<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mandatory Courses</strong></td>
<td><strong>Mandatory Courses</strong></td>
</tr>
<tr>
<td>Semester 1</td>
<td>Semester 1</td>
</tr>
<tr>
<td>8 courses: 8 mandatory</td>
<td>8 courses: 7 mandatory 1 optional</td>
</tr>
<tr>
<td>Calculus A</td>
<td>Multivariable Calculus and Real Analysis A</td>
</tr>
<tr>
<td>F17CA</td>
<td>F18CD</td>
</tr>
<tr>
<td>Algebra A</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>F17CC</td>
<td>F18CF</td>
</tr>
<tr>
<td>Introduction to Statistical Science A</td>
<td>Cognitive Psychology 1</td>
</tr>
<tr>
<td>F77SA</td>
<td>A48CO</td>
</tr>
<tr>
<td>Introduction to Psychology 1</td>
<td>Multivariable Calculus and Real Analysis B</td>
</tr>
<tr>
<td>A47NY</td>
<td>F18CE</td>
</tr>
<tr>
<td>Semester 2</td>
<td>Semester 2</td>
</tr>
<tr>
<td></td>
<td>One of:</td>
</tr>
<tr>
<td></td>
<td>Applied Mathematics A</td>
</tr>
<tr>
<td></td>
<td>F18AA</td>
</tr>
<tr>
<td></td>
<td>Logic &amp; Proof</td>
</tr>
<tr>
<td></td>
<td>F17LP</td>
</tr>
<tr>
<td></td>
<td>Mathematics for Direct Entrants</td>
</tr>
<tr>
<td></td>
<td>F18GD</td>
</tr>
<tr>
<td></td>
<td>Pure Mathematics A</td>
</tr>
<tr>
<td></td>
<td>F18PA</td>
</tr>
<tr>
<td></td>
<td>Cognitive Psychology 2</td>
</tr>
<tr>
<td></td>
<td>A48CY</td>
</tr>
<tr>
<td>Semester 1</td>
<td>Semester 1</td>
</tr>
<tr>
<td></td>
<td>120 credits</td>
</tr>
<tr>
<td></td>
<td>(8 courses to be completed)</td>
</tr>
<tr>
<td>Semester 2</td>
<td>Semester 2</td>
</tr>
<tr>
<td></td>
<td>Diploma of Higher Education</td>
</tr>
<tr>
<td></td>
<td>240 credits, incl. 90 at Level 8</td>
</tr>
<tr>
<td></td>
<td>(16 courses to be completed)</td>
</tr>
</tbody>
</table>
Form P6  Heriot-Watt University – Undergraduate Programme Structure Template

1. Programme Code(s) (recruitment & exit awards)  
F1D1-MWP /YYY/ZZZ

2. Programme Titles for all awards (unabbreviated)  
Mathematics with Psychology

3. Main Award(s) (to be recruited to)  
BSc (F1D1-MWP)

4. Exit Awards (for graduation only)  
BSc (Hons) (F1D1-YYYY)  
BSc (Ord) (F1D1-ZZZ)

5. Type  
School specialist degree

6. Programme Accredited by  
G1C8

7. UCAS Code  
Mathematical & Computer Sciences

8. School  
Group(s)

9. QAA Subject Benchmarking  
Mathematics

10. Date of Production/Revision  
July 2014/201415

11. Stage Composition  

<table>
<thead>
<tr>
<th>Stage</th>
<th>Mandatory Courses</th>
<th>Optional Courses</th>
<th>Elective Courses</th>
<th>13. Awards, Credits &amp; Levels</th>
</tr>
</thead>
</table>
| Stage 3 | 8 courses: 6 mandatory, up to 2 optional, up to 2 elective | Abstract Algebra F19PL  
Ordinary Differential Equations F19MO  
Complex Analysis F19MC  
Social Cognition and Personality A49SG  
Cognition across the Lifespan A49CL  
Project Preparation F19GB  
Social Influences on Childhood Cognition and Emotion A40CE | Up to one of:  
Vector Analysis F19MV  
Pure Mathematics B F19PB  
Numerical Analysis B F19NB  
Applied Mathematics B F19AB | Any SCQF Level 7,8,9 course from approved list¹ | Ordinary or General Degree  
360 credits, incl. 60 at Level 9  
(24 courses to be completed) |
| Stage 4 | 8 courses: 3 mandatory, 5 optional | Mathematics Project Dissertation F10GP  
Cognition and Emotion A40CE | Three of:  
Applied Mathematics C F10AC  
Mathematical Biology A F10AM  
Functional Analysis F10MF  
Optimisation F10MM  
Numerical Analysis C F10NC  
Pure Mathematics C F10PC | Two of:  
Mathematical Biology B F10AN  
Geometry F10PG  
Partial Differential Equations F10MP  
Numerical Analysis D F10ND  
Pure Mathematics D F10PD | Honours Degree  
Requires 480 SCQF credits including a minimum of 180 at Level 9 and 10 and at least 90 at Level 10  
(32 courses to be completed) |

¹ The choice of electives at different stages will be published in the student handbook.
<table>
<thead>
<tr>
<th>1. Programme Code(s) (recruitment &amp; exit awards)</th>
<th>2. Programme Titles for all awards (unabbreviated)</th>
<th>3. Main Award(s) (to be recruited to)</th>
<th>4. Exit Awards (for graduation only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1D1-MWP /YYY/ZZZ</td>
<td>Mathematics with Psychology</td>
<td>BSc (F1D1-MWP)</td>
<td>BSc (Hons) (F1D1-YYY)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BSc (Ord) (F1D1-ZZZ)</td>
</tr>
</tbody>
</table>

5. Type
School specialist degree

6. Programme Accredited by
G1C8

7. UCAS Code

8. School Mathematical & Computer Sciences

9. QAA Subject Benchmarking Group(s)
Mathematics

10. Date of Production/Revision
July 2014/201415

11. Stage Composition

12. Arrangement of Courses: (Themes and Subject Streams)

13. Awards, Credits & Levels

The accompanying Programme Notes provide details of stage notes, progression requirements and award requirements for the programme.

The accompanying Programme Description provides details of aims, outcomes, teaching & learning and assessment policies for the programme.
### Form P8

#### Heriot-Watt University – Undergraduate Programme Notes Template

<table>
<thead>
<tr>
<th>1. Programme Code(s) <em>(recruitment &amp; exit awards)</em></th>
<th>F1D1-MWP/YYY</th>
<th>2. Programme Titles for all awards <em>(unabbreviated)</em></th>
<th>Mathematics with Psychology</th>
<th>3. Main Award(s) <em>(to be recruited to)</em></th>
<th>BSc (F1D1-MWP)</th>
<th>4. Exit Awards <em>(for graduation only)</em></th>
<th>BSc (Hons) (F1D1-YYY), BSc (Ord) (F1D1-ZZZ)</th>
</tr>
</thead>
</table>

### Stage Notes

Stage One: Students must study 8 mandatory courses.

Stage Two: Students must study 8 mandatory courses.

Stage Three:
- Honours degree students must study 6 mandatory courses, together with 2 optional courses and no electives.
- Ordinary degree students must study 6 mandatory courses, together with up to 2 optional courses and up to 2 approved elective courses.
- The choice of electives will be published in the student handbook.

An optional course may not run if there is insufficient demand for it; some choices of courses may not be available to students in some years because of timetabling constraints.
<table>
<thead>
<tr>
<th>1. Programme Code(s) (recruitment &amp; exit awards)</th>
<th>2. Programme Titles for all awards (unabbreviated)</th>
<th>3. Main Award(s) (to be recruited to)</th>
<th>4. Exit Awards (for graduation only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1D1-MWP/YYYY</td>
<td>Mathematics with Psychology</td>
<td>BSc (F1D1-MWP)</td>
<td>BSc (Hons) (F1D1-YYY) BSc (Ord) (F1D1-ZZZ)</td>
</tr>
</tbody>
</table>

5. Type: School specialist degree

6. Programme Accredited by: Mathematical & Computer Sciences

7. UCAS Code: G1C8

8. School: Mathematical & Computer Sciences

9. QAA Subject Benchmarking Group(s): Mathematics

10. Date of Production/Revision: April 2013/201415

Progression Requirements

1. Progression through the course normally requires a minimum of number of credit points:
   - Progression from Stage 1 to Stage 2: 120 credits
   - Progression from Stage 2 to Stage 3: 240 credits
   - Progression from Stage 3 to Stage 4: 360 credits

2. Progression through the course for an Honours degree normally requires:
   - Stage 1: a minimum of Grade D in at least 6 courses including Introduction to Psychology 1, Introduction to Psychology 2, Calculus A, Calculus B, Algebra A and Problem Solving
   - Stage 2: a minimum of Grade D in at least 6 courses including Cognitive Psychology 1, Cognitive Psychology 2, Multivariable Calculus and Real Analysis A, Multivariable Calculus and Real Analysis B, and Linear Algebra
   - Stage 3: average mark on qualifying courses of at least 40% and an average mark of at least 40% in the seven qualifying courses other than F19GB1 (Project Preparation).

   The Progression Board may permit a student to be re-assessed in any qualifying course not taken in the final stage in order to gain credits for the course, provided that the mark or grade obtained in the first assessment of any such course is used in determining the classification of the degree to be awarded.

   (c) Progression through the programme for an Ordinary degree normally requires:
   - Stage 1: a minimum of Grade D in at least 5 courses including Calculus A, Calculus B, Algebra A and Problem Solving and at least one of Introduction to Psychology 1, Introduction to Psychology 2
   - Stage 2: a minimum of Grade D in at least 5 courses including Cognitive Psychology 1, Cognitive Psychology 2, Multivariable Calculus and Real Analysis A, Multivariable Calculus and Real Analysis B, and Linear Algebra

Award Requirements

Honours degree classification is determined by performance in
- Stage 3, averaged over all qualifying courses (40%)
- Stage 4, averaged over all qualifying courses (60%)

The qualifying courses are all courses in these years rated SCQF level 9 or 10.
10. Educational Aims of the Course

The principal aims of the course are to

- provide high-quality undergraduate education in a wide range of subjects in modern mathematics and psychology
- enable students to develop detailed knowledge and critical understanding of both theoretical and applied elements of mathematics and psychology
- provide students with training and practical experience of modelling, analysing and interpreting mathematical and real-world problems
- enable students to communicate and work effectively with peers and academic staff, demonstrating appropriate levels of autonomy, initiative, and responsibility
- provide students at the undergraduate level with the opportunity to plan and write a dissertation requiring detailed and critical understanding in an area of mathematics
- equip students with the grounding in mathematics and psychology necessary to go onto to further study or straight into graduate jobs

11. The Course provides opportunities for learners to achieve the following outcomes:

**Subject Mastery**

**Understanding, Knowledge and Cognitive Skills**

On completion of the course students should be able to:

- demonstrate an understanding across a broad range of mathematics and psychology
- demonstrate a detailed knowledge and understanding in certain specific areas of both subjects
- demonstrate an understanding of the power of abstraction and of the notions of proof and logical reasoning
- demonstrate an appreciation of the usefulness of mathematics over a wide range of applications
- develop and evaluate logical arguments
- solve problems by applying a range of concepts and principles in loosely defined contexts and showing effective judgement in the selection and application of tools and techniques.

**Scholarship, Enquiry and Research**

On completion of the course students should be able to:

- demonstrate a good level of skill in calculation and in mathematical manipulation
- demonstrate the ability to present rigorous arguments
- model real-life situations in mathematical terms and analyse the resulting models
- demonstrate computational skills involving the use of a range of software packages.
- demonstrate an understanding of the nature of psychological theory and evidence and of the relationship between them across a broad range of topics.
<table>
<thead>
<tr>
<th>14. Course Code</th>
<th>F1D1-MWP</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Course Title</td>
<td>Mathematics with Psychology</td>
</tr>
<tr>
<td>16. School</td>
<td>Mathematical &amp; Computer Sciences</td>
</tr>
<tr>
<td>17. Type</td>
<td>BSc</td>
</tr>
<tr>
<td>18. Awards</td>
<td>BSc Honours, BSc Ordinary, DipHE, CertHE</td>
</tr>
<tr>
<td>19. Course Accredited by</td>
<td></td>
</tr>
<tr>
<td>6. UCAS Code</td>
<td>G1C8</td>
</tr>
<tr>
<td>7. QAA Subject Benchmarking Group(s)</td>
<td>Mathematics</td>
</tr>
<tr>
<td>8. Date of Production/Revision</td>
<td>31 March 2008/201415</td>
</tr>
</tbody>
</table>

### Personal Abilities

#### Industrial, Commercial and Professional Practice

On completion of the course, students will have the knowledge and skills for the development, application and consequent analysis of mathematics and mathematical models and an awareness of the issues involved in obtaining and evaluating psychological evidence as currently required in modern employment sectors. They will be able to identify, analyse and solve problems, and discuss issues at a professional level; they will also be able to critically review existing practices and will be in a strong position to move on to a professional environment, with sound knowledge, confidence and awareness of the nature of that environment and the demands it will make.

#### Autonomy, Accountability and Working with Others

On completion of the course students will be able to:

- plan and organise their own learning through self management and time management
- demonstrate the ability to work with relatively little guidance or support, to undertake self-directed work and to meet deadlines
- communicate effectively at all levels and using a range of media
- interact effectively with professionals from a wide and diverse range of areas

#### Communication, Numeracy and ICT

On completion of the course, students will be numerate, able to make presentations on specialised topics and able to communicate well with peers and other colleagues. They will have extensive IT knowledge and skills and will be able to use them confidently. They will also have the necessary background to enable them to be ready and able to communicate on technical and general matters with peers and senior colleagues.

### 12. Approaches to Teaching and Learning:

The following teaching methods are used: lectures, tutorials, computing laboratory work, coursework, projects. Teaching on the course is student-focused, with students encouraged to take responsibility for their own learning and development. In addition, students learn through structured group work in problems solving, collaborative student presentations, and independent study and technical project work. Resource-based and problem-based teaching styles are used to facilitate the motivational and assimilative phases of the learning process. The level and type of support available via VISION will vary between the modules as is appropriate for the subject matter.

Approaches to learning and teaching are continually reviewed and developed with the aim of matching them to the abilities and experiences of the students.

### 13. Assessment Policies:

The assessment policy for the course incorporates a range of assessment types. Continuous assessment during some modules and summative assessment at the conclusion of modules both contribute to the overall assessment and are used to formally measure achievement in specified learning outcomes. Understanding, knowledge and subject-specific skills are assessed by coursework assignments and written examinations. Formative assessment is used to provide feedback and to inform student learning.

Approaches to assessment are continually reviewed. Specific details about methods of assessment are provided in the appropriate module descriptors.