



**University of  
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**3D Printing & Additive  
Manufacturing**

# **Sustainability and Manufacturing**

**Dr Nida Naveed  
Keynote Presentation**

Senior Lecturer

University of Sunderland, UK

Faculty of Business & Technology, School of Engineering

E-mail: [Nida.Naveed@sunderland.ac.uk](mailto:Nida.Naveed@sunderland.ac.uk)

<https://www.sunderland.ac.uk/about/staff/engineering/nidanaveed/>

<https://www.linkedin.com/in/dr-nida-naveed-00436a109/>

# Outline

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- Sustainability in engineering
- Global Industrial Challenges
- Sustainability Goal
- AM-3D printing and Sustainability
- Multi-material 3D Printing
- Advantages and Challenges
- Research work
- Results
- Conclusion
- 3D printing facilities at UoS





# Sustainability in Engineering

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- **Sustainability in engineering** is about creating engineering solutions to meet the needs of current generations without compromising the ability of future generations to meet their own needs.
- Goes beyond short-term functionality and cost.
- Considers **long-term impacts**:
  - Environmental
  - Social
  - Economic