Best Practices:

1. **Title: Impetus to Research and Entrepreneurship**

i) Objective:
- Objective is to build an ecosystem in the University to facilitate research in a sustained manner right at the entrance of a student to the University system.
- This spurs students to express their research potential and apply to it hands-on.
- Another objective, *inter alia*, is to mentor students in their formative stage of careers to engage in research publications by going through the rigours of literature survey, fabrication of experimental set-up, use of Application softwares, use of computational techniques, follow-up analysis and then publishing in the accredited peer-reviewed national and international journals. They are even mentored to carry their research work to the next level of patent filing
- Venturing into start-ups at an early age is the quintessential objective of this practice.

ii) The Context:
- Motivating students to travel beyond the classrooms and encouraging them on to research / publications / entrepreneurship calls for an inquisitive bent of mind.
- Students have to learn and become clued up on various futuristic technologies and Application softwares.
- Further, they have to develop quantitative and analytical techniques way beyond the classroom teaching.

iii) The Practice:
- Students are motivated and incentivized to engage in Research, paper publications, patents, project work, App development, competing in National and International level and entrepreneurship right from the first year of their programmes. Close mentorship and guidance are provided to the students by in-house faculty as well as outside experts along with all high-end technological support.
- Incubation and Innovation Centre of the university provides a 24x7 Atelier for the students to realize their serendipity, creative ideation, disruptive streaks to end up in creation of commercial viable products. This is an all-out effort to enable to transcend way beyond class-room learning- a crying need for our education system.

iv) Evidence of Success:
- Ever since strenuous efforts have been expended on this practice, we have been able to register very considerable improvements in our research publications, both for students and faculty. Our intended target of a minimum 30% YoY enhancement in research publications shall be well within reach. This has also led to a fillip in the number of start-ups to enter into the lipeline.

v) Problems Encountered and Resources Required:
- A swift switch of change of mind to a research bent of mind
- Devotion of huge efforts on part of students to learn Application softwares, quantitative and analytical techniques.

- Professional and commercial acumen have to be imbibed in students to transform ideas towards commercially viable end products.

2. **Title: Curriculum Design**

i) Objective:
- Intended objective of this practice is to design and develop an ever-evolving curriculum which would afford students a relevant education leading to developing an enquiring mind, amenability to disruptive thinking, hands-on skills, awareness of the cut and thrust of marketplace and commercial viability as against learning by rote.

ii) The Context:
- In the contemporary scenario, the contextual issues of higher education call upon a technology-intensive curriculum in the Indian perspective incorporating best practices of leading global universities
- A curriculum design must subsume employability, acquiring hands-on skills but also spur students towards entrepreneurship besides acquiring life-skills and ethical values.

iii) The Practice:
- Highly industry-aligned, employability-inducing and entrepreneurship-promoting curriculum is the bedrock to lead to a well-rounded education system reinforced by communication skills, general awareness and personality development. Periodic revision of curriculum after detailed feedback from stakeholders lends to continued relevance of the curriculum. The study-schemes, beside academics, trigger creative urges, disruptive thinking and hands-on learning for the student way beyond the class-room domain. CBCS and offering open electives are essential ingredient to encourage cross-domain movement for students.
- Close monitoring, intimate mentoring of students by faculty, real-time interaction with the parents ensure a smooth progression for students and a readily available counseling to address to their emerging problems.

iv) Evident of Success:
- Offering CBCS and open electives have elicited very favourable response from students. Success rate for NPTEL and other MOOC courses bear eloquent testimony to this.
- Professional accretion, general awareness, communication skills, placements of a large cross-section of students have shown a marked improvement.

v) Problems Encountered and Resources Required:
- Availability of faculty with high research acumen and hands-on skills.
- Paucity of faculty with high level of expertise in modern manufacturing and computational techniques.
- Logistic limitations in offering CBCS and open electives