About GIAN Course

About GIAN Course: Ministry of Human Resource Development (MHRD), Government of India (GoI) 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 NIT Warangal

National Institute of Technology Warangal, formerly known as Regional Engineering College was established in1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate and 31 post- graduate programmes besides doctoral programmes. About 5000 students across the country and about 500 international students' study in the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure.

About Warangal

Warangal is the second largest city of the state of Telangana. It is situated at a distance of 140 km from the state capital Hyderabad (Nearest Airport). It is well connected by Rail (Kazipet Junction is 2 km away and Warangal Station is 12 km away) and by Road (NH 202). Warangal is renowned for its rich historical and cultural heritage. It was the seat of erstwhile 5th Kakatiya dynasty. It is a place of tourist attraction with a number of historical monuments like Thousand Pillars Temple, Warangal Fort, Bhadrakali Temple, Ramappa Temple and Laknavaram Lake.

Brief Profile of the Civil Engineering Department

The Department of Civil Engineering offers B. Tech in Civil Engineering, Eight M. Tech programs including Water Resources Engineering and Remote Sensing and GIS and offers PhD in all civil engineering domains. The Department is a recognized QIP Centre since 1978. It has well established and well-equipped state of the art laboratories with experienced faculty engaged in teaching, research, capacity building activities and industry extension services. Water Resources Engineering and Remote Sensing group Faculty are carrying out research in the field of climate change impact studies. Faculty members represent several policy making and professional bodies. The Department has liaison with reputed industries and R&D organizations.

For any queries regarding the course, please contact

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MHRD GOVERNMENT OF INDIA

GIAN GLOBAL INITIATIVE OF ACADEMIC NETWORKS

A One Week GIAN Course *On*

Entrepreneurial Meteorology

March 22nd - 26th, 2022

(Online)

Call for Registration and Participation

International Faculty

Dr. Morgan B. Yarker
Certified Consulting Meteorologist and Science Educator
Founder, Yarker Consulting
CEO, Ycomm LLC
Cedar Rapids, IA, USA

Coordinator

Dr. K. Venkata Reddy

Organized by

Department of Civil Engineering
National Institute of Technology
WARANGAL – 506 004
Telangana State, INDIA

Overview of the GIAN Course:

Entrepreneurial Meteorology (Entre. Met.) a subfield of meteorology focused on the innovation of weather/climate services and products, and turning them into a viable business. Available career options in meteorology and atmospheric science is experiencing a significant transformation. It is for this reason that meteorology professionals will have to adapt to transformations and use their meteorology degree for careers in an industry that has different expectations and goals than most of us were trained for. Many private companies are driven by entrepreneurship, so it is imperative that we, as meteorologists, need to understand how to apply our experience and knowledge as scientists to the concept of entrepreneurship. Meteorology professionals who can think like entrepreneurs will be highly marketable members of the workforce. While it may seem like a daunting transition, the process of starting up a company requires a significant amount of research, which scientists are highly skilled at and trained to do. With a little training, any atmospheric scientist can apply these skills to a new scenario. What better way to train ourselves to be entrepreneurs than to start up our own meteorology-based business!

In developing countries, meteorology still is considered as science and always looking for the government departments and other sources to provide the data to the general public. There are limited exercises are ongoing to add the value to the meteorological data. Huge requirement in different government and private sectors for tailor made meteorological data for various applications. Hence, meteorology needs to be seen from an entrepreneurship perspective. This course covers the lectures on idea of meteorology data, finding the industry requirements, entrepreneurship ideas, plan, execution etc. Tutorials will be taken on developing small ideas on meteorological aspects and make them using marketable commodities.

2.0 Objectives

The primary objectives of the course are:

- Provide participants with opportunity to innovate a meteorology product/service.
- Participants will learn about the Strategyzer Business Model Canvas.
- Participants will enhance their capabilities for developing strategies for successful business innovations in the field of meteorology

Who can participate?

This interdisciplinary program on **Entrepreneurial Meteorology** will be beneficial to faculty members /research scholars/ students /scientists and technologists who are working in the field of meteorology/climate and allied fields. The following persons can attend this program:

- Faculty from academic Institutions
- Scientists/Technologists from research organisations.
- Working people from government, private organisations, start-ups and NGOs.
- Research scholars and Master's students from academic institutions.

(Participants for the course will be selected on first come first served basis)

Registration Fee:

- Faculty & Scientist from Research Organizations: Rs. 2,000/-
- Participants from Industry /Consultancy Firms: Rs. 4,000/-
- PG &Ph.D Students: Rs. 1,000/-
- Students from Abroad: $ 50/-
- Faculty/Scientist/Industry Participants from abroad: $ 100/-

(The Registration fee includes course material, access to video recorded lectures)

Important Dates

- **Last date for Registration: 07/03/2022**
- **Announcement of selection: 11/03/2022**

Selection and Mode of Payment:

Selected candidates will be intimated through **e-mail.** They have to remit the necessary course fee to the Bankas per the details given below.

Account Name	GIAN NITW
Account No & Bank	62447453600, SBI
Branch	SBI, NIT Warangal, 20149
IFSC Code	SBIN0020149
MICR Code	506002030,
SWIFT Code	SBININBBH14

Candidates who registered early will be given preference inshort listing process.

How to Register?

Step-1: One-timeWeb (Portal) Registration:

- Visit **GIAN** Website at the link: **http://www.gian.iitkgp.ac.in/GREGN/index**
- Create login User ID and Password.
- Fill up the blank registration form and do web registration by paying Rs 500/- online through Net Banking /Debit / Credit card.
- This provides him/her with life time registrationtoenrol in any number of the GIAN courses offered in future.

Step-2: Course Registration (Through GIANPortal):

- Log in to the GIAN portal with the user ID and Password created.
- Clickon **"Course Registration"** option given at the top of the registration form.
- Select the Course titled **" Entrepreneurial Meteorology"**from the list and click on '**Save**' option.
- Confirm your registration by Clicking on '**Confirm Course**'.

Step-3:

- The registered participants on GIAN portal will be informed by the Program Coordinator through E-mail regarding their shortlisting/selection for the program.
- The shortlisted candidates are then required to pay the applicable Registration fee, as mentioned above.

International Faculty: Dr. Morgan B. Yarker

Morgan B. Yarker is an AMS Certified Consulting Meteorologist (CCM) with more than 10 years' experience as an atmospheric scientist and more than 15 years' experience as an educator. She is the Founder and Owner of Yarker Consulting, which provides atmospheric science and education services to a variety of industries worldwide. She is also Co-Founder and CEO of Ycomm, an education platform designed to create engaging, immersive, online e-learning communities. Prior research includes mesoscale modeling, regional impacts of ENSO, analysis of PM2.5 concentrations, and inquiry-based learning theory and application. Current projects involve the research and development of high-quality online courses so that topics crucial to climate change mitigation, such as regional climate modeling, are more readily accessible. As a business owner, Morgan most enjoys being able to combine her unique background as a K-12 and adult educator, atmospheric scientists, and education researcher into projects that solve professional and societal problems

Host faculty: Dr. Venkata Reddy Keesara

Venkata Reddy Keesara, is working as Associate Professor in the Department of Civil Engineering at the National Institute of Technology Warangal. He is carrying out research in watershed modelling applications for the last twenty years. He has carried out post-doctoral research work on Impact of Climate change on Water Resources at Texas A&M University with Raman Fellowship given by GOI. He is carrying out research in the fields of real time forecasting flow in watersheds, climate change impacts on water resources and decision support systems under climate change scenarios. Collaborative research is carrying out for real time forecasting of floods for two river basins of India with collaboration from TAMU, USA and VT, Blacksburg USA as part of SPARC project. Climate change impact analysis and integrated water resource management model development is carrying out for the selected basins of Brazil, South Africa and India as part of ongoing BRICS project He has published 40 research papers in peer reviewed journals in the field of water resources along with geospatial applications in different other domains.

Course details

The program is planned for 20 hours of teaching cum tutorial sessions spanned over five days. Main content of the program is as follows:

Day 1

- **Lecture (L):** Introduction to entrepreneurial meteorology
- **Lecture (L):** Meteorology Data Sources
- **Lecture/Tutorial Session (L/T):** Group brainstorming session, Practice of innovating meteorology product/services. Generate a list of startup business ideas and break into working teams

Day 2

- **L:** Overview of Strategyzer Business Model Canvas.
- **L:** Value Edition to Metrological Data
- **L/T:** Data collection: Proposition value and customer segments. Teams workshop their product's proposition value and draft customer interview questions

Day 3

- **L:** Data analysis: Customer interview data
- **L:** Programming Methods for Meteorological Data.
- **L/T:** Experimentation: Embracing evidence to adjust hypothesis. Teams work to analyse their customer interview data and adjust their value propositions accordingly

Day 4

- **L:** Researcher, Entrepreneur and Educator – Dr. Morgan Yarkar Journey
- **L:** Working with Climate Data- Case Studies
- **L/T:** The Pitch: Communicating as an entrepreneur, Data analysis: Scientific inquiry as a marketing strategy, Teams research their customer base and use their findings to develop a marketing strategy and pitch their product/service to the group
- Conduct the exam for participants who need grade

Day 5

- **L:** Business Avenues for Meteorology in Developing Countries.
- **L:** Lessons learned from existing meteorology businesses, Next steps: An introduction to prototyping
- **L/T:** Teams work on a mini-sprint to begin the process of prototyping their product/service

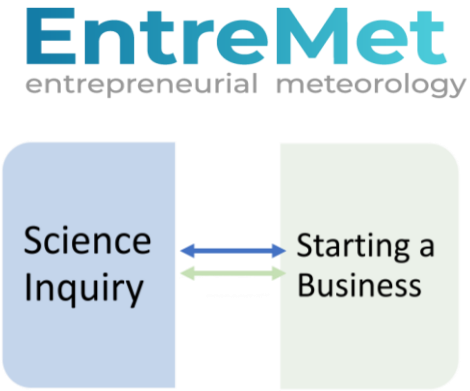

Figure: Entrepreneurial Meteorology: Applying the scientific process to modern business strategies in order to support the development of innovative weather services and products into viable businesses.