



## Indian Institute of Science Education and Research (IISER) Tirupati

### **Announcement- New course-starting from April 24, 2020**

#### **BIO329/629: Pandemics: Disease & Intervention**

Lead instructors: Dr. Suchi Goel\*, Dr. Ashwani Sharma, Prof. BJ Rao, Dr. Raju Mukherjee, Dr. Shibdas Banerjee and Dr. Rajesh Viswanathan

General motivation to students on why this is an exciting course:

As the world grapples with COVID-19, there is an ever-increasing need for developing a scientifically rigorous awareness course on Infectious Diseases, especially those which potentially could turn into a COVID-19 like pandemic. With biological and related expert faculty, you will get a first-hand contemporary scientific literature discussed in the course. With a focus on COVID-19, but deriving a broad analysis of related ones from history of pandemics, this course will systematically introduce the scientific topics of identification, analysis, biomarker discovery for detection and treatments with drugs and possible vaccination pathways in the context of a realistic pandemic, and integrates these with regulatory aspects of prevention / control of spread. As an institution, this part of our curriculum also lays importance to encourage students to develop new contemporary research streams on the projects related to health care with emphasis on COVID-19 orientation and this course will synergistically help in that direction for students to approach this topic as possible future research avenues.

1. Credits: 2 (Pass / Fail type)
2. Open to: BS-MS (III year), I-PhD (Years I), Ph. D.( Year I)  
Year IV of BS-MS, year II of I-Ph.D. and any other year of Ph. D. can audit the course.
3. Semester: The course will start with lectures online from April 24<sup>th</sup>, 2020. For those who pass the course, credits will be included in Monsoon 2020 semester.
4. The students after completion of this course will be able to:
  - Learn about different bacterial and viral pandemics in new and old world and mortality associated with these pandemics
  - Methods of identification of pathogen responsible for pandemic
  - Various approaches for development of diagnostics, biomarkers
  - Study regulatory guidelines for societal management during pandemic
  - Repurposing drugs for treatment and vaccine against pathogens
5. Module-wise course schedule is provided as attached.