

## School of Chemistry

### 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 sub-honours credits into Honours.

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

[Entry to Honours](#)

### BSc 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 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.

### MChem Honours

The general requirements are 600 credits over a period of normally five years (and not more than six years) or part-time equivalent, the final three years of which form an approved Honours programme of 360 credits, of which 120 credits are at 5000 level and at least a further 210 credits at 3000 and 4000 levels.

### MSci Honours

The general requirements are 600 credits over a period of normally five years (and not more than six years) or part-time equivalent, the final three years of which form an approved Honours programme of 360 credits, of which 120 credits are at 5000 level and at least a further 210 credits at 3000 and 4000 levels.

**Other information:** Direct entry into Level 2000 is possible, in which case credit of 120 credits at level 1000 is given on the basis of school examinations.

**Study Abroad:** In the case of students who spend part of the Honours programme on a recognised Study Abroad scheme, the Programme Requirements will be amended to take into account overseas courses which are approved by the relevant St Andrews School in the Learning Agreement.

(see <http://www.st-andrews.ac.uk/studyabroad/outgoingstudents/AcademicInformation/>).

**Professional Accreditation:** Unless otherwise stated all degree programmes in Chemistry are accredited by the Royal Society of Chemistry (RSC) for professional membership.

## Chemistry - Programme Requirements 2014/15 - November 2014

### Biomolecular Science - Single Honours BSc

First Year:	80 credits: BL1101 <b>and</b> BL1102 <b>and</b> CH1401 <b>and</b> CH1601.
Second Year:	60 credits: BL2101 <b>and</b> BL2104 - with passes at grade 11 or better in both 60 credits: CH2501 <b>and</b> CH2601 - with an average of grade 11 or better.
Third Year:	120 credits: BL3301 <b>and</b> BL3310 <b>and</b> CH3431 <b>and</b> CH3612 <b>and</b> CH3613 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3716 <b>and</b> PN3312.
Fourth Year:	65 credits: BL4210 <b>and</b> CH4442; 45 credits in three of: BL4212, BL4213, BL4215, BL4216, BL4222, BL4223; 10 credits in one of: CH4612, CH4614, CH4615, CH5611, CH5612, CH5613, CH5614, CH5616. <i>Alternatively, by special arrangement only:</i> 75 credits: BL4201 <b>and</b> BL4210; 50 credits in five of: CH4612, CH4614, CH4615, CH5611, CH5612, CH5613, CH5614, CH5616.

Other information: This course does not have RSC accreditation

### Biomolecular Science - Single Honours BSc

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

Second Year:	10 credits: CH1202; 60 credits: BL2101 <b>and</b> BL2104 - with passes at grade 11 or better in both 60 credits: CH2501 <b>and</b> CH2601 - with an average of grade 11 or better.
Third Year:	120 credits: BL3301 <b>and</b> BL3310 <b>and</b> CH3431 <b>and</b> CH3612 <b>and</b> CH3613 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3716, PN3312.
Fourth Year:	65 credits: BL4210 <b>and</b> CH4442; 45 credits in three of: BL4212, BL4213, BL4215, BL4216, BL4222, BL4223; 10 credits in two of: CH4612, CH4614, CH4615, CH5611, CH5612, CH5613, CH5614, CH5616. <i>Alternatively, by special arrangement only:</i> 75 credits: BL4201 <b>and</b> BL4210; 50 credits in five of: CH4612, CH4614, CH4615, CH5611, CH5612, CH5613, CH5614, CH5616.

Other information: This course does not have RSC accreditation

### Chemical Sciences - Single Honours BSc

First Year:	60 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601.
Second Year:	90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with an average of grade 11 or better.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3712 <b>and</b> CH3717 <b>and</b> CH3721.
Fourth Year:	50 credits: CH4442; 30 credits: CH4514 <b>and</b> CH4614 <b>and</b> CH4714; 40 credits in four of: CH4515, CH4612, CH4615, CH4713, CH4715, CH5516 - CH5518, CH5612 - CH5614, CH5616, CH5713 - CH5715, CH5717.

Other information: This course is aimed at those who like Chemistry and were good at it at school, who want the varied training that a Chemistry Degree gives, but who do not wish to be professional Chemists. Up to 30 credits from the 3000 - level and 4000 - level modules listed above can be replaced with modules from other relevant Schools.

**Chemical Sciences - Single Honours BSc**

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

Second Year: 10 credits: CH1202;  
90 credits: CH2501 **and** CH2601 **and** CH2701 - with an average of grade 11 or better.

Third Year: 120 credits: CH3431 **and** CH3441 **and** CH3514 **and** CH3512 **and** CH3521 **and** CH3612 **and** CH3615 **and** CH3621 **and** CH3712 **and** CH3717 **and** CH3721.

Fourth Year: 50 credits: CH4442;  
30 credits: CH4514 **and** CH4614 **and** CH4714;  
40 credits in four of: CH4515, CH4612, CH4615, CH4713, CH4715, CH5516 - CH5518, CH5612 - CH5614, CH5616, CH5713 - CH5715, CH5717

Other information: This course is aimed at those who like Chemistry and were good at it at school, who want the varied training that a Chemistry Degree gives, but who do not wish to be professional Chemists. Up to 30 credits from the 3000 - level and 4000 - level modules listed above can be replaced with modules from other relevant Schools.

**Chemistry - Single Honours BSc**

First Year: 60 credits: CH1401 **and** CH1402 **and** CH1601.

Second Year: 90 credits: CH2501 **and** CH2601 **and** CH2701 - with an average of grade 11 or better.

Third Year: 120 credits: CH3431 **and** CH3441 **and** CH3514 **and** CH3512 **and** CH3521 **and** CH3612 **and** CH3615 **and** CH3621 **and** CH3712 **and** CH3717 **and** CH3721.

Fourth Year: 60 credits: CH4442 **and** CH4461;  
30 credits: CH4514 **and** CH4614 **and** CH4714;  
30 credits in three of: CH4515, CH4615, CH4713, CH4715, CH5516 - CH5518, CH5612 - CH5614, CH5616, CH5713-CH5715, CH5717

**Chemistry - Single Honours BSc**

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

Second Year: 10 credits: CH1202;  
90 credits: CH2501 **and** CH2601 **and** CH2701 - with an average of grade 11 or better.

Third Year: 120 credits: CH3431 **and** CH3441 **and** CH3514 **and** CH3512 **and** CH3521 **and** CH3612 **and** CH3615 **and** CH3621 **and** CH3712 **and** CH3717 **and** CH3721.

Fourth Year: 60 credits: CH4442 **and** CH4461;  
30 credits: CH4514 **and** CH4614 **and** CH4714;  
30 credits in three of: CH4515, CH4615, CH4713, CH4715, CH5516 - CH5518, CH5612 - CH5614, CH5616, CH5713-CH5715, CH5717

## Chemistry - Programme Requirements 2014/15 - November 2014

### Chemistry - Joint Honours BSc

#### Chemistry and Geology - Joint Honours BSc

First Year: 100 credits: CH1401 **and** CH1402 **and** CH1601 **and** ES1001 **and** ES1002.  
Second Year: 60 credits: CH2501 **and** CH2701 - with an average of grade 11 or better.  
60 credits: ES2001 **and** ES2002 - with passes at grade 11 or better in both.  
Third Year: 120 credits: CH3431 **and** CH3514 **and** CH3521 **and** CH3712 **and** CH3717 **and** CH3721 **and** ES3001 **and** ES3004 **and** ES3006 **and** ES3008.  
Fourth Year: 30 credits in three of: CH4514, CH4714, CH4715, CH5711, CH5715, CH5717;  
50 credits: (ES4010 **with** CH4448) **or** ID4441;  
25 credits: CH5518 and ES3009;  
15 credits in one of: ES3011, ES4006, ES4007, ES5009, ID4001.  
In total, 240 credits must be achieved at 3000 and 4000 level with at least 90 of these at 4000 level.

Other information: This course does not have RSC accreditation

### Chemistry and Mathematics - Joint Honours BSc

#### Chemistry element of Chemistry and Mathematics Joint Honours BSc:

First Year: 60 credits: CH1401 **and** CH1402 **and** CH1601.  
Second Year: 60 credits: CH2501 **and** CH2701 - with an average of grade 11 or better.  
Third Year: 30 credits in three of: CH3431, CH3512, CH3615, CH3621, CH3717, CH3721;  
30 credits: CH3441, CH3514, CH3521, CH3712, CH3715.  
Fourth Year: 50 credits: CH4442;  
10 credits: CH4514 **or** CH4515 **or** CH4612 **or** CH4614 **or** CH4615 **or** CH4713 **or** CH4714 **or** CH4715.  
In total, 240 credits must be achieved at 3000 and 4000 level with at least 90 of these at 4000 level.

Other information: This course does not have RSC accreditation

### Chemistry with French - Honours BSc

First Year: 100 credits: CH1401 **and** CH1402 **and** CH1601 **and** FR1001 **and** FR1002.  
Second Year: 20 credits: FR2021;  
20 credits: FR2022 - with a pass at grade 11 or better.  
80 credits: CH2501 **and** CH2603 **and** CH2701 - with an average of grade 11 or better.  
Third Year: 50 credits: CH3441 **and** FR3001 **and** FR3002;  
70 credits in seven of: CH3431, CH3514, CH3512, CH3521, CH3612, CH3615, CH3621, CH3712, CH3717, CH3721.  
*Year Abroad: WIYA version only: 60 credits comprising FR3101.*  
Fourth Year: 80 credits: CH4442 **and** FR4105 **and** FR4106;  
40 credits in four of: CH4461, CH4514, CH4515, CH4614, CH4615, CH4713, CH4714, CH4715.

**Chemistry with Medicinal Chemistry - Single Honours BSc:**

First Year:	60 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601.
Second Year:	90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with an average of grade 11 or better.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3613 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3716 <b>and</b> CH3721.
Fourth Year:	110 credits: CH4442 <b>and</b> CH4461 <b>and</b> CH4514 <b>and</b> CH4612 <b>and</b> CH4614 <b>and</b> CH4615 <b>and</b> CH5611; 10 credits in one of: CH5612 - CH5614, CH5616.

**Chemistry with Medicinal Chemistry - Single Honours BSc**

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

Second Year:	10 credits: CH1202; 90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with an average of grade 11 or better.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3613 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3716 <b>and</b> CH3721.
Fourth Year:	110 credits: CH4442 <b>and</b> CH4461 <b>and</b> CH4514 <b>and</b> CH4612 <b>and</b> CH4614 <b>and</b> CH4615 <b>and</b> CH5611; 10 credits in one of: CH5612 - CH5614, CH5616.

**Materials Chemistry - Single Honours BSc**

First Year:	60 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601.
Second Year:	90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 – with an average of grade 11 or better.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3513 <b>and</b> CH3514 <b>and</b> CH3521 <b>and</b> CH3615 <b>and</b> CH3622 <b>and</b> CH3712 <b>and</b> CH3715 <b>and</b> CH3717 <b>and</b> CH3721;
Fourth Year:	120 credits: CH4442 <b>and</b> CH4453 <b>and</b> CH4461 <b>and</b> CH4514 <b>and</b> CH4515 <b>and</b> CH4713 <b>and</b> CH4715 <b>and</b> 10 credits in <b>either</b> CH5711 <b>or</b> CH5713.
Other information:	This course does not have RSC accreditation

**Chemistry - Single Honours MChem**

First Year:	60 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601.
Second Year:	90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3712 <b>and</b> CH3717 <b>and</b> CH3721.
Fourth Year:	80 credits: CH4442 <b>and</b> CH4514 <b>and</b> CH4614 <b>and</b> CH4714 40 credits in four of: CH4515, CH4612, CH4615, CH4713, CH4715.
Fifth Year:	90 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5511 <b>and</b> CH5611 <b>and</b> CH5711. 30 credits in three of: CH5516 - CH5518, CH5612 - CH5614, CH5616, CH5713 - CH5715, CH5717.

## Chemistry - Programme Requirements 2014/15 - November 2014

### Chemistry - Single Honours MChem

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

Second Year:	10 credits comprising CH1202; 90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3712 <b>and</b> CH3717 <b>and</b> CH3721.
Fourth Year:	80 credits: CH4442 <b>and</b> CH4514 <b>and</b> CH4614 <b>and</b> CH4714 40 credits in four of: CH4515, CH4612, CH4615, CH4713, CH4715.
Fifth Year:	90 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5511 <b>and</b> CH5611 <b>and</b> CH5711. 30 credits in three of: CH5516 - CH5518, CH5612 - CH5614, CH5616, CH5713 - CH5715, CH5717.

### Chemistry with External Placement - Single Honours MChem

First Year:	60 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601.
Second Year:	90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3712 <b>and</b> CH3717 <b>and</b> CH3721.
Fourth Year:	120 credits: CH4441 <b>and</b> CH4454 <b>and</b> CH4455 <b>and</b> CH4456.
Fifth Year:	90 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5511 <b>and</b> CH5611 <b>and</b> CH5711; 30 credits in three of: CH5516 - CH5518, CH5612 - CH5614, CH5616, CH5713 - CH5715, CH5717.

### Chemistry with External Placement - Single Honours MChem

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

Second Year:	10 credits: CH1202; 90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 – with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3712 <b>and</b> CH3717 <b>and</b> CH3721.
Fourth Year:	120 credits: CH4441 <b>and</b> CH4454 <b>and</b> CH4455 <b>and</b> CH4456.
Fifth Year:	90 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5511 <b>and</b> CH5611 <b>and</b> CH5711; 30 credits in three of: CH5516 - CH5518, CH5612 - CH5614, CH5616, CH5713 - CH5715, CH5717.

## Chemistry - Programme Requirements 2014/15 - November 2014

### Chemistry with French - Honours MChem

First Year:	100 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601 <b>and</b> FR1001 <b>and</b> FR1002.
Second Year:	20 credits: FR2021; 20 credits: FR2022 - with a pass at grade 11 or better. 80 credits: CH2501 <b>and</b> CH2603 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	50 credits: CH3441 <b>and</b> FR3001 <b>and</b> FR3002; 70 credits in seven of: CH3431, CH3514, CH3512, CH3521, CH3612, CH3615, CH3621, CH3712, CH3717, CH3721.
Fourth Year:	110 credits: CH4442 <b>and</b> CH4514 <b>and</b> CH4614 <b>and</b> CH4714 <b>and</b> FR5810; 10 credits in one of: CH4515, CH4615, CH4713, CH4715.
Fifth Year:	90 credits: CH5441 <b>and</b> CH5461 <b>and</b> FR4105 <b>and</b> FR4106; 30 credits in three of: CH5511, CH5516 - CH5518, CH5611 - CH5614, CH5616, CH5711 - CH5715, CH5717.

### Chemistry with French and External Placement - Honours MChem

First Year:	100 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601 <b>and</b> FR1001 <b>and</b> FR1002.
Second Year:	20 credits: FR2021; 20 credits: FR2022 - with a pass at grade 11 or better. 80 credits: CH2501 <b>and</b> CH2603 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	50 credits: CH3441 <b>and</b> FR3001 <b>and</b> FR3002; 70 credits in seven of: CH3431, CH3514, CH3512, CH3521, CH3612, CH3615, CH3621, CH3712, CH3717, CH3721.
Fourth Year:	120 credits: CH4441 <b>and</b> FR5810.
Fifth Year:	90 credits: CH5441 <b>and</b> CH5461 <b>and</b> FR4105 <b>and</b> FR4106; 30 credits in three of: CH5511, CH5516 - CH5518, CH5611 - CH5614, CH5616, CH5711 - CH5715, CH5717.

## Chemistry - Programme Requirements 2014/15 - November 2014

### Chemistry with Mathematics - Honours MChem

First Year:	80 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601 <b>and</b> MT1002. <i>(Students without prerequisite for MT1002 will take MT1001 in Semester 1.)</i>
Second Year (2013/4):	60 credits: CH2501 <b>and</b> CH2701 - with an average of grade 15 or better 30 credits: MT2001 - with a pass at grade 11 or better; 30 credits: MT2002 (for Pure Maths options) <b>or</b> MT2003 (for Applied Maths options) - with a pass at grade 11 or better <i>(Students wishing to take MT2002 need to discuss this with an Adviser of Studies)</i>
Second Year (2014/5):	60 credits: CH2501 <b>and</b> 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 MT2504), (MT2502, MT2504 and MT2505), (MT2502, MT2504 and MT2508), (MT2503, MT2506 and MT2507) or (MT2504, MT2505 and MT2508) with 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, CH4713, CH4714, CH4715;
Third and Fourth Years (Maths):	30 credits in two of: MT3501, MT3503, MT3504; 15 credits: MT3600 <b>or</b> MT3601; 45 further credits: MT3000 - MT4598, MT4600 - MT4999.
Fifth Year:	90 credits: CH5441 <b>and</b> CH5711 <b>and</b> CH5713 <b>and</b> CH5714 <b>and</b> CH5715; 30 credits in two of: CH5511, CH5516 - CH5518, CH5611 - CH5614, CH5616, CH5717.

### Chemistry with Medicinal Chemistry - Single Honours MChem

First Year:	60 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601.
Second Year:	90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3613 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3716 <b>and</b> CH3721.
Fourth Year:	120 credits: CH4442 <b>and</b> CH4514 <b>and</b> CH4515 <b>and</b> CH4612 <b>and</b> CH4614 <b>and</b> CH4615 <b>and</b> CH4714 <b>and</b> CH5612.
Fifth Year:	110 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5511 <b>and</b> CH5611 <b>and</b> CH5613 <b>and</b> CH5614 <b>and</b> CH5616. 10 credits in one of: CH5516, CH5517, CH5518.



**Chemistry with Medicinal Chemistry - Single Honours MChem**

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

Second Year:	10 credits: CH1202; 90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3613 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3716 <b>and</b> CH3721.
Fourth Year:	120 credits: CH4442 <b>and</b> CH4514 <b>and</b> CH4515 <b>and</b> CH4612 <b>and</b> CH4614 <b>and</b> CH4615 <b>and</b> CH4714 <b>and</b> CH5612.
Fifth Year:	110 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5511 <b>and</b> CH5611 <b>and</b> CH5613 <b>and</b> CH5614 <b>and</b> CH5616. 10 credits in one of: CH5516, CH5517, CH5518.

**Chemistry with Medicinal Chemistry and External Placement - Single Honours MChem**

First Year:	60 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601.
Second Year:	90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3613 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3716 <b>and</b> CH3721.
Fourth Year:	120 credits: CH4441 <b>and</b> CH4454 <b>and</b> CH4455 <b>and</b> CH4456.
Fifth Year:	120 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5511 <b>and</b> CH5611 <b>and</b> CH5612 <b>and</b> CH5613 <b>and</b> CH5614 <b>and</b> CH5616.

**Chemistry with Medicinal Chemistry and External Placement - Single Honours MChem**

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

Second Year:	10 credits: CH1202; 90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3514 <b>and</b> CH3512 <b>and</b> CH3521 <b>and</b> CH3612 <b>and</b> CH3613 <b>and</b> CH3615 <b>and</b> CH3621 <b>and</b> CH3716 <b>and</b> CH3721.
Fourth Year:	120 credits: CH4441 <b>and</b> CH4454 <b>and</b> CH4455 <b>and</b> CH4456.
Fifth Year:	120 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5511 <b>and</b> CH5611 <b>and</b> CH5612 <b>and</b> CH5613 <b>and</b> CH5614 <b>and</b> CH5616.

## Chemistry - Programme Requirements 2014/15 - November 2014

### Chemistry and Physics - Joint Honours MSci

First Year:	100 credits: CH1401 <b>and</b> CH1402 <b>and</b> MT1002 <b>and</b> PH1011 <b>and</b> PH1012. <i>(Students without pre-requisite for MT1002 will take MT1001 in Semester 1.)</i> <i>(Permission may be granted for suitably-qualified students to be exempted from PH1011 and/or PH1012 and to take some 2000-level PH credits in First Year, thus reducing the credit load in second year towards 120.)</i>
Second Year:	60 credits: CH2501 <b>and</b> CH2701 - with an average of grade 15 or better. 90 credits: MT2001 (or MT2501 and MT2503) <b>and</b> PH2011 <b>and</b> PH2012 - with passes at grade 15 or better in all.
Third or Fourth Year* (Chemistry):	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3512 <b>and</b> CH3514 <b>and</b> CH3615 <b>and</b> CH3712 <b>and</b> CH3717 <b>and</b> CH3721 <b>and</b> CH4713 <b>and</b> CH4714 <b>and</b> CH4715.
Third or Fourth Year* (Physics):	120 credits: PH3007 <b>and</b> PH3012 <b>and</b> PH3061 <b>and</b> PH3062 <b>and</b> PH3082 <b>and</b> PH3101 <b>and</b> PH4022 <b>and</b> PH4037 <b>and</b> PH4039.
Fifth Year:	<b>EITHER</b> 60 credits: PH5101; 15 further credits in one of: PH5000 - PH5999; 30 credits in three of: CH5518, CH5711 - CH5715, CH5717; 15 further credits: CH5000 - CH5999, PH5000 - PH5999. <b>OR</b> 50 credits from CH5441; 30 credits: PH5000 - PH5999; 30 credits: CH5518, CH5711 - CH5715, CH5717; 10 further credits: CH5000 - CH5999, PH5000 - PH5999.

\* Normally students will take the Chemistry modules in Third Year and the Physics modules in Fourth Year; students should take advice from the two Schools.

Other information: This course does not have RSC accreditation, but does have IOP accreditation.

### Materials Chemistry - Single Honours MChem

First Year:	60 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601
Second Year:	90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3513 <b>and</b> CH3514 <b>and</b> CH3521 <b>and</b> CH3615 <b>and</b> CH3622 <b>and</b> CH3712 <b>and</b> CH3715 <b>and</b> CH3717 <b>and</b> CH3721.
Fourth Year:	110 credits: CH4442 <b>and</b> CH4453 <b>and</b> CH4514 <b>and</b> CH4515 <b>and</b> CH4713 <b>and</b> CH4714 <b>and</b> CH4715 <b>and</b> 10 credits in <b>either</b> CH5711 <b>or</b> CH5713;
Fifth Year:	90 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5715 <b>and</b> CH5716 <b>and</b> CH5717; 30 credits in three of: CH5511, CH5516 - CH5518, and <b>either</b> CH5511 <b>or</b> CH5713 (depending on module taken in fourth year).

**Materials Chemistry - Single Honours MChem**

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

Second Year:	10 credits: CH1202; 90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3513 <b>and</b> CH3514 <b>and</b> CH3521 <b>and</b> CH3615 <b>and</b> CH3622 <b>and</b> CH3712 <b>and</b> CH3715 <b>and</b> CH3717 <b>and</b> CH3721.
Fourth Year:	110 credits: CH4442 <b>and</b> CH4453 <b>and</b> CH4514 <b>and</b> CH4515 <b>and</b> CH4713 <b>and</b> CH4714 <b>and</b> CH4715 <b>and</b> 10 credits in <b>either</b> CH5711 <b>or</b> CH5713;
Fifth Year:	90 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5715 <b>and</b> CH5716 <b>and</b> CH5717; 30 credits in three of: CH5511, CH5516 - CH5518, and <b>either</b> CH5511 <b>or</b> CH5713 (depending on module taken in fourth year).

**Materials Chemistry with External Placement - Single Honours MChem**

First Year:	60 credits: CH1401 <b>and</b> CH1402 <b>and</b> CH1601.
Second Year:	90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3513 <b>and</b> CH3514 <b>and</b> CH3521 <b>and</b> CH3615 <b>and</b> CH3622 <b>and</b> CH3712 <b>and</b> CH3715 <b>and</b> CH3717 <b>and</b> CH3721.
Fourth Year:	120 credits: CH4441 <b>and</b> CH4453 <b>and</b> CH4454 <b>and</b> CH4455.
Fifth Year:	90 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5715 <b>and</b> CH5716 <b>and</b> CH5717; 30 credits in three of: CH5511, CH5516, CH5517, CH5518, CH5711, CH5712, CH5713, CH5714.

**Materials Chemistry with External Placement - Single Honours MChem**

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

Second Year:	10 credits: CH1202; 90 credits: CH2501 <b>and</b> CH2601 <b>and</b> CH2701 - with passes at grade 11 or better in all and an average of 15 or better in any two.
Third Year:	120 credits: CH3431 <b>and</b> CH3441 <b>and</b> CH3513 <b>and</b> CH3514 <b>and</b> CH3521 <b>and</b> CH3615 <b>and</b> CH3622 <b>and</b> CH3712 <b>and</b> CH3715 <b>and</b> CH3717 <b>and</b> CH3721.
Fourth Year:	120 credits: CH4441 <b>and</b> CH4453 <b>and</b> CH4454 <b>and</b> CH4455.
Fifth Year:	90 credits: CH5441 <b>and</b> CH5461 <b>and</b> CH5715 <b>and</b> CH5716 <b>and</b> CH5717; 30 credits in three of: CH5511, CH5516, CH5517, CH5518, CH5711, CH5712, CH5713, CH5714.

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