



Science and Technology Foundation Year

Programme Specification

1. Programme title	Science and Technology Foundation Year
2. Awarding institution	Middlesex University
3a. Teaching institution	Middlesex University, Hendon
3b. Language of study	English
4a. Valid intake dates	September
4b. Mode of study	Full Time
4c. Delivery method	<input checked="" type="checkbox"/> On-campus/Blended <input type="checkbox"/> Distance Education
5. Professional/Statutory/Regulatory body	N/A
6. Apprenticeship Standard	N/A
7. Final qualification(s) available	Foundation Certificate
8. Academic year effective from	2024/25

9. Criteria for admission to the programme

Students accepted to study the Foundation Year should have equivalent of 80-200 UCAS entry points or 32-80 tariff points. All candidates should possess at least a level 4 or Grade C GCSE in both Maths and English language, or equivalent.

Mature applicants with relevant work experience are also welcome to apply. International students who have not been taught in the English medium must show evidence of proven ability in English such as TOEFL grade 550 or IELTS grade 6.0 (with minimum 5.5 in all components). The University provides pre-sessional English language courses throughout the year for candidates who do not meet the English requirements.

University policies supporting students with disabilities apply, as described in the University Regulations. Students with disabilities are welcome to contact the programme leader for discussion in advance of the commencement of the course. Some of the

programmes have considerable practical work and to be able to provide the curriculum it helps if we understand your requirements.

10. Aims of the programme

The programme aims to:

- Prepare students for level 4 undergraduate study in Higher Education
- Provide students with knowledge and understanding of relevant mathematical, academic communication and problem-solving skills
- Support students to become self-directed learners for undergraduate study
- Develop critical awareness of science fostering an interest in the ever-changing nature of knowledge and significance of new developments within the field and subsequent impact on society
- Develop competence in scientific methods of enquiry and problem solving and communication of scientific principles and data through diverse methods
Provide hands-on experience of state-of-the-art equipment and laboratories for developing practical and analytical skills relevant to the subject area and appropriate for employment

Successful completion of this programme provides progression to a number of degree programmes at Middlesex University.

11. Programme outcomes

A. Knowledge and understanding

On completion of this programme the successful student will have knowledge and understanding of:

- A1.** Foundations of mathematics and statistics.
- A2.** Strategies and techniques to support undergraduate studies.
- A3.** Underpinning scientific principles of chosen degree programme.
- A4.** Applications of the chosen degree programme to industry, health and the environment.
- A5.** Analytical techniques and technologies and their applications in research and technology.
- A6.** Environmental impact, ethical responsibilities and local and global sustainability goals in relation to the field of study and wider society.

Teaching/learning methods

Students gain knowledge and understanding through attendance and participation in seminars, workshops, laboratory classes, online learning activities, excursions and group work. Critical discussion during practical and seminar work forms an important vehicle for learning.

Participating in different formats of formative assessment such as online learning exercises, peer evaluation, in-class worksheets and group activities and feedback of

sample work will also advance knowledge. Short videos will introduce students to underpinning knowledge and threshold concepts.

Students are encouraged to actively participate in all sessions and attendance and engagement is encouraged to achieve positive outcomes throughout the programme.

Assessment methods

Students' knowledge and understanding is assessed by:

- Individual reports
- Essays
- Group or individual presentations
- Learning logs
- Practical Assessments
- Student Observable Behaviours

B. Skills

On completion of this programme the successful student will be able to:

- B1.** Apply analytical skills by using basic mathematical and statistical techniques
- B2.** Research and evaluate information and apply to given problems
- B3.** Apply problem solving strategies to scenarios and formulate solutions
- B4.** Apply knowledge gained in an appropriate subject area
- B5.** Effectively communicate through a range of methods
- B6.** Design research projects; collect, analyse, present, interpret and evaluate data
- B7.** Describe ethical problems associated with scientific research and applications
- B8.** Develop as a reflective and independent learner to work effectively individually and in interdisciplinary teams

Teaching/learning methods

Students learn skills through:

Interactive teaching sessions supervised laboratories and workshops, online activities and tests, key concept videos, guided research, individual and group projects and reflection.

Students learn skills through participation in seminars, workshops, group discussions, peer review of oral presentations and written documents, problem solving exercises and engaging in assessment activities. Students learn practical skills through participation in laboratory classes, virtual labs and video demonstrations. Study skills are taught and embedded throughout the programme, but particularly in SMART. Emphasis is placed on ICT and numeracy skills in particular. Career tutorials and progression to Year 1 sessions will support students to enhance their personal and academic development.

Assessment methods

Students' skills are assessed by problem solving exercises and case studies, laboratory reports and portfolios. Practical skills are assessed by presentations and laboratory practical exams.

The above learning, teaching and assessment will be designed to develop and assess these graduate competencies:

1. Curiosity and learning,
2. collaborative innovation,
3. resilience and adaptability,
4. technological agility,
5. entrepreneurship,
6. communication, empathy, and inclusion,
7. leadership and influence,
8. problem solving and delivery

12. Programme structure (levels, modules, credits and progression requirements)

12.1 Overall structure of the programme

Module Title/Code

- SMART (**S**tudents **M**astering **A**cademic writing, **R**esearch and **T**echnology) (for Natural Sciences)/SAT0500
- SMART (**S**tudents **M**astering **A**cademic writing, **R**esearch and **T**echnology) (for Psychology)/SAT0501
- SMART (**S**tudents **M**astering **A**cademic writing, **R**esearch and **T**echnology) (for Sports Science)/SAT0502
- SMART (**S**tudents **M**astering **A**cademic writing, **R**esearch and **T**echnology) (for Technology)/SAT0503
- Foundation Mathematics (Science and Technology)/MSO0200
- Foundation Mathematics (Psychology)/MSO0201
- Foundation Mathematics (Natural Sciences)/MSO0209
- Foundation Project (for Technology)/PDE0300
- Psychology Project/PSY0020
- Computing and Digital Technology/CST0400
- Life Sciences/BIO0500
- Introductory Psychology/PSY0010
- Chemistry/BIO0800
- Integrated Sport Science Foundation/SES0101
- Practical Sport Science Foundation/SES0102

12.2 Levels and modules

COMPULSORY

Students studying Natural Science based programmes must take all of the following:

- SAT0500
- BIO0500
- MSO0209
- BIO0800

Semester 1

- SAT0500: SMART
Core, 30 Credits
- BIO0500 Life Sciences
Core, 30 Credits

Semester 2

- BIO0800 Chemistry
Core, 30 Credits
- MSO0209: Foundation Mathematics
Core, 30 Credits

Students studying Technology-based programmes must take all of the following:

- SAT0503
- MSO0200
- PDE0300
- CST0400

Semester 1

- PDE0300
Foundation Project
Core, 30 Credits
- MSO0200:
Foundation
Mathematics
Core, 30 Credits

Semester 2

- CST0400:
Computing & Digital Technology
Core, 30 Credits
- SAT0503:
SMART
Core, 30 Credits

Students studying Psychology based programmes must take all of the following:

- SAT0501
- PSY0010
- PSY0020
- MSO0201

Semester 1

- PSY0010:
Introductory Psychology
Core, 30 Credits
- SAT0501:
SMART
Core, 30 Credits

Semester 2

- MSO0201:
Foundation
Mathematics
Core, 30 Credits
- PSY0020
Psychology Project
Core, 30 Credits

Students studying Sports Science based programmes must take all of the following:

- SAT0502
- MSO0200
- SES0101
- SES0102

Semester 1

- MSO0200:
Foundation
Mathematics
Core, 30 Credits
- SES0101
Integrated Sport Science Foundation
Core, 30 Credits

Semester 2

- SAT0502:
SMART
Core, 30 Credits
- SES0102
Practical Sport Science Foundation Core, 30 Credits

PROGRESSION REQUIREMENTS

Students must pass all modules to progress to Year One / Level 4 at Middlesex University

12.3 Non-compensatable modules

Module level/Module code

Programmes can compensate a maximum of 30 credits according to University regulations.

BIO0500 and BIO0800 are non-compensatable.

13. Information about assessment regulations

This programme will run in line with general University Regulations:

<https://www.mdx.ac.uk/about-us/policies>

In order to successfully pass the Foundation Year, students must pass all four modules.

14. Placement opportunities, requirements and support (if applicable)

N/A

15. Future careers / progression

You enrol on a four-year course, which includes the one-year foundation course. If you complete this year successfully you progress directly to the course you applied for – you can also transfer to other degree courses within your area of speciality subject to availability and previous qualifications. The number of students who progress to degree study is high and in fact many foundation year students have gone on to become some of our most successful graduates.

Successful completion of the foundation year guarantees entry to your chosen degree.

16. Particular support for learning

As a Foundation Year student, you will take part in an induction programme during which you are introduced to the teaching team, support services, university resources including e-learning and subject librarians. You will also get to know your peers by taking part in team building exercises and practical demonstrations based on different subject areas.

The Foundation Year focusses on developing your skills as a student and preparing you for progression into university and your degree. The design of the Foundation Year is based on an integrated approach, thus providing best possible support for your learning. Subject librarians and Learning Enhancement Team tutors provide expert guidance on written and oral communication skills and their support is embedded in the Foundation programme curriculum. A team of dedicated staff such as Student Learning Assistants, Graduate Teaching Assistants and a dedicated Progression and Support Advisor provide extra student support.

The programme aims to engage you in all aspects of your learning. You are required to have a good attendance record; are encouraged to actively participate in taught sessions either individually, with your peers or collaboratively in small groups.

Your learning is supported by technology and through MyLearning you will have flexible access to all learning materials; assessment information; online tests and quizzes; student records; Library resources and other University services.

17. HECos code(s)

Dependent on choice of a degree at entry stage.

18. Relevant QAA subject benchmark(s)

QAA - The Framework for Higher Education Qualifications in England, Wales and Northern Ireland (FHEQ) (February 2024)

19. Reference points

- Middlesex University Regulations
- Middlesex University Learning and Quality Enhancement Handbook
- Middlesex University 2031 Learning Framework
- QAA Quality Code

20. Other information

The Foundation Year supports the following programmes:

Science and Technology

Technology based programmes:

BEng Computer Systems Engineering with Foundation Year
BEng Design Engineering with Foundation Year
BEng Electronic Engineering with Foundation Year
BEng Mechatronics and Robotics with Foundation Year
BSc Business Computing & Data Analytics with Foundation Year
BSc Cyber Security and Digital Forensics with Foundation Year
BSc Computer Networks and Security with Foundation Year
BSc Computer Science with Foundation Year
BSc Information Technology with Foundation Year

Modules:

SAT0503 SMART (**S**tudents **M**astering **A**cademic writing, **R**esearch and **T**echnology)
MSO0200 Foundation Mathematics
PDE0300 Foundation Project
CST0400 Computing and Digital Technology

Natural Sciences-based programmes:

BSc Biochemistry with Foundation Year
BSc Biological Sciences with Foundation Year
BSc Biomedical Science with Foundation Year
BSc Environmental Health with Foundation Year
BSc Medical Physiology with Foundation Year
BSc Pharmaceutical Sciences with Foundation Year

BSc Public Health with Foundation Year
BSc Neuroscience with Foundation Year
BSc Medical Science with Foundation Year

Modules:

SAT0500 SMART (Students Mastering Academic writing, Research and Technology)
MSO0209 Foundation Mathematics
BIO0500 Life Sciences
BIO0800 Chemistry

Psychology based programmes:

BSc Psychology with Counselling Skills with Foundation Year
BSc Psychology with Criminology with Foundation Year
BSc Psychology with Foundation Year
BSc Psychology with Neuroscience with Foundation Year

Modules:

SAT0501 SMART (Students Mastering Academic writing, Research and Technology)
MSO0201 Foundation Mathematics
PSY0010 Introductory Psychology
PSY0020 Psychology Project

Sports Science based programmes:

BSc Sport and Exercise Rehabilitation with Foundation Year
BSc Sport and Exercise Science with Foundation Year
BSc Sport and Exercise Science (Physical Education & Coaching) with Foundation Year

Modules:

SAT0502 SMART (Students Mastering Academic writing, Research and Technology)
MSO0200 Foundation Mathematics
SES0101 Integrated Sport Science Foundation
SES0102 Practical Sport Science Foundation

Please note programme specifications provide a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve if they take full advantage of the learning opportunities that are provided. More detailed information about the programme can be found in the rest of your programme handbook and the university regulations.

Curriculum map for Foundation Year

This section shows the highest level at which programme outcomes are to be achieved by all graduates, and maps programme learning outcomes against the modules in which they are assessed.

Programme learning outcomes

Knowledge and understanding	
A1	Foundations of mathematics and statistics
A2	Strategies and techniques to support undergraduate studies
A3	Underpinning scientific principles of chosen degree programme
A4	Applications of the chosen degree programme to industry, health and the environment.
A5	Analytical techniques and technologies and their applications in research and technology.
A6	Environmental impact, ethical responsibilities and local and global sustainability goals in relation to the field of study and wider society.
Skills	
B1	Apply analytical skills by using basic mathematical and statistical techniques
B2	Research and evaluate information and apply to given problems
B3	Apply problem solving strategies to scenarios and formulate solutions
B4	Apply knowledge gained in an appropriate subject area
B5	Effectively communicate through a range of methods
B6	Design research projects; collect, analyse, present, interpret and critically evaluate data
B7	Describe ethical problems associated with scientific research and applications
B8	Develop as a reflective and independent learner to work effectively individually and in interdisciplinary teams

Programme outcomes													
A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	B7	B8
Highest level achieved by all graduates													
3	3	3	3	3	3	3	3	3	3	3	3	3	3

Module Title	Module Code Level	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	B7	B8
SMART	SAT0500 SAT0501 SAT0502 SAT0503		✓						✓		✓	✓	✓	✓	✓
Foundation Mathematics	MSO0200 MSO0201 MSO0209	✓	✓			✓		✓	✓	✓				✓	
Foundation Project	PDE0300 PSY0020		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Practical Sport Science Foundation	SES0102		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Computing and Digital Technology	CST0400	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Life Sciences	BIO0500		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Introductory Psychology	PSY0010		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Chemistry	BIO0800		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Integrated Sport Science Foundation	SES0101		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓