and repeatability - Energy savings and reduced operating costs - Plan capital cost reductions

However achieving success with and intensified process is more than just selecting the right reactor. It may require the redesign of other operations, improvements to the chemistry through changes to operating conditions and/or catalysis. PI can provide new opportunities for control, instrumentation and on-line analytics. These are some of the factors important to industrialists seeking a move towards PI, all of which require a good understanding of the underlying mechanisms and principles. Furthermore, the understanding of these key mechanisms and principles can also be applied to process scale up more generally, helping to achieve more successful development to full scale. The primary objectives of the course are as follows:

- i) Exposing participants to the fundamentals of process intensification practices,
- ii) Building in confidence and capability amongst the participants in the application of process intensification equipments in chemical industries
- iii) Providing exposure to practical problems and their solutions, through case studies of PI implementation



**Prof. Andrzej Górak** is a Head of Laboratory of Fluid Separations at the Department of Biochemical and Chemical Engineering at the TU Dortmund University.

Professor Andrzej Górak studied chemistry at the Technical University of Lodz in Poland. He obtained his Ph.D. from the Faculty of Process Engineering in 1979. His thesis treated continuous distillation of multi-component mixtures. He worked at the same faculty as senior researcher until 1988. The following four years he spent as a researcher at Henkel KGaA in Düsseldorf. Having completed his “habilitation” at RWTH Aachen in 1989 and at Technical University Warsaw in 1990, Andrzej Górak became professor at the chair of fluid separation processes at TU Dortmund University in 1992. In 1996 he took over the chair of fluid separation processes at the University of Essen. Four years later, in 2000, he returned to TU Dortmund University to become the head of Laboratory of Fluid Separations, former chair of fluid separation processes. Apart from this, he has been full professor at the Technical University of Lodz since 2003. Since 2009 he has been Dean of the Faculty of Biochemical and Chemical Engineering until the University Council of TU Dortmund University elected him as prorector for research in April 2011. He kept this position until January 2014. Between 2010 and 2012 he was member of Council of National Centre for Research and Development, appointed by Polish minister of science.

For more details:

[https://www.researchgate.net/profile/Andrzej\\_Gorak](https://www.researchgate.net/profile/Andrzej_Gorak)

<http://www.fvt.bci.tu->

[dortmund.de/cms/en/staff/Prof/index.html](http://dortmund.de/cms/en/staff/Prof/index.html)

**Who can participate?**

- This program is open to the Faculty, UG, PG students, and Research Scholars working or interested in Modeling of heterogeneous reactors from various Institutes.
- Engineers/Scientists working in Industries, Interested in process intensification of chemical processes.

## How to Register?

### Stage-1: Web Portal Registration:

Visit <http://www.gian.iitkgp.ac.in/GREGN/index> and create login User ID and Password. Fill up the registration form and complete web registration by online payment of Rs. 500/-. This provides the user with life time registration to enroll in any number of GIAN courses offered.

### Stage-2: Course Registration:

Login to the GIAN portal with the user ID and Password already created in Step 1. Click on Course Registration option at the top of Registration form. Select the Course titled “Process Intensification” from the list and click on save option. Confirm your registration by clicking on Confirm Course.

### Registration Fee:

Faculty & Scientists	Rs. 2500/-
Participants from Industry / Consultancy firm	Rs. 5,000/-
Students & Research Scholars	
• Without award of Grade	Rs. 1,000/-
• With award of Grade	Rs. 1,500/-
Students from abroad	\$ 300

**Boarding & Lodging Fee:**

Faculty, Participants from Industry /Research Organizations	Rs. 2500/- Accommodation -Visitors Block
Student & Research Scholar	Rs. 1,500/- Accommodation -Institute Hostel

### Selection and Mode of Payment

Selected candidates will be intimated through e-mail. They have to remit the necessary course fee (**Mandatory for all**) and boarding & lodging fee (**if boarding & lodging is required**) to the Bank as per the details given below.

Account Name	GIAN NITW
Account No.	62447453600
Bank	State Bank of India
Branch	REC Warangal (NIT Campus)
Branch Code	20149
IFSC	SBIN0020149
MICR Code	506002030
SWIFT Code	SBININBB

Candidates registering early will be given preference in short listing process

For any queries regarding registration of the course, please contact the Coordinator:

### Dr. Shirish Sonawane

#### Dr S Srinath

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### About GIAN Course

MHRD, Govt. of India has launched an innovative program titled “Global Initiative of Academic Networks (GIAN)” in higher Education, in order to garner the best international experience. As part of this, internationally renowned Academicians and Scientists are invited to augment the Country’s academic resources, accelerate the pace of quality reforms and elevate India’s scientific and technological capacity to global excellence.

### About the Institute and Warangal

National Institute of Technology, Warangal (NITW) formerly known as RECW is the first among seventeen RECs set up in 1959. Over the years, the Institute has established itself as a premier Institution in imparting technical education of a very high standard, leading to B.Tech, M.Tech and Ph.D. programmes in various specializations of Science and Engineering streams. Warangal is known for its rich historical and cultural heritage. It is situated at a distance of 140 km from Hyderabad. Warangal is well connected by rail and road. National Institute of Technology, Warangal campus is 2 km away from Kazipet railway station and 12 km away from Warangal railway station.

### About the Department

The Department of Chemical Engineering was established in the year 1964 and celebrated Golden Jubilee year in 2014. The Department offers B.Tech in Chemical Engineering, two M.Tech programmes (each in Chemical Engineering and Process Control) and Ph.D programs. Currently, the Department has 15 faculty members with different research expertise. The Department has good research facilities for both experimental as well as simulation based research.



**A Five Day  
GIAN Course on**

### Process Intensification

**7 -11 Jan 2019**

**Call for Registration and Participation**

**International Faculty**

**Prof. Andrzej Górak**

**Department of Biochemical and Chemical  
Engineering, Laboratory of fluid separations,**

**TU Dortmund, Germany**

**National Coordinators**

**Dr. Shirish Sonawane**

**Dr Srinath**

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