University of Central Lancashire
UCLan

Hugh Baird University Centre

Course Handbook

Foundation Degree in Engineering (Advanced Manufacturing)

2024-25

School of Engineering

Hugh Baird College

Please read this Handbook in conjunction with the University's Student Handbook.

Contents

1. Welcome to the Course 3
2. Structure of the Course 6
3. Approaches to Teaching and Learning 12
4. Student Support 15
5. Assessment 16
6. Classification of Awards 21
7. Appendices 21
7.1 Programme Specification(s) 21

1. Welcome to the Course

Welcome to your UCLan Higher Education (HE) course at the Hugh Baird University Centre. We offer a friendly and supportive learning environment and the tailored support you need to be successful. Class sizes are small and tutors use varied teaching and learning methods to meet your needs. Our staff are also used to working with people of all ages and recognise that your work and life experience are an asset. As a friendly community of staff and students our aim is to give you an excellent educational experience. I hope you will enjoy this year and find your course challenging, stimulating, enjoyable and rewarding.

This Handbook provides a quick guide to what is offered at the college, what we aim to help you to achieve and what we expect of you. It also provides information about support services and regulations that you need to know.

We want you to achieve your academic and personal potential, to develop networks of friends, new interests and life skills. To achieve this, we want you to:

- **Work hard** - we expect you to attend lectures, seminars and workshops, as students with good attendance will achieve the best degrees overall. Plan your workload and think carefully about how to manage your reading and preparation for written assignments and practical work.
- **Enjoy your time at college** – studying on an HE course is also about having new experiences, making friends, finding new interests, and learning to create a balance between work and social life. Make sure you find time to take advantage of enrichment activities or sports facilities and get involved with student committees. Look after yourself and make sure you know about student wellbeing resources for information and support.
- **Make use of the support that is available to you** - I am sure you will have a great year but don't forget that there are many services available if you need them.

I wish you every success during your time at the Hugh Baird University Centre.

Colette Mawdsley

Assistant Principal Higher Skills

1.1 Rationale, aims and learning outcomes of the course

Firstly, a warm welcome from the Course Team. We hope you will enjoy your time with us and achieve your aims.

The course team consists of the academic and technical staff who contribute to your course. The academic staff take responsibility for the delivery of the content of your modules, but they also have other many roles including research, overseas development, marketing and publicity, etc.

Your course is also supported by a number of facilitators who induct you into the workshops and the use of technical resources, demonstrate craft and technical processes and/or assist individual students with the production of work. They are a team of well-qualified individuals who assist students across a range of courses.

When we created your course, we began by considering a number of things:

- What knowledge and skills you are likely to have at the beginning of your course
- What knowledge and skills will be expected by the employers when you begin your career
- The range of expertise and professional experience of your tutors
- What standards are required for the various awards that we offer (the UK's 'Framework for Higher Education')
- What is generally expected to form a significant part of the curriculum of a course of this title (the UK's 'National Subject Benchmark' statements)

In the above we were informed by our experience, both as educators and practitioners, and by external reference points. Once we considered these key points, we blocked the responses into a number of modules, each with Aims and Learning Outcomes. You can think of Aims and Learning Outcomes as the 'DNA' that ultimately shapes the form and content of your degree. We've reprinted the aims for your course below and throughout the following sections you'll develop a sense of what the learning rationale of your course is; you'll find the overarching learning outcomes for your course in the programme specification.

On successful completion of the course you will be awarded a Foundation Degree in Engineering (Advanced Manufacturing) awarded by the University of Central Lancashire.

Aims of the Programme
• To provide an access route to BEng programmes in Engineering for students either lacking the required formal qualifications with appropriate analytical content or UCAS points.
• To equip students with appropriate knowledge, skill and experience of the concepts of Engineering analysis and problem solving, at a level suitable for progression on to BEng Engineering programmes.
• To develop the key personal and transferrable skills required to enable students to successfully progress on a BEng programme of study.
• To provide a stimulating and rewarding learning environment to cultivate a confident, pragmatic and resourceful approach to the solution of engineering problems.

• To introduce awareness of the Engineer's role in industry and the societal impact of Advanced Manufacturing in Engineering.
• To develop and equip students with appropriate transferrable skills and knowledge of the concepts of Engineering analysis and problem solving, at a level suitable for progression into the Engineering Industry
• To provide an access route to employment in Engineering for students lacking the required formal qualifications with appropriate analytical content.

1.2 Expertise of Staff

All staff who deliver on the course have extensive course related industry and/or educational experience and have qualifications up to MA level in related subjects. The staff regularly complete work experience opportunities within their subject areas, which allows them to keep up to date with current industry trends and standards.

Staff profiles can be accessed on the Hugh Baird University Centre website.

1.3 Administration Details

At the Hugh Baird University Centre, all enquiries should be made to: enquiries@hughbaird.ac.uk or via telephone on 0151 353 4444.

Further information can be found on the website at:

www.hughbaird.ac.uk/university-centre

At UCLan, Academic Registry provides a range of services to support the student journey from enrolment to graduation. The Academic Registry is responsible for course administration and supports the University's academic Schools and Faculties. Teams in the Academic Registry provide information and guidance on student records, change of circumstances and academic appeals. Services within Academic Registry operate from **8.45am until 5.15pm Monday to Thursday and until 4.00pm on Fridays.** Contact information can be found at: https://www.uclan.ac.uk/students/support/course_admin_service.php.

1.4 Communication

In order to access communication from UCLan, the University expects you to use your UCLan email address and check regularly for messages from staff. If you send us email messages from other addresses they risk being filtered out as potential spam and discarded unread.

At Hugh Baird University Centre, the course leader will set up a course e-mail account that will allow staff to e-mail all students from the group. Additionally, email is checked daily and students should expect a prompt reply to their query.

Student Zone is a new system set up by the College that can be accessed via the College website for staff and students to share information. The course team will up-load relevant course information that will allow the student easy access for example module resources, course handbook, Harvard referencing, copyright information, deadline dates and times and project briefs.

During induction week you will be enrolled into the library and shown how to use College email, the library systems and College IT facilities, including Microsoft Teams. You will also be shown how to access your university systems such as MyUCLan.

2. Structure of the Course

2.1 Overall Structure

Integrated Foundation Entry (Level 3)

Full time (Year 1)

Semester 1	Semester 2
ERC101 Core Study Skills for Engineers 20 credits	
ERC102 Creative Problem Solving 20 credits	
ERC103 Technical Communication Skills 20 credits	
ERC104 Mathematical Methods 20 credits	
ERC105 Electronic Engineering for Advanced Manufacturing 20 credits	
ERC106 Mechanical Engineering for Advanced Manufacturing 20 credits	

Part time (two years recommended)

Year One

Semester 1	Semester 2
ERC101 Core Study Skills for Engineers 20 credits	
ERC103 Technical Communication Skills 20 credits	
ERC104 Mathematical Methods 20 credits	

Year Two

Semester 1	Semester 2
ERC102 Creative Problem Solving 20 credits	
ERC105 Electronic Engineering for Advanced Manufacturing 20 credits	
ERC106 Mechanical Engineering for Advanced Manufacturing 20 credits	

Foundation Degree (Levels 4 & 5)

Full time (Year 1)

Semester 1	Semester 2
ER1101 2D & 3D Computer Aided Design 20 credits	

ER1102 Manufacturing Engineering 20 credits
ER1103 Further Mathematical Methods and Analysis 20 credits
ER1104 Electronics and Instrumentation 20 credits
ER1106 Introduction to Programming in Engineering 20 credits
ER1107 Robotic Systems 20 credits

Full time (Year 2)

Semester 1	**Semester 2**
SC2153 Further Maths 20 credits	
ER2102 CAD for Manufacturing 20 credits	
ER2103 Design and Development for Manufacturing 20 credits	
MP2576 Thermo-fluids 20 credits	
ER2104 Mechanics Kinematics and Materials 20 credits	
ER2106 Work Based Study 20 credits	

Part time (three years recommended)

Year One

Semester 1	Semester 2
ER1101 2D & 3D Computer Aided Design 20 credits	
ER1102 Manufacturing Engineering 20 credits	
ER1103 Further Mathematical Methods and Analysis 20 credits	
ER1106 Introduction to Programming in Engineering 20 credits	

Year Two

Semester 1	Semester 2
ER1104 Electronics and Instrumentation 20 credits	
ER2107 Robotic systems 20 credits	
ER2102 Computer Aided Design for Manufacturing 20 credits	
ER2103 Design and Development for Manufacturing 20 credits	

Year Three

Semester 1	Semester 2
SC2153 Further Maths 20 credits	

MP2576 Thermo-fluids 20 credits
ER2104 Mechanics Kinematics and Materials 20 credits
ER2106 Work Based Study 20 credits

The course will be delivered in the Hugh Baird University Centre and Port Academy Liverpool part of the campus.

Please note that all modules are mandatory.

The overarching UCLan programme specification is attached to the back of this handbook. Where the modules listed therein may differ slightly from those listed above, this is the result of a validated agreement between the University Centre and UCLan, whereby the modules listed above shall be those on offer at the Hugh Baird University Centre.

2.2 Modules Available

Each module is a self-contained block of learning with defined aims, learning outcomes and assessment. A standard module is worth 20 credits. It equates to the learning activity expected from one sixth of a full-time undergraduate year. Modules may be developed as double or triple modules with credit allocated up to a maximum of 120 credits per module.

2.3 Course Requirements

All modules are compulsory. For entry requirements see programme specification.

As a student undertaking this course, you are bound by the Code of Conduct as specified by **Hugh Baird College and the University Centre** and subject to the UCLan procedure for the consideration of Fitness to Practise.

2.4 Module Registration Options

Discussions about your progression through the course normally take place in February each year. It is an opportunity for you to make plans for your study over the next academic year. The course team will tell you about the various modules / combinations available and you will both agree on the most appropriate (and legal) course of study for you.

2.5 Study Time

2.5.1 Weekly timetable

A timetable will be available once you have enrolled onto the programme.

Your timetable is likely to consist of:

Integrated Foundation Entry (Level 3)

Year 1 full time:
- Up to 14 hours of taught sessions per week

Year 1 part time
- Up to 7 hours of taught sessions per week

Year 2 part time
- Up to 7 hours of taught sessions per week

Part time students may be in-filled with full time students.

Foundation Degree (Levels 4 and 5)

Year 1 full time:
- Up to 14 hours of taught sessions per week
- **Year 2 full time:**
- Up to 14 hours of taught sessions per week

Year 1 part time
- Up to 7 hours of taught sessions per week

Year 2 part time
- Up to 7 hours of taught sessions per week

Year 3 part time
- Up to 7 hours of taught sessions per week

Part time students may be in-filled with full time students.

Additionally for each year:
- Self-directed study
- Work based learning opportunities

Enrichment activities, designed to help you meet people from other areas of the College, try out new skills and develop new interests.

2.5.2 Expected hours of study

20 credits is a standard module size and equals 200 notional learning hours.

The normal amount of work involved in achieving a successful outcome to your studies is to study for 10 hours per each credit you need to achieve – this includes attendance at the Hugh Baird University Centre and time spent in private study.

Your modules have been designed for teaching and independent learning to be completed in a set amount of time – each credit studied requires 10 hours of study. So a 20 credit module will require you to commit to 200 learning hours and 40 credit module, 400 learning hours. Full time students study 120 credits so over each year you will study, in total, 1200 hours. The academic calendar identifies 30 study and assessment weeks spread over

two semesters of approximately 15 weeks each, so a full time students' learning should average 40 hours per week. If you find that you are regularly exceeding this amount, or regularly finishing your weekly studies in less time, then you should speak to module tutors.

Part-time students study modules in exactly the same way as full-time students, you just study less at any time. If you need advice or guidance about the amount of time you should spend in study, speak to your Course Tutor.

For a 20 credit module, where the taught component is 60 hours, you should spend approximately 140 hours in independent study. Occasionally you may find modules where the contact hours are greater or less than the 60-hour norm. This is because of the nature of the module but you'll find this is compensated for in other modules. However, no matter how the contact hours and independent study hours are split up, no module requires more or less than 10 hours' study per credit and so you should still be spending approximately 40 hours per week in study if you are a full time student (speak to staff if you are not achieving or exceeding this amount).

2.5.3 Attendance Requirements

You are required to attend all timetabled learning activities for each module. Notification of illness or exceptional requests for leave of absence must be made to your module tutor.

No modules or sessions are optional. Please be aware that attendance is closely monitored and may affect decisions taken about you in assessment boards or in the provision of references. There is a 95% attendance target.

Student attendance is recorded electronically and if you are absent for more than 28 days without contact, we reserve the right to inform your grant office or student loan company. If you are unable to attend as a result of illness, accident or serious family problems (or other personal reasons) you must notify your course tutor before the start of class.

Notification of illness or exceptional requests for leave of absence must be made to your Course tutor via email.

If you have not gained the required authorisation for leave of absence, do not respond to communications from the University and if you are absent for four weeks or more, you may be deemed to have withdrawn from the course. If this is the case, then the date of withdrawal will be recorded as the last day of attendance.

3. Approaches to Teaching and Learning

3.1 Learning and Teaching methods

As we created the modules that constitute your course, we considered the following:

Your experience of study must be a holistic one; each module should be fully integrated within the total course of study;

Much of the focus of the teaching, especially during level 4, is aimed at forming the student body into a fully functioning group. It is important that you, as part of your learning, should develop a sense of the needs of others and become equally responsible for all aspects of the group's development. When, as occurs in group work, you rely on the presence and contribution of others for your own progression, a mutual contract is made between all parties and the exploitation of this commitment is essential to both educational and personal development.

3.2 Study Skills

At the Hugh Baird University Centre, study skills will be provided by a variety of staff. The Personal Development Coaches will lead on this and sessions will be arranged for all students. Communication regarding these and any other sessions will be sent out by the Personal Development Coaches.

To access UCLan's Study Skills - 'Ask Your Librarian'

https://www.uclan.ac.uk/students/support/study/it_library_trainer.php

You can book a one to one session with a subject Librarian via Starfish. These sessions will help with questions such as

- "My lecturer says I need a wider variety of sources in my references, what do I do?"
- "I need to find research articles, where do I start?"
- "How do I find the Journal of ...?"
- "How do I use RefWorks?"

3.3 Learning Resources

3.3.1 Learning and Information Services (LIS)

For UCLan resources, the best place to start when exploring the Library resources available to you is;

- Your 'Subject Guide' can be found in the Library Resources
- Your 'My Library' tab in the Student Portal
- Library search
- Your module reading list – this can be found in your electronic module space.

The Hugh Baird University Centre has a full range of printing facilities, media studio, editing suite, dedicated HE study areas for independent study and two well stocked Library Learning Centres. Here you will find an extensive range of resources available to support your studies provided by the Hugh Baird University Centre and your partner university. Your course team works closely with the learning resources department to ensure that your primary learning needs are met. In addition, you will have access to journals and the electronic resources at UCLan. These include e-journals and databases, e-books, images and texts.

For library opening times please visit the Hugh Baird University Centre website.

3.3.2 Electronic Resources

The course MS TEAMS PAGE also houses many resources that are kept up to date by your course team.

3.4 Personal Development Planning

PDP is designed to:

- Enable you to work towards a point you would like to be at on graduation;
- Help you acquire the skills needed for your chosen career;
- Evaluate your strengths and plan to deploy them in a range of situations during study and after graduation.

PDP starts at the beginning of the first year and will vary from course to course, but the aim on all courses is that on graduation you will be well prepared for industry, demonstrating your skills, knowledge and capabilities in a variety of settings.

As a student, it is important that you tie together the modules you are studying concurrently and to trace your progression throughout the three levels of study. One of the purposes of using a journal is to enable you to remember the details of the taught sessions and to reflect on how successful you were in absorbing and applying the content, both then and now, within your working process. But whatever mechanism you prefer it is important that all students should reflect on their progress and identify successful changes to work or learning patterns that will assist you to become a 'better' student.

We aim to train you to take responsibility for your own learning and career development, to be able to evaluate your strengths and weaknesses and conduct a skills audit to develop a critical practice. This covers analysis of your key skills base (use of English, literacy and writing skills, numeracy, communication skills and use of IT) and you will be encouraged to evaluate your strengths and weakness on a continual basis as you progress through different points during the course.

Many of the conversations that you will have with your tutors are intended to cause you to reflect on the work that you have completed; but they also intend you to look forward and build upon this success or perhaps to challenge a working practice that is limiting your development. Within PDP, you should consider how your learning and working processes should evolve to enable greater creative success and therefore greater personal satisfaction achieved through learning!

3.5 Preparing for your Career

For UCLan Careers support, you can access what is available at:
https://www.uclan.ac.uk/careeredge

For careers support from the Hugh Baird University Centre, please contact the Personal Development Coaches. Your future is important to us, so to make sure that you achieve your full potential whilst at university and beyond, your course has been designed with employability learning integrated into it. This is not extra to your degree, but an important part of it, which will help you to show future employers just how valuable your degree is. These "Employability Essentials" take you on a journey of development that will help you to write your own personal story of your time at university:

- To begin with, you will explore your identity, your likes and dislikes, the things that are important to you and what you want to get out of life.
- Later, you will investigate a range of options including jobs and work experience, postgraduate study and self- employment,
- You will then be ready to learn how to successfully tackle the recruitment process.

It's your future: take charge of it!

4. Student Support

At the Hugh Baird University Centre, the **Health & Wellbeing Officer** offers information and advice to students relating to all aspects of leading a healthy lifestyle both inside and outside College. Information and advice are offered in many areas including:

- Sexual health
- Nutrition
- Stopping smoking
- Healthy living
- Staying safe
- Making a positive contribution
- Personal development
- Financial help
- Enjoying College

You can also access non-academic student support services at UCLan at: http://www.uclan.ac.uk/students/study/library/the_i.php

4.1 Additional Student Support

You will be assigned a Tutor who will provide additional academic advice and support during the year. Tutors are academic members of staff whose role is to look after a group of students across a year group for specific courses, they will be the first point of call for many of the questions that you might have during the year. Your Tutor will be able to help you with personal development, providing guidance and direction to enable you to realise your potential, and can refer you to other University support services if appropriate.

You may also be contacted by a Personal Development Coach, whose role it is to identify students that would benefit from additional support to engage in their studies. The Personal Development Coach will work with you, alongside the Tutor and other members of staff to develop solutions to any difficulties you may be experiencing.

4.2 Students with Disabilities

We make every possible effort to support students with disabilities and have a very strong, dedicated team of professionals who are here to help you.

If you have a specific learning difficulty (SpLD), a long-term health condition or mental health condition, you may be eligible to receive Disabled Support Allowance (DSA). Please go to: https://www.gov.uk/disabled-students-allowances-dsas/overview for more information and to apply.

4.3 Students' Union

The Students' Union is here to 'make life better for students' and we aim to do this every day through our wide range of services, activities and opportunities. You can find out more information on our website: http://www.uclansu.co.uk/

As one of the thousands of students who are not studying on the main UCLan campus in Preston, the Students Union is still your union, please check http://www.uclansu.co.uk/ for full details on what we may be running in your partner institution.

5. Assessment

5.1 Assessment Strategy

Why is assessment relevant to learning?

For assessment to be truly meaningful, you have to perceive its relevancy to your learning. Consequently, we make assessment relevant to your interests, relevant to the industry's standards and relevant to potential future careers.

In previous sections within this document we've tried to give you some insight into how we 'modularised' your learning. The learning process enables you to unpack these and 'use' the contents. We gauge how well you do this by assessment. Assessment forms part of your learning process; it provides feedback information so that you can refine your judgement of your own abilities and progress, and respond accordingly – this is significant in your planning and the self-evaluation that occurs within your PDP activities and your Journals and Logs. Secondly, it provides information that helps us evolve the various modules and, ultimately, the course you are studying.

Each assignment that you undertake commits you to a certain amount of study. To ensure fairness the evidence of this study must be completed by all students to the same deadline. Part of the assessment process is the recognition that meeting deadlines involves realistic planning and setting achievable targets. Thus your tutors will apply deadlines rigorously, as does the University system generally. We recognise that some students achieve better grades for practical work, whilst other are better at theoretical study. Consequently, we will use a very wide range of assessment methods to ensure that all skills and knowledge are fairly assessed.

To ensure that you have a full and accurate understanding of the purpose and processes of assessment, there will be frequent opportunities to discuss the assessment of each assignment. These discussions will include 'house-keeping' and simple practicalities, as well as making sure you fully understand what you will be expected to do to fulfil the brief. There will also be discussion of more abstract areas, such as 'creativity', 'originality' and 'imagination'. You will have the opportunity to discuss what seemingly subjective

assessment criteria such as 'experimentation' actually mean, rather than simply being assessed on them.

There are several desirable attributes within assessment of any course; these are that you:

- Understand the meaning of terms used in assessment;
- Have a clear understanding of exactly how the assessment mechanism works, and the reasons for the arrangements adopted;
- Appreciate that assessment is a means of developing your own critical facilities and self-awareness;
- Know what steps to take to meet assessment criteria and gain maximum benefit from the process;
- Are assessed frequently and that this regular process encourages you to make comparisons between your own judgement and values, and those of others;
- Are aware of the assessment criteria that staff apply to the growing evidence of your learning and that this is clear and open and is discussed freely;
- Partake in the activities of discussion, evaluation and assessment and that you receive feedback that is immediate and frequent, detailed, accurate and fair

What is assessed?

We assess course work – course work is normally a set of creative projects and some essays, set by your tutors to deadlines that are same for all. Course work is marked to an agreed set of criteria and, through moderation, a final mark is achieved.

It is important for you to understand that we don't assess modules; we assess assignments packaged within these modules. By assessing individual assignments, we obtain a mark that indicates how well you did overall on a particular module. At the end of your course, by putting the module marks together we calculate your degree classification. Therefore, the assessment of each assignment contributes to passing your degree.

You must attempt each assessment; even if your work is late or incomplete, we still regard the submission of this as an 'attempt' – it is always better to attempt an assessment that you think you will fail than to submit nothing at all!

The assessment strategy is created out of the information agreed at validation and contained within the module descriptors. Many modules have two or more assignments but it is entirely normal for a module to be only composed of one assignment. In the Module Handbook (occasionally called Module Information Pack), all the assignments for that module are usually included. Read them as soon as you receive it because this will help you understand what we expect of you and how the module will develop; it will also help you to time-manage your workload for the semester or year.

In feedback your tutors will explain what qualities in your work defined the grade you were awarded, and what you could improve on in future assessment that will assist you to improve your grades.

The nature of your course requires that a number of different learning methods be used and assessed. These can be summarised as follows:

Lecture/Seminar Work - The majority of the modules that you study are practical. However, even within practical modules it is still often appropriate to deliver some lectures and seminars. It is normal to assess the knowledge that you have gained from these lectures at

various points throughout the year. However, rather than always expecting you to present theoretical learning for assessment in the form of essays, we often prefer you to introduce this knowledge in your practical work or to create seminar presentations, which you may think of as solo or group presentations. To assess the results of lectures and seminars we apply criteria based upon the following:

- Consideration of information and personal views, interpretation and analysis
- Involvement of the use of resources to extend understanding through self-study
- Development of abilities to originate, research and prepare concepts or ideas
- Fluency in communicating creative issues, concepts or ideas

Group Work – It is more appropriate to assess group work in some courses more than others, but where group work is assessed we sub-divide its assessment into 2 different approaches: Firstly, when we assess your understanding of some aspect of theory within group work, we may need to isolate your contribution and measure this contribution to the group's presentation separately from other students. We may use your supporting documentation, discussions, viva voces and workshop sessions to help us to monitor your contribution. Secondly, it is common in practical work to assess your groups' response to a particular task holistically. In these instances, it is not always possible or relevant to isolate each individual's contribution (however we may adjust this grade for one or more individuals if we feel there has been an unequal contribution to the group from certain members). To assess group work we apply criteria based upon the following:

- Your understanding of personal responsibility
- Your ability to integrate and play an active part
- Your participation in complex organisational and creative decision making
- Your management and monitoring of the group's progress
- Your participation in joint presentations of proposals/solutions

In addition to the above, assessment criteria may also include:

* Active involvement in learning
* Positive use of resources
* Relationships with people - working in teams or groups
* Management of study including self-study

The specifics of the assessment criteria for each assignment will be explained to you prior to starting the assignment, but if you are in any doubt **speak to your module tutor immediately!**

Why do you assess written work in practice-based courses?

To ensure that your course is the equal of all other subjects it is not only essential to test your embedded knowledge through the creation of creative work, but to test your intellectual understanding and higher levels skills of research, reflection and communication. Essays and other written works are the simplest way of testing the skills of:

1. The collection of appropriate knowledge (research) from primary and secondary sources
2. The organisation of this knowledge in a coherent and logical way (structure)

3. The ability of you as the writer to make the material 'alive' and engaging to the reader (communication)
4. The correct use of academic conventions, such as referencing and language and grammar (accuracy)

Please remember that, unless you are told otherwise, we expect **all** written work submitted for assessment to be word-processed, printed on white A4 paper, using a plain font of either 11 or 12 points. Citations and references should be made in Harvard format. Where a specific word count is listed:

i) Between 'two stated figures', i.e., between 2,000 and 2,500 work, you should not submit work where the word count is outside of these limits
ii) That is 'a single figure', i.e. 1,500 words, you should submit work that is within 10% of this figure (in the case of 1,500 words you should submit no less than 1,350 and no more than 1,650 words).

The words on the tile page, in the bibliography and in appendices are not included in the word count.

How can I be certain that my work has been assessed accurately and fairly?

To ensure standards are maintained our assessment procedures are rigorous and regularly reviewed. For example:

1. All work that accounts for 25% or more of a module will be assessed by at least 2 staff members from your College; all work that receives a fail grade (below 40%) will also be assessed by at least 2 of your College tutors;
2. Samples of work from each module will be further moderated by UCLan staff
3. If, because of the particular nature of your work or because of prior commitment, 2 staff members cannot present at 'ephemeral' assessment (presentations), then we will ask you to record your work on video so that this becomes available to another staff member;
4. Our assessment processes are monitored by academics from other Universities, just as we are asked to 'externally examine' similar courses to yours in other institutions. Your course's External Examiner may view the work you submit for assignments at any time but normally at the end of the academic year; they will certainly discuss your modules with staff and look at a range of samples of the work of students on all modules within your course.

5.2 Notification of Assignments and Examination Arrangements

All assessed work must be submitted according to the Course's assessment plan (issued by your course tutor). Authorisation of the late submissions requires written permission from your university. Extenuating Circumstances may be applied for in cases where factors outside your control will adversely affect your performance on the course. If you are unable to submit work within 10 days of the due submission date (due to verifiable circumstances) you may be able to submit an application in accordance with your university's Extenuating Circumstances procedures.

5.3 Referencing

Your work must be referenced using the Harvard system where specified. Sessions and a presentation from Library Learning Centre staff will be delivered so that you are clear about this system. Further information will be provided on the UCLan website.

You are required to sign a declaration indicating that individual work submitted for an assessment is your own.

5.4 Confidential Material

It is not expected that students will need to access confidential material for this programme. Students have an ethical and legal responsibility to respect confidentiality and maintain the anonymity of individuals and organisations within their assignments. All students will be required to adhere to the Ethics in research Policy, which can be located on the College's MyDay webpage.

5.5 Cheating, plagiarism, collusion or re-presentation

The Hugh Baird University Centre uses an online Assessment Tool called Turnitin. Students are required to self-submit their own assignment on Turnitin and will be given access to the Originality Reports arising from each submission. In operating Turnitin, Schools must take steps to ensure that the University's requirement for all summative assessment to be marked anonymously is not undermined and therefore Turnitin reports should either be anonymised or considered separately from marking. Turnitin may also be used to assist with plagiarism detection and collusion, where there is suspicion about individual piece(s) of work.

5.6 How do I know my assessed work has been marked fairly?

Assessment is an integral part of the course. Module staff work closely together to design assessments, agree the marking criteria and approve final versions of assessments to ensure that these are appropriate. The criteria for assessment will be communicated to you clearly during the module teaching.

All module staff engage in development and training in assessment, marking and feedback. Once the assessments have been completed the module team will discuss the assessment methods and marking criteria, prior to starting to mark, so that there is a common understanding of what is expected of students. All assessed modules have moderation built into the marking process. Moderation involves sampling students' assessed work to make sure that the learning outcomes and agreed marking criteria have been interpreted and applied in the same way. This ensures that you and your fellow students are treated equitably and that the academic standards are applied consistently. During the marking process the module leader will co-ordinate moderation to ensure that at least 10% of assessed work (or a minimum of three pieces) has been reviewed by other

markers and any concerns about consistency or accuracy addressed with the whole module team. Your work may or may not be part of this sample, but the processes for developing assessments and marking criteria as well as moderation mean that you can be confident that teaching staff are marking assessments to the same criteria. Module teams may then use feedback from moderation to improve clarity about the nature and purpose of future assessment, or to make changes if required.

Modules are also moderated externally. The module leader will arrange for the external examiner to receive a sample of work for review and comment. External examiners cannot change individual grades but can act as 'critical friends' and confirm that marking standards are in line with other, similar courses in the sector. If, on reviewing the sample, external examiners feel that the marking criteria have not been applied consistently the work of the whole cohort will be reviewed.

6. Classification of Awards

The University of Central Lancashire publishes the principles underpinning the way in which awards and results are decided in their Academic Regulations. Decisions about the overall classification of awards are made by Assessment Boards through the application of the academic and relevant course regulations.

7. Appendices

7.1 Programme Specification(s)

UNIVERSITY OF CENTRAL LANCASHIRE

Programme Specification

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if taking full advantage of the learning opportunities that are provided.

1. Awarding Institution / Body	University of Central Lancashire
2. Teaching Institution and Location of Delivery	Hugh Baird College
3. University School/Centre	Engineering and Computing
4. External Accreditation	Higher Technical Qualification Status
5. Title of Final Award	Foundation Degree in Engineering (Advanced Manufacturing)
6a. Modes of Attendance offered	Full time Part time
6b. Methods of Delivery offered	Campus Taught
7a. UCAS Code	F1M3
7b. HECOS Code	100184
8. Relevant Subject Benchmarking Group(s)	QAA Subject Benchmarking Statement: Engineering (2019)
9. Other external influences	Engineering Council UK-SPEC 3, QAA Academic Infrastructure Codes of Practice, Science, Technology, Engineering & Mathematics (STEM) government initiatives.
10. Date of production/revision of this form	July 2023

11. Aims of the Programme

- To provide an access route to BEng programmes in Engineering for students either lacking the required formal qualifications with appropriate analytical content or UCAS points.
- To equip students with appropriate knowledge, skill and experience of the concepts of Engineering analysis and problem solving, at a level suitable for progression on to BEng Engineering programmes.
- To develop the key personal and transferrable skills required to enable students to successfully progress on a BEng programme of study.
- To provide a stimulating and rewarding learning environment to cultivate a confident, pragmatic and resourceful approach to the solution of engineering problems.

- To introduce awareness of the Engineer's role in industry and the societal impact of Advanced Manufacturing in Engineering.
- To develop and equip students with appropriate transferrable skills and knowledge of the concepts of Engineering analysis and problem solving, at a level suitable for progression into the Engineering Industry.
- To provide an access route to employment in Engineering for students lacking the required formal qualifications with appropriate analytical content.

12. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

On successful completion of the course a student will be expected to be able to:
A1. Use mathematical principles required for study of engineering disciplines at Higher Education level.
A2. Apply fundamental scientific concepts applicable to electrical and electronic systems.
A3. Apply fundamental scientific concepts of mechanics (static and dynamic systems).
A4. Develop skills in information technology.
A5. Communication of technical information using written, oral and visual techniques.

Teaching and Learning Methods

Core knowledge acquisition occurs principally through tutor-led lectures (teaching) and directed study of textbooks. This is followed up by student led learning activity using text (books and e-resources), media (software, video, technical articles).

The understanding comes by way of application. This is aided by tutorials (incorporating worked examples and guided student work) and laboratory experiments. The use of independent study to consolidate understanding is encouraged through research based tasks built into assignments.

The Teaching and Learning strategies employed deliver opportunities for the achievement of the learning outcomes, demonstrate their attainment and recognise the range of student backgrounds. Delivery methods, activities and tasks are aligned with the learning outcomes for this programme, taking account of the learning styles and stage of the student.

Assessment methods

Assessment of knowledge is through examination of key facts using unseen papers (A1 to A3). These may be formal end of year examinations, or 'phase tests' during the year, focussing on a limited range of material.

Assessment of Skills and Experience of the knowledge (and knowledge itself where appropriate) is through assignment or other coursework. These include individual and team reports (A4, A5), presentations (A4, A5) and formal written laboratory reports (A2, A5). This is a structured application of knowledge derived from the tutor-led and individual student activities.

B. Subject-specific skills

On successful completion of the course a student will be expected to be able to:
B1. Employ technical and commercial management skills to Engineering problems.
B2. Make effective use of information technology tools for presentation and analysis.
B3. Demonstrate a logical approach to problem solving and design.
B4. Use technical writing in the preparation of technical reports.

Teaching and Learning Methods

The subject-specific practical and intellectual skills are developed through the teaching and learning programme as outlined above.

A combination of tutorials, practical design work and laboratory experiments are used to bolster the skill development. For all coursework pre-submission support and timely feedback post-submission is used to reinforce the specific learning outcomes, nurture confidence and facilitate engagement with the learning process. In the second semester of the course greater emphasis is placed on independent learning.

Assessment methods

Assessment of subject-specific skills is made by assessing the results of applying that skill. Analytical skills are assessed through unseen examination papers (B1, B3) and coursework assignments (B1 to B4). Practical problem solving skills are assessed within context of assignment

tasks – both individually and team based – by use of observation (B3) and formal written reports (B2 to B4).

C. Thinking Skills

On successful completion of the course a student will be expected to be able to:
C1. Recognise appropriate mathematical techniques to solution of analytical problems.
C2. Effective decision making for the identification, formulation and solution of design problems.
C3. Appreciate the broader context of engineering in business and the impact of engineering on society and the environment.

Teaching and Learning Methods

General intellectual skills are developed through the teaching and learning programme as outlined above.

Numerical and analytical skills (C1) are developed by tutorial support and independent students led consolidation is encouraged. Experimental and design skills (C2) are developed by applying them to specific design tasks and practical exercises in the laboratory and workshop. An appreciation of the wider context of engineering (C3) is developed through directed research, seminars and assignment work.

Formative and evaluative feedback is used as an essential part of the learning process.

Assessment methods

Analytical skills are assessed through unseen examination papers and coursework assignments (C1). Problem solving skills are assessed within context of practical and experimental work (C2). Much of the assessment in Introduction to Communications tests the understanding of business and societal implications of engineering (C3).

D. Other skills relevant to employability and personal development

On successful completion of the course a student will be expected to be able to:
D1. Manage and apply safe systems of work in an engineering environment.
D2. Demonstrate a working knowledge of all relevant legislation and professional standards.
D3. Reflect on and employ sustainable and ethical practises relevant to the Advanced Manufacturing Industry.
D4. Demonstrate the ability to keep abreast of emerging technologies and changes to industry practises.

Teaching and Learning Methods

The teaching and learning methods applied throughout the programme, as outlined above, are used to assist the progress of transferrable skills development.

Assessment methods

The direct assessment of transferable skills related to study and communications is addressed with clearly labelled learning outcomes in 'Study Skills' and 'Introduction to Communications'. Indirectly it is addressed by measuring developing engineering competence in all other modules.

The range of assessment techniques employed across modules on the course allow students sufficient opportunity to demonstrate competencies in their transferrable skills. Written communication skills are developed and assessed through the context for the assessment; examples include the requirements for formal laboratory report (Engineering Science (Electrical)), business or technical justification (Introduction to Communications), and critical evaluation (Study Skills). Group based activity (in Problem Solving Skills) requires reflection on the performance and contribution of the individual toward the outcome.

13. Programme Structures*				**14. Awards and Credits***
Level	**Module Code**	**Module Title**	**Credit rating**	
Level 5	ER2102	Computer Aided Design for Manufacturing	20	**Foundation Degree Engineering (Advanced Manufacturing)** Requires 240 credits including a minimum of 100 at Level 5 and 120 at Level 4
	ER2103	Design and Development for Manufacturing	20	

	ER2104	Mechanics, Kinematics and Materials	20	
	ER2106	Work Based Study	20	
	MP2576	Thermo-fluids	20	
	SC2153	Further Engineering Mathematics And Simulation	20	
Level 4	ER1101	2D & 3D Computer Aided Design	20	**Foundation Certificate Engineering (Advanced Manufacturing)**
	ER1102	Manufacturing Engineering	20	Requires 120 credits at Level 4 or above
	ER1103	Further Mathematical Methods and Analysis	20	
	ER1104	Electronics and Instrumentation	20	
	ER1107	Robotic Systems	20	
	ER1106	Introduction to Programming in Engineering	20	
Levels 3 (FE)	ERC101	Core Study Skills for Engineers	20	Foundation Year requires the completion of 120 credits at Level 3 to progress to Year 1.
	ERC102	Creative Problem Solving	20	
	ERC103	Technical Communication Skills	20	Students who exit after the Foundation year will receive a transcript of their modules and grades.
	ERC104	Mathematical Methods	20	
	ERC105	Electronic Engineering for Advanced Manufacturing	20	Students may be considered for progression to other Engineering programmes at UCLan. An interview will be required.
	ERC106	Mechanical Engineering for Advanced Manufacturing	20	

15. Personal Development Planning

The concept of Personal Development Planning (PDP) will be introduced and monitored through the FdEng Engineering (Advanced Manufacturing) programme at Level 4. The integration of PDP will enable students to:

- develop skills of reflection on their academic, personal and professional development within clear and guided boundaries
- increase self-awareness of their own skills, capabilities and attitudes
- improve individual learning, capabilities and aptitude through taking responsibility for their own personal development and self-directed learning
- identify personal development needs, areas of strength and areas for improvement in order to direct change
- set goals, plan, action and review personal progress
- compile records of learning achievements and experiences including progress reviews, personal reflections and action plans
- plan realistically for career progression and manage individual career progression and lifelong learning

In order to facilitate PDP and ensure that it is fully embedded in to the students' learning experience all students on the programme will be required to attend a personal tutorial session once a week.

Development of the range of study skills necessary to succeed in the assessment process will be addressed in the 'Work Based Study' module and the topics covered here will underpin the academic advancement of students as they progress throughout the programme.

Personal tutor sessions will also incorporate one-to-one reviews where each student will be encouraged to reflect on their own strengths and weaknesses and the progress they are making towards their personal goals.

16. Admissions criteria

For students entering via the optional Foundation Entry route, the following admission criteria will apply: -

Individual interview

- Entrants must be aged over 18 years.
- Given the nature of the programme as an access course, applications from individuals with non-standard qualifications, or relevant work/life experience and who have aspirations for professional careers in the field of engineering, but lack the requisite academic qualifications for direct entry onto the engineering degree course of interest, are welcome.
- Applicants will normally be expected to hold one or more A-Level passes in non-technical subjects plus GCSE grade C/5 or above in Mathematics, English and a technical subject. Students with a BTEC in Engineering will also be considered. Other applicants such as mature students with vocational qualifications will be considered.
- Mature students may not meet the standard entry requirements but they may still be considered for a place on the course. Mature students with no qualifications may offer experience in other forms such as life experience, work experience and continued personal and professional development. All students are interviewed and selected on merit. This course offers the opportunity for mature students who may have been out of education for a while, or without traditional qualifications, to up-skill.

UK and EU Entry: Equivalent international qualifications will be considered towards meeting the general entry requirements. Additionally, EU students, for whom English is not the first language, will be required to evidence an IELTS score or 6.0 or equivalent. Equivalences include:

- TOEFL written examination score of 550 plus a test of written English (at 4)
- TOEFL Computer Equivalent score of 230
- Proficiency in English (Cambridge) at Grade C/5 or above

For students entering directly onto the Foundation Degree, the following admission criteria will apply: -

Applicants will normally be accepted who hold

- 80 new UCAS tariff points at A2 level, comprising one or more A-Level passes in non-technical subjects plus GCSE grade C/5 or above in Mathematics, English and a Science.
- 80 new UCAS tariff points from a technical vocational qualification plus GCSE grade C or above in Maths
- Mature students may not meet the standard entry requirements but they may still be considered for a place on the course. Mature students with no qualifications may offer experience in other forms such as life experience, work experience and continued personal and professional development. All students are interviewed and selected on merit. This course offers the opportunity for mature students who may have been out of education for a while, or without traditional qualifications, to up-skill.
- **UK and EU Entry:** Equivalent international qualifications will be considered towards meeting the general entry requirements. Additionally, EU students, for whom English is not the first language, will be required to evidence an IELTS score or 6.0 or equivalent. Equivalences include:
  - TOEFL written examination score of 550 plus a test of written English (at 4)
  - TOEFL Computer Equivalent score of 230
  - Proficiency in English (Cambridge) at Grade C/5 or above

17. Key sources of information about the programme

- www.hughbaird.ac.uk
- Hugh Baird College
- www.ucas.com

• Student handbook
• www.uclan.ac.uk

18. Curriculum Skills Map

Level	Module Code	Module Title	Core (C), Compulsory (COMP) or Option (O)	Programme Learning Outcomes															
				Knowledge and understanding					Subject-specific Skills				Thinking Skills			Other skills relevant to employability and personal development			
				A1	A2	A3	A4	A5	B1	B2	B3	B4	C1	C2	C3	D1	D2	D3	D4
LEVEL 4	ER1101	2D & 3D Computer Aided Design	COMP				✓	✓		✓		✓	✓			✓		✓	
	ER1102	Manufacturing Engineering	COMP				✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓
	ER1103	Further Mathematical Methods and Analysis	COMP	✓			✓	✓		✓	✓	✓	✓			✓		✓	
	ER1104	Electronics and Instrumentation	COMP	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	
	ER1107	Robotics Systems	COMP	✓		✓	✓	✓		✓	✓	✓	✓			✓	✓	✓	
	ER1106	Introduction to Programming in Engineering	COMP				✓	✓		✓	✓	✓		✓		✓		✓	
				A1	A2	A3	A4	A5	B1	B2	B3	B4	C1	C2	C3	D1	D2	D3	D4
LEVEL 5	ER2102	Computer Aided Design for Manufacturing	COMP	✓	✓		✓	✓		✓		✓	✓	✓		✓	✓	✓	
	ER2103	Design and Development for Manufacturing	COMP				✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
	ER2104	Mechanics, Kinematics and Materials	COMP	✓		✓	✓	✓	✓	✓		✓	✓			✓	✓	✓	
	ER2106	Work Based Study	COMP		✓	✓	✓	✓	✓	✓		✓			✓	✓	✓	✓	✓
	MP2576	Thermo-fluids	COMP	✓	✓	✓		✓			✓								✓
	SC2153	Further Engineering Mathematics And Simulation	COMP	✓		✓		✓			✓		✓						

19. LEARNING OUTCOMES FOR EXIT AWARDS:

Learning outcomes for the award of Foundation Certificate Engineering (Advanced Manufacturing):

A1. Use mathematical principles required for study of engineering disciplines at Higher Education level.
A4. Develop skills in information technology.
A5. Communication of technical information using written, oral and visual techniques.
B2. Make effective use of information technology tools for presentation and analysis.
B3. Demonstrate a logical approach to problem solving and design.
C1. Recognise appropriate mathematical techniques to solution of analytical problems.
D1. Manage and apply safe systems of work in an engineering environment.
D3. Reflect on and employ sustainable and ethical practises relevant to the Advanced Manufacturing Industry.