

Title of Programme: BSc (Hons) Technology (Automotive and Motorsport)

Programme Code: PET

Programme Specification

This programme specification is relevant to students entering:
01 September 2023

Associate Dean of School (Academic Quality Assurance):
Mariana Lilley



A programme specification is a collection of key information about a programme of study (or course). It identifies the aims and learning outcomes of the programme, lists the modules that make up each stage (or year) of the programme, and the teaching, learning and assessment methods used by teaching staff. It also describes the structure of the programme, its progression requirements and any programme-specific regulations. This information is therefore useful to potential students to help them choose the right programme of study, to current students on the programme, and to staff teaching and administering the programme.

Summary of amendments to the programme:

Section	Amendment
D	5ENT2055 introduction to Vehicle Aerodynamics replaces 5ENT2010 Applied Mechatronics from September 2023.
D	5ENT2056 Automotive Electronic Practice replaces 5ENT2018 Automotive Smart Infrastructure from September 2023.
D	6ENT2050 BSc Individual Project (Automotive Technology) replaces 6ENT1107 BSc Individual Project (Automotive Technology) from September 2023.
D	The BSc (Hons) Aerospace programme awards have been phased out.
Title of Programme and Programme Specification	Changed the Programme Title from BSc (Hons) Technology (Automotive, Motorsport and Aerospace) to BSc (Hons) Technology (Automotive and Motorsport)

If you have any queries regarding the changes, please email AQO@herts.ac.uk

Programme Specification

BSc (Hons) Technology (Automotive and Motorsport)

This programme specification (PS) is designed for prospective students, enrolled students, academic staff and potential employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the teaching, learning and assessment methods, learning outcomes and content for each module can be found in Definitive Module Documents (DMDs).

Section 1

Awarding Institution/Body	University of Hertfordshire
Teaching Institution	University of Hertfordshire
University/partner campuses	College Lane
Programme accredited by	Institution of Mechanical Engineers (IMechE)
Final Qualification	BSc Honours
All Final Award titles	BSc (Hons) Automotive Technology
(Qualification and Subject)	BSc (Hons) Motorsport Technology
	BSc (Hons) Automotive Technology (Sandwich)
	BSc (Hons) Motorsport Technology (Sandwich)
	BSc (Hons) Automotive Technology with Year Abroad
	BSc (Hons) Motorsport Technology with Year Abroad
	BSc (Hons) Automotive Technology with Study Abroad
	BSc (Hons) Motorsport Technology with Study Abroad
FHEQ level of award	6

A. Programme Rationale

The School of Physics, Engineering and Computer Science offers BSc awards in Automotive Technology and Motorsport Technology. The programme has been developed to (i) satisfy the QAA Engineering Benchmark requirements (ii) to fulfil the academic requirements of UK-SPEC for IEng status and (iii) meet the professional employment needs of industry.

The technological emphasis of the Automotive Technology degree is on automotive design, chassis and powertrain technology, body engineering including materials and manufacturing methods and vehicle aerodynamics. All of these disciplines are integrated into a group design project at level 6 (Vehicle Design).

The Motorsport Technology degree varies from the automotive award as it emphasises high performance powertrains, racing car body engineering, and motorsport technology applications (including engine mapping, tyre technology, damper analysis, aerodynamics, and competitive events).

Additionally, students will study modules covering operational issues faced by managers, engineers and technologists in modern organisations. Topics will include engineering management, project management and product development, the management of innovation, reliability, organisational processes, team working and leadership, aspects of management theory and quality. Techniques and concepts such as total quality management, lean manufacturing, cost benefit analysis, the product life cycle and six sigma will be introduced.

Students will also be introduced to sustainability and the importance that engineering and technology plays in ensuring that products are designed, developed and operated with minimal impact on the environment. Students will examine issues such as minimising weight in design, technologies for alternative power

sources in vehicles, ways of minimising emissions and reducing noise, as well as aspects of re-cycling and reuse of materials.

B. Educational Aims of the Programme

Diversity and Inclusion

Our programmes are purposefully designed to enable all students to engage meaningfully with the curriculum by being accessible and representative. We will support students to shape their learning experience, removing barriers and enabling them to succeed. The curriculum explicitly includes multiple and representative perspectives, valuing collective identities and individual diversity. Learning, teaching and assessment activities help students to understand how they can enhance outcomes both for themselves and for others. All students belong to a learning community, and during their studies we really want to hear their voices, encourage them to listen to others, and express themselves.

The programme has been devised in accordance with the University's graduate attributes of programmes of study as set out in [UPR TL03](#).

Additionally this programme aims to:

- Provide a high-quality education in automotive and motorsport technology.
- Provide an education for the individual that enhances his/her prospects of employment in business both nationally and internationally.
- Meet the professional employment needs of industry, by providing graduates with the ability to work in the aviation and automotive sectors, product development and commercial environments.
- Provide studies which enable the student to attain a specific expertise in a range of topics appropriate to their named award:
 - Automotive Technology students will particularly study technologies employed in the design of automotive vehicles, operations management, and manufacturing strategies appropriate to the automotive industry.
 - Motorsport Technology students will particularly study emerging technologies and how they can be used to enhance vehicle performance.

Graduate Attributes

Our graduates will be capable and professional, creative and enterprising, and will build their social and global awareness throughout. In addition to their subject expertise and proficiency, as a University of Hertfordshire graduate, they will be:

- Professionally focused
- Globally minded
- Sustainability driven
- Digitally capable and confident
- Inclusive and collaborative
- Evidence based and ethical

C. Intended Learning Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills and other attributes in the following areas. The programme outcomes are referenced to the QAA benchmark statements for Engineering and the Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2014) and relate to the typical student. Additionally, the SEEC Credit Level Descriptors for Further and Higher Education (2021) have been used as a guiding framework for curriculum design.

Knowledge and Understanding	Teaching and learning methods	Assessment strategy
<p>A1. Mathematical methods and fundamental engineering sciences appropriate to technology.</p> <p>A2. The fundamental engineering sciences.</p> <p>A3. The basic principles and economic, social, legal, ethical and sustainability considerations of the business of engineering.</p> <p>A4. Professional engineering and management practice.</p> <p>A5. Principles of IT and communications.</p> <p>Additionally for:</p> <p>Motorsport Technology (M) A6m. Motorsport technology and its application in the design, performance and manufacture of high performance vehicles. A7m. The industrial context of the motorsport sector.</p> <p>Automotive Technology (V) A6v. Automotive technology and its application in the design, performance and manufacture of volume production vehicles. A7v. The industrial context of the automotive sector.</p>	<p>Acquisition of knowledge and understanding is through the following approaches:</p> <p>Acquisition of A1 is through a combination of lectures, small group tutorials, coursework and laboratory work, mainly at levels 4 and 5 of the programme.</p> <p>Acquisition of A2 is through a combination of lectures, projects and coursework, mainly at levels 4 and 5 of the programme.</p> <p>Acquisition of A3, A4 and A5 – A8 is through lectures, projects and coursework throughout the programme and in particular at level 6.</p> <p>Acquisition of A5 is through a combination of lectures, small group tutorials, coursework and computer work, mainly at levels 4 and 5 of the programme.</p> <p>On this programme, staff use a range of teaching and learning strategies in the most appropriate way for each individual module. This will vary depending on the subject nature of a particular module and the level of study. A more didactic approach will tend to be adopted at lower levels, in particular for A1 and A5. An increasingly self-directed and interactive approach will be used at higher levels, particularly for A2 – A8.</p> <p>Throughout, the learner is encouraged to undertake independent study both to supplement and consolidate what is being taught/learnt and to broaden their individual knowledge and understanding of the subject.</p> <p>Feedback is given to all students on all work produced.</p>	<p>Knowledge and understanding are assessed through a combination of unseen examinations (A1, A4 – A5) and in-course assessments (A1-A13), in the form of laboratory reports (A2), essay assignments (A2, A3), phase tests (A1), design exercises (A2) and project reports, portfolios and presentations (A2-A8).</p>
Intellectual skills	Teaching and learning methods	Assessment strategy

<p>B1. Use appropriate mathematical / scientific principles to solve problems.</p> <p>B2. Select commercial software packages for engineering and communication.</p> <p>B3. Evaluate external influences on the design and manufacturing process.</p> <p>B4. Design appropriate systems, components or processes.</p> <p>Additionally for:</p> <p>Motorsport Technology (M) B5m. Model and analyse relevant motorsport technology systems.</p> <p>Automotive Technology (V) B5v. Model and analyse relevant automotive technology systems.</p>	<p>Intellectual skills are developed throughout the programme by the methods and strategies outlined in section A, above, again moving from a more didactic approach to an increasingly self-directed and interactive approach at higher levels, particularly for B3, B4 and B5.</p> <p>Analysis, problem solving and modelling skills are further developed through tutorial work, laboratory work and in-course exercises at levels 5 and 6 of the programme.</p> <p>Design and IT skills are further developed through project work, design exercises and case studies at all levels of the programme.</p> <p>Feedback is given to all students on all work produced.</p> <p>Throughout, the learner is encouraged to develop intellectual skills further by independent study.</p>	<p>Intellectual skills are assessed as follows:</p> <p>Analysis, problem solving and modelling skills (B1, B2, B5) are assessed through unseen examination papers, laboratory reports and coursework related to in-course exercises.</p> <p>Design and IT skills (B3, B4) are assessed through coursework related to in-course exercises, presentations, portfolios and project reports.</p>
Practical skills	Teaching and learning methods	Assessment strategy
<p>C1. Apply appropriate analytical and modelling techniques.</p> <p>C2. Perform experimental and manufacturing work and draw conclusions.</p> <p>C3. Use computer-based engineering tools.</p> <p>C4. Prepare technical documentation.</p> <p>C5. Plan and manage a project, taking into account economic, social, legal, ethical and sustainability constraints.</p> <p>Additionally for:</p> <p>Motorsport Technology (M) C6ms. Evaluate the design of high-performance vehicles, components or processes.</p> <p>Automotive Technology (V)</p>	<p>Practical skills are developed throughout the programme by the methods and strategies outlined in sections A and B, above, again moving from a more didactic approach to an increasingly self-directed and interactive approach at higher levels, particularly for C4, C5, C6, C7 and C8.</p> <p>C1 is developed through computing work, coursework assignments and tutorial work. C2 is developed through computing, workshop and laboratory work. C3 is developed through computing work, design exercises, coursework assignments and tutorial work. C4 is developed through project work and design exercises. C5 is developed through case study and project work. C6 is developed through project work.</p>	<p>Practical skills are assessed through laboratory reports, coursework assignments, design exercise submissions, case study reports, presentations and project reports.</p>

C6v. Evaluate the design of vehicles, components or processes.	Feedback is given to all students on all work produced.	
Transferable skills	Teaching and learning methods	Assessment strategy
D1. Communicate effectively, both orally and in writing. D2. Use commonly available IT tools. D3. Manage time and resources effectively. D4. Work effectively within a team. D5. Manipulate, sort and present data. D6. Solve problems in a logical manner. D7. Learn effectively and independently, in all aspects of life.	Transferable skills are developed throughout the programme by the methods and strategies outlined in sections A, B and C, above. D1 is developed through feedback on coursework reports, oral presentations and project reports. D2 is developed through their use in preparing project reports, laboratory reports, case studies, design work, etc. D3 is developed through project work planning and throughout the programme. D4 is developed through group project and assignment work. D5 and D6 are developed through lectures and tutorial work throughout the programme. D7 is developed and promoted throughout the programme. Throughout, the learner is encouraged to develop transferable skills by maintaining a record of evidence and completing a personal development plan.	Transferable skills are assessed through the following approaches. D1, D2, D5 and D7 are assessed through coursework reports, oral presentations and project reports. D3 is assessed by review of project management work. D4 is assessed by review of group project work D6 is assessed through coursework, project work and examination.

D. Programme Structures, Features, Levels, Modules, and Credits

The programme is offered in full-time (3 years), part-time (4 years at level 5 entry and 6 years at level 4 entry) and sandwich (4 years) modes and leads to the award of a BSc Degree with Honours in one of the named courses as listed in Section 1.

Entry is normally at level 4 (with A-Level, or equivalent qualifications) but is possible at level 5 with suitable qualifications (e.g. an Edexcel HND in Engineering). Direct entry into level 6 is also possible, for example following successful completion of two years of a similar BSc degree programme at another HE institution. Intake is normally in Semester A.

Professional and Statutory Regulatory Bodies

The programme is accredited by the Institution of Mechanical Engineers (IMechE) for the 2023 intake.

Work-Based Learning, including Sandwich Programmes

A sandwich award requires the successful completion of at least 30 weeks full-time equivalent placement activity from a maximum of two separate approved placements, neither of which will be normally less than 12 weeks in duration, as defined in [UPR AS11](#).

The placement activity will normally be completed within the United Kingdom but with approval may be completed within other countries. Progress of the student's training is monitored by visits from University academic staff. Students will be required to document this period of work in accordance with the guidelines produced by the School. Students on industrial placement will be registered on the Placement Year Module (6AAD0015).

Students who have not achieved the minimum progression requirements at the end of level 5 may be prevented from undertaking a sandwich placement. The policy relating to progression onto the placement year from level 5 is given in the School Guidelines on Industrial Placements. Additionally, students on industrial placement but who have level 4 or 5 modules to repeat, will not normally be allowed to re-enrol on these modules until they return from industrial placement. This is to avoid a conflict between UH attendance requirements and the student's commitment to their employer.

Study Abroad

Students may also opt to take additional studies through the Year Abroad or Semester Abroad options at a partner institution in place of the sandwich placement year, i.e. between Levels 5 and 6. To be eligible for these options students will be expected to have passed 120 credits at level 4 and 120 credits at level 5 with an average of at least 60%. In order to maintain registration with UH, students studying abroad for a full year will be registered on 6ENT0001 whilst students studying abroad for a single semester will be enrolled on 6ENT1051. In recognition of the extra study, provided a full transcript of their achievement in the host academic institution is submitted to the Board of Examiners, this will lead to an award of a BSc Degree with Honours in one of the named awards as listed in Section 1 "with Year Abroad" or "with Study Abroad" on the award.

Further Features

In order to recognise the significant programme related extra-curricular commitment and experience which can be gained by students who participate in Formula Student, there is a zero-credit rated elective module which students may take. These are:

- Formula Student (6ENT1043)

Programme Structure

The programme structure and progression information below (Table 1a and 1b) is provided for the Honours award. Any interim awards are identified in Table 1b. The Programme Learning Outcomes detailed above are developed and assessed through the constituent modules. Table 2 identifies where each learning outcome is assessed.

BSc (Hons) Automotive Technology

Mode of study

BSc Full Time: 3 years; Part-time: 6 years

Entry point Semester A

Level 4

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Motorsport and Automotive Technology	4ENT1128	15	60	0	40	0	A
Introduction to Engineering Projects	4ENT2000	15	0	0	100	0	A
Professionalism and Project Management	4ENT2002	15	0	0	100	0	A
Fundamentals of Static Systems	4ENT2016	15	50	0	50	0	A
Introduction to Microcontrollers and Design	4ENT2001	15	0	0	100	0	B
Applications of Engineering Materials	4ENT2017	15	0	0	100	0	B
Introduction to Manufacturing Technology	4ENT2018	15	0	0	100	0	B
Fundamentals of Dynamics Systems	4ENT2020	15	50	0	50	0	B

Progression to level 5 requires:

A minimum of 90 credits to remain on Honours award. Progression to non-honours level 5 with 75 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 4 in the first instance.

Level 5

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Automotive Electrical Systems	5ENT1004	15	0	60	40	0	A
Computer Aided Engineering	5ENT2009	15	0	0	100	0	A
Applied Thermodynamics	5ENT2011	15	50	0	50	0	A
Introduction to Vehicle Aerodynamics	5ENT2055	15	0	0	60	40	A
Production & Distribution Systems Management	5ENT2012	15	0	60	0	40	B
Computational Fluid Dynamics	5ENT2013	15	0	0	100	0	B
Automotive Design	5ENT2015	15	0	0	100	0	B
Automotive Electronics Practice	5ENT2056	15	30	0	70	0	B

Progression to level 6 requires a minimum of 210 credits.

A minimum of 210 credit points is required to progress to Honours award. Progression to non-honours level 6 with 180 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 5 in the first instance.

Level 6

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Instrumentation and Control Systems	6ENT1009	15	40	0	60	0	A
Vehicle Design	6ENT1067	15	0	0	100	0	A
Automotive Powertrain	6ENT2010	15	0	0	100	0	A
Autonomous Automotive Transportation	6ENT2001	15	0	60	40	0	B
Automotive Body Engineering	6ENT1112	15	0	0	100	0	B
Automotive Chassis Technology	6ENT2012	15	0	0	60	40	B
BSc Individual Project (Automotive Technology)	6ENT2050	30	0	0	80	20	AB

The award of an Honours degree requires 360 credit points including 240 at level 6/5 of which 120 must be at level 6, including the individual major project.

BSc (Hons) Automotive Technology (Sandwich)

Mode of study

BSc Full Time: 4 years; Part-time: 6 years

Entry point Semester A

Level 4

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Motorsport and Automotive Technology	4ENT1128	15	60	0	40	0	A
Introduction to Engineering Projects	4ENT2000	15	0	0	100	0	A
Professionalism and Project Management	4ENT2002	15	0	0	100	0	A
Fundamentals of Static Systems	4ENT2016	15	50	0	50	0	A
Introduction to Microcontrollers and Design	4ENT2001	15	0	0	100	0	B
Applications of Engineering Materials	4ENT2017	15	0	0	100	0	B
Introduction to Manufacturing Technology	4ENT2018	15	0	0	100	0	B
Fundamentals of Dynamics Systems	4ENT2020	15	50	0	50	0	B

Progression to level 5 requires a minimum of 90 credits.

A minimum of 90 credits to remain on Honours award. Progression to non-honours level 5 with 75 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 4 in the first instance.

Level 5

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Automotive Electrical Systems	5ENT1004	15	0	60	40	0	A
Computer Aided Engineering	5ENT2009	15	0	0	100	0	A
Applied Thermodynamics	5ENT2011	15	50	0	50	0	A
Introduction to Vehicle Aerodynamics	5ENT2055	15	0	0	60	40	A
Production & Distribution Systems Management	5ENT2012	15	0	60	0	40	B
Computational Fluid Dynamics	5ENT2013	15	0	0	100	0	B
Automotive Design	5ENT2015	15	0	0	100	0	B
Automotive Electronics Practice	5ENT2056	15	30	0	70	0	B

Progression to level 6 requires a minimum of 210 credits.

A minimum of 210 credit points is required to progress to Honours award. Progression to non-honours level 6 with 180 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 5 in the first instance.

Level 6

Compulsory Module Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Industrial Placement	6AAD0015	0	0	0	P/F	0	AB

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Instrumentation and Control Systems	6ENT1009	15	40	0	60	0	A
Vehicle Design	6ENT1067	15	0	0	100	0	A
Automotive Powertrain	6ENT2010	15	0	0	100	0	A
Autonomous Automotive Transportation	6ENT2001	15	0	60	40	0	B
Automotive Body Engineering	6ENT1112	15	0	0	100	0	B
Automotive Chassis Technology	6ENT2012	15	0	0	60	40	B
BSc Individual Project (Automotive Technology)	6ENT2050	30	0	0	80	20	AB

The award of an Honours degree requires 360 credit points including 240 at level 6/5 of which 120 must be at level 6, including the individual major project.

BSc (Hons) Automotive Technology with Year Abroad

Mode of study

BSc Full Time: 4 years; Part-time: 6 years

Entry point Semester A

Level 4

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Motorsport and Automotive Technology	4ENT1128	15	60	0	40	0	A
Introduction to Engineering Projects	4ENT2000	15	0	0	100	0	A
Professionalism and Project Management	4ENT2002	15	0	0	100	0	A
Fundamentals of Static Systems	4ENT2016	15	50	0	50	0	A
Introduction to Microcontrollers and Design	4ENT2001	15	0	0	100	0	B
Applications of Engineering Materials	4ENT2017	15	0	0	100	0	B
Introduction to Manufacturing Technology	4ENT2018	15	0	0	100	0	B
Fundamentals of Dynamics Systems	4ENT2020	15	50	0	50	0	B

Progression to level 5 requires a minimum of 90 credits.

A minimum of 90 credits to remain on Honours award. Progression to non-honours level 5 with 75 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 4 in the first instance.

Level 5

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Automotive Electrical Systems	5ENT1004	15	0	60	40	0	A
Computer Aided Engineering	5ENT2009	15	0	0	100	0	A
Applied Thermodynamics	5ENT2011	15	50	0	50	0	A
Introduction to Vehicle Aerodynamics	5ENT2055	15	0	0	60	40	A
Production & Distribution Systems Management	5ENT2012	15	0	60	0	40	B
Computational Fluid Dynamics	5ENT2013	15	0	0	100	0	B
Automotive Design	5ENT2015	15	0	0	100	0	B
Automotive Electronics Practice	5ENT2056	15	30	0	70	0	B

Progression to level 6 requires a minimum of 210 credits.

A minimum of 210 credit points is required to progress to Honours award. Progression to non-honours level 6 with 180 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 5 in the first instance.

Level 6

Compulsory Module Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Year Abroad	6ENT0001	0	0	0	0	0	AB

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Instrumentation and Control Systems	6ENT1009	15	40	0	60	0	A
Vehicle Design	6ENT1067	15	0	0	100	0	A
Automotive Powertrain	6ENT2010	15	0	0	100	0	A
Autonomous Automotive Transportation	6ENT2001	15	0	60	40	0	B
Automotive Body Engineering	6ENT1112	15	0	0	100	0	B
Automotive Chassis Technology	6ENT2012	15	0	0	60	40	B
BSc Individual Project (Automotive Technology)	6ENT2050	30	0	0	80	20	AB

The award of an Honours degree requires 360 credit points including 240 at level 6/5 of which 120 must be at level 6, including the individual major project.

BSc (Hons) Automotive Technology with Study Abroad

Mode of study

BSc Full Time: 4 years; Part-time: 6 years

Entry point Semester A

Level 4

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Motorsport and Automotive Technology	4ENT1128	15	60	0	40	0	A
Introduction to Engineering Projects	4ENT2000	15	0	0	100	0	A
Professionalism and Project Management	4ENT2002	15	0	0	100	0	A
Fundamentals of Static Systems	4ENT2016	15	50	0	50	0	A
Introduction to Microcontrollers and Design	4ENT2001	15	0	0	100	0	B
Applications of Engineering Materials	4ENT2017	15	0	0	100	0	B
Introduction to Manufacturing Technology	4ENT2018	15	0	0	100	0	B
Fundamentals of Dynamics Systems	4ENT2020	15	50	0	50	0	B

Progression to level 5 requires a minimum of 90 credits.

A minimum of 90 credits to remain on Honours award. Progression to non-honours level 5 with 75 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 4 in the first instance.

Level 5

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Automotive Electrical Systems	5ENT1004	15	0	60	40	0	A
Computer Aided Engineering	5ENT2009	15	0	0	100	0	A
Applied Thermodynamics	5ENT2011	15	50	0	50	0	A
Introduction to Vehicle Aerodynamics	5ENT2055	15	0	0	60	40	A
Production & Distribution Systems Management	5ENT2012	15	0	60	0	40	B
Computational Fluid Dynamics	5ENT2013	15	0	0	100	0	B
Automotive Design	5ENT2015	15	0	0	100	0	B
Automotive Electronics Practice	5ENT2056	15	30	0	70	0	B

Progression to level 6 requires a minimum of 210 credits.

A minimum of 210 credit points is required to progress to Honours award. Progression to non-honours level 6 with 180 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 5 in the first instance.

Level 6

Compulsory Module Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Semester Abroad	6ENT1051	0	0	0	0	0	A or B

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Instrumentation and Control Systems	6ENT1009	15	40	0	60	0	A
Vehicle Design	6ENT1067	15	0	0	100	0	A
Automotive Powertrain	6ENT2010	15	0	0	100	0	A
Autonomous Automotive Transportation	6ENT2001	15	0	60	40	0	B
Automotive Body Engineering	6ENT1112	15	0	0	100	0	B
Automotive Chassis Technology	6ENT2012	15	0	0	60	40	B
BSc Individual Project (Automotive Technology)	6ENT2050	30	0	0	80	20	AB

The award of an Honours degree requires 360 credit points including 240 at level 6/5 of which 120 must be at level 6, including the individual major project.

BSc (Hons) Motorsport Technology

Mode of study

BSc Full Time: 3 years; Part-time: 6 years

Entry point Semester A

Level 4

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Motorsport and Automotive Technology	4ENT1128	15	60	0	40	0	A
Introduction to Engineering Projects	4ENT2000	15	0	0	100	0	A
Professionalism and Project Management	4ENT2002	15	0	0	100	0	A
Fundamentals of Static Systems	4ENT2016	15	50	0	50	0	A
Introduction to Microcontrollers and Design	4ENT2001	15	0	0	100	0	B
Applications of Engineering Materials	4ENT2017	15	0	0	100	0	B
Introduction to Manufacturing Technology	4ENT2018	15	0	0	100	0	B
Fundamentals of Dynamics Systems	4ENT2020	15	50	0	50	0	B

Progression to level 5 requires a minimum of 90 credits.

A minimum of 90 credits to remain on Honours award. Progression to non-honours level 5 with 75 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 4 in the first instance.

Level 5

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Automotive Electrical Systems	5ENT1004	15	0	60	40	0	A
Computer Aided Engineering	5ENT2009	15	0	0	100	0	A
Applied Thermodynamics	5ENT2011	15	50	0	50	0	A
Introduction to Vehicle Aerodynamics	5ENT2055	15	0	0	60	40	A
Production & Distribution Systems Management	5ENT2012	15	0	60	0	40	B
Computational Fluid Dynamics	5ENT2013	15	0	0	100	0	B
Motorsport Design	5ENT2017	15	0	0	100	0	B
Automotive Electronics Practice	5ENT2056	15	30	0	70	0	B

Progression to level 6 requires a minimum of 210 credits.

A minimum of 210 credit points is required to progress to Honours award. Progression to non-honours level 6 with 180 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 5 in the first instance.

Level 6

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Instrumentation and Control Systems	6ENT1009	15	40	0	60	0	A
Vehicle Design	6ENT1067	15	0	0	100	0	A
Motorsport Technology	6ENT1057	15	30	0	70	0	A
High Performance Powertrain	6ENT2011	15	0	60	40	0	A
Racing Car Body Engineering	6ENT1113	15	0	0	100	0	B
Automotive Chassis Technology	6ENT2012	15	0	0	60	40	B
BSc Individual Project (Automotive Technology)	6ENT2050	30	0	0	80	20	AB

The award of an Honours degree requires 360 credit points including 240 at level 6/5 of which 120 must be at level 6, including the individual major project.

BSc (Hons) Motorsport Technology (Sandwich)

Mode of study

BSc Full Time: 4 years; Part-time: 6 years

Entry point Semester A

Level 4

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Motorsport and Automotive Technology	4ENT1128	15	60	0	40	0	A
Introduction to Engineering Projects	4ENT2000	15	0	0	100	0	A
Professionalism and Project Management	4ENT2002	15	0	0	100	0	A
Fundamentals of Static Systems	4ENT2016	15	50	0	50	0	A
Introduction to Microcontrollers and Design	4ENT2001	15	0	0	100	0	B
Applications of Engineering Materials	4ENT2017	15	0	0	100	0	B
Introduction to Manufacturing Technology	4ENT2018	15	0	0	100	0	B
Fundamentals of Dynamics Systems	4ENT2020	15	50	0	50	0	B

Progression to level 5 requires:

A minimum of 90 credits to remain on Honours award. Progression to non-honours level 5 with 75 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 4 in the first instance.

Level 5

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Automotive Electrical Systems	5ENT1004	15	0	60	40	0	A
Computer Aided Engineering	5ENT2009	15	0	0	100	0	A
Applied Thermodynamics	5ENT2011	15	50	0	50	0	A
Introduction to Vehicle Aerodynamics	5ENT2055	15	0	0	60	40	A
Production & Distribution Systems Management	5ENT2012	15	0	60	0	40	B
Computational Fluid Dynamics	5ENT2013	15	0	0	100	0	B
Motorsport Design	5ENT2017	15	0	0	100	0	B
Automotive Electronics Practice	5ENT2056	15	30	0	70	0	B

Progression to level 6 requires a minimum of 210 credits.

A minimum of 210 credit points is required to progress to Honours award. Progression to non-honours level 6 with 180 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 5 in the first instance.

Level 6

Compulsory Module Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Industrial Placement	6AAD0015	0	0	0	P/F	0	AB

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Instrumentation and Control Systems	6ENT1009	15	40	0	60	0	A
Vehicle Design	6ENT1067	15	0	0	100	0	A
Motorsport Technology	6ENT1057	15	30	0	70	0	A
High Performance Powertrain	6ENT2011	15	0	60	40	0	A
Racing Car Body Engineering	6ENT1113	15	0	0	100	0	B
Automotive Chassis Technology	6ENT2012	15	0	0	60	40	B
BSc Individual Project (Automotive Technology)	6ENT2050	30	0	0	80	20	AB

The award of an Honours degree requires 360 credit points including 240 at level 6/5 of which 120 must be at level 6, including the individual major project.

BSc (Hons) Motorsport Technology with Year Abroad

Mode of study

BSc Full Time: 4 years; Part-time: 6 years

Entry point Semester A

Level 4

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Motorsport and Automotive Technology	4ENT1128	15	60	0	40	0	A
Introduction to Engineering Projects	4ENT2000	15	0	0	100	0	A
Professionalism and Project Management	4ENT2002	15	0	0	100	0	A
Fundamentals of Static Systems	4ENT2016	15	50	0	50	0	A
Introduction to Microcontrollers and Design	4ENT2001	15	0	0	100	0	B
Applications of Engineering Materials	4ENT2017	15	0	0	100	0	B
Introduction to Manufacturing Technology	4ENT2018	15	0	0	100	0	B
Fundamentals of Dynamics Systems	4ENT2020	15	50	0	50	0	B

Progression to level 5 requires:

A minimum of 90 credits to remain on Honours award. Progression to non-honours level 5 with 75 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 4 in the first instance.

Level 5

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Automotive Electrical Systems	5ENT1004	15	0	60	40	0	A
Computer Aided Engineering	5ENT2009	15	0	0	100	0	A
Applied Thermodynamics	5ENT2011	15	50	0	50	0	A
Introduction to Vehicle Aerodynamics	5ENT2055	15	0	0	60	40	A
Production & Distribution Systems Management	5ENT2012	15	0	60	0	40	B
Computational Fluid Dynamics	5ENT2013	15	0	0	100	0	B
Motorsport Design	5ENT2017	15	0	0	100	0	B
Automotive Electronics Practice	5ENT2056	15	30	0	70	0	B

Progression to level 6 requires a minimum of 210 credits.

A minimum of 210 credit points is required to progress to Honours award. Progression to non-honours level 6 with 180 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 5 in the first instance.

Level 6

Compulsory Module Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Year Abroad	6ENT0001	0	0	0	0	0	AB

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Instrumentation and Control Systems	6ENT1009	15	40	0	60	0	A
Vehicle Design	6ENT1067	15	0	0	100	0	A
Motorsport Technology	6ENT1057	15	30	0	70	0	A
High Performance Powertrain	6ENT2011	15	0	60	40	0	A
Racing Car Body Engineering	6ENT1113	15	0	0	100	0	B
Automotive Chassis Technology	6ENT2012	15	0	0	60	40	B
BSc Individual Project (Automotive Technology)	6ENT2050	30	0	0	80	20	AB

The award of an Honours degree requires 360 credit points including 240 at level 6/5 of which 120 must be at level 6, including the individual major project.

BSc (Hons) Motorsport Technology with Study Abroad

Mode of study

BSc Full Time: 4 years; Part-time: 6 years

Entry point Semester A

Level 4

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Motorsport and Automotive Technology	4ENT1128	15	60	0	40	0	A
Introduction to Engineering Projects	4ENT2000	15	0	0	100	0	A
Professionalism and Project Management	4ENT2002	15	0	0	100	0	A
Fundamentals of Static Systems	4ENT2016	15	50	0	50	0	A
Introduction to Microcontrollers and Design	4ENT2001	15	0	0	100	0	B
Applications of Engineering Materials	4ENT2017	15	0	0	100	0	B
Introduction to Manufacturing Technology	4ENT2018	15	0	0	100	0	B
Fundamentals of Dynamics Systems	4ENT2020	15	50	0	50	0	B

Progression to level 5 requires:

A minimum of 90 credits to remain on Honours award. Progression to non-honours level 5 with 75 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 4 in the first instance.

Level 5

	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Compulsory Modules							
Module Title							
Automotive Electrical Systems	5ENT1004	15	0	60	40	0	A
Computer Aided Engineering	5ENT2009	15	0	0	100	0	A
Applied Thermodynamics	5ENT2011	15	50	0	50	0	A
Introduction to Vehicle Aerodynamics	5ENT2055	15	0	0	60	40	A
Production & Distribution Systems Management	5ENT2012	15	0	60	0	40	B
Computational Fluid Dynamics	5ENT2013	15	0	0	100	0	B
Motorsport Design	5ENT2017	15	0	0	100	0	B
Automotive Electronics Practice	5ENT2056	15	30	0	70	0	B

Progression to level 6 requires a minimum of 210 credits.

A minimum of 210 credit points is required to progress to Honours award. Progression to non-honours level 6 with 180 credits may be permissible. The maximum study rate in such an instance would typically be 120 credits but students would be expected to remedy any failed modules from level 5 in the first instance.

Level 6

Compulsory Module Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Semester Abroad	6ENT1051	0	0	0	0	0	A or B

Compulsory Modules Module Title	Module Code	Credit Points	% Test	% Examination	% Coursework	% Practical	Semesters
Instrumentation and Control Systems	6ENT1009	15	40	0	60	0	A
Vehicle Design	6ENT1067	15	0	0	100	0	A
Motorsport Technology	6ENT1057	15	30	0	70	0	A
High Performance Powertrain	6ENT2011	15	0	60	40	0	A
Racing Car Body Engineering	6ENT1113	15	0	0	100	0	B
Automotive Chassis Technology	6ENT2012	15	0	0	60	40	B
BSc Individual Project (Automotive Technology)	6ENT2050	30	0	0	80	20	AB

The award of an Honours degree requires 360 credit points including 240 at level 6/5 of which 120 must be at level 6, including the individual major project.

Honours classification

The University has approved structure and assessment regulations common to all programmes. Full details are provided in UPR AS14, Section D.

Table 1b Final and interim awards available

The programme provides the following final and interim awards:

Final Award	Award Title	Minimum requirements	Available at end of Level	Programme Learning Outcomes developed (see above)
BSc (Hons)	Automotive Technology	360 credit points including 240 at level 6/5 of which 120 must be at level 6, including a pass for BSc Individual Project (Automotive Technology) 6ENT2050.	6	A1-A7, B1-B5, C1-C6, D1-D7 (see Table 2a).
BSc (Hons) (Sandwich)	Automotive Technology	360 credit points including 240 at level 6/5 of which 120 must be at level 6, including passes for BSc Individual Project (Automotive Technology) 6ENT2050 and Industrial Placement 6AAD0015.	6	A1-A7, B1-B5, C1-C6, D1-D7 (see Table 2a).
BSc (Hons) with Study Abroad	Automotive Technology	360 credit points including 240 at level 6/5 of which 120 must be at level 6, including passes for including passes for BSc Individual Project (Automotive Technology) 6ENT2050 and Semester Abroad 6ENT1051.	6	A1-A7, B1-B5, C1-C6, D1-D7 (see Table 2a).
BSc (Hons) with Year Abroad	Automotive Technology	360 credit points including 240 at level 6/5 of which 120 must be at level 6, including passes for including a pass	6	A1-A7, B1-B5, C1-C6, D1-D7 (see Table 2a).

		for BSc Individual Project (Automotive Technology) 6ENT2050 and Year Abroad 6ENT0001.		
BSc (Hons)	Motorsport Technology	360 credit points including 240 at level 6/5 of which 120 must be at level 6, including a pass for BSc Individual Project (Automotive Technology) 6ENT2050.	6	A1-A7, B1-B5, C1-C6, D1-D7 (see Table 2b).
BSc (Hons) (Sandwich)	Motorsport Technology	360 credit points including 240 at level 6/5 of which 120 must be at level 6, including passes for BSc Individual Project (Automotive Technology) 6ENT2050 and Industrial Placement 6AAD0015.	6	A1-A7, B1-B5, C1-C6, D1-D7 (see Table 2b).
BSc (Hons) with Study Abroad	Motorsport Technology	360 credit points including 240 at level 6/5 of which 120 must be at level 6, including passes for including passes for BSc Individual Project (Automotive Technology) 6ENT2050 and Semester Abroad 6ENT1051.	6	A1-A7, B1-B5, C1-C6, D1-D7 (see Table 2b).
BSc (Hons) with Year Abroad.	Motorsport Technology	360 credit points including 240 at level 6/5 of which 120 must be at level 6, including passes for including a pass for BSc Individual Project (Automotive	6	A1-A7, B1-B5, C1-C6, D1-D7 (see Table 2b).

		Technology) 6ENT2050 and Year Abroad 6ENT0001.		
Interim Award	Award Title	Minimum requirements	Available at end of Level	Programme Learning Outcomes developed (see above)
University Certificate		45 credit points at level 4	4	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm
Certificate of Higher Education		120 credit points at level 4	4, 5	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm
Diploma of Higher Education		240 credit points including at least 120 at level 5.	5, 6	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm
BSc	Automotive Technology	300 credit points including 180 at level 6/5 of which 60 must be at level 6. For students entering directly at level 6 only, 75 UH specified credits must be at level 6 excluding the final year project.	6	A subset of the programme learning outcomes (see Table 2a) depending on the student's individual modules passed.
BSc (Sandwich)	Automotive Technology	300 credit points including 180 at level 6/5 of which 60 must be at level 6, including a pass for Industrial Placement 6AAD0015.	6	A subset of the programme learning outcomes (see Table 2a) depending on the student's individual modules passed.
BSc with Study Abroad	Automotive Technology	300 credit points including 180 at level 6/5 of which 60 must be at level 6, including a pass for Semester Abroad 6ENT1051.	6	A subset of the programme learning outcomes (see Table 2a) depending on the student's individual modules passed.
BSc with Year Abroad	Automotive Technology	300 credit points including 180 at level 6/5 of which 60 must be at level 6, including a pass for Year Abroad 6ENT0001.	6	A subset of the programme learning outcomes (see Table 2a) depending on the student's individual modules passed.

BSc	Motorsport Technology	300 credit points including 180 at level 6/5 of which 60 must be at level 6. For students entering directly at level 6 only, 75 UH specified credits must be at level 6 excluding the final year project.	6	A subset of the programme learning outcomes (see Table 2a) depending on the student's individual modules passed.
BSc (Sandwich)	Motorsport Technology	300 credit points including 180 at level 6/5 of which 60 must be at level 6, including a pass for Industrial Placement 6AAD0015.	6	A subset of the programme learning outcomes (see Table 2a) depending on the student's individual modules passed.
BSc with Study Abroad	Motorsport Technology	300 credit points including 180 at level 6/5 of which 60 must be at level 6, including a pass for Semester Abroad 6ENT1051.	6	A subset of the programme learning outcomes (see Table 2a) depending on the student's individual modules passed.
BSc with Year Abroad	Motorsport Technology	300 credit points including 180 at level 6/5 of which 60 must be at level 6, including a pass for Year Abroad 6ENT0001.	6	A subset of the programme learning outcomes (see Table 2a) depending on the student's individual modules passed.

Programme-specific assessment regulations

The programme complies with the University's academic regulations (in particular, [UPR AS11](#), [UPR AS12](#) and [UPR AS14](#)) with the exception of those listed below, which have been approved by the University:

- Professional Statutory Regulatory Bodies thresholds will apply for accredited awards as per the Engineering Council Compensation and Condonement notice November 2018. To comply with professional body regulations students must achieve, after all available attempts under the University regulations, **a minimum of 30% (in any allowable attempt) at levels 4, 5 and 6, before the board of examiners will be able to consider compensation for an accredited honours degree.**
- A compensated pass cannot be awarded for BSc Individual Project (Automotive Technology) 6ENT2050, which must be included in the calculation of degree classification.** Students who do not succeed in the Individual Major Project may be eligible to repeat and will be allocated an entirely different project.
- For non-honours awards, the standard University regulations on progression and compensation shall apply, and the Programme Board of Examiners shall have discretion to transfer a student onto a non-honours award where it is to the advantage of the student to do so (for example, where the criteria for progression on an accredited award have not been met).

Course Code	Course Instance	Award Title	Modules (child instance codes & title)	Must be included in classification algorithm?
PET	AU	BSc (Hons) Automotive Technology	6ENT2050 BSc Individual Project (Automotive Technology)	Yes
PET	M	BSc (Hons) Motorsport Technology	6ENT2050 BSc Individual Project (Automotive Technology)	Yes

E. Management of Programme & Support for student learning.

Management

The programme is managed and administered through:

- Dean of School
- Associate Dean (Academic Quality Assurance)
- Associate Dean (Learning, Teaching and Student Experience)
- Programme Leader who has overall responsibility for the effective operationalization of the programme, and ensuring that academic standards are maintained, and an effective student learning experience is provided
- Student representatives on programme committees
- Module Leaders
- A designated administrative team to deal with day-to-day administration associated with the modules within the programme
- An Admissions Tutor with specific responsibility for open days and selection
- School Academic Support Hub – SASH

Support

Students are supported by:

- An induction week at the beginning of each new academic session
- Overseas Orientation
- You will have a Personal Tutor who will be an important point of contact, able to help you gain a good understanding of the School and programme you are studying.
- A substantial Student Centre that provides advice on issues such as finance, University regulations, legal matters, accommodation, international student support, etc
- Office of Dean of Students, Student Wellbeing (incorporating Counselling, Mental Health and Disability Support), Chaplaincy, and Day Nursery
- A versatile on-line inter-active intranet and learning environment
- Guided student-centred learning on Canvas module sites
- Access to extensive digital and print collections of information resources
- Attractive modern study environments in 2 Learning Resources Centres
- Student Success Hubs, which include a Mathematics Drop-in Centre
- Medical Centre
- University Disability Advisors
- Careers and Employment
- Hertfordshire Student's Union
- Dedicated programme site

F. Other sources of information

In addition to this Programme Specification, the University publishes guidance to registered students on the programme and its constituent modules:

- A dedicated programme site
- A Definitive Module Document (DMD) for each constituent module;

The [Ask Herts](#) website provides information on a wide range of resources and services available at the University of Hertfordshire including academic support, accommodation, fees, funding, visas, wellbeing services and student societies.

As a condition of registration, all students of the University of Hertfordshire are required to comply with the University's rules, regulations and procedures. These are published in a series of documents called

'University Policies and Regulations' (UPRs). The University requires that all students consult these documents which are available on-line, on the UPR web site, at: <http://www.herts.ac.uk/secreg/upr/>. In particular, [UPR SA07](#) 'Regulations and Advice for Students' Particular Attention - Index' provides information on the UPRs that contain the academic regulations of particular relevance for undergraduate and taught postgraduate students.

In accordance with section 4(5) of the Higher Education and Research Act 2017 (HERA), the UK Office for Students (OfS) has registered the University of Hertfordshire in the register of English higher education providers. The Register can be viewed at: <https://www.officeforstudents.org.uk/advice-and-guidance/the-register/the-ofs-register/>.

G. Entry requirements

The normal entry requirements for the programme are:

For current entry tariff point requirements, please refer to the relevant page for the Course on the University website or on the online prospectus.

The programme is subject to the University's Principles, Policies and Regulations for the Admission of Students to Undergraduate and Taught Postgraduate Programmes (in [UPR SA03](#)), along with associated procedures. These will take account of University policy and guidelines for assessing accredited prior certificated learning (APCL) and accredited prior experiential learning (APEL).

If you would like this information in an alternative format please contact:
Hutton Hub Student Administration Service hhaq@herts.ac.uk

If you wish to receive a copy of the latest External Examiner's Report for the programme, please email a request to aqo@herts.ac.uk

BSc (Hons) Automotive Technology

Table 2a: Development of Intended Programme Learning Outcomes in the Constituent Modules

This map identifies where the programme learning outcomes are delivered and assessed in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the programme aims (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own learning, personal and professional development as the programme progresses.

			Programme Learning Outcomes (as identified in section 1 and the following page)																								
			Knowledge & Understanding							Intellectual Skills					Practical Skills						Transferable Skills						
Module Title		Module Code	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	D7
Level 4	Motorsport and Automotive Technology	4ENT1128		X				X	X				X	X		X					X						X
	Introduction to Engineering Projects	4ENT2000						X					X						X		X			X			
	Professionalism and Project Management	4ENT2002			X	X						X										X				X	
	Fundamentals of Static Systems	4ENT2016	X	X						X						X									X	X	
	Introduction to Microcontrollers and Design	4ENT2001									X	X		X	X		X					X					
	Applications of Engineering Materials	4ENT2017		X						X		X				X									X	X	
	Introduction to Manufacturing Technology	4ENT2018															X	X									
	Fundamentals of Dynamics Systems	4ENT2020	X	X							X						X								X	X	
Level 5	Automotive Electrical Systems	5ENT1004		X				X	X		X	X	X	X						X	X						
	Computer Aided Engineering	5ENT2009						X					X		X		X				X						
	Applied Thermodynamics	5ENT2011		X						X										X							
	Introduction to Vehicle Aerodynamics	5ENT2055								X			X														
	Production & Distribution Systems Management	5ENT2012			X								X							X							
	Computational Fluid Dynamics	5ENT2013					X	X					X		X										X		
	Automotive Design	5ENT2015	X	X	X								X							X		X					
	Automotive Electronics Practice	5ENT2056								X		X															
	Placement Year	6AAD0015			X	X												X	X		X	X					
	Year Abroad	6ENT0001																									
	Semester Abroad	6ENT1051																									
Level 6	Instrumentation and Control Systems	6ENT1009			X	X											X			X							
	Vehicle Design	6ENT1067		X	X	X		X	X			X	X	X				X	X	X	X			X			
	Automotive Powertrain	6ENT2010	X					X		X		X									X					X	
	Autonomous Automotive Transportation	6ENT2001					X	X	X			X	X			X											
	Automotive Body Engineering	6ENT1112		X				X	X			X		X			X			X							
	Automotive Chassis Technology	6ENT2012			X			X					X	X						X							
	BSc Individual Project (Automotive Technology)	6ENT2050			X													X	X	X	X	X	X		X	X	

KEY TO PROGRAMME LEARNING OUTCOMES

Knowledge and Understanding

- A1. Mathematical methods and fundamental engineering sciences appropriate to technology.
- A2. The design-to-build process.
- A3. The basic principles and economic, social, legal, ethical and sustainability considerations of the business of engineering.
- A4. Professional engineering and management practice.
- A5. Principles of IT and communications.
- A6v. Automotive technology and its application in the design, performance and manufacture of volume production vehicles.
- A7v. The industrial context of the automotive sector.

Intellectual Skills

- B1. Use appropriate mathematical / scientific principles to solve problems.
- B2. Select commercial software packages for engineering and communication.
- B3. Evaluate external influences on the design and manufacturing process.
- B4. Design appropriate systems, components, or processes.
- B5v. Model and analyse relevant automotive technology systems.

Practical Skills

- C1. Apply appropriate analytical and modelling techniques.
- C2. Perform experimental and manufacturing work and draw conclusions.
- C3. Use computer-based engineering tools.
- C4. Prepare technical documentation.
- C5. Plan and manage a project, taking into account economic, social, legal, ethical and sustainability constraints.
- C6v. Evaluate the design of vehicles, components, or processes.

Transferable Skills

- D1. Communicate effectively, both orally and in writing.
- D2. Use commonly available IT tools.
- D3. Manage time and resources effectively.
- D4. Work effectively within a team as a member.
- D5. Manipulate, sort and present data.
- D6. Solve problems in a logical manner.
- D7. Learn effectively and independently, in all aspects of life.

BSc (Hons) Motorsport Technology

Table 2b: Development of Intended Programme Learning Outcomes in the Constituent Modules

This map identifies where the programme learning outcomes are delivered and assessed in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the programme aims (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own learning, personal and professional development as the programme progresses.

			Programme Learning Outcomes (as identified in section 1 and the following page)																								
			Knowledge & Understanding							Intellectual Skills					Practical Skills						Transferable Skills						
Module Title		Module Code	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	D7
Level 4	Motorsport and Automotive Technology	4ENT1128		X				X	X				X	X		X					X						X
	Introduction to Engineering Projects	4ENT2000						X					X						X		X			X			
	Professionalism and Project Management	4ENT2002			X	X						X											X				X
	Fundamentals of Static Systems	4ENT2016	X	X						X						X									X	X	
	Introduction to Microcontrollers and Design	4ENT2001									X	X		X	X		X						X				
	Applications of Engineering Materials	4ENT2017		X						X		X				X									X	X	
	Introduction to Manufacturing Technology	4ENT2018															X	X									
	Fundamentals of Dynamics Systems	4ENT2020	X	X						X						X									X	X	
Level 5	Automotive Electrical Systems	5ENT1004		X				X	X		X	X	X	X						X	X						
	Computer Aided Engineering	5ENT2009						X						X	X		X				X						
	Applied Thermodynamics	5ENT2011		X						X										X							
	Introduction to Vehicle Aerodynamics	5ENT2055								X			X														
	Production & Distribution Systems Management	5ENT2012			X								X							X							
	Computational Fluid Dynamics	5ENT2013					X	X				X		X											X		
	Automotive design	5ENT2015	X	X	X								X							X		X					
	Automotive Electronics Practice	5ENT2056								X		X															
	Placement Year	6AAD0015			X	X												X	X		X	X					
	Year Abroad	6ENT0001																									
	Semester Abroad	6ENT1051																									
Level 6	Instrumentation and Control Systems	6ENT1009			X	X											X			X							
	Vehicle Design	6ENT1067		X	X	X		X	X			X	X	X				X	X	X	X			X			
	Automotive Powertrain	6ENT2010						X					X	X						X	X						
	Autonomous Automotive Transportation	6ENT2001					X	X	X			X	X			X											
	Automotive Body Engineering	6ENT1112		X				X	X	X	X	X			X		X			X							
	Automotive Chassis Technology	6ENT2012			X			X					X	X						X							
	BSc Individual Project (Automotive Technology)	6ENT2050			X													X	X	X	X	X	X		X	X	X

KEY TO PROGRAMME LEARNING OUTCOMES

Knowledge and Understanding

- A1. Mathematical methods and fundamental engineering sciences appropriate to technology.
- A2. The design-to-build process.
- A3. The basic principles and economic, social, legal, ethical and sustainability considerations of the business of engineering.
- A4. Professional engineering and management practice.
- A5. Principles of IT and communications.
- A6m. Motorsport technology and its application in the design, performance, and manufacture of high-performance vehicles.
- A7m. The industrial context of the motorsport sector.

Intellectual Skills

- B1. Use appropriate mathematical / scientific principles to solve problems.
- B2. Select commercial software packages for engineering and communication.
- B3. Evaluate external influences on the design and manufacturing process.
- B4. Design appropriate systems, components, or processes.
- B5m. Model and analyse relevant motorsport technology systems.

Practical Skills

- C1. Apply appropriate analytical and modelling techniques.
- C2. Perform experimental and manufacturing work and draw conclusions.
- C3. Use computer-based engineering tools.
- C4. Prepare technical documentation.
- C5. Plan and manage a project, taking into account economic, social, legal, ethical and sustainability constraints.
- C6m. Evaluate the design of high-performance vehicles, components, or processes.

Transferable Skills

- D1. Communicate effectively, both orally and in writing.
- D2. Use commonly available IT tools.
- D3. Manage time and resources effectively.
- D4. Work effectively within a team as a member.
- D5. Manipulate, sort and present data.
- D6. Solve problems in a logical manner.
- D7. Learn effectively and independently, in all aspects of life.

Table 3: Development of Graduate Attributes in the Constituent Modules

This map identifies where the Graduate Attributes are delivered in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the development of the Graduate Attributes (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own personal and professional development as the programme progresses. [Note that there is no requirement for the Graduate Attributes to be assessed through these modules]

D = Delivered

	Module Title	Module Code	Professionally Focused	Globally Minded	Sustainability Driven	Digitally capable & confident	Inclusive and collaborative	Evidenced based and Ethical
Level 4	Motorsport and Automotive Technology	4ENT1128	D					D
	Introduction to Engineering Projects	4ENT2000	D	D			D	D
	Professionalism and Project Management	4ENT2002	D	D	D			D
	Fundamentals of Static Systems	4ENT2016				D		D
	Introduction to Microcontrollers and Design	4ENT2001	D			D	D	
	Applications of Engineering Materials	4ENT2017			D			D
	Introduction to Manufacturing Technology	4ENT2018	D		D	D		
	Fundamentals of Dynamics Systems	4ENT2020				D		D
Level 5	Automotive Electrical Systems	5ENT1004			D			
	Computer Aided Engineering	5ENT2009	D	D		D	D	D
	Applied Thermodynamics	5ENT2011	D		D			
	Introduction to Vehicle Aerodynamics	5ENT2055	D			D		
	Production & Distribution Systems Management	5ENT2012	D	D		D	D	D
	Computational Fluid Dynamics	5ENT2013	D			D		
	Automotive Design	5ENT2015	D	D			D	D
	Motorsport Design	5ENT2017	D	D			D	D
Level 6	Automotive Electronics Practice	5ENT2056	D			D		
	Placement Year	6AAD0015	D			D	D	D
	Year Abroad	6ENT0001		D				
	Semester Abroad	6ENT1051		D				
	Instrumentation and Control Systems	6ENT1009	D			D		
	Vehicle Design	6ENT1067	D	D			D	D
	Automotive Powertrain	6ENT2010		D	D			
	Autonomous Automotive Transportation	6ENT2001		D	D	D		D
Level 6	Automotive Body Engineering	6ENT1112	D		D	D		D
	Motorsport Technology	6ENT1057	D			D		D
	High Performance Powertrain	6ENT2011		D	D			

	Racing Car Body Engineering	6ENT1113	D			D		D
	Automotive Chassis Technology	6ENT2012	D	D	D			
	BSc Individual Project (Automotive Technology)	6ENT2050	D	D	D	D	D	D

Section 2

Programme management

Relevant QAA subject benchmarking statements	Engineering
Type of programme	Undergraduate
Date of validation/last periodic review	November 21
Date of production/ last revision of PS	March 2023
Relevant to level/cohort	Level 4 entering September 2023
Administrative School	School of Physics, Engineering & Computer Science
Language of Delivery	English

Table 4 Course structure

Course details			
Course Code	Course Description	HECOS	UCAS
PETAU	BSc (Hons) Automotive Technology	100201	H342

Course details			
Course Code	Course Description	HECOS	UCAS
PETM	BSc (Hons) Motorsport Technology	100206	H331