## Course Aim
To develop an understanding of the characteristics and properties of materials & material selection for a particular application.

### Short Title
EN6107

### Faculty
EDICT

### Polytechnic Level
15

### Credits
15

### Pre-requisites
None

### Co-requisites
None

### Anti-requisites
None

### Learning Outcomes

<table>
<thead>
<tr>
<th>No.</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On successful completion of this course, students will be able to:</td>
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<tr>
<td></td>
<td>Determine the properties of materials by identifying appropriate testing methods, conducting tests and analyzing results.</td>
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<tr>
<td>2</td>
<td>Select appropriate methods to achieve specific material property improvements and alterations.</td>
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<tr>
<td>3</td>
<td>Complete appropriate material selection processes for given engineering applications.</td>
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<tr>
<td>4</td>
<td>Analyse, compare and contrast the microstructure and resultant properties of materials used in engineering applications.</td>
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<tr>
<td>5</td>
<td>Identify the relationship between material microstructure and failure mechanisms of materials in service.</td>
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</table>

### Version
3

### Effective From
September 1, 2016

### Indicative NQF Level
6

### Student Contact hrs
75

### Self-directed hrs
75

### Other directed hrs
0

### Total learning hrs
150

### NQF Sub-strand
Practical
Application of knowledge
Generic, Problem Solving and Analytical Skills
Autonomy, Responsibility, Context
Theoretical Understanding
Communication, ICT, Numeracy