

# WM3B5-30 Work Based Project (APEP)

27/28

**Department**

WMG

**Level**

Undergraduate Level 3

**Module leader**

India Palmer

**Credit value**

30

**Module duration**

36 weeks

**Assessment**

100% coursework

**Study locations**

University of Warwick main campus, Coventry Primary

Distance or Online Delivery

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## Description

### Introductory description

The work-based project module offers apprentices the opportunity to undertake a significant piece of work-based engineering research which meets the needs of the business, is relevant to their role and allows the relevant KSBs to be demonstrated for the EPA. Apprentices will be required to demonstrate problem solving and project management skills whilst applying engineering principles and complying with safety and ethical requirements.

This project acts as the major project of an undergraduate engineering programme in line with accreditation requirements. Formative project proposals will be generated by students in discussion with their line manager/work based mentor and University academic staff. With the project being focused in the workplace, supervision will be undertaken by both the University and the employer to ensure alignment with parallel objectives.

The project is mapped to specific knowledge, skills and behaviours (KSBs) from each apprenticeship standard within APEP - ST0023, ST0024, ST0025 & ST0027. Apprentices may also demonstrate additional KSBs, depending on the exact nature of their chosen project.

This module is linked with C1, C2, C4, C5, C7, C8, C9, C13, C15 & C17 of the AHEP 4.  
LO1-C8 LO2-C4 LO3-C7, C9 LO4-C13,C15 LO5-C1,C2,C5,C17

[Module web page](#)

## Module aims

The aim of this module is to undertake independent engineering study, drawing on the knowledge, skills and behaviours developed during the apprenticeship and completing a significant and defined piece of work that has a real business application and benefit.

## Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

Work-based and self-directed learning

Management and organisation of self and work-based project

Developing practitioner research skills and applying them within a specific work context

Selecting a project and generating research questions

Formulation of relevant objectives to address academic and organisational needs

Scoping and management of the project

Development of a robust proposal

Carrying out literature research

Primary research methods

Data analysis methods relevant to the chosen topic

Presentation of results

Presentation of the project to meet academic and organisational needs

## Learning outcomes

By the end of the module, students should be able to:

- Define a research question and generate aims and objectives which seek to solve an existing problem or make an improvement for the employer. [AHEP:4 - C8]
- Critically analyse existing literature, including industry publications, relevant to the chosen research topic. [AHEP:4 - C4]
- Evaluate and apply appropriate research methods to answer the research question, including risk management practices, research ethics and health and safety. [AHEP:4 - C7, C9]
- Demonstrate proficiency in utilising project management tools, specifically for planning and resource management. [AHEP:4 - C13, C15]
- Effectively communicate the project's outcomes, critically analysing and presenting its results. [AHEP:4 - C1, C2, C5, C17]

## Indicative reading list

[Reading lists can be found in Talis](#)

[Specific reading list for the module](#)

## Research element

This project module requires apprentices to make a reasoned selection of approaches to the research methodology, data collection techniques and data analysis, including the development of appropriate aims and objectives and abiding by ethical, social and environmental considerations.

## Subject specific skills

Comply with statutory and organisational safety requirements and demonstrate a responsible and disciplined approach to risk mitigation, avoidance and management (S1 on all standards)

Undertake project management and schedule of engineering activities (S2 on ST0025)

Use and interpret a range of engineering data sources and supporting documentation (S2 on ST0023)

Organise work efficiently and effectively by managing engineering resources when completing tasks (S3 on ST0027)

Secure and manage appropriate resources (S3 on ST0025)

Lead complex maintenance or technical support activities (S3 on ST0023)

Produce presentations and work to engineering specifications and briefs, presenting and technical problem solving (S3 on ST0024)

Carry out Project Management activities (S5 on ST0027, S2 on ST0024)

Qualitative and quantitative analysis

Research methods and information gathering

Ethical, social and environmental issues in engineering.

Additional skills will depend on the topic of the project and the specific apprenticeship. All projects will draw on aspects of the course and apply them throughout the project. The project is seen as an opportunity to aggregate the subject skills developed throughout the course and synthesise them to address an identified, real world situation.

## Transferable skills

Problem solving: Use rational and logical reasoning to deduce appropriate and well-reasoned conclusions  
Critical Thinking: Make informed decisions on the value of a range of sources allowing an evidence based

conclusion based on this analysis.

Self-awareness: Awareness of personal strengths and emotional intelligence.

Written communication: Present arguments, knowledge and ideas, in a range of formats

Communication Active Listening: questioning, reflecting, summarizing

Professionalism: Prepared to operate autonomously; Aware of how to be efficient and resilient; Manages

priorities and time; Self-motivated, setting and achieving goals, prioritising tasks.

Information Literacy: Critical awareness of how information is gathered, used, managed and synthesised;

Systematic collection, analysis and evaluation of information in the investigation of a topic.

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# Study

## Study time

| Type                          | Required                    |
|-------------------------------|-----------------------------|
| Seminars                      | 5 sessions of 1 hour (2%)   |
| Project supervision           | 10 sessions of 1 hour (3%)  |
| Work-based learning           | 51 sessions of 1 hour (17%) |
| Online learning (independent) | 50 sessions of 1 hour (17%) |
| Assessment                    | 180 hours (61%)             |
| Total                         | 296 hours                   |

## Private study description

No private study requirements defined for this module.

## Costs

No further costs have been identified for this module.

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## Assessment

You must pass all assessment components to pass the module.

### Assessment group A2

| Assessment component | Weighting | Study time | Eligible for self-certification |
|----------------------|-----------|------------|---------------------------------|
| Final report         | 90%       | 160 hours  | Yes (extension)                 |

The final report will cover:

- An introduction to the problem
  - Aims and objectives
  - Research plan
  - Research findings
  - Analysis and discussion
  - Recommendations and conclusions
- Full details will be available in the assessment brief.

## Weighting

## Study time

## Eligible for self-certification

This will form a single individual submission consisting of a written report.

Reassessment component is the same

### Assessment component

Project presentation and discussion

10%

20 hours

No

The project presentation and discussion will cover:

- overview of the project, including the project scope
- summary of actions taken by the apprentice
- justification of the solution adopted and methods used to deliver the project
- recommendations and conclusions
- review of the effectiveness of the solution
- summary of achievements, challenges and lessons learnt

This will form an individual oral presentation of 20 minutes followed by time for questions.

Please refer to the assessment brief for your specific stream for the details of this component as different standards include different requirements.

Reassessment component is the same

## Feedback on assessment

Formative Feedback:

- Written feedback on project ideation document
- Verbal formative feedback during online Q&A sessions
- Verbal individual feedback during supervisor meetings

Summative Feedback

- Written feedback on Project report
- Oral feedback on presentation

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## Availability

## Pre-requisites

## Courses

Course availability information is based on the current academic year, so it may change.

This module is Core for:

- Year 4 of DWMS-H7C7 Undergraduate Applied Professional Engineering (Control/Technical Support Engineer) (Degree Apprenticeship)
- Year 4 of DWMS-H7C6 Undergraduate Applied Professional Engineering (Electrical/Electronic Support Engineer) (Degree Apprenticeship)
- Year 4 of DWMS-H7C5 Undergraduate Applied Professional Engineering (Manufacturing Engineer) (Degree Apprenticeship)
- Year 4 of DWMS-H7C8 Undergraduate Applied Professional Engineering (Product Design and Development Engineer) (Degree Apprenticeship)