

SE4011 Current Technologies and Applications

Module status in MSc Professional Engineering: Core **Module credits:** 15

Aims

To develop a sound understanding and associated practical skills in relation to the technologies lying at the forefront of current professional practice in the selected engineering domain.

Content

This is a generic module specification – whilst adhering to the broad principles set out here, the content of any particular delivery of the module will necessarily depend on the selected engineering domain and the learning contract agreed between the programme participant, Aston University and the participant's professional engineering institution.

Illustrative content: Current technologies and their scientific foundations. Methodologies for effective application of technologies. Practical and professional constraints. Practical application development tasks.

Teaching

The module will normally be taught through work-based projects supplemented by appropriate individual learning (eg through directed reading) and supported by individual supervision and mentoring. Where appropriate and specified by the learning contract, formally taught elements from one or more level 4 modules forming part of another EAS MSc programme may be accessed by distance learning.

Assessment

Written reports and (where appropriate) other formal work products arising from the work-based project(s) will be assessed.

Where content has been accessed by distance learning, and if specified by the learning contract, a proportion of the module mark may be derived from formal assessments associated with the modules accessed.

If assessment is based entirely on work-based activities, the participant's reports should total around 4000 words, or 10-15 pages including appropriate diagrams, tables, etc. Where formal assessment of distance learning provides part of the overall module assessment, reports on work-based activities should be limited to around 2500 words (about 6-9 pages) in total.

Module outcomes

What the participant should gain from successful completion of the module

Teaching/Learning Methods

Assessment Methods

Knowledge and Understanding

Systematic comprehension of current technologies and their scientific underpinnings and applications
In-depth understanding of relevant engineering practice and its limitations

Work-based projects, supplemented by individual learning and distance learning as appropriate.

Written reports and other appropriate formal work products, possibly supplemented by exam assessment of distance learning material.

Intellectual Skills

Ability to select and apply appropriate technologies in a range of contexts, with a capacity for innovation

Professional/Subject-Specific Skills

Take account of commercial, industrial and professional constraints

Transferable Skills

Learning resources

As appropriate to the selected engineering domain and any modules accessed by distance learning.

Other modules required in order to take this module

SE4001 Professional Development Audit