Programme Specification

(please see the notes at the end of this document for a summary of uses of programme specifications)

*Fields marked with * must be completed for the initial submission for Stage One approval to the Board of Studies and to the Academic Programmes Committee*

GENERAL INFORMATION	
Awarding Institution//Body	University of Bath
*Teaching Institution**	Partner Institution/s
Validated/Franchised/Licensed (if appropriate)	Licensed
*Programme accredited by (including date of accreditation)**	
Programme approved by (including date & minute number of Senate)	Programme Approval Panel: 21 January 2009 Transfer date from Division for Lifelong Learning to Faculty of Engineering & Design: 1st October 2012.
Final award	BSc (Hons)
*Programme title**	Motorsport Engineering (Work-based Learning)
UCAS code (if applicable)	
*Subject Benchmark Statement**	QAA Subject Benchmark Statement: Engineering http://www.qaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Engineering-.pdf
*Intended level of completed programme (in line with FHEQ eg 5, 6, 7,)**	Level 6
*Duration of programme & mode of study**	1 Year full-time
*Date of Specification preparation/revision**	July 2015
*Applicable to cohorts (eg. for students commencing in September 2013 or 20013/14-2014/15)**	*For students commencing in 2015/16*

Synopsis and academic coherence of programme*

A key area of the UK automotive sector is motorsport, which contributes over £5 billion per annum to the UK economy. The UK motorsport sector is a global leader, thanks to its dominant role in both managing and serving the Formula 1 and other international racing series. This has led to a wealth of world-class design, precision and high-performance engineering companies, as well as a comprehensive range of leading service firms in areas such as event management, marketing, PR and sponsorship. The UK's "Motorsport Valley", employs over 2,500 world-class engineers.

This programme is designed to provide Honours degree status to students who have achieved level 5 qualifications through the Foundation Degree in Motorsport Engineering

course.

Adopting the same work-based learning approach as the Foundation Degree, students are prepared for longer-term leadership and management roles at work whilst studying a variety of motorsport engineering principles at level 6.

Units reflect current trends and enable learners to develop a broad understanding of the nature of current motorsport engineering in a variety of contexts. These units include 'Advanced CAD/CAM Technology in Motorsports Manufacturing', 'Alternative Energy in Motorsport', 'Dynamics: Simulation and Analysis', 'The Application of Composite Materials in Motorsport', 'Motorsport Management and Leadership' and 'Start-up and Operation of a Motorsport Business'. The Work-based Research Project gives an opportunity for students to apply and develop their research and project management skills in a real employer-led project, greatly enhancing their employability.

Educational aims of the programme*

Whilst the work-based learning principles of the Foundation Degree remain, the primary aim of this course is to 'add value' by preparing students for potential, longer-term leadership roles in the workplace. At its heart is a subject-based project that embodies the full life cycle from conception, design and planning, through organisation, execution and management, to delivery, reflective review and objective assessment of the outcomes. Taught material supports the course ethos by: a) advancing knowledge through higher-level, subject-specific studies in areas of particular current relevance; b) engendering appropriate management, organisational, evaluative and team-building skills; and c) providing a firm basis for the effective research, assessment and presentation of evidence, arguments and assumptions, so as to enable sound judgments to be reached. Particular stress is placed on the timely and appropriate application of knowledge and problem-solving skills in a work-place environment.

The subject specific units are as follows:

The Application of Composite Materials in Motorsport
As the use of composites in motorsport becomes more widely used, this unit rationalizes the use of these materials used in the industry. The impact of Composite materials on the performance and safety of competition vehicles is examined. How composite materials have affected the design parameters of a competition vehicle is also considered.

Advanced CAD/CAM Technology in Motorsports Manufacturing
The aims of this unit are to consider the use of Computer Aided Design and Computer Aided Manufacture in Motorsport. This includes the effects of CAD/CAM on Motorsport manufacturing and consideration of some of the current software systems available to the market. The learner gains first-hand experience of designing, programming and manufacturing a component using the available machinery and software.

Dynamics: Simulation and Analysis
Great emphasis in the Industry is placed on this subject to increase the performance of a vehicle. This unit analyses the potential of simulator packages to improve the dynamic response of a competition vehicle. This includes scrutinizing the interaction of data gained from a simulation package with data gained empirically via telemetry and data logging systems. Using 'live' race vehicles the learner is able to identify the effects on driver performance gained from the use of simulator packages

Alternative Energy in Motorsport
With increasing pressure on the Industry to produce 'greener' vehicles, this unit examines the current use of alternative energy in motorsport and the initiatives being undertaken within the motor industry. The future development work being undertaken by the industry and academia is also considered. Alternative fuel sources are tested and analysed.

Motorsport Management and Leadership
The aims of this unit are to give students the opportunity to understand the range of management activities that take place in the average business, and to also introduce students to the concept of leadership, and cover such topics as motivation, team work and communication in relation to their importance in the average motorsport small to medium sized business.

Start-up and Operation of a Motorsport Business
The aim of this module is to introduce students to the individual requirements of starting a small motorsport specific business. Elements ranging from becoming a new manager, through to employing people for the first time, and setting up a legal structure will be covered in this comprehensive module.

Intended learning outcomes * (including teaching, learning and assessment methods, specifying those applicable for interim awards where appropriate)

➢ Knowledge & Understanding:	On successful completion of the programme it is expected that the student will be able to: • Demonstrate an understanding of the application of research methods in the context of their professional practice using a case study, or action research project; • Describe a coherent project design, locating and reviewing literature from appropriate fields, identifying suitable methods of data collection, techniques of analysis and ethical considerations for research into professional practice; • Comment on a selection of recent research into the study of Motorsport Engineering in different settings; • Evaluate the implications of research findings on policy and practice; • Appreciate the limits of current knowledge and practice in the field of Motorsport Engineering • Demonstrate an understanding of motorsport engineering in a management context. • Systematically understand the technical requirements of using Bio-fuels and motorsport specific regulations • Utilise telemetry systems and data loggers to develop a record of vehicle performance on a variety of events • Analyse and evaluate a range of composite materials
➢ Intellectual Skills:	On successful completion of the programme it is expected that the student will be able to: • Engage in critical analysis of a wide range of texts and electronic information; • Synthesise information from a number of sources in order to gain a coherent understanding of research, policy and practice; • Critically evaluate arguments, assumptions, abstract concepts and data, to make judgements, and to frame appropriate questions to achieve a solution or identify a range of solutions to a problem; • Reflect on the appropriateness of theory, practice and

	outcomes; • Apply the methods and techniques that they have learned to review, consolidate, extend and apply their knowledge and understanding, and to initiate and carry out projects with skills in data analysis (qualitative and/or quantitative where appropriate); • Communicate information, ideas, problems and solutions to both specialist and non-specialist audiences. • Evaluate driver information to optimise vehicle set up based on available data • Analyse the impact of alternative fuels on a given formula of motorsport • Evaluate the impact of manufacturing low volume and production components in a range of composite materials
➢ Professional Practical Skills:	On successful completion of the programme it is expected that the student will be able to: • Understand the application of relevant research findings in the workplace; • Apply Engineering skills appropriately to facilitate clients' progress towards their goals; • Reflect upon their own academic and professional performance and take responsibility for personal and professional learning and development; • Observe and evaluate their own skills and those of others and give clear and appropriate feedback. • Apply leadership skills in the workplace and demonstrate an understanding of motorsport engineering in a management context. • Justify composite materials in the design of competition vehicle components in relation to alternatives • Identify areas in which CAD/CAM may be implemented or further used to improve the product/profitability of small to medium companies working in the motorsport industry
➢ Transferable/Key Skills:	On successful completion of the programme it is expected that the student will be able to: • Exercise initiative and personal responsibility; • Make decisions; • Work in teams; • Use oral, written or audio-visual communication skills; • Demonstrate confidence in using IT for the access, creation and manipulation of information; • Undertake appropriate further training of a professional or equivalent nature.

➢	**Teaching and Learning Methods:** Teaching and learning methods include lectures, workshop practicals at purpose built training centre at Castle Combe, employer sponsored projects and guest external speakers. **Assessment Methods:** Assessment methods include report-based and practical assignments, and written, oral and visual presentations including project presentations. A key objective of the assessment process is that work submitted acts as evidence of students' ability to apply learning and critical thinking to industry relevant outcomes.

Structure and content of the programme (including potential stopping off points)

The Honours Year programme is studied on a one year full-time basis and offers progression for those students successfully completing the FdSc Motorsport Engineering. Study for this programme is at Level 6; students enter at Level 5.

The programme description is appended to this document.

Details of work placements / work-based learning / industrial training / study abroad requirements

It is expected that students access to professional experiences in a relevant setting. Access to such arrangements is required for successful completion of the work-based assignments within the programme and in particular for the purposes of the management units and the research project. Students are required to find a suitable work-based learning environment, in consultation with their tutor.

Details of support available to students (e.g. induction programmes, programme information, resources)

Support will follow the arrangements made by the partner institution, and detailed in the Partner Institution Programme Handbook. In particular, the following arrangements will apply:

- induction to the partner institution, its services and facilities, and to the programme
- access to the partner institution's learning resources (Library, IT facilities etc.)
- access to the partner institution's central support services, including counselling, learning support, careers, financial guidance, Students' Union etc.
- information on the units to be studied, including content, delivery and assessment
- a partner institution programme handbook, including details of the full assessment schedule and programme regulations
- personal tutorial system for the provision of academic and pastoral support.

In addition, students will receive support from the University of Bath according to the partnership arrangement between the two institutions, including:

- the allocation of a Link Academic Advisor from the University to the programme
- University of Bath Student Handbook, including details of the University's regulations

Admissions criteria (including arrangements for APL/APEL)

Candidates for the Honours Year will be expected to have successfully completed a University of Bath FdSc Motorsport Engineering programme. Students will normally have achieved a minimum overall programme average grade profile of at least 55%.

Applications will be considered in competition with others and based upon the number of places available.

It will be the student's responsibility to identify and agree a suitable work-based learning environment with their tutor in which they can carry out the Work-based Research Project. This must be in place at the time of admission.

Admission may be subject to interview.

Where English is not the applicant's first language an IELTS score of 6 or TOEFL score of 580 (paper-based) or 237 (computer-based) or equivalent qualification, will normally be required.

Full details of the different routes into the qualification can be found at:
http://www.wiltshire.ac.uk/MotorsportEngineeringTopUp/course_info.asp

Precise entry requirements may vary from year to year.

Deferral from Foundation Degree to Honours Year Top Up

Students are able to defer entry to the Honours Year by one year only following the completion of their Foundation Degree. Permission has to be granted by the University and the partner institution in advance. Under exceptional extenuating circumstances and course permitting, the University will consider deferral by a further one year.

Suspension of Studies

For suspension of studies a formal request has to be made to the University either directly or via the Programme Leader at the partner institution communicating a valid reason for the need to suspend. This request will then be considered by the University. Suspension is for 12 months and allows students to return back to their study at the same point in the following academic year. In exceptional circumstances only, the University will consider a further suspension period of 12 months. Suspension beyond this point is not feasible.

Summary of assessment and progression regulations

This programme is compliant with NFA assessment regulations:
http://www.bath.ac.uk/registry/nfa/index.htm

Indicators of quality and standards (e.g. professional accreditation)

For more general information on each part of the framework, click on the link)

To assure continuing excellence in its quality and standards, the University of Bath has a quality management framework including:

1. A Quality Assurance Code of Practice, and associated regulations and policies: http://www.bath.ac.uk/quality/cop/statements.html

2. A learning, teaching and quality committee structure which monitors quality and standards and instigates action for enhancement. For further information:
   Governance:
   http://www.bath.ac.uk/quality/documents/QA03PSGuidQSGov.doc
   Review and Monitoring:
   http://www.bath.ac.uk/quality/documents/QA03PSGuidQSRevMon.doc

3. Staff development arrangements that assist staff in enhancing their own performance as educators, as researchers or as professional support services staff. Further information:
   http://www.bath.ac.uk/quality/documents/QA03PSGuidQSASD.doc

   Students are involved in many of these processes. The emphasis here is upon the *informed* student voice - engaging with students as academic citizens to ensure they have opportunities to take an active part in shaping their own learning.

   http://www.bath.ac.uk/quality/documents/QA03PSGuidQSStuVoice.doc

A more detailed overview of the University's Quality Management framework is set out in this summary document:
http://www.bath.ac.uk/quality/documents/approach-to-quality-management.pdf

The University's management of its academic standards and quality is subject to external institutional review by the Quality Assurance Agency on a six year cycle. In its 2013 Institutional Review, the QAA confirmed that the University met its expectations for the management of standards, the quality of learning opportunities, and the enhancement of learning opportunities. The University was commended on its provision of information.

Sources of other information

- University of Bath Website: http://www.bath.ac.uk
- Partner institution website: http://www.wiltshire.ac.uk/
- Partner institution publicity (e.g. prospectus, course leaflet, open days)
- Partner Institution Programme handbook
- University of Bath Student Handbook

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Appendix : Programme Description for a programme fully compliant with the NFA

Please read/use in conjunction with: http://www.bath.ac.uk/registry/registry.bho/assessment/nfa-briefing-009.pdf.

Programme code	UEME-WFB46
Programme title	Motorsport Engineering
Award type	BSc(Hons)
Award title	BSc(Hons) Motorsport Engineering (Work-based Learning)
Mode of Attendance	Full-time
Length	1 year
State if coexistent M-level programme	
State any designated alternative programme(s)	
Approving body and date of approval	Programme Approval Panel: 21 January 2009

Year 1 ***(for implementation with effect from Sept 2015)***

Part	Stage	Normal period of study for this Mode	Unit code	Unit title	Unit status	Credits	DEU status	Placement or Study Abroad status	Notes
3	1	S1	LP30496	Research Methods	C	6			
		S1	LP20588	Motorsport Management and Leadership	C	6			
		S1	LP30316	Alternative Energy in Motorsport	C	6			
		S1	LP30315	Advanced CAD/CAM Technology in Motorsport Manufacturing	C	6			
		AY	LP30486	Work-based Research Project	C	18	Y		
		S2	LP20589	Start-up and Operation of a Motorsport Business	C	6			
		S2	LP30318	Dynamics: Simulation and Analysis	C	6			
		S2	LP30317	The Application of Composite Materials in Motorsport	C	6			

Assessment weightings and decision references

Stage	Weighting within programme	NFAAR decisions reference *See*: http://www.bath.ac.uk/registry/nfa/index.htm
Stage 1	100%	Main assessment: http://www.bath.ac.uk/registry/nfa/nfaar-hy-appendix-11.pdf Supplementary assessment: http://www.bath.ac.uk/registry/nfa/nfaar-hy-appendix-12.pdf

NOTES
Programme Specifications are **definitive**, **formal and concise** descriptions of programmes that are comprehensible to a general audience and are intended to support external accountability. The University has committed to using programme specifications in the following ways:

Approval, Amendment and Review of Programmes

The University uses programme specifications in programme approval, amendment and review processes to ensure that the aims and intended learning outcomes of programmes are clear, and that the learning outcomes can be achieved and demonstrated. Further guidance on the content of programme specifications, including common content on University quality and student support structures, is available from the Learning and Teaching Enhancement Office or from the LTEO website: http://www.bath.ac.uk/quality/cop/statements.html

- **Programme approval:** Further information about the role of programme specifications in the process of programme approval is provided in QA3 Approval of New Programmes of Study Annex A. A draft programme specification setting out the title, level, learning outcomes, diet of core and key optional units, and any partnership arrangements or professional accreditation is submitted as part of the documentation for first stage strategic approval to Board of Studies and Academic Programmes Committee. The draft programme proposal and specification should also be forwarded to the Registry at this stage. It is good practice to submit the draft document to the Faculty/School Learning, Teaching and Quality Committee after first stage strategic approval and before second stage final approval is sought so that feedback may guide development of the final documentation. The completed programme specification including the programme description, which should be fully differentiated in respect of any exit awards, is submitted to the Faculty/School Learning Teaching and Quality Committee and to the Programmes Approval and Partnerships Committee as part of the documentation for second stage (full) approval. Once final approval has been granted by Senate the programme specification should be published on the University website

- **Amendment of programmes:** When an intermediate or major amendment to a programme is made, an updated programme specification should be submitted as part of the approval process (see QA4 Amendments to Programmes of Study para 6.4). Amended versions of the programme specification must be signed by the Dean of Faculty/School. Once approved, the revised programme specification should be published on the University website.

- **Degree Scheme Review:** The programme specification forms part of the evidence for the periodic review of the aims and learning outcomes of a programme of study (see QA13 Degree Scheme Reviews, para 4.11).

Provision of Information to Students

Programme specifications are multi-stakeholder documents, which form one of the sources of programme information available to current and prospective students (For further information, see QA44 Programme Handbooks and Programme Specifications, Section 5). Directors of Studies are responsible for ensuring that the programme specification is up to date and coherent with the detailed programme information provided in the prospectus and programme handbooks,and for ensuring that current programme specifications are published on the University website.

Programme descriptions should be appended to programme specifications and are intended to provide precise information for students and others on the stages of the programme, as required for the 'Structure and content of the programme' section of the main document. (PD forms for NFAAR for UG, PG, and non-NFA are available.)