# School of Mathematics & Statistics

#### **Entry to Honours**

Students who attain an average of grade 11.0 or above at the first sitting in the requisite 2000-level modules and who meet all other programme requirements will be given automatic offers of entry into Honours programmes\*.

\*Apart from students on Integrated Masters degrees.

Students permitted automatic entry to Honours will only be permitted to trail one module to a maximum of 30 subhonours credits into Honours.

This School also allows 'Qualified Entry to Honours' as defined in: Entry to Honours

#### **BSc / MA Honours**

The general requirements are 480 credits over a period of normally four years (and not more than five years) or part-time equivalent, of which the final two years form an approved Honours programme of 240 credits, of which 90 credits are at 4000 level and at least a further 120 credits at 3000 and/or 4000 levels.

#### BSc / MA Honours with Integrated Year Abroad

The general requirements are 540 credits over a period of normally five years (and not more than six years) or part-time equivalent, of which the final three years are an approved Honours programme of 300 credits, of which 60 credits are gained during the integrated year abroad, 90 credits are at 4000 level and at least a further 120 credits at 3000 and/or 4000 levels.

#### **MMath Honours**

The general requirements are 600 credits over a period of normally five years (or four years with advanced standing credits) and in no circumstances more than six years or part-time equivalent, of which the final years form an approved Honours programme of at least 330 credits of which 120 credits are at 5000 level and at least a further 210 credits are at 3000 level and above.

**Exchange scheme:** In the case of students who spend part of the BSc/MA Honours programme abroad on a recognised Exchange scheme, the Programme Requirements will be amended to take into account courses taken while abroad. (see <a href="https://www.st-andrews.ac.uk/studyabroad/outgoingstudents/AcademicInformation">www.st-andrews.ac.uk/studyabroad/outgoingstudents/AcademicInformation</a>).

#### Applied Mathematics - Integrated Masters (5-year) MMath

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year (2014/5 or later): 120 credits: MT2501 - MT2508 passed with an average grade of the

best four grades of MT2501 - MT2508 being 15 or higher and no more than two

grades of MT2501 - MT2508 below 11.

Third, Fourth and Fifth Years (For those who entered Honours in 2014/5 or earlier):

45 credits: MT3501 and MT3503 and MT3504;

60 credits: MT3601 and MT4005 and MT4509 and MT4510;

Third, Fourth and Fifth Years (For those entering Honours in 2015/6 or later):

 $120\ credits : MT3501\ \mbox{and}\ \mbox{MT3502}\ \mbox{and}\ \mbox{MT3503}\ \mbox{and}\ \mbox{MT3504}\ \mbox{and}\ \mbox{MT3506}\ \m$ 

MT4005 and MT4509 and MT4510;

Third, Fourth and Fifth Years (for all students regardless of year of entry to Honours):

Between 15 and 20 credits: MT4112 (recommended) **or** MT4111 **or** MT5611; 60 credits in three of: MT5802, MT5806, MT5809, MT5810, MT5852, MT5990;

40 credits: MT5999 (Fifth Year only);

20 further credits from: MT5000 - MT5753, MT5757 - MT5999, ID5059;

Further credits: MT3000 - MT5753, MT5757 - MT5999, ID5059, to a total of 360 credits across Third,

Fourth and Fifth Years, except that 30 of these credits in Third or Fourth Year may be substituted by credits from another Level or School, with permission of the

Adviser of Studies and any other School involved.

## Applied Mathematics – Integrated Masters MMath (Fast Track)

Approved candidates will be awarded (60 in 2013/4) 90 (in 2014/5 or later) advanced standing credits

Applied Mathematics - Integrated Masters MMath (Fast Track), entrants 2013/4 or earlier:

First Year (2013/4): 20 credits: MT1002;

30 credits: MT2001 - with a pass at grade 15 or better.

Second Year: 90 credits: MT2502, MT2504-MT2508;

30 credits in two of: MT3501, MT3503, MT3504.

An average of 13.5 on the 2000-level modules taken (including MT2001) with no

more than two below grade 11 required to progress into Honours.

Third and Fourth Years (For those who entered Honours in 2014/5 or earlier):

15 further credits: MT3501 or MT3503 or MT3504

60 credits: MT3601 and MT4005 and MT4509 and MT4510

Third and Fourth Years (For those entering Honours in 2015/6):

15 further credits: MT3501 or MT3503 or MT3504

75 credits: MT3502 and MT3506 and MT4005 and MT4509 and MT4510

Third and Fourth Years (for all students regardless of year of entry to Honours):

Between 15 and 20 credits: MT4112 (recommended) **or** MT4111 **or** MT5611; 60 credits in three of: MT5802, MT5806, MT5809, MT5810, MT5852, MT5990;

40 credits: MT5999 (Fourth Year only);

20 further credits from: MT5000 - MT5753, MT5757 - MT5999, ID5059;

Further credits: MT3000 - MT5753, MT5757 - MT5999, ID5059, to a total of 300

credits across Third and Fourth Years.

In total, at least 330 credits must be achieved at 3000, 4000 and 5000 level, including at least 120 credits at 5000 level.

Applied Mathematics - Integrated Masters MMath (Fast Track), entrants 2014/5 or later:

First Year: 20 credits: MT1002;

10 credits: MT1010.

75 credits: MT2501, MT2503, MT2504, MT2506, MT2507.

15 credits: MT2505 or MT2508

All six 2000-level modules passed with the average of the best four grades of the six of MT2501–MT2508 taken being 15 or higher and no more than two grades of the

six of MT2501-MT2508 taken below 11.

Second Year: 15 credits: MT2502

15 further credits: MT2505 or MT2508

Second, Third and Fourth Years:

 $120\ credits$ : MT3501 and MT3502 and MT3503 and MT3504 and MT3506 and

MT4005 and MT4509 and MT4510;

Between 15 and 20 credits: MT4112 (recommended) **or** MT4111 **or** MT5611; 60 credits in three of: MT5802, MT5806, MT5809, MT5810, MT5852, MT5990;

40 credits: MT5999 (Fourth Year only);

20 further credits from: MT5000 - MT5753, MT5757 - MT5999, ID5059;

Further credits: MT3000 - MT5753, MT5757 - MT5999, ID5059, to a total of 390 credits (including the two 2000-level MT modules) across Second, Third and Fourth Years, except that 30 of these credits in Second or Third Year may be substituted by credits from another Level or School, with permission of the Adviser of Studies and

any other School involved.

## **Mathematics - Single Honours BSc or MA**

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year: 15 credits: MT2501

At least 45 credits: MT2502-MT2508 in at least one of the following: (MT2502, MT2503 & MT2505), (MT2502, MT2504 & MT2505), (MT2502, MT2504 & MT2508), (MT2503, MT2504 & MT2508), (MT2503, MT2506 & MT2507), or

(MT2504, MT2505 & MT2508)

passed with the average of the best four grades on MT2501-MT2508 being 11 or

higher to progress into Honours.

Third and Fourth Years (for those who entered Honours 2014/5 or earlier):

45 credits: MT3501 and MT3503 and MT3504;

15 credits: MT3600 or MT3601 or MT3606;

Third and Fourth Years (for those entering Honours 2015/6 or later):

60 credits in four of: MT3501 - MT3508

Third and Fourth Years (for all students, regardless of year of entry to Honours):

15 credits: MT3607 or MT4111 or MT4112 or MT4113;

15 credits: MT4599 (in Fourth Year only);

150 further credits: MT3000 - MT4999 (except MT4794 - MT4797), except that 30 of these credits in Third Year may be substituted by credits from another Level or School, with permission of the Adviser of Studies and any other School involved.

#### **Mathematics - Joint Honours BSc or MA**

(BSc Honours)

**Mathematics and one of:** Biology, Chemistry, Computer Science, Economics, Geography, Internet Computer Science, Logic & Philosophy of Science, Management Science, Philosophy, Physics, Psychology

Not available to entrants from 2011-12

(MA Honours)

Mathematics and one of: Ancient History, Arabic W, Art History, Biblical Studies, Classical Studies, Economics, English, German W, Hebrew, International Relations, Italian W, Latin, Mediaeval History, Modern History, Philosophy, Psychology, Russian W, Scottish History H, Spanish W, Theological Studies

W Available also as 'With Integrated Year Abroad' degree

<sup>H</sup> Timetable clash exists, this combination does not follow the standard pathway. Contact the School of History for more information.

# Mathematics element of Joint BSc or MA Honours (except Mathematics and Computer Science or Physics or Psychology with BPS recognition):

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year: 15 credits: MT2501

At least 45 credits: MT2502 - MT2508 including at least one of the following: (MT2502, MT2503 & MT2505), (MT2502, MT2504 & MT2505), (MT2503, MT2506 & MT2507), (MT2502, MT2504 & MT2508) or (MT2504, MT2505 & MT2508) passed with the average of the best 4 grades on MT2501 - MT2508 being 11 or higher

Third and Fourth Years (for those who entered Honours 2014/5 or earlier):

30 credits in two of: MT3501, MT3503, MT3504;

15 credits: MT3600 **or** MT3601; 15 credits: MT4111 **or** MT4112;

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year only);

45 further credits: MT3000-MT4999.

Third and Fourth Years (for those entering Honours 2015/6 or later):

45 credits in three of: MT3501 - MT3508

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year only);

60 further credits: MT3000 - MT4999.

In total, 240 credits must be achieved at 3000 and 4000 level, including at least 90 credits at 4000 level.

# Mathematics element of Mathematics and Computer Science - Joint BSc Honours:

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year 15 credits: MT2501

At least 45 credits: MT2502 - MT2508 including at least one of the following: (MT2502, MT2503 & MT2505), (MT2502, MT2504 & MT2505), (MT2503, MT2506 & MT2507), (MT2502, MT2504 & MT2508) or (MT2504, MT2505 & MT2508) passed with the average of the best 4 grades on MT2501 - MT2508 being 11 or higher

Third and Fourth Years for those who entered Honours 2014/5 or earlier):

30 credits in two of: MT3501, MT3503, MT3504;

15 credits: MT3600 or MT3601:

Third and Fourth Years (for those entering Honours 2015/6 or later):

45 credits in three of: MT3501 - MT3508

Third and Fourth Years (for all students, regardless of year of entry to Honours):

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year only);

60 further credits: MT3000 - MT4999.

In total, 240 credits must be achieved at 3000 and 4000 level, including at least 90 credits at 4000 level.

<sup>&</sup>lt;sup>L</sup> Not available to entrants from 2015-16

Mathematics element of Mathematics and Psychology (with BPS recognition) - Joint BSc or MA

**Honours:** 

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year: 15 credits: MT2501

> At least 45 credits: MT2502 - MT2508 including at least one of the following: (MT2502, MT2503 & MT2505), (MT2502, MT2504 & MT2505), (MT2503, MT2506 & MT2507), (MT2502, MT2504 & MT2508) or (MT2504, MT2505 & MT2508) passed with the average of the best 4 grades on MT2501 - MT2508 being 11 or higher

Third and Fourth Years (for those who entered Honours 2014/5 or earlier):

30 credits in two of: MT3501, MT3503, MT3504:

15 credits: MT3600 or MT3601: 15 credits: MT4111 or MT4112;

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year only);

15 further credits: MT3000-MT4999

Third and Fourth Years (for those entering Honours 2015/6 or later):

45 credits in three of: MT3501 - MT3508

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year only);

30 further credits: MT3000 - MT4999.

In total, 240 credits must be achieved at 3000 and 4000 level, including at least 90 credits at 4000 level.

# **Mathematics - Computer Science Joint Honours BSc**

Direct entry to second year for approved candidates with 120 advanced standing credits

Second Year: 15 credits: MT2501

> At least 45 credits: MT2502 - MT2508 including at least one of the following: (MT2502, MT2503 & MT2505), (MT2502, MT2504 & MT2505), (MT2503, MT2506 & MT2507), (MT2502, MT2504 & MT2508) or (MT2504, MT2505 & MT2508) passed with the average of the best 4 grades on MT2501 - MT2508 being 11 or

higher

Third and Fourth Years (for those entering Honours 2015/6 or later):

45 credits in three of: MT3501 - MT3508

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year

only);

60 further credits: MT3000 - MT4999.

In total, 240 credits must be achieved at 3000 and 4000 level, including at least 90 credits at 4000 level

and above.

#### **Mathematics and Physics - Joint Honours BSc**

First Year: 60 credits: PH1011 and PH1012 and MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Additional credits if needed up to 120.

Second Year: 60 credits: PH2011 and PH2012 passed with an average of grade 11 or better;

30 credits: MT2501 and MT2503

30 credits: one of either: (MT2502 and MT2505) or (MT2506 and MT2507)

passed with an average grade of 11 or better in the four 2000-level MT modules

Third Year: 45 credits: PH3007 and PH3061 and PH3062 and PH3080;

For those who took MT2502 and MT2505 in second-year: 45 credits: MT3502 and

MT3505 and PH3081

For those who took MT2506 and MT2507 in second-year: 30 credits: MT3504 and

(MT3503 or MT3506)

Further credits to a total of 120 credits: Normally chosen from PH and MT Honours

modules.

Fourth Year: 45 credits: PH3012 and PH4039 and PH4040

15 or 30 credits: MT4599 **or** PH4111 or other, approved, joint Honours project Further credits to a total of 120 credits: usually chosen from PH and MT Honours

modules and ID4001

In total, 240 credits must be achieved at 3000 and 4000 level with at least 90 of these at 4000 level. At least 100 credits must be from PH or AS modules and at least 100 credits from MT modules. ID4001 taken in the respective school counts towards the totals for PH/AS or MT.

#### Mathematics – Integrated Masters (5-year) MMath

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year: 120 credits: MT2501 - MT2508 passed with an average grade of the best four

grades of MT2501 - MT2508 being 15 or higher and no more than two grades of

MT2501 - MT2508 below 11.

Third, Fourth and Fifth Years (for those who entered Honours in 2014/5 or earlier):

45 credits: MT3501 and MT3503 and MT3504; 15 credits: MT3600 or MT3601 or MT3606;

Third, Fourth and Fifth Years (for those entering Honours in 2015/6 or later):

60 credits: MT3501 and MT3502 and MT3503 and MT3504;

15 credits: MT3505 or MT3506 or MT3507 or MT3508;

Third, Fourth and Fifth Years (for all students, regardless of year of entry to Honours):

30 credits in two of: MT4003, MT4004, MT4509, MT4510, MT4606;

Between 15 and 20 credits: MT3607 or MT4111 or MT4112 or MT4113 or

MT5611;

60 credits from: MT5751 - MT5753, MT5757, MT5758, MT5802, MT5806, MT5809, MT5810, MT5821, MT5823 - MT5830, MT5836, MT5852, MT5990,

ID5059:

40 credits: MT5999 (Fifth Year only);

20 further credits from: MT5000 - MT5753, MT5757 - MT5999, ID5059;

Further credits: MT3000 - MT5753, MT5757 - MT5999, ID5059, to a total of 360 credits across Third, Fourth and Fifth Years, except that 30 of these credits in Third or Fourth Year may be substituted by credits from another Level or School, with permission of the Adviser of Studies and any other School involved.

In total, at least 330 credits must be achieved at 3000, 4000 and 5000 level, including at least 120 credits

at 5000 level.

## Mathematics - Integrated Masters MMath (Fast Track)

Approved candidates will be awarded 60 (in 2013/4) 90 (in 2014/5 or later) advanced standing credits

Mathematics – Integrated Masters MMath (Fast Track), entrants 2013/4 or earlier:

First Year (2013/4): 20 credits: MT1002;

30 credits: MT2001 - with a pass at grade 15 or better.

Second Year: 90 credits: MT2502, MT2504-MT2508;

30 credits in two of: MT3501, MT3503, MT3504.

An average of 13.5 on the 2000-level modules taken (including MT2001) with no

more than two below grade 11 required to progress into Honours.

Third and Fourth Years (For those who entered Honours in 2014/5 or earlier):

15 further credits: MT3501 or MT3503 or MT3504;

15 credits: MT3600 or MT3601 or MT3606;

Third and Fourth Years (For those entering Honours in 2015/6):

15 further credits: MT3501 or MT3503 or MT3504

15 credits: MT3502

15 credits: MT3505 or MT3506 or MT3507 or MT3508

Third and Fourth Years (for all students regardless of year of entry to Honours):

30 credits in two of: MT4003, MT4004, MT4509, MT4510, MT4606;

Between 15 and 20 credits: MT3607 or MT4111 or MT4112 or MT4113, or

MT5611;

60 credits from: MT5751 - MT5753, MT5757, MT5758, MT5802, MT5806, MT5809, MT5810, MT5821, MT5823 - MT5830, MT5836, MT5852, MT5990,

ID5059;

40 credits: MT5999 (Fourth Year only);

20 further credits from: MT5000 - MT5753, MT5757 - MT5999, ID5059;

Further credits: MT3000 - MT573, MT5757 - MT5999, ID5059, to a total of

300 credits from these ranges across Third and Fourth Years.

Mathematics – Integrated Masters MMath (Fast Track), entrants 2014/5 or later:

First Year: 20 credits: MT1002;

10 credits: MT1010;

45 credits: MT2501, MT2503, MT2504

45 credits in three of: MT2505, MT2506, MT2507, MT2508.

All six 2000-level modules passed with the average of the best four grades of the six of MT2501–MT2508 taken being 15 or higher and no more than two grades

of the six of MT2501-MT2508 taken below 11.

Second Year: 15 credits: MT2502;

15 further credits in: MT2505, MT2506, MT2507, MT2508.

Second, Third and Fourth Years:

60 credits: MT3501 and MT3502 and MT3503 and MT3504; 15 credits: MT3505 or MT3506 or MT3507 or MT3508;

30 credits in two of: MT4003, MT4004, MT4509, MT4510, MT4606;

At least 15 credits: MT3607 **or** MT4111 **or** MT4112 **or** MT4113 **or** MT5611; 60 credits from: MT5751 - MT5753, MT5757, MT5758, MT5802, MT5806, MT5809, MT5810, MT5821, MT5823 - MT5830, MT5836, MT5852, MT5990,

ID5059;

40 credits: MT5999 (Fourth Year only);

20 further credits from: MT5000 - MT5753, MT5757 - MT5999, ID5059;

Further credits: MT3000 - MT5753, MT5757 - MT5999. ID5059, to a total of 390 credits (including the two 2000-level MT modules) across Second, Third and Fourth Years, except that 30 of these credits in Second or Third Year may be substituted by credits from another Level or School, with permission of the

Adviser of Studies and any other School involved.

In total, at least 330 credits must be achieved at 3000, 4000 and 5000 level, including at least 120 credits at 5000 level.

# Pure Mathematics - Integrated Masters (5-year) MMath

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year: 120 credits: MT2501 - MT2508 passed with an average grade of the best four

grades of MT2501 - MT2508 being 15 or higher and no more than two grades of

MT2501 - MT2508 below 11.

Third, Fourth and Fifth Years (for those who entered Honours in 2014/5 or earlier):

45 credits: MT3501 and MT3503 and MT3504;

45 credits: MT3600 and MT4003 and MT4004;

Third, Fourth and Fifth Years (for those entering Honours in 2015/6 or later):

105 credits: MT3501 and MT3502 and MT3503 and MT3504 and MT3505 and

MT4003 and MT4004;

Third, Fourth and Fifth Years (for all students, regardless of year of entry to Honours):

Between 15 and 20 credits: MT4111 or MT4112 or MT5611;

60 credits in three of: MT5821, MT5823 - MT5830, MT5836, MT5990;

40 credits: MT5999 (Fifth Year only);

20 further credits from: MT5000 - MT5753, MT5757 - MT5999, ID5059;

Further credits: MT3000 - MT5753, MT5757 - MT5999, ID5059, to a total of 360 credits across Third, Fourth and Fifth Years, except that 30 of these credits in Third or Fourth Year may be substituted by credits from another Level or School,

with permission of the Adviser of Studies and any other School involved.

#### Pure Mathematics - Integrated Masters MMath (Fast Track)

Approved candidates will be awarded 60 (2013/4) 90 (2014/5) advanced standing credits

Pure Mathematics - Integrated Masters MMath (Fast Track), entrants 2013/4 or earlier:

First Year (2013/4): 20 credits: MT1002;

30 credits: MT2001 - with a pass at grade 15 or better.

Second Year: 90 credits: MT2502, MT2504-MT2508;

30 credits in two of: MT3501, MT3503, MT3504.

An average of 13.5 on the 2000-level modules taken (including MT2001) with no

more than two below grade 11 required to progress into Honours.

Third and Fourth Years (For those who entered Honours in 2014/5 or earlier):

15 further credits: MT3501 or MT3503 or MT3504;

45 credits: MT3600 and MT4003 and MT4004;

Third and Fourth Years (For those entering Honours in 2015/6):

15 further credits: MT3501 or MT3503 or MT3504;

60 credits: MT3502 and MT3505 and MT4003 and MT4004

Third and Fourth Years (for all students regardless of year of entry to Honours):

Between 15 and 20 credits: MT4111 or MT4112 or MT5611;

60 credits in three of: MT5821, MT5823 - MT5830, MT5836, MT5990;

40 credits: MT5999 (Fourth Year only);

20 further credits from: MT5000 - MT5753, MT5757 - MT5999, ID5059;

Further credits: MT3000 - MT5753, MT5757 - MT5999, ID5059, to a total of 300

credits across Third and Fourth Years.

In total, at least 330 credits must be achieved at 3000, 4000 and 5000 level, including at least 120 credits at 5000 level.

#### Pure Mathematics – Integrated Masters MMath (Fast Track), entrants 2014/5 or later:

First Year: 20 credits: MT1002;

10 credits: MT1010

60 credits: MT2501, MT2503, MT2504, MT2505 30 credits in two of: MT2506, MT2507, MT2508.

All six 2000-level modules passed with the average of the best four grades of the six of MT2501–MT2508 taken being 15 or higher and no more than two grades

of the six of MT2501-MT2508 taken below 11.

Second Year: 15 credits: MT2502

15 further credits in: MT2506, MT2507, MT2508

Second, Third and Fourth Years:

 $105\ credits : MT3501\ \text{and}\ MT3502\ \text{and}\ MT3503\ \text{and}\ MT3504\ \text{and}\ MT3505\ \text{and}$ 

MT4003 and MT4004;

Between 15 and 20 credits: MT4111 or MT4112 or MT5611;

60 credits in three of: MT5821, MT5823 - MT5830, MT5836, MT5990;

40 credits: MT5999 (Fourth Year only);

20 further credits from: MT5000 - MT5753, MT5757 - MT5999, ID5059;

Further credits (2015/6 or later): MT3000 - MT5753, MT5757 - MT5999, ID5059, to a total of 390 credits (including the two 2000-level MT modules) across Second, Third and Fourth Years, except that 30 of these credits in Second or Third Year may be substituted by credits from another Level or School, with permission of the Adviser of Studies and any other School involved.

#### Mathematics 'with' ... - Honours BSc

(BSc Honours) (MA Honours)

Mathematics with one of: Geography

Mathematics with either Russian wor Spanishw

W Available also as 'With Integrated Year Abroad'

degree

Mathematics Major element of BSc or MA Honours 'with' degree:

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year: 15 credits: MT2501;

At least 45 credits: MT2502 - MT2508 including at least one of the following: (MT2502, MT2503 & MT2505), (MT2502, MT2504 & MT2505), (MT2503, MT2506 & MT2507), (MT2502, MT2504 & MT2508) or (MT2504, MT2505 & MT2508) passed with the average of the best 4 grades on MT2501 - MT2508

being 11 or higher

Third and Fourth Years (for students who entered Honours in 2014/5 or earlier):

30 credits in two of: MT3501, MT3503, MT3504;

15 credits: MT3600 **or** MT3601; 15 credits: MT4111 **or** MT 4112;

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year

only);

105 further credits: MT3000 - MT4999.

Third and Fourth Years (for those entering Honours in 2015/6 or later):

45 credits in three of: MT3501 - MT3508;

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year

only);

120 further credits: MT3000 - MT4999.

In total, 240 credits must be achieved at 3000 and 4000 level, including at least 90 credits at 4000

level.

# **Mathematics and Theoretical Physics - Joint Integrated Masters MPhys**

First Year: 60 credits: PH1011 and PH1012 and MT1002.

(Students without pre requisite for MT1002 will take MT1001 in Semester 1.)

Additional credits if needed up to 120

Second Year: 60 credits: PH2011 and PH2012 - with an average of grade 15 or better.

30 credits: MT2501 and MT2503

30 credits: one of either (MT2502 and MT2505) or (MT2506 and MT2507)

passed with an average of grade 15 or better in the four 2000-level MT modules

Third Year 75 credits: MT3501 and PH3007 and PH3061 and PH3062 and PH3080 and PH4038

For those who took MT2502 and MT2505 in second-year: 45 credits: MT3502 and

MT3505 and PH3081

For those who took MT2506 and MT2507 in second-year: 30 credits: MT3504 and

(MT3503 or MT3506)

Further credits, if required, to a total of 120 credits: normally chosen from MT and

PH Honours modules.

Fourth Year: 75 credits: PH3012 and PH4028 and PH4032 and PH4039 and PH4040

Further credits to a total of 120 credits: usually chosen from MT and PH honours

modules and ID4001

Fifth Year: 40 or 60 credits: MT5999 or PH5103;

At least 15 credits from: PH5002, PH5003, PH5004, PH5011, PH5012 (unless

already taken);

At least 40 credits: MT5000 - MT5899 (unless already taken in Fourth Year); Further credits if necessary to a total of at least 145 across Third, Fourth and Fifth Years from 3000 - , 4000 - and 5000 - level MT modules (except that 30 further

credits from MT2000 - MT2999 may be substituted).

Further credits if necessary to a total of at least 145 across Third, Fourth and Fifth Years from 3000 - , 4000 - and 5000 - level PH and AS modules (except that 15

further credits from a physics-based ID4001 may be substituted).

In total, at least 330 credits must be achieved at 3000, 4000 and 5000 level with at least 120 of these at 5000 level.

#### **Chemistry with Mathematics – Integrated Masters MChem**

First Year: 80 credits: CH1401 and CH1402 and CH1601 and MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year: 60 credits: CH2501 and CH2701 - with an average of grade 15 or better

15 credits: MT2501 - with a pass at grade 15 or better;

At least 45 credits: MT2502 - MT2508 in at least one of the following: (MT2502, MT2503 and MT2505), (MT2502, MT2504 and MT2505), (MT2502, MT2504 and MT2508), (MT2503, MT2506 and MT2507) or (MT2504, MT2505 and MT2508) passed at grades of 11 or better.

Third Year (Chemistry): 20 credits: CH3441;

60 credits in six of: CH3431, CH3514, CH3512, CH3521, CH3615, CH3621,

CH3712, CH3715, CH3717, CH3721;

Fourth Year (Chemistry): 50 credits: CH4442;

20 credits in two of: CH4514, CH4515, CH4612, CH4614, CH4615, CH4714,

CH4715, CH4717;

Third and Fourth Years (Maths) (for those who entered Honours in 2014/5 or earlier):

30 credits in two of: MT3501, MT3503, MT3504;

15 credits: MT3600 or MT3601;

Third and Fourth Years (Maths) (for those entering Honours in 2015/6 or later):

45 credits in three of: MT3501 - MT3508;

Third and Fourth Years (Maths) (for all students, regardless of the year of entry to Honours):

45 further credits: MT3000 - MT4598, MT4600 - MT4999.

Fifth Year: 90 credits: CH5441 and CH5711 and CH5713 and CH5714 and CH5715;

30 credits in three of: CH5511, CH5516 - CH5518, CH5611 - CH5616, CH5717.

## Statistics - Single Honours BSc or MA

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year: 60 credits: MT2501, MT2503, MT2504 and MT2508, passed with an average

grade of 11 or higher in these modules.

Third and Fourth Years (for those who entered Honours in 2014/5 or earlier):

Between 60 and 70 credits: MT3501 and MT3606 and (MT4606 or MT5701)

and (MT4607 or MT5753);

Third and Fourth Years (for those enter Honours in 2015/6 or later):

Between 75 and 85 credits: MT3501 and MT3507 and MT3508 and (MT4606

or MT5701) and (MT4607 or MT5753);

Third and Fourth Years (for all students, regardless of year of entry to Honours):

15 credits: MT4113 (recommended) or MT3607 or MT4111 or MT4112 30 or 35 credits in two of: (MT4531 **or** MT5831), MT4608, MT4609;

15 credits: MT4599 (in Fourth Year only)

Further credits: MT3000 - MT4999 (except MT4794 - MT4797) to a total of 240 credits across Third and Fourth Years, except that 30 of these credits in Third Year may be substituted by credits from another Level or School, with permission of the Adviser of Studies and any other School involved.

In total, at least 210 credits must be achieved at 3000 and 4000 level, including at least 90 credits at 4000

level.

## **Statistics - Joint Honours BSc or MA**

(BSc Honours)

**Statistics and one of:** Biology, Computer Science, Economics, Geography, Internet Computer Science <sup>N</sup>, Logic & Philosophy of Science <sup>L</sup>, Management Science, Philosophy, Psychology BPS

Not available to entrants from 2011-12

(MA Honours)

**Statistics and either** Economics **or** Philosophy **or** Psychology BPS

#### Statistics element of Joint Honours BSc or MA

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year: 60 credits: MT2501, MT2503, MT2504 and MT2508, passed with an average

grade of 11 or higher in these modules.

Third and Fourth Years (for those who entered Honours in 2014/5 or earlier):

30 credits: MT3501 and MT3606;

Between 30 and 40 credits in two of: MT3706, MT4528, (MT4531 or MT5831),

(MT4606 or MT5701), (MT4607 or MT5753), MT4608, MT4609;

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year

only);

Further credits: MT3000 - MT4999 to a total of 120 credits.

Third and Fourth Years (for those entering Honours in 2015/6 or later):

45 credits: MT3501 and MT3507 and MT3508;

Between 15 and 20 credits: MT4531 or MT4606 or MT5831 or MT5701;

Between 15 and 20 credits: MT4607 or MT5753;

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year

only);

Further credits: MT3000 - MT4999 to a total of 120 credits.

In total, 240 credits must be achieved at 3000 and 4000 level, including at least 90 credits at 4000 level.

<sup>&</sup>lt;sup>L</sup> Not available to entrants from 2015-16

<sup>&</sup>lt;sup>BPS</sup> Available with or without BPS recognition - Psychology module choices determine recognition - see Psychology entry

#### **Statistics - Computer Science Joint Honours BSc**

Direct entry to second year for approved candidates with 120 advanced standing credits

Second Year: 60 credits: MT2501, MT2503, MT2504 and MT2508, passed with an average

grade of 11 or higher in these modules.

Third and Fourth Years:

45 credits: MT3501 and MT3507 and MT3508;

Between 15 and 20 credits: MT4531 or MT4606 or MT5831 or MT5701;

Between 15 and 20 credits: MT4607 or MT5753;

15 credits: MT4599 or other, approved, joint Honours project (in Fourth Year

only);

Further credits: MT3000 - MT4999 to a total of 120 credits.

In total, 240 credits must be achieved at 3000 and 4000 level, including at least 90 credits at 4000 level and above.

## Statistics - Integrated Masters (5-year) MMath

First Year: 20 credits: MT1002.

(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)

Second Year: 120 credits: MT2501 - MT2508 passed with an average grade of the best

four grades of MT2501 - MT2508 being 15 or higher and no more than two

grades of MT2501 - MT2508 below 11.

Third, Fourth and Fifth Years (for those who entered Honours in 2014/5):

65 credits: MT3501 and MT3606 and (MT3607 or MT4113) and MT5753;

Third, Fourth and Fifth Years (for those entering Honours in 2015/6 or later):

80 credits: MT3501 and MT3507 and MT3508 and MT4113 and MT5753;

Third, Fourth and Fifth Years (for all students, regardless of year of entry to Honours):

15 credits: MT4527 **or** MT4608; 20 credits: MT5701 **or** MT5831;

Between 30 and 40 credits in two of: MT5751, MT5752, MT5757, MT5758,

ID5059;

40 credits: MT5999 (on a statistical topic - Fifth Year only); Further credits: MT5000 - MT5753, MT5757 - MT5999, ID5059, if

necessary, to a total of at least 120 credits from these ranges;

Further credits: MT3000 - MT5753, MT5757 - MT5999, ID5059, to a total of 360 credits across Third, Fourth and Fifth Years, except that 30 of these credits in Third or Fourth Year may be substituted by credits from another Level or School, with permission of the Adviser of Studies and any other

School involved.

#### Statistics - Integrated Masters MMath (Fast Track)

Approved candidates will be awarded 60 (2013/4) 90 (2014/5) advanced standing credits

Statistics - Integrated Masters MMath (Fast Track), entrants 2013/4 or earlier:

First Year (2013/4): 20 credits: MT1002;

30 credits: MT2001 - with a pass at grade 15 or better.

Second Year: 90 credits: MT2502, MT2504-MT2508;

15 credits: MT3501;

15 further credits: MT3000-MT4999.

An average of 13.5 on the 2000-level modules taken (including MT2001) with no

more than two below grade 11 required to progress into Honours.

Third and Fourth Years (For those who entered Honours in 2014/5 or earlier):

50 credits: MT3606 and (MT3607 or MT4113) and MT5753;

Third and Fourth Years (For those entering Honours in 2015/6):

65 credits: MT3507 and MT3508 and MT4113 and MT5753

Third and Fourth Years (for all students regardless of year of entry to Honours):

15 credits: MT4527 **or** MT4608; 20 credits: MT5701 **or** MT5831:

Between 30 and 40 credits in two of: MT5751, MT5752, MT5757, MT5758,

ID5059;

40 credits: MT5999 (on a statistical topic - Fourth Year only);

Further credits: MT5000 - MT5753, MT5757 - MT5999, ID5059, if necessary, to a

total of at least 120 credits from these ranges;

Further credits: MT3000 - MT5753, MT5757 - MT5999, ID5059, to a total of 300

credits across Third and Fourth Years.

In total, at least 330 credits must be achieved at 3000, 4000 and 5000 level, including at least 120 credits at 5000 level.

#### Statistics - Integrated Masters MMath (Fast Track), entrants 2014/5 or later:

First Year: 20 credits: MT1002;

10 credits: MT1010

60 credits: MT2501, MT2503, MT2504, MT2508 30 credits in two of: MT2505, MT2506, MT2507

All six 2000-level modules passed with the average of the best four grades of the six of MT2501–MT2508 taken being 15 or higher and no more than two grades of

the six of MT2501-MT2508 taken below 11.

Second Year: 15 credits: MT2502

15 further credits: MT2505, MT2506, MT2507

Second, Third and Fourth Years:

 $80\ credits : MT3501\ and\ MT3507\ and\ MT3508\ and\ MT4113\ and\ MT5753;$ 

Third, Fourth and Fifth Years (for all students, regardless of year of entry to Honours):

15 credits: MT4527 **or** MT4608; 20 credits: MT5701 **or** MT5831;

Between 30 and 40 credits in two of: MT5751, MT5752, MT5757, MT5758,

ID5059;

40 credits: MT5999 (on a statistical topic - Fourth Year only);

Further credits: MT5000 - MT5753, MT5757 - MT5999, ID5059, if necessary, to a

total of at least 120 credits from these ranges;

Further credits: MT3000 - MT5753, MT5757 - MT5999, ID5059, to a total of 390 credits (including the two 2000-level MT modules) across Second, Third, and Fourth Years, except that 30 of these credits in Third or Fourth Year may be substituted by credits from another Level or School, with permission of the

Adviser of Studies and any other School involved.

In total, at least 330 credits must be achieved at 3000, 4000 and 5000 level, including at least 120 credits at 5000 level.

Students still completing degree programmes as defined in previous Course Catalogues should discuss their module selections with their Honours Adviser(s).