



राष्ट्रीय इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी संस्थान, कालीकट
National Institute of Electronics & Information Technology, Calicut



सत्यमेव जयते

Ministry of Electronics and
Information Technology
Government of India

On-line Courses Prospectus

ISO 9001-2015 Certified

Certificate Course on Sustainable Manufacturing

Starting Date: 12th Dec 2022

Duration: 10 Days, 2Hrs daily

Course Description

Sustainability has become basic standard for assessing any development related to engineering and non-engineering activities. The environmental burden that is being created due to manufacturing industry is significant and hence needs special attention. Assessing the environmental score will help to compare the alternatives and come up with new sustainable manufacturing practices. The Course tries to impart some of the environmental considerations in manufacturing. The main objectives are

- Create the awareness of sustainability practices in manufacturing.
- Environmental assessment of manufacturing process through case studies.
- Finding out the alternatives and best practices for reducing CO₂ Emissions.
- Effects of Energy in manufacturing and Environment and its optimization.

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Who can attend?

Any under graduate/diploma student with basic knowledge of manufacturing.

- Students pursuing Engineering
- Professionals working on design & manufacturing
- Research students
- Teaching professionals & faculties

Course Content

Session	Topic	Day
1.	Evaluation of Sustainability concept. Need of sustainable technologies	1,2
2.	Sustainability and Manufacturing: Conflicting Ideas	2
3.	Energy scores and CO ₂ Emissions Importance of energy on sustainable Manufacturing	3
4.	Energy consumption units in a manufacturing process taking CNC machining as example System, Sub-system and Component level Energy computation	4,5
5.	Machine-tool design and its effects in energy consumption Process planning and process optimization for energy efficient machining	5,6,7
6.	Energy computation for additive manufacturing	7,8
7.	Environmental score calculation for manufacturing a part for various processes Comparison of machined and 3-D Printed Parts for its environmental score	9
8.	Best practices of Sustainable Manufacturing	10

Prerequisite

- Knowledge of Manufacturing Processes
- Basic knowledge of computers

Certificate

E-Certificate of participation will be mailed through registered email id after the completion of the course.

Fee and important dates

Fee	Rs. 3000/- (Including GST)
Last date for registration & payment	10 th December 2022
Sharing of Link / passwords & other details	11 th December 2022

Minimum Requirements

- Attendees must have a computer system with a good internet connection.

Link to attend the course shall be forwarded on **12th December 2022**

Faculty Profile

Qualification and experience of the faculty handling the sessions

Dr. Arun Unnikrishnan, Ph.D. in Manufacturing

Course Coordinator

Dr. Arun Unnikrishnan

Content Writer

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Terms and Conditions

- In case any registered candidate could not attend the online session due to technical issue at their side there will not be any refund of the course fee and the sessions will not be repeated.*
- In case the online course is cancelled /postponed due to some technical issue at NIELIT side and new date is not convenient to the candidate, our liability is limited to the refund of the course fee and NIELIT shall not be responsible for any consequential damages.*

For more details about our institution and facilities visit us

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Autonomous Scientific Society of
Ministry of Electronics & Information Technology,
Govt. of India



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