Using and Interpreting Information

Lecture 1 Introduction to Unit

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Eng. Ahmed Saeed Eladly
Aim and purpose

This unit aims to give learners the knowledge and skills needed to use engineering information such as drawings and working instructions to carry out manufacturing or engineering process operations.
The ability to access and use information is probably one of the most critical skills required in engineering. This unit will enable learners to understand how to make effective use of textual, numeric and graphical information when working with engineering drawings, technical manuals, reference tables, specifications, charts or electronic displays, in accordance with approved procedures.
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Learners will consider how best to extract information from engineering drawings and related documents and also how to use drawings and related documentation to establish the work that needs to be done, carry out the work requirements and check their own work output.
A good, well-documented product, is generally more useful and more successful than an excellent product that has been poorly documented. But simply creating engineering drawings and recording engineering data is insufficient. To be useful, engineering drawings and related documentation must be stored, reviewed and approved, published and maintained. Document control for engineering drawings comprises document attributes as well as a clearly defined control process.
This unit will enable learners to identify, work within and comply with appropriate organisational policies and procedures for obtaining and using the documentation that applies to given activities. It is expected that learners will be able to do this with minimum supervision, taking responsibility for their own actions and the quality and accuracy of the work that they undertake.
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The first learning outcome takes the learner through the steps required to extract information from a range of given sources to enable specified tasks to be carried out. The second learning outcome requires that the learner makes use of the information from the view of their own activity/work output, identifying the information required to enable them to both carry out and check their own work. This second learning outcome also requires the learner to consider the care, control and security of information.
The unit can be delivered and assessed in a range of engineering settings and disciplines depending upon the learner’s circumstances. However, it is important that the information used by the learner is relevant, realistic and current for a typical engineering context.
Learning outcomes

On completion of this unit a learner should:

1. Know how to interpret drawings and related documentation

2. Be able to use information from drawings and related documentation.
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Assessment and grading criteria

P1: extract information from engineering drawings and related documentation to enable a given task to be carried out.

P2: select and use other information sources to support and check information provided.

P3: identify and obtain relevant drawings and related documentation to carry out and check own work output.

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Assessment and grading criteria

P4: complete all necessary production documentation related to own work output.

P5: describe the care and control procedures for the drawings and related documentation used when carrying out and checking own work output.
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Assessment and grading criteria

M1: identify gaps or deficiencies in the information obtained that need to be resolved to enable a given task to be carried out.

M2: identify improvements in the care and control procedures used for drawings and related documentation.

D1: justify valid solutions to meet identified gaps or deficiencies with the information obtained.

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assignment 1 : Engineering Drawings and Documentation
(P1, P2, M1 and D1).

assignment 2 : Using Engineering Information
(P3, P4, P5 and M2).

Materials or components and Dimensional detail

Location/orientation of parts:

Where should the Materials or components located?!, each material have a specific requirements of storage such as temperature, humidity or even storage space, so we should keep a record about each material where it should be located exactly.
Connections to be made:

See this picture, you will find that there are some connections made in order to activate the motor using the 9v battery. These wires called connections. Because it connects between two items.
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- Imperial Units
  Feet, inch

- Metric Units
  Meter, Millimeters, centimeter
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1 inch = 25.4 mm

Mm = inch \times 25.4
Inch = \frac{mm}{25.4}
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### Conversion Table

<table>
<thead>
<tr>
<th>Fraction</th>
<th>Decimal</th>
<th>Millimeters</th>
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<td>0.500&quot;</td>
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<td>1.0 &quot;</td>
<td>1.000&quot;</td>
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Physical dimensions: Length, width, height and depth
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Search Engine Sample

<table>
<thead>
<tr>
<th>Logo</th>
<th>Browser Name &amp; Developer</th>
<th>Platform</th>
</tr>
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</table>
| ![Internet Explorer Logo](image) | **Internet Explorer**  
Microsoft Corporation  
Download version 9.0.10 | ![Windows Logo](image) |
| ![Firefox Logo](image) | **Firefox (also called Mozilla Firefox)**  
Mozilla Corporation  
Download version 16.0.1 | ![Windows and Linux Logos](image) |

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<table>
<thead>
<tr>
<th>Browser</th>
<th>Company</th>
<th>Version</th>
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<td>Safari</td>
<td>Apple Inc.</td>
<td>6.0</td>
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<tr>
<td>Opera</td>
<td>Opera Software ASA</td>
<td>12.02</td>
</tr>
<tr>
<td>Netscape Navigator</td>
<td>Netscape Communications Corporation (now part of AOL)</td>
<td>9</td>
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</tbody>
</table>

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Terminologies

Imperial system ........................................ Metric System ........................................
Thank you

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