FACULTY OF ENGINEERING

DEPARTMENT OF DESIGN, MANUFACTURING AND ENGINEERING MANAGEMENT

SPORTS DESIGN ENGINEERING

Master of Engineering in Sports Design Engineering
Bachelor of Engineering with Honours in Sports Design Engineering
Bachelor of Engineering in Sports Design Engineering
Diploma of Higher Education in Sports Design Engineering
Certificate of Higher Education in Sports Design Engineering

These regulations are to be read in conjunction with General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

Mode of Study
1. The programmes are available by full-time study only.

Curriculum
2. **First Year** - All students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
DM100	Design 1	1	20
DM101	Integrating Studies 1	1	20
DM102	Introduction to Production Engineering and Management	1	20
DM103	Technology Concepts	1	20
BE100	Anatomy and Physiology for Biomedical Engineers	1	20
MM115	Mathematics 1D	1	20

3. **Second Year** - All students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
BE209	Sports Biomechanics	2	20
DM200	Design 2	2	20
DM204	Integrating Studies 2	2	20
DM205	Production Techniques 1	2	20

DM206	Sports Engineering	2	20
	Elective Module(s)	1	20

4. **Third Year** - All students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
B1225	Physiology of Aerobic Exercise	2	20
DM303	Engineering Design	3	20
DM306	Product Development	3	20
DM312	Mechatronic Design and Applications	3	10
DM313	Multidisciplinary Integrating Project	3	10
DM314	Individual Integrating Project	3	10
DM315	Mechatronics: Product Programming	3	10

Optional Modules

20 credits at Level 3 or 4 chosen from the list below, or such other modules as approved by the Year Adviser.

Module Code	Module Title	Level	Credits
DM300	Design Emotion and Experience	3	20
DM305	Innovation Management	3	20
DM307	Production and Operations Management	3	20
Various	Vertically Integrated Project	3	10
DM400	Advanced Design Methods	4	20

Not all optional modules on this list may be available in each academic year.

5. **Fourth Year** - All students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
DM402	Individual Project 1	4	40
DM403	Industrial Group Project 1	4	20
BE405	Sports Injury and Rehabilitation	4	20

BE400	Advanced Topics in Human Movement	4	20

Optional Modules

20 credits chosen from the list below, or such other modules as approved by the Year Adviser.

Module Code	Module Title	Level	Credits
DM300	Design Emotion and Experience	3	20
DM305	Innovation Management	3	20
DM307	Production and Operations Management	3	20
DM308	Production Techniques 2	3	20
Various	Vertically Integrated Project	4	10
DM400	Advanced Design Methods	4	20
DM401	Advanced Product Design and Manufacture	4	20
DM404	Quality Management	4	20
DM406	Industrial Placement 1	4	20
DM506	Industrial Placement 4	5	20
DM918	People, Organisation and Technology	5	10
DM920	Strategic Technology Management	5	10
DM923	Product Modelling and Visualisation	5	10
DM926	Supply Chain Operations	5	10
DM939	Digital Manufacturing Concepts	5	10
DM943	Sustainable Product Design and Manufacturing	5	10
DM951	Design for Industry and Smart Products	5	10
DM985	Remanufacturing	5	10
EF927	Design Management	5	10

Not all optional modules on this list may be available in each academic year.

6. **Fifth Year** - All students shall undertake modules amounting to no fewer than 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits

DM511	Individual Project 2	5	60
DM501	Industrial Group Project 2	5	20
DM502	Research Studies	5	20

Optional Modules

No fewer than 20 credits at Level 4 or 5 (which must bring the total at Level 5 to no fewer than 120 credits) chosen from the list below or such other modules as approved by the Year Adviser.

Module Code	Module Title	Level	Credits
DM400	Advanced Design Methods	4	20
DM401	Advanced Product Design and Manufacture	4	20
DM404	Quality Management	4	20
DM406	Industrial Placement 1	4	20
Various	Vertically Integrated Project	4	10
DM503	Global Design	5	10
DM506	Industrial Placement 4	5	20
DM918	People, Organisation and Technology	5	10
DM920	Strategic Technology Management	5	10
DM923	Product Modelling and Visualisation	5	10
DM926	Supply Chain Operations	5	10
DM933	Engineering Risk Management	5	10
DM935	Management of Total Quality and Continuous Improvement	5	10
DM939	Digital Manufacturing Concepts	5	10
DM941	Fundamentals of Lean Six Sigma	5	10
DM943	Sustainable Product Design and Manufacturing	5	10
DM951	Design for Industry and Smart Products	5	10
DM983	Design Form and Aesthetics	5	10
DM984	Human Centred Design	5	10
DM985	Remanufacturing	5	10
EF927	Design Management	5	10

BE902	Prosthetics and Orthotics	5	10
BE903	Cardiovascular Devices	5	10
BE904	Clinical and Sports Biomechanics	5	10
BE908	Biomedical Instrumentation	5	10
BE909	Biomedical Electronics	5	10

Not all optional modules on this list may be available in each academic year.

Progress

7. In order to progress to the second year of the programme, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

8. In order to progress to the third year of the programme, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

9. In order to progress to the fourth year of the programme, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

10. In order to progress to the fifth year of the programme, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

Final Classification

11. The final award for the chosen degree in Sports Engineering will normally be based on the first assessed attempt at all modules taken in the second, third, fourth and fifth years.

Award

12. **MEng:** In order to qualify for the award of the degree of MEng in Sports Design Engineering, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level; and must include DM402 Individual Project 1 and DM511 Individual Project 2.

13. **BEng with Honours:** In order to qualify for the award of the degree of BEng with Honours in Sports Design Engineering, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level; and must include DM402 Individual Project 1.

14. **BEng:** In order to qualify for the award of the degree of BEng in Sports Design Engineering, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

15. **Diploma of Higher Education:** In order to qualify for the award of a Diploma of Higher Education in Sports Design Engineering, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

16. **Certificate of Higher Education:** In order to qualify for the award of a Certificate of Higher Education in Sports Design Engineering, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.