

<b>Course title:</b> Independent Study				
<b>Course code:</b> ENR 105		<b>No. of credits:</b> 3	<b>L-T-P:</b> 0-0-84	<b>Learning hours:</b> 84
<b>Pre-requisite course code and title (if any):</b> Students having a CGPA of 7.5 and above are eligible to register for this course.				
<b>Department:</b> Department of Energy and Environment				
<b>Course coordinator:</b> Programme Coordinator			<b>Course Instructor:</b> Assigned Faculty	
<b>Contact:</b> Email of the assigned faculty				
<b>Course type:</b> Core			<b>Course offered in:</b> Semester 3	
<b>Course description</b>				
<p>The independent study is a 3-credit course offered to the students registered for the MTech in Renewable Energy Engineering and Management (REEM). The student will conduct a study independently under the supervision of a faculty member. The supervisor can be any faculty member from TERI School of Advanced Studies. Students interested in registering for the course should get consent from the supervisor before they register for the course. The course will be conducted through submission and presentation of synopsis by August 2<sup>nd</sup> week, mid-term presentation by October 4<sup>th</sup> week and final report submission and presentation by November 4<sup>th</sup> week.</p>				
<b>Course objective</b>				
<ul style="list-style-type: none"> <li>▪ To enable students carry out research studies independently under supervised self-learning approach</li> <li>▪ To help students obtain advanced understanding on specific system/process/scenarios in renewable energy, energy systems, policy &amp; regulation and allied areas</li> </ul>				
<b>Course contents</b>				
<b>Module</b>	<b>Topic</b>	<b>L</b>	<b>T</b>	<b>P</b>
1	Preparation of a synopsis document and a presentation having the following: <ul style="list-style-type: none"> <li>• Title of the study</li> <li>• Rationale for the study and Research objectives (Maximum 3)</li> <li>• Literature review</li> <li>• Methodology</li> <li>• Expected Outcome</li> <li>• Timeline</li> <li>• References</li> </ul>	0	0	18
2	Work focused on the approved synopsis leading to mid-term presentation of work comprising of the progress made and understanding developed by the student on the specific topic.	0	0	44
3	Completion of remaining work and preparation of Independent Study report containing the following and final presentation: <ul style="list-style-type: none"> <li>• Abstract</li> <li>• Introduction</li> <li>• Study Area</li> <li>• Aim and Objectives</li> <li>• Methodology</li> <li>• Results and Discussions</li> <li>• Conclusions and Limitations</li> <li>• Future Scope of Work</li> <li>• References</li> </ul>	0	0	22
<b>Total</b>		<b>0</b>	<b>0</b>	<b>84</b>
<b>Evaluation criteria</b>				
Test 1: Synopsis document and presentation:		20%	(August 2 <sup>nd</sup> week)	
Test 2: Mid-term presentation:		20%	(October 4 <sup>th</sup> week)	
Test 3: Final evaluation			(November 4 <sup>th</sup> week)	
Presentation:		30%		
Report:		30%		

<ul style="list-style-type: none"> <li>• Synopsis will be evaluated by the supervisor and two faculty members.</li> <li>• Mid-term test will be evaluated by the supervisor and two faculty members.</li> <li>• Presentation made to supervisor and 2 additional faculty members</li> <li>• Report submission at the end of the term evaluated by supervisor and a faculty member</li> </ul>
<p><b>Learning outcomes</b></p> <p>After completing the course, the students will be able to:</p> <ul style="list-style-type: none"> <li>• Provide comprehensive knowledge about the topics of the study (Test 1)</li> <li>• Design and implement the concepts related to the study (Test 2 and 3)</li> <li>• Test the systems (if any) in with wholistic approach (Test 2 and 3)</li> </ul>
<p><b>Pedagogical approach</b></p> <p>Self-learning; interaction with supervisor; literature review; interaction with experts;</p>
<p><b>Materials</b></p> <p>Peer-reviewed journal articles  Reputed conference proceedings  Reports related to the specific project  Learning materials provided by supervisor</p>
<p><b>Additional information (if any)</b></p> <ul style="list-style-type: none"> <li>• The final report should be around 40 pages</li> <li>• A guideline along with important dates and format will be notified by the supervisor or course coordinator.</li> <li>• Student needs to check plagiarism using software (e.g. Turnitin) and submit the report to supervisor before final submission</li> </ul>
<p><b>Student responsibilities</b></p> <p>Attendance; Discipline; Research Ethics, etc.  Regular discussion with supervisor and adhering to the timeline</p>

### Course Reviewers

1. Dr. Milap Punia, Associate Professor, Jawaharlal Nehru University, New Delhi
2. Dr. P.P. Pani, Assistant Professor, Jawaharlal Nehru University, New Delhi
3. Dr. R.D. Garg, Associate Professor, Indian Institute of Technology, Roorkee
4. Dr. T.P. Singh, Assistant Professor, Symbiosis Institute of Geoinformatics, Pune