



# GUJARAT TECHNOLOGICAL UNIVERSITY

**Program Name: Bachelor of Engineering**

**Level: UG**

**Branch: ALL**

**Subject Code: BE05000011**

**Subject Name: Societal Internship**

w.e.f. Academic Year:	2024-25
Semester:	5 (To be done in between 4 <sup>th</sup> and 5 <sup>th</sup> semester)
Category of the Course:	Project

<b>Prerequisite:</b>	-
<b>Rationale:</b>	The <i>Societal Internship</i> fosters experiential learning and community engagement, aligning with NEP 2020. It exposes engineering students to real societal challenges, encouraging empathy, collaboration, and socio-technical problem-solving. By bridging classroom knowledge with community realities, it nurtures socially responsible engineers committed to sustainable development, inclusivity, and ethical citizenship.

## 1.0 Framework for the course

- 1.1 NEP 2020 envisions Higher Educational Institutes to be centres with high quality teaching, research and community engagement (Sec 10). It emphasizes holistic and multidisciplinary education, experiential learning, community engagement, & development of socially responsible engineers (Sec 11).
- 1.2 In line with this, the 2-week societal internship provides students with structured exposure to real social challenges, enabling them to apply their technical thinking, develop empathy, and learn contributorship in authentic contexts (in alignment with the CPDP program).
- 1.3 **Total duration:** 2 weeks (10–12 field days)
- 1.4 Mode: Field-based team internship with guided mentoring and reflection sessions.

### Course Outcome:

After Completion of the Course, Students will be able to:

No	Course Outcomes
01	Demonstrate sensitivity towards socio-economic and cultural realities of diverse communities.
02	Identify and articulate community challenges by engaging with multiple stakeholders.
03	Apply engineering knowledge and problem-solving skills to collaboratively design socio-technical solutions.
04	Participate meaningfully with government departments, NGOs, and grassroots institutions to understand societal processes.
05	Communicate observations, insights, and contributions effectively through structured field diaries, presentations, and reports.



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## Teaching and Examination Scheme:

Teaching / Learning Scheme (in Hours per semester)					Total Credits = TH/30	Assessment Pattern and Marks					Total Marks
L	T	P	PBL*	TH		Theory		Tutorial / Practical			
						ESE (E)	PA (M)	PA/ (I)	PBL (I)	ESE (V)	
0	0	60	0	60	02	0	0	20	0	80	100

- *Problem Based Learning (PBL) aims to accommodate learning beyond syllabus as per clause 9.4 of NBA manual.*

Where L = Lecture, T= Tutorial, P= Practical, TW/SL = Term-Work / Self-Learning, TH = Total Hours, PA = Progressive Assessment, ESE = End-Semester Examination

### 3. Format of the Course (Indicative)

Faculty will pre-identify some themes suitable in their local context.

*Some triggers to think about the themes*

3.1 Environmental: pollution management, energy/ resource conservation, weather and bio- diversity documentation, etc.

3.2 Civic: waste management, public transport management, health monitoring, etc.

3.3 Local industry: engineering needs for industries in any MSMEs, textiles, agriculture & food processing, diamonds, chemicals, etc. (some of the students' families may be involved in these)

3.4 In-college: academic processes and academic ambience, green campus, and energy efficiency in campus".

#### **Structure**

Students will work in their teams based on themes they are interested in. The Internship can be structured in 3 intensive phases.

Phases	Details of the activities
<b>Orientation and Proposal (3 days):</b> Introductory sessions on the scope and purpose of the course, and guidelines on community engagement and research and implementation ethics	Students will <ul style="list-style-type: none"> <li>– Have a clear picture of the objective of the internship</li> <li>– Organize themselves to engage with the community sensitively</li> <li>– Make a proposal document with their plan: which theme they will work on, which stakeholders in the community they will interact with, tools and modes of engagement (surveying, interviewing, etc.), plan with timelines etc.</li> </ul>
<b>Field work Phase-1 –</b>	Students will



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<p><b>Framing the scope (5-6 days):</b> Choosing the challenge and framing the problem</p>	<ul style="list-style-type: none"> <li>- Engage with the stakeholders, gather inputs on the challenges, areas of concern, digging deeper to understanding the roots of the challenge, etc.</li> <li>- They will collect, synthesize, and analyze data into insightful inference to make an informed decision or action.</li> <li>- Every day, there can be a 1-hr huddle at the end of the day, to consolidate, present and seek feedback from peers on the progress, and any course-correction.</li> <li>- Make an interim Framing Document (extending the proposal)</li> </ul>
<p><b>Field work Phase-2 – Solution Design (4-5 days):</b> Outlining the solution in some detail, and reflecting on the feasibility and value</p>	<p>Students will</p> <ul style="list-style-type: none"> <li>- Go to the drawing board and ideate possible solutions or interventions to address these challenges. <i>They can draw inspirations from any pre-existent approach or solution, that is implemented or tried out elsewhere, by doing quick web research as well.</i></li> <li>- Detail out the solution approach doing research online or quick discussions with the relevant stakeholders. <i>Here they may seek support from faculty of other departments etc, to inform their technical feasibility.</i></li> <li>- Work out the feasibility, pros-cons, value-creation for the stakeholder, and probable steps and necessary resources and means to implement this.</li> <li>- Make a Societal Internship Report (extending the framing document) and present the whole field work to the entire college or department. They can be creative in the presentation (may build virtual and real prototypes if necessary)</li> </ul>

During Field work phases (esp. phase-1), there can be a 1-hr huddle between 3-4 teams at the end of each day, to consolidate, present and seek feedback from peers on the progress, and any course-correction.

*Faculty's role will be primarily participating in these pursuits as an adult facilitator, and not to preach or provide solutions. Where possible, necessary and accessible, external stakeholders can be involved to support/mentor students.*

These daily huddles will also keep the faculty broadly abreast with the developments, and ensure students make steady progress and are broadly safe.



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#### 4. Assessment Scheme

Component	Weightage	Criteria
Initial Proposal	10%	Quality of thinking as reflected in the detailed think-through.
Field Work	40%	Rigour, coordination, discipline and care for the detail in their field engagements and analysis
Final Report	30%	<ul style="list-style-type: none"><li>- Quality of thinking, research and articulation</li><li>- Sensitivity to the realities of the stakeholders</li><li>- Application of their engineering skills</li><li>- Feasibility of implementation</li></ul>
Presentation	20%	Clarity and sharpness of insights in the presentation

*Some of these can include peer-evaluation and expert/stakeholder evaluation (where possible).*

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#### 5. Responsibilities of the Faculty

- 5.1 Identifying possible themes suitable in the community (within and outside the college)
  - 5.2 Conducting orientation sessions
  - 5.3 Facilitating daily huddles to ensure steady and safe progress by all teams in Field work phases
  - 5.4 Mentoring on research and technical aspects, bringing out multi-disciplinary nature
  - 5.5 Evaluating final outputs and certify completion
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#### 6. Optional Add-ons (Recommended by NEP)

- 6.1 Integration with any ongoing community / innovation labs or student chapters
- 6.2 Opportunity for extended projects during 3<sup>rd</sup> year and built into Bachelor's project or full- fledged internship in a suitable organization.

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