Innovation: Course Overview, Goals and Assessment

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Introduction

- Goal of the course: To encourage students pursue their unique ideas in a systematic manner.
- Prerequisites: Willingness to learn.
- Focus Areas: Healthcare, Wearables, IoT.

Learning Methodology

- **Task Based Learning**: Each week an exploration task will be given and discussed in the next week.
- Reading material will be given for each topic.
- Students are expected to read and participate in class discussions and brainstorming sessions.
- Instructor will facilitate the discussion and questions in the class.

Assessment

The assessment is divided into two portions: Formative Assessment (30 marks) and Summative Assessment (70 marks) .

- A group of 10 members roll-number wise. For eg. 1-10 roll numbers in first group, 11-20 in second and so on.
- Group presentations. In formative assessment each group has to give a poster presentation along with a 300 word concept note/abstract. In summative assessment each group will give a powerpoint based presentation.
- Details of poster presentation and ways to create poster will be discussed in the class.
- Timeline: Formative Assessment will be after 6 weeks from the beginning and Summative Assessment will begin from the 9th week and go till 12th.

Week wise Lectures

Table 1: Week-wise themes for lectures.

Week	Theme
1	Introduction to course, Assessment Details and Research in Innovation.
2	Health Care Innovations
3	Wearables Revolution
4	Geriatrics Innovative Solutions
5	Mental health/Depression Innovative Solutions
6	Smart Homes
Formative Assessment Submission (30 Marks)	
7	Role of Data Analysis and Artificial Intelligence in Innovation
8	Ethics in Innovation
Summative Assessment Final Presentation (70 Marks)	
9	Summative Assessment Presentations (Group 1-5)
10	Summative Assessment Presentations (Group 6-11)
11	Summative Assessment Presentations (Group 12-16)
12	Summative Assessment Presentations (Group 17-22)

Assessment Details

Each group must select an area from the themes discussed in this course and address the following questions in brief in poster:

- What is the research problem?
- Why is it important to solve? (Provide evidence)
- What will be the effect of not solving/addressing it?
- What is the approach to solve it? (only approach not details.)

For the final presentation, the powerpoint must include the answers to the following questions:

- Detail evidence related to the important of problem and the current lack of solution.
- The rationale and context of the problem.
- The central goal of the proposed solution to tackle the problem.
- Who is the target population and why?
- What are the ethical concerns about the solution?
- Details of how the solution will be implemented.
- Limitations of the solution.

Each group is encouraged to submit their final solution in the National Level Business Plan Competitions.

Research and Innovation

- What is innovation? Give examples of the most popular contemporary innovation examples.
- What role do you think research plays in innovation?
- What is research? Give example of what you consider as research.
- What does research entail? What process you think is required?
- What is the role of clear and narrowed problem in innovation?
- What is the problem. VS. Why the problem.
- Research is every step of the innovative solution.
- Role of Critical Evidence Review or Literature Review.
- Study of target population. Assessment of their needs and feasibility of the solution.
- Solution prototype pilot, assessment and feedback from users.
- Revisiting the problem statement, target population and solution.
- Do not try to solve all problems in one solution.
- Keep the problem tight and solution neat.

Discussions topics for next lecture

Health Care Innovations

- 12 Innovations That Will Change Health Care and Medicine in the 2020s.
- Why Innovation in Health Care Is So Hard
- Promoting innovation in healthcare
- 9 Recent Medical Innovations Disrupting The Healthcare Industry
- Innovation in Healthcare: Why It's Needed and Where It's Going
- Healthcare Innovation - 10 Recent Examples Of Powerful Innovation In Healthcare
- What do we mean by Innovation in Healthcare?
- The next wave of healthcare innovation: The evolution of ecosystems

Discussions topics for next lecture

Health Care Innovations

- Eleven Ideas For Healthcare Innovation
- A Roadmap To Welcoming Health Care Innovation
- Innovation as a value in healthcare priority-setting: the UK experience
- COVID-19 has inspired global healthcare innovation
- Introducing responsible innovation in health: a policy-oriented framework
- Understanding and investing in healthcare innovation and collaboration

Next lecture: Discussion on health care innovations. Date: 16 December, 4-5pm.