15MH375L Minor Project I L T P C 0 0 3 2

Co-requisite: Nil
Prerequisite: Nil
Data Book / Codes/Standards Nil
Course Category P Professional Core Mechatronics Engineering
Course designed by Department of Mechatronics Engineering
Approval 32nd Academic Council Meeting held on 23.07.2016.

Purpose
To obtain an hands-on experience in converting a small novel idea / technique into a working model / prototype involving multi-disciplinary skills and / or knowledge and working in at team.

Instructional Objectives
At the end of the course, student will be able to
1. Conceptualise a novel idea / technique into a product. c
2. Think in terms of multi-disciplinary environment. d
3. Understand the management techniques of implementing a project. k
4. Take on the challenges of teamwork, prepare a presentation in a professional manner, and document all aspects of design work. g

Session Description of Topic Contact hours C-D-I-O IOs Reference
A multidisciplinary project to be taken up by a team of maximum of ten students. Development of prototype product, a 3D model, simulation, blueprint for a larger project and any other development work are permitted. The contribution of the individuals in the project should be clearly brought out. A combined report is to be submitted. A presentation is to be made for the reviewers on the work done by the candidate.
C,D,I 1,2,3,4

Total contact hours

Course nature Project – 100% internal continuous assessment

Assessment Method (Weightage 100%)

<table>
<thead>
<tr>
<th>In-semester</th>
<th>Assessment tool</th>
<th>Weightage</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>Assessment tool</td>
<td>Refer the table below</td>
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<td>100%</td>
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End semester examination weightage : 0%

Assessment components

<table>
<thead>
<tr>
<th>Assessment component</th>
<th>Expected outcome</th>
<th>Evaluators</th>
<th>Criteria or basis</th>
<th>Marks</th>
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</thead>
<tbody>
<tr>
<td>Project proposal Review I</td>
<td>A short presentation to be delivered on: • A brief, descriptive project title (2-4 words). This is critical! • The 3 nearest competitors (existing solutions) and price. • Team members name, phone number, email, department/degree program, and year. • A description of the product opportunity that has been identified. To include: Documentation of the market need, shortcomings of existing competitive products, and definition of the target market and its size. • Proposed supervisor / guide</td>
<td>Panel of reviewers</td>
<td>Viability / feasibility of the project Extent of preliminary work done.</td>
<td>0</td>
</tr>
<tr>
<td>Review II</td>
<td>• Mission Statement / Techniques • Concept Sketches, Design Specifications / Modules &amp; Techniques along with System architecture. • Coding.</td>
<td>Panel of reviewers</td>
<td>Originality, Multi-disciplinary component, clarity of idea and presentation, team work, handling Q&amp;A.</td>
<td>20</td>
</tr>
<tr>
<td>Review III</td>
<td>• Final Concept and Model / Algorithm/ Technique. • Drawings, Plans / programme output. • Financial Model / costing.</td>
<td>Panel of reviewers</td>
<td>Originality, Multi-disciplinary component, clarity of</td>
<td>50</td>
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|                              | • Prototype / Coding.  
|                              | • Final Presentation and Demonstration | • idea and presentation,  
|                              |                                           | team work, handling  
|                              |                                           | Q&A.  
| Final technical Report      | • A good technical report.0           | Supervisor / Guide  
|                              |                                           | • Regularity,  
|                              |                                           | systematic progress,  
|                              |                                           | extent of work and  
|                              |                                           | quality of work  
|                              |                                           | 30  
|                              |                                           | Total 100  

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