<table>
<thead>
<tr>
<th>Subject Code</th>
<th>BRE223</th>
</tr>
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<tbody>
<tr>
<td>Level</td>
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</tr>
<tr>
<td>Contact Hours</td>
<td>Lect:21 Sem/Tut:21</td>
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<tr>
<td>Student Effort Hours</td>
<td>120</td>
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<tr>
<td>Assessment Method</td>
<td>Coursework 100%</td>
</tr>
<tr>
<td>Credit Value</td>
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</tr>
<tr>
<td>Pre-requisites</td>
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<tr>
<td>Co-requisites</td>
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</tr>
<tr>
<td>Exclusions</td>
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</tr>
<tr>
<td>Subject Leader/Lecturer/Dept.</td>
<td>(BRE) M.F. Ho (BRE)</td>
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### Subject Aim:

*This subject is intended to:*

1. Introduce measuring and estimating techniques of building elements and gives students an understanding of their importance in estimating quantities and costs of building work.

### Learning Outcomes:

*Students will demonstrate their ability to:*

1. Examine and analyse the documentation used in procurement of building works.
2. Measure quantities for building work.

### Brief Syllabus Content:

**Mensuration and The Surveyor**

The builder, surveyor and related professions. The role of the Quantity Surveyor, his evolution, current place and future direction.

**Bills of Quantities**

Quantitative Analysis of Building works for Tender - Builder’s Quantities - An introduction.

Advantages of Standardization of Measurement for Tender - S.M.M.’s.

The bill of quantities - types, functions and uses. The working up process to the bill of quantities.

**Measurement Techniques**

Organization and systems of taking off including subdivision of building elements, gross measurement, schedules and other preparatory documentation such as query lists.

Conventions used in recording of dimensions, including traditional dimension paper and the use of its columns, principles of description writing waste quantities and side notes standard abbreviations.

Mensuration commonly used in taking off particularly that for excavations, including formulae for regular figures and methods of measuring irregular figures, interpolation and extrapolation of ground levels, simple and weighted average of levels from grids, and computing volumes of earthwork. Centre lines and mean girths of walling and strip foundations.

Measurement examples of building structures according to the H.K.S.M.M.
**Learning and Teaching Approach** *(tasks and activities designed to achieve learning outcomes):*

Fundamental principles will be covered in lectures and topics are further developed through seminars and tutorials. Practical exercises will provide basic training in measurement skills.

**Assessment strategy** *(assessment of student performance resulting from learning tasks):*

The coursework mark will be based on the assignments (2 nos. of equal weighting).

**Reading List:**

**Recommended:**


**Supplementary:**
