

Course Summary

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Weekly Coverage

Week 1

- What is Design
- What is Design Thinking
- Design Thinking Needs and Outcomes
- Introduction to Design Manufacturing

Week 2

- Functions of agricultural implements
- Operational characteristics
- Aesthetic characteristics
- Cost characteristics
- Ease of Maintenance
- Developing successful products

Weekly Coverage

Week 3

- Empathize
- Define
- Ideate
- Prototyping
- Testing

Week 4

- Understanding customer
- Voice of customer (farmers/operators)
- Translating customer needs
- Design and Specification requirements

Weekly Coverage

Week 5

- Practicing creativity
- Brainstorming
- Checklisting
- Webbing technique
- SWOT analysis

Week 6

- Low Fidelity Prototyping
- High Fidelity Prototyping
- Usability Testing : Efficiency
- Usability Testing : Capacity and throughput
- Frugal Innovation

Weekly Coverage

Week 7

- Prototyping demonstration : Materials and tools
- Prototyping demonstration : Grain Filling Machine
- Prototyping demonstration: Plant Seed Sowing Machine
- Prototyping demonstration : simple Agricultural Implements

Week 8

- Case study : Amla deseeding Machine
- Case Study : Seed Sowing Machine
- Case Study : Motorcycle Driven Ploughing Machine
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