Programme Specification

Foundation Degree Electrical and Electronic Engineering

Valid from: September 2015

Faculty of Technology, Design & Environment/ Solihull College

SECTION 1: GENERAL INFORMATION

Awarding body:	Oxford Brookes University
Teaching institution and location:	Solihull College, Woodland Campus
Final award:	Foundation Degree (Engineering- FdEng)
Programme title:	**Electrical and Electronic Engineering**
Interim exit awards and award titles:	Certificate of Higher Education (exit award only)
Brookes course code:	SH34
UCAS/UKPASS code:	H600
JACS code:	H300
Mode of delivery:	Face to face
Mode/s and duration of study:	2 yrs Full-time (120 credits/yr) (max 6 yrs from 1st reg.) 3 yrs Part-time (80 credits/yr) (max 6 yrs from 1st reg.) 4 yrs Part-time (60 credits/yr) (max 6 yrs from 1st reg.)
Language of study:	English
Relevant QAA subject benchmark statement/s:	Foundation degree benchmark (2010): http://www.qaa.ac.uk/en/Publications/Documents/Foundation-Degree-qualification-benchmark-May-2010.pdf QAA Engineering benchmark (revised edition, 2010): http://www.qaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Engineering-.pdf[1] Engineering Council UK-SPEC (third edition, 2013): http://www.engc.org.uk/ukspec.aspx
External accreditation/recognition: *(applicable to programmes with professional body approval)*	N/A
Faculty managing the programme:	Faculty of Technology, Design & Environment
Date of production (or most recent revision) of specification:	February 2015

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[1] Strictly, this benchmark statement corresponds to threshold criteria for engineering honours degrees and does not correspond to the output standards for this foundation degree. Further, the engineering benchmark statement concedes, and refers the reader to, the UK Engineering Council's accreditation Standard for Professional Engineering Competence (UK-SPEC) and criteria for accreditation of degree programmes towards CEng and IEng status.

2.1 Rationale for and/or distinctive features of the programme

This course is a Foundation Degree programme designed to offer flexible learning patterns and designed to enable students with a relevant Level 3 qualification in an Electrical and Electronic Engineering subject, or equivalent, to obtain a FdEng in Electrical and Electronic Engineering and, if desired, progress to a BSc(Hons) programme in Electronic Engineering and practice in a career as an Incorporated Engineer (IEng). The programme has been developed by Oxford Brookes University to answer the needs of industry which has experienced an increasing demand for employees with the right vocational knowledge and skills and with the independence to add value to organisations. Graduates from the programme will have a wider and deeper range of skills and knowledge than their contemporaries on more traditional courses that will help them progress in the workplace or help them to continue their studies to a higher-level degree course.

This proposed programme is distinctive as it:

- Meets local employers' needs, particularly those allied to the manufacturing, aeronautical and automotive industries in the Wet Midlands region, for HE progression for their employees on a P/T basis.
- Allows learners from local industries to engage in HE and develop into informed and competent practitioners within a team setting. Through a learner-centred approach that increases ability to learn independently, it allows learners to make a valued contribution to their organisation in Electrical and Electronic Engineering and provides opportunities for these students to become skilled in the use and application of information and computer-based technology.

2.2 Aim/s of the programme

The aim of the Foundation Degree is to provide a rational, structured and coherent programme of study that offers an alternative pathway to well-motivated individuals within the region in which Solihull College is situated. The programme is relevant to the needs of employers, facilitates CPD of the student and benefits the regional economy as well as potentially offering an opportunity for growth in Higher Education. This programme intends to:

- Provide students, from a wide range of educational backgrounds, with an opportunity for further study including an alternative route for learners who have completed a Level 3 course and wish to gain work experience and study part-time;
- Equip learners with the broad knowledge and ability to apply current technology to existing products and designs as well as developing new ones;
- Enable learners to have a sound understanding of engineering principles and the skills necessary to communicate them to others and develop them into finished products that meet customer expectations and agreed specifications;
- Develop the learner's ability to reflect on their own work evaluating what worked, what can be improved and how the overall process can be changed for the better;
- Enable learners that are employed to make an immediate professional contribution in their work environment through skills learnt and in particular via a work related project.
- Develop the learners' skills, personal qualities and attitudes essential for reflective learning and practice leading to successful performance in working life through the integrated, but explicit, curriculum and assessment.

Students graduating with this FdEng award will be confident practitioners in Engineering with the knowledge and ability to apply current technology to existing products & designs as well as developing

new ones. They will have a sound understanding of engineering principles and the skills necessary to communicate them to others and develop them into finished products that meet customer expectations and agreed specifications. Within this skill set will be the ability to reflect on their own work to evaluate what worked, what can be improved and how the overall process can be changed for the better.

SECTION 3: PROGRAMME LEARNING OUTCOMES

On successful completion of the programme, graduates will demonstrate the following Brookes Attributes informed by the subject benchmark statements for Engineering in the form of UKSPEC 3rd Edition 2013 (http://www.engc.org.uk/engcdocuments/internet/Website/UK-SPEC%20third%20edition%20(1).pdf):

Please note reference is made against Incorporated Engineer in UK-SPEC and 'Part 2' (Accreditation of Higher Education Programmes (2004)) which has been adopted as the QAA Benchmark Statement. FD's, by definition, are work-based and so involve BOTH academic underpinning (related to the benchmark statement) and professional development & experience (related to UK-SPEC). That is, attempts have also been made to identify which elements of UK-SPEC can be mapped to the defined programme learning outcomes as well as the academic educational outcomes listed in the benchmark statement / 'Part 2'.

1. Academic literacy
   Learners are expected to have academic literacy of:

   1.1. Electrical and Electronic Engineering, so that they are able to demonstrate the knowledge and understanding to deal with well-established, and with some depth, facts, concepts, principles & theories relevant to Electrical and Electronic Engineering, within a broad engineering subject base (UK-SPEC A1, A2: Output[2] US1i, S1i, P6i).
   1.2. Complexity within Electrical and Electronic Engineering systems, informed by literature & resources which are largely prescribed (UK-SPEC A1, A2: Output P4i, P5i).
   1.3. The inter-relationships of health & safety, design, engineering science & applications, analytical & mathematical techniques, environmental considerations & sustainability, systems, management and economic factors in relation to Electrical and Electronic Engineering (Output US2i, D1i, S1i, S2i, S3i, S4i, P6i).

2. Research literacy
   Learners are expected to have research literacy so that they can:

   2.1. Apply aspects of relevant facts, concepts, principles & theories relevant to Electrical and Electronic Engineering issues to their subject and / or professional work areas (UK-SPEC A1, A2: Output US1i, US2i, S1i, P6i).
   2.2. Make and justify decisions relevant to design, manufacture, use and decommissioning of electrical and electronic equipment and / or plant including preventative measures which are specified and predictable; and produce an action plan, where appropriate, supported by pertinent evidence (UK-SPEC A2, B2: Output E1i, E3i, D3i, D4i, D5i).
   2.3. With guidance, in relation to the field of Electrical and Electronic Engineering and within specified parameters, explain key engineering principles and identify their relevance and significance to Electrical and Electronic Engineering and justify their application to specific problems which are specified and produce a coherent line of argument supported by relevant evidence (UK-SPEC B1: Output E1i, E2i, E3i, P4i).

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[2] The definition of UK-Spec Outputs can be found, for example, in the IET handbook of Learning outcomes http://www.theiet.org/academics/accreditation/policy-guidance/handbook_lo.cfm

2.4. Identify, explain and use appropriate practical and laboratory skills with the appropriate selection of experimental and investigative techniques (Output P1i, P2i).

2.5. Identify, access, use, explain and evaluate information / data which is relevant from a range of sources (Output P4i).

2.6. Set milestones within a given plan and implement plan to achieve several objectives (UK-SPEC C1: Output S2i).

3. **Critical self-awareness and personal literacy**
Learners are expected to have critical self-awareness and personal literacy so that they can:

3.1. Undertake prescribed independent study techniques and their application to work-based learning including the setting of goals, managing time appropriately and prioritising tasks, and review personal performance to ensure that work is completed in a timely manner.

3.2. In relation to the professional work area, operate effectively in situations that are largely straightforward and predictable within practical / employment / work contexts requiring the exercise of personal responsibility and/or decision-making as evidenced by work-based learning in the application of underlying concepts and principles of Electrical and Electronic Engineering in routine and novel situations (UK-SPEC C1, C2, E2: Output D3i, P3i, P4i).

3.3. In relation to the learner's professional area and with clear guidance / support, participate effectively in appropriate collaboration with people from other disciplines / professions (UK-SPEC C3, D3: Output P3i).

3.4. For a given situation and audience, communicate knowledge and understanding appropriate to the level in an appropriate written, verbal or visual format in a way that is appropriate for the purpose, topic and situation and in such a way as to demonstrate understanding to academic, specialist and non-specialist audiences (UK-SPEC D1: Generic Output).

4. **Digital and information literacy**
Learners are expected to have digital and information literacy so that they can:

4.1. With guidance, in relation to academic and practical work, convey information which has some complexity in written/spoken English which is accurate and clear in terms of grammar / syntax / vocabulary-choice / style and use academic conventions appropriately for the purpose, topic, situation and audience and also reference a range of different types of sources accurately in line with guidance provided (Generic Output).

4.2. Select and use specified IT applications and strategies as appropriate for guided purposes and tasks and the retrieval of information (Output E2i, P1i).

4.3. Solve straightforward contextual, qualitative and numerical problems by identifying, explaining and selecting appropriate approaches to use and also evaluate both the approaches and solutions to the problem (Output E2i, E3i).

4.4. Critically evaluate the validity and implications of information relevant to Electrical and Electronic Engineering and their work practice (Generic Output).

5. **Active citizenship**
Learners are expected to have active citizenship so that they can:

5.1. With guidance, in relation to the field of Electrical and Electronic Engineering and within specified parameters, identify and explain issues related to health and safety, design, engineering science & applications, analytical & mathematical techniques, environmental considerations & sustainability, systems, management and economic factors (UK-SPEC E2, E3: Output E4i, D1i, D2i, D5i, S4i).

5.2. With guidance, in relation to the field of Electrical and Electronic Engineering and within specified parameters, evaluate and critically analyse electrical and electronic equipment and systems and make suggestions to improve the design life, performance and efficiency and justify

decisions about the management of electrical and electronic equipment and systems and also related technologies (UK-SPEC B3, C4: Output E1i, E2i, E3i, E4i, D4i, D5i, P7i).

5.3. Demonstrate respect for the perspective of other disciplines / professions and be able to identify the potential contribution of own and other professions / disciplines to the area of practice and describe the purpose of these disciplines / professions and their role within a multidisciplinary team (UK-SPEC C3, D3: Output P3i).

5.4. In relation to Engineering, with clear guidance & support, appropriately work effectively within the boundaries imposed by ethical and legal issues (including standards & codes) and demonstrate respect for the ethical and legal boundaries of other disciplines (UK-SPEC E1, E2: Output S4i, S5i, P3i, P5i).

5.5. Demonstrate the learning ability needed to undertake further training, develop existing skills, and acquire new competences that will enable them to assume significant responsibility within organisations (UK-SPEC A1, E4: Generic Output).

5.6. Reflect, selecting from a range of suggested approaches and techniques, and seek and use feedback to inform reflection on and analysis of own strengths, limitations & performance and identify their implications (UK-SPEC D3: Generic Output).

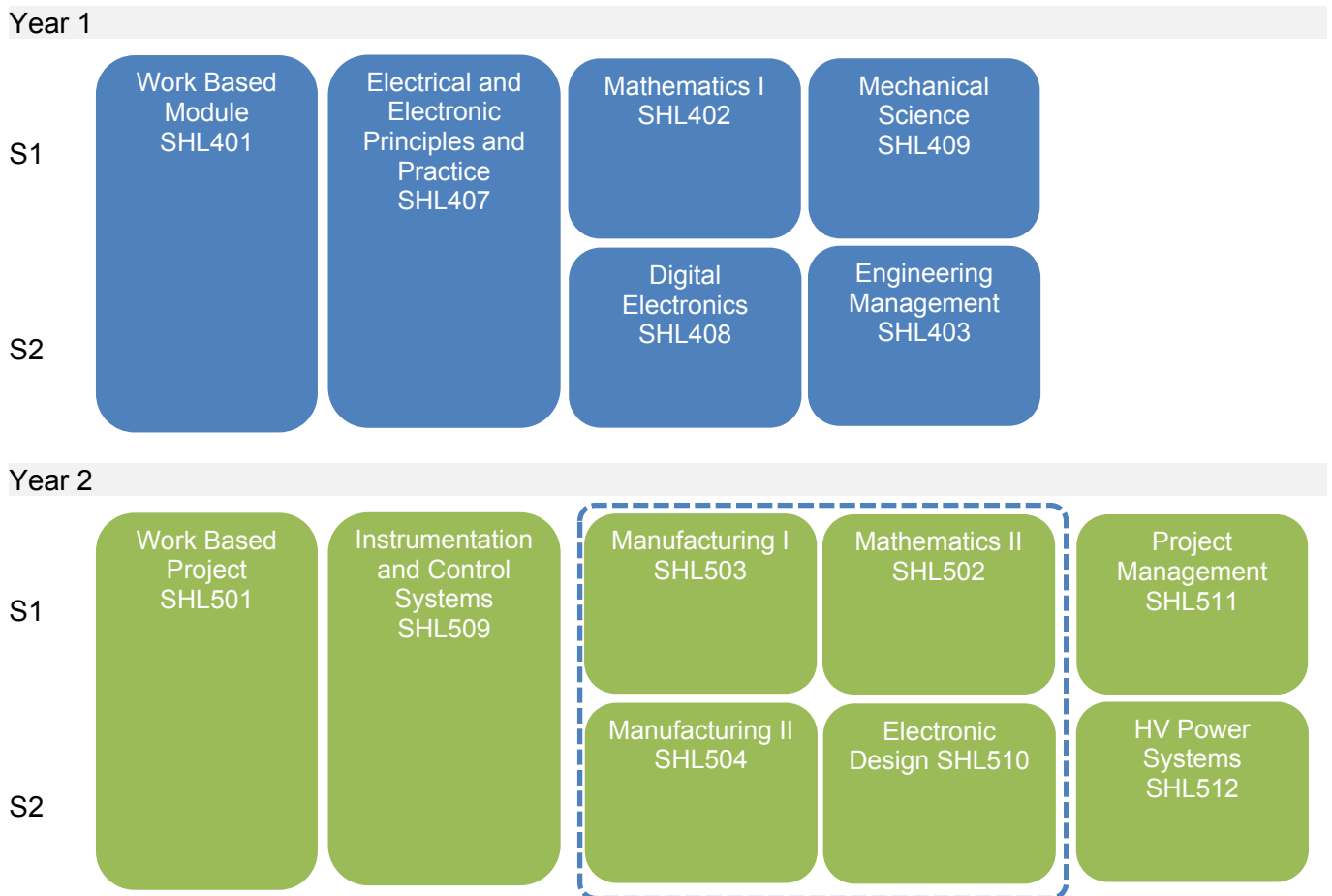---

SECTION 4: PROGRAMME STRUCTURE AND CURRICULUM

4.1 Programme structure and requirements:

Module Code	Module Title	Credits	Level	Status	Semester of delivery	Pre-requisites
SHL401	Work Based Module	30	4	core	1&2	N/A
SHL407	Electrical and Electronic Principles and Practice	30	4	core	1&2	N/A
SHL402	Mathematics I	15	4	core	1	N/A
SHL409	Mechanical Engineering Science	15	4	compulsory	2	N/A
SHL408	Digital Electronics	15	4	compulsory	2	None
SHL403	Engineering Management	15	4	compulsory	2	None
SHL501	Work Based Project	30	5	compulsory	1&2	SHL401
SHL509	Instrumentation and Control Systems	30	5	compulsory	1&2	SHL407 SHL408
SHL511	Project Management	15	5	compulsory	1	SHL403
SHL512	HV Power Systems	15	5	compulsory	2	SHL402 SHL407
SHL503	Manufacturing I	15	5	optional	1	None
SHL504	Manufacturing II	15	5	optional	2	SHL503
SHL502	Mathematics II	15	5	optional*	1	SHL402
SHL510	Electronic Design	15	5	optional*	2	SHL407 SHL408

*Mathematics II and Electronic Design are compulsory for students who wish to progress to Level 6 of the BSc (Hons) Electrical and Electronic Engineering degree.
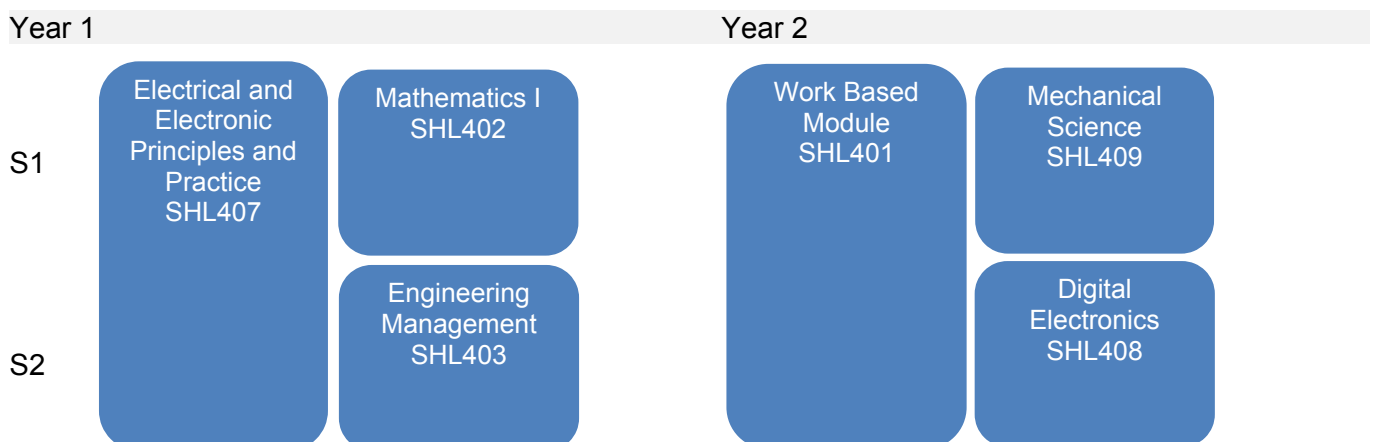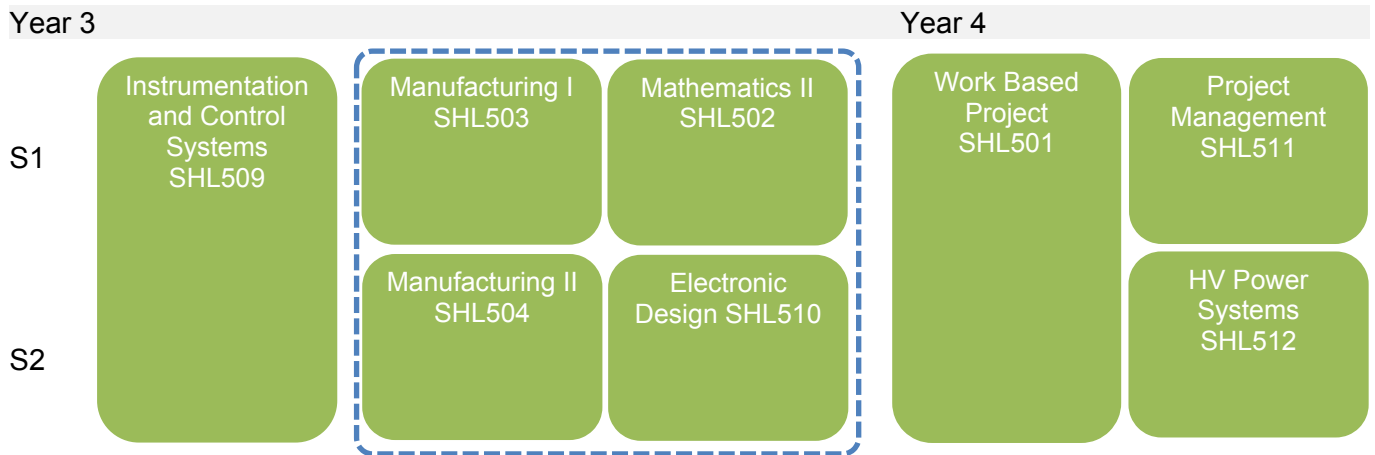
4.1.1 Full time programme structure:

The structure of the full-time course is shown by the subject diagram (the dashed line means the students take 2 out of the 4 modules):

Year 1

S1	Work Based Module SHL401	Electrical and Electronic Principles and Practice SHL407	Mathematics I SHL402	Mechanical Science SHL409
S2			Digital Electronics SHL408	Engineering Management SHL403

Year 2

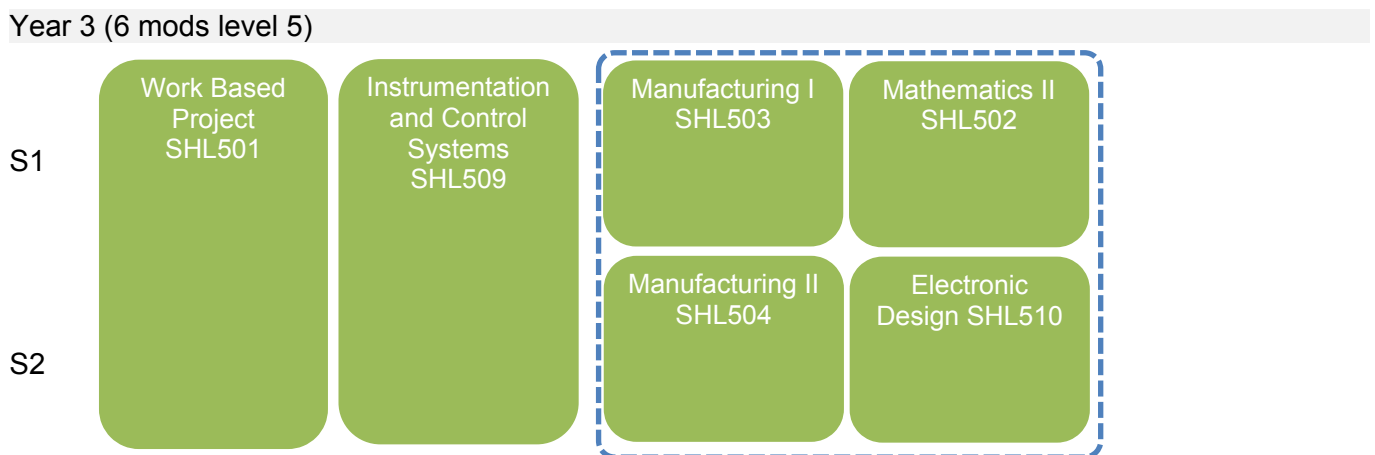|						
S1	Work Based Project SHL501	Instrumentation and Control Systems SHL509	Manufacturing I SHL503	Mathematics II SHL502	Project Management SHL511
S2			Manufacturing II SHL504	Electronic Design SHL510	HV Power Systems SHL512

4.1.2 Part-time 4 years programme structure:

The structure for the 4 years part-time course is shown by the following diagram (the dashed line means the students take 2 out of the 4 modules):

Year 1

S1	Electrical and Electronic Principles and Practice SHL407	Mathematics I SHL402
S2		Engineering Management SHL403

Year 2

S1	Work Based Module SHL401	Mechanical Science SHL409
S2		Digital Electronics SHL408

Year 3

S1	Instrumentation and Control Systems SHL509	Manufacturing I SHL503	Mathematics II SHL502
S2		Manufacturing II SHL504	Electronic Design SHL510

(Manufacturing I SHL503, Mathematics II SHL502, Manufacturing II SHL504, Electronic Design SHL510 enclosed in dashed line)

Year 4

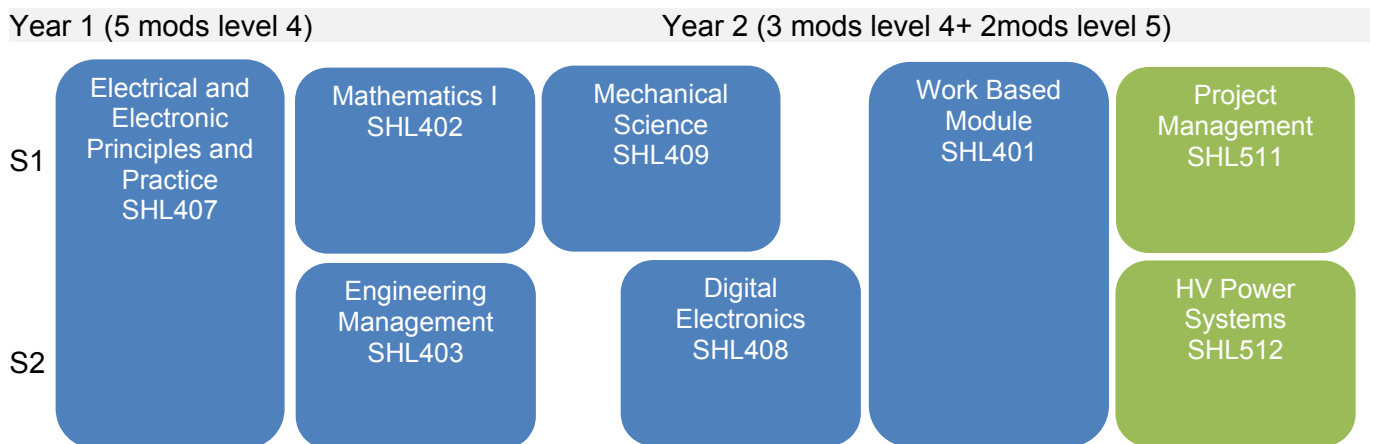| S1	Work Based Project SHL501	Project Management SHL511
S2		HV Power Systems SHL512

4.1.3 Part-time 3 years programme structure:

The structure for the 3 years part-time course is shown by the following diagram (the dashed line means the students take 2 out of the 4 modules):

Year 1 (5 mods level 4)

S1	Electrical and Electronic Principles and Practice SHL407	Mathematics I SHL402	Mechanical Science SHL409
S2		Engineering Management SHL403	Digital Electronics SHL408

Year 2 (3 mods level 4+ 2mods level 5)

S1	Work Based Module SHL401	Project Management SHL511
S2		HV Power Systems SHL512

Year 3 (6 mods level 5)

S1	Work Based Project SHL501	Instrumentation and Control Systems SHL509	Manufacturing I SHL503	Mathematics II SHL502
S2			Manufacturing II SHL504	Electronic Design SHL510

(Manufacturing I SHL503, Mathematics II SHL502, Manufacturing II SHL504, Electronic Design SHL510 enclosed in dashed line)

Progression Rules:

To progress from Level 4 to Level 5 a student must have achieved at least 90 credits at Level 4 including the core modules. If a student does not achieve 90 credits at Level 4 or one of the core modules he/she will continue with a revised programme of studies which can include Level 5 modules for which the pre-requisites have been passed.

4.1.4 Requirement for awards:

- Requirement for final FdEng award: 240 credits including all core and compulsory modules.

- Requirement for CertHE (exit award): 120 credits of which at least 90 credits must be at Level 4.

4.2 Professional requirements
Not applicable.

SECTION 5: PROGRAMME DELIVERY

5.1   Teaching, Learning and Assessment
The programme has been designed to meet the University's aims of widening participation, both in mode of delivery and recruitment.   The programme is targeted at a group under-represented in Higher Education and aims to develop their academic achievement through practical coursework assignments, case studies, time-constrained assignments and work-based learning. The rationale for and pattern of assessment are based on the aims, learning outcomes and rationale of the course and align with the Oxford Brookes Assessment Compact. The key criteria governing assessment will be validity, reliability and fitness for purpose.

Each single undergraduate module is 150 hours of effort. Modules presently include 36 to 54 hours contact time and are delivered using a mixture of lectures, tutorial/seminar sessions and laboratories. In addition, a student can expect to undertake approximately an additional 100 hours of independent work per single 15-credit module. The exception is the double weight project module. In any given week a student's contact time may be as high as sixteen hours or as low as ten hours depending on scheduling of laboratory and workshop timetables. The use and distribution of laboratory work varies significantly between modules and module levels on the programme and is allocated as appropriate by the subject specialist in each area.

Teaching and Learning Methods

Teaching methods vary from module to module.   Usually they include lectures, laboratory-based practical activities and software simulations, problem-solving classes and tutorial support, often supplemented by handouts and booklets produced by staff.

Learners will experience a range of learning environments: workplace, college and private study. During attendance at college, lectures and practical sessions (e.g. IT and CAD) are backed up with detailed notes & other resources in addition to module handbooks, *etc*. The learning materials given to learners provide for a structured approach and so allow learning away from the college. In addition, a strong emphasis is given to electronic resources which provide support both on- and off-campus at any time through, for example, the virtual learning environment with access to reading materials, websites, quizzes, assignment briefs, course notes, *etc*. to help to engage and encourage students with their learning, and to ensure that work-based learners can access materials when they are not able to attend classes. Furthermore, students have free access to relevant software such as MultiSim and MatLab-Simulink.   Concepts, principles and theories are generally explored in formal lectures, practised in associated tutorials and employment. For example, many modules provide tutorials to work through set problem sheets (requiring prior preparation) and thus offer the chance to further explore issues.   Thus, lectures, tutorials & development sessions are used, amongst other things, to present an outline of the principal areas of learning as well as help structure the learner's development, *i.e.* promote learner-centred practice (LCP).   Depending on the particular module, further opportunities are provided in

smaller groups to consider the latest thinking, inter-relationships, areas of difficulty and depth of the knowledge and understanding of the relevant topics.

Teaching and learning methods used throughout the programme will acknowledge and encourage a range of learning styles, including development of academic, research, personal, digital literacy as well as active citizenship through assignment work. The programme aims to balance the provision of information with opportunities for learners to assimilate, apply and critically reflect. Teaching and learning strategies will also give learners the opportunity to acquire practical experience in activities related to their employment, especially through two work-based modules and a work-based project and to encourage learners to reflect critically on new knowledge and understanding and on their own learning experience.

Tutorials are fundamental to ensuring that learner's progress on the course is regularly monitored and evaluated. Formative assessment will be undertaken by tutors and will provide formative feedback, which is intended to improve performance and resolve issues that may be affecting the learner's progress. All tutorials are documented within the learner's personal development plan and / or online as part of academic advising system, resulting in an action plan addressing any issues that require future action.

The graduate attributes are developed through a series of theoretical and practical problems or professional briefs that need to be completed or solved; this could be through practical application of theories, the implementation of existing processes or by devising new solutions to practical problems. Lectures are particularly used to furnish the foundations and framework that will enable the students to attain the knowledge and understanding outcomes for the module, also where appropriate some of the professional and transferable skills. Workshops and problem-solving sessions reinforce student acquisition of the knowledge and learning outcomes of the module. They also prepare the students for assessed work and reinforce students' ability to solve problems. Practical assignments and workplace practice further reinforce the process of acquisition of knowledge and understanding, but are also pivotal for the development of the majority of the graduate attributes. Group design exercises prepare the students for teamwork, development of interpersonal skills, working to deadlines, independent thinking and the ability to organise themselves. Tutorials are used to give formative and summative feedback on assessed work, in alignment with Brookes Assessment Compact, to support student understanding of the learning outcomes of the module and to help students to improve their future work.

Work-Based Learning (WBL) modules also aim to promote learning at work, but more importantly learning through the medium of work. These modules also involve elements of developing team-working, formatively, and other interpersonal skills since interaction within the workplace and the employer will be a strong element. The relevant modules aim to develop the higher level skills of analysis, evaluation and synthesis as well as develop as a "reflective practitioner". In undertaking, WBL, learners will be provided with a named contact (supervisor) for individual guidance & support.

Assessment

Assessment is conducted through a balance of examination and coursework, varying from module to module: for example 100% coursework in the Work Based module, 70% examination, 30% coursework in Mathematics. The examinations assess the understanding and consolidation of the course material. Within the FD ethos, coursework is an important element of assessment as it provides an opportunity for authenticity and the development of professional practice and a strong mechanism to provide valued feedback to learners. In general most modules offer a mixture of modes of assessment. Other than modules focussing upon work-based learning, most modules are assessment by a mixture of unseen written examination and/or assignments and so a large variety of assignment modes are used, depending upon the topic and the indicative syllabus such as:

- oral presentations;
- short design studies;
- problem sheets;
- short tests done in class;
- write-ups of laboratory experiments;
- technical reports;
- design tasks;
- computer based exercises.

Many of the Assignments will be based on modern industry practice such as using real data from the work place or using industry-standard software or the use of Materials Properties databases. Details and arrangements of the coursework are provided in the module descriptors and also confirmed to students at the beginning of each module. A key aspect of course work is to develop and assess the 'practitioner' skills (mainly practical and transferable) in their application to the workplace.

Whilst most modules are heavily directed in terms of content, work-based modules provide a structure that emphasises independent learning by the student focussing upon the workplace. Students are provided direct support by the module team and are offered the opportunity to discuss their work on an individual level. Assessment is primarily by the creation of a 'portfolio' of evidence / work or by project report in the last module (see below). Reflective approach to learning will form part of the assessment process for portfolios, e.g. promoting formative self-assessment of coursework alongside assessment criteria. The independent WBL project is aimed at providing a solution to a problem in the workplace. Assessment includes testing the skills involved in the planning as well as the dissemination of the results by oral presentation.

Examinations are two hours in length where specified and held at the end of each module and are used mainly to assess knowledge and understanding of specific subjects. The examinations are generally orientated to testing the application of knowledge (analysis) and practical understanding (problem solving) in terms of interpretation of theoretical calculations / problems as well as empirical results.

5.2   Assessment regulations

The programme conforms to the University Regulations which can be found at:

http://www.brookes.ac.uk/regulations/current/specific/b1/

In addition, if a module has more than one element of assessment (exam/ coursework), to obtain a Pass, a minimum of 30% must be obtained in each element of the assessment and result in an overall module mark of no less than 40%.

SECTION 6: ADMISSIONS

6.1 Entry criteria

Typically entrants will possess:

- National Certificate / Diploma or other full equivalent Level 3 qualification, in a discipline related to Engineering, minimum grade MM, plus a minimum of three passes at GCSE (grades A-C) including Mathematics at grade B or equivalent and English language.

And

- Employment in an appropriate workplace setting with their organisation's support for the programme.

Entrants with equivalent qualifications and experience will be accepted on an individual basis. Full-time students may be admitted with equivalent qualifications and experience subject to identifying suitable work placements.

Work-based learning is an integral part of the Foundation Degree programme. Thus, a key characteristic of a Foundation Degree is close co-operation with relevant employers. Entrants to the programme will be expected to have the support of their employer and will need to demonstrate the employer will provide the opportunity for work-based learning, e.g. a letter of employer support with the application form. For full-time students, arrangements will be made to identify appropriate work placement in advance of admission. It follows that in order to undertake the assessment on the programme, a student must have access to an appropriate work environment (voluntary or paid; full-time, part-time or work placement). If during the course of the programme a student loses their work or access to the work-place then alternative arrangements, if feasible, will be made as soon as possible. Whilst the college will facilitate as far as possible, fundamentally, it remains the learner's responsibility to secure such access in order to complete the assessment on the programme.

Applicants are normally interviewed and may be required to undertake numeracy and literacy tests as part of the assessment by the College, especially where experiential learning is used to support admission, to ensure that they possess the appropriate attributes to succeed on the programme and to check on the suitability of the work environment to which applicants have access.

Full-time students apply through UCAS, while part-time students may apply direct to the College for admission to the Foundation Degree.

Admission with Credit
Applicants with prior certificated or experiential learning may be admitted with credit for up to a maximum of 120 credits at Level 4 and 30 credits at Level 5. Applications for the award of credit must be made in writing following discussion with the College programme lead and the University's Liaison Manager. Documentary evidence will be required in support of the application.

English Language Requirements
Applicants whose first language is not English must also demonstrate that their level of English is acceptable, by achieving a score in a recognised test such as British Council IELTS (normally minimum Level 6.0 overall with a minimum of 6.0 in reading and writing, 5.5 in listening and speaking).

The University's English language requirements can be found at
http://www.brookes.ac.uk/international/how-to-apply/undergraduate/undergraduate-entry-requirements/

6.2 DBS checks

N/A

SECTION 7: STUDENT SUPPORT AND GUIDANCE

During induction week are provided with sessions that introduce the philosophy of the programme, the rationale for its design and delivery, and provides insight into what is expected of students. In addition, students are issued with handbooks and other relevant documentation explaining the how the course is structured and what will be expected of them during their studies with both Solihull College and Oxford Brookes University. The Programme Manager and Personal Tutors are available for consultation during this first week on the course.

A number of people are available to support, guide and assist personal development during the programme. The Programme Leader and the Personal Tutor work as a team to ensure the programme runs smoothly. The Module Leaders and Module Tutors provide academic tutoring and answer subject specific queries during modules. Each student is allocated an Academic Adviser from within the College and is invited to regular and structured meetings throughout the programme to review progress and get help with academic development. College Support Services can provide one-to-one support, advice and guidance on a range of issues, such as personal and family problems, disability or sickness, learning difficulties and money worries. As enrolled students of Oxford Brookes, students have access to all University's support and disability services, including the Students' Union and Careers and Employment Centre.

Programme and Module Handbooks are provided for both the programme and for each module. The module handbook provides:

- Contact details of the Module Leader and Tutors
- Specific content and module learning outcomes
- Week by week topics and activities
- Details of required class preparation
- Recommended and required reading
- Coursework assessment including the task, how it relates to learning outcomes, the assessment criteria and deadlines.
- How the module relates to employability and the professional context.

In addition, throughout the programme, module handbooks and online resources are available through the virtual learning environment; these resources provide a great deal of guidance for students. In addition students can get help and guidance from their Programme Manager and their Personal Tutor. They are also able to obtain module-specific advice from the Module Leaders and any of the staff teaching on the relevant module.

The College Careers Service offers guidance on career planning as well as practical advice on CV writing, mock interviews and assessment centres, tutorials and careers counselling. In addition, Student Services are dedicated to helping students. The Student Services office processes full-time applications and arranges interviews with course tutors. The team is also responsible for enrolling all full-time and part time applications, so any enquiries regarding these procedures can also be dealt with through this office. They can be contacted on 0121 678 7000 or by email on enquiries@solihull.ac.uk

SECTION 8: GRADUATE EMPLOYABILITY

The College and University provide advice and careers guidance. For Oxford Brookes careers website follow http://www.brookescareerscentre.co.uk. The college careers team can be contacted at careers@solihull.ac.uk. The Programme team will also be able to provide support and guidance around careers interests to learners throughout their programme.

SECTION 9: LINKS WITH EMPLOYERS

The College has established strong links with locally based international companies such as Cogent Elliott, Arup, Jaguar Land Rover, Birmingham Airport, John Lewis and the NEC Group, and graduates have employment opportunities with them (or are supported by them in the pursuit of their foundation degree). The programme provides students with the chance to further develop skills, understanding and personal attributes valued by employers and offers learners to identify and capitalise on opportunities. The flexible structure within this programme will enable students to remain in employment while

undertaking the programme and after graduation offer the progression to a BSc(Hons) programme of secure opportunities with employers in the region such as: Jaguar Land Rover, Aero Engine Controls, Alcoa Manufacturing, BT Openreach, International Automotive Components, Monarch, National Express, Couch Perry Wilks, Manufacturing Technology Centre and TRW Automotive. There are another 40 or so other employers that the College work with frequently and can call upon to secure work placement opportunities for full-time students, for example. The College's links with employers ensure that teaching is relevant to contemporary engineering practice and also provides students with opportunities to get real-world experience. Many employers sit on advisory panels for curriculum developments and their comments help to ensure that the programme continues to be relevant. Students will also have the opportunity to learn first-hand from high-profile guest speakers who are at the forefront of their field. These experts are invited to the College to share their experiences, including the latest developments in industry, through lectures, seminars and even master classes.

SECTION 10: QUALITY MANAGEMENT

<u>Indicators of quality/methods for evaluating the quality of provision.</u>

Solihull College's QAA Integrated Quality and Enhancement Review (IQER) report published in August 2011 stated that:

"*As a result of its investigations, the Summative Review team (the team) considers that there can be confidence in the College's management of its responsibilities, as set out in its partnership agreements, for the standards of the awards it offers on behalf of its awarding bodies. The team also considers that there can be confidence in the College's management of its responsibilities, as set out in its partnership agreements, for the quality of learning opportunities it offers. The team considers that reliance can be placed on the accuracy and completeness of the information that the College is responsible for publishing about itself and the programmes it delivers.*

The team has identified the following good practice for dissemination:

- *The management and delivery of staff development, which involves a highly effective combination of College, partner and individual staff-directed activities, and which is embedded in a supportive and responsive College culture*
- *The Code of practice is well used to evaluate and improve practice, especially in relation to disability, which has resulted in enhancement of the learning opportunities through, for example, ensuring students have access to the physical environment and additional specialist support*
- *The provision of learning opportunities through the library and the virtual learning environment which make a very positive contribution to ensuring the accessibility of resources and supporting students' learning*
- *Proactive relationships with industry partners have led to curriculum innovation, all of which are mutually beneficial for partners, students and the College. Indicators of quality/methods for evaluating the quality of provision.*"

See also http://www.qaa.ac.uk/InstitutionReports/Pages/Solihull-College.aspx

The programmes at Brookes' Department of Mechanical Engineering and Mathematical Sciences also benefit from rigorous quality assurance procedures and regularly receive excellent feedback from external examiners, employers, students and professional bodies. Other FD programmes have also recently been subject to a rigorous accreditation visit by the IET and IMechE. Examples of how quality assurance of the programme is addressed include:

- Programme Committee meetings, held once a semester, to enable staff and students to feedback on the programme.

- A rigorous annual and periodic review process to ensure the currency of the programme.
- An external examining process that follows the University guidelines - http://www.brookes.ac.uk/asa/apqu/handbook/introduction.html
- Systematic end of module and end of programme monitoring and evaluation.

Other indicators of quality include:

- Academic staff who are Chartered Engineers / Chartered Physicists / Chartered Scientists.
- Academic staff who are fellows of senior fellows of the HEA
- Strong performance in the last Research Excellence Framework.
- Feedback from Industrial Advisory Board drawn from senior industrialists.
- Strong performance in the National Student Survey & Graduate Employability surveys
- The programme adheres to the nationally accepted benchmark statements for Engineering.