Course Description

Various aspects of systems analysis for sustainability include assessing technical feasibility, economic viability, environmental impacts, resource sustainability and social aspects of engineered systems. This course will introduce these aspects of sustainability with a focus on case studies that are relevant to biofuels and bioproduct technologies. This course will introduce tools to perform technical feasibility analysis, economic viability analysis, resource sustainability assessment and life cycle assessment (LCA). This course will provide an introduction and overview of the LCA methodology, various tools to perform LCA and its use in assessing the environmental impacts. Course will consist of lectures focusing on theory and case studies highlighting the use of these methods to assess sustainability.

Learning Outcomes

By the end of this course, for a given system, you must be able to:

- Describe various aspects of sustainability.
- Evaluate technical feasibility.
- Assess economic viability.
- Evaluate the environmental impacts.

Course Format and Schedule

- Classes will be held online from 5:00-7:30 pm everyday. (Except 25 July and 1 Aug.). On 24 and 31 July, the classes will be held from 3:00-6:00 pm. All times are Indian Standard Time.
- Opensource software and databases must be downloaded and installed before the commencement of the classes (links will be sent with notice of acceptance).
- The course will consist of theory lectures along with case studies. Participants will work on a small project of their choice.

A minimum 80% attendance and completion of exam with >70% mandatory for completing the course.

Course Faculty

- Prof. Ganti S. Murthy, IIT Indore (Lead and coordinator)
- Dr. Deepak Kumar, SUNY College of Environmental Science and Forestry, USA
- Dr. Karthik Rajendran, SRM University, India
- Dr. S.M. Hossein Tabatabaie, Iwatani Corporation of America, USA

What: This course will provide an introduction to Systems analysis for sustainability with a focus on case studies that are relevant to biofuels and bioproduct technologies.

Who: Faculty, scientists, students and professionals who work on engineered systems.

Correspondence:
Prof. Ganti S. Murthy,
Discipline of Biosciences and Biomedical Engineering, IIT Indore
Email: Ganti_Murthy@iiti.ac.in

Registration Details

Registration Fee
- There is no fee for Student participants
- Faculty from Non AICTE colleges and Industry participants: ₹ 2000 Note: The fees includes service tax.

Limited seats. Registration is mandatory for ALL participants

Registration Link: https://forms.gle/9mL3VScuQuB9yv229

Registration Deadline: 10th July, 2021
Notification of Acceptance: 15th July, 2021

Mode of Payment: For Online Payment http://www.iiti.ac.in/page/e-payments
Bank Transfer:
Beneficiary Name: Registrar IIT Indore
Bank Name: Canara bank Branch: IIT Indore, Khandwa Road, Simrol, Indore
Account number: 1476101027440 IFS Code: CNRB0006223

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