

## **School of Chemistry**

### **Important Degree Information:**

#### **B.Sc./M.A. Honours**

The general requirements are 480 credits over a period of normally 4 years (and not more than 5 years) or part-time equivalent; the final two years being 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. Refer to the appropriate Faculty regulations for lists of subjects recognised as qualifying towards either a B.Sc. or M.A. degree.

For the degree of B.Sc. Chemical Sciences (Honours) the approved Honours programme of 240 credits, requires 90 credits at 4000 level and a further 110 credits (minimum) at 3000 and 4000 levels.

#### **B.Sc./M.A. Honours with Integrated Year Abroad**

The general requirements are 540 credits over a period of normally 5 years (and not more than 6 years) or part-time equivalent; the final three years being 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. Refer to the appropriate Faculty regulations for lists of subjects recognised as qualifying towards either a B.Sc. or M.A. degree.

#### **M.Chem. Honours**

General requirements are 600 credits over a period of normally 5 years (and not more than 6 years) or part-time equivalent; the final three years being 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.

#### **M.Sci. Honours**

General requirements are 600 credits over a period of normally 5 years (and not more than 6 years) or part-time equivalent; the final three years being 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. In the case of students who spend part of the Honours programme abroad on a recognised Exchange Scheme, the Programme Requirements will be amended to take into account courses taken while abroad.

**Chemistry – 1000 & 2000 Level 2008/09 – August 2008**

<b>Degree Programmes</b>	<b>Programme Requirements at:</b>
<p>(B.Sc. Honours):</p> <p><b>Biomolecular Science</b></p>	<p><b>Biomolecular Science (B.Sc. Honours):</b></p> <p><b>Level 1:</b> Biology Element: 40 credits including passes in BL1001 and BL1201.</p> <p>Chemistry Element: 20 – 40 credits comprising pass or bypass for CH1001, pass in CH1004 or From 2008-08: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> (120 credits including BL2101, BL2104 and CH2101 and CH2103 or From 2008-09: 120 credits comprising passes at 11 or better in BL2101, BL2104, CH2501 and CH2601</p> <p><b>Level 3:</b> 120 credits comprising Biology Element: BL3301 or BL3302, BL3310 and BL3312 Chemistry Element: CH3611, CH3612, CH3613, CH3621, CH3432, CH3716</p> <p><b>Level 4:</b> 120 credits comprising:</p> <p>Biology element: BL4210 and THREE modules chosen from (BL4211-BL4217, BL4221, BL4230, BL4273)#.</p> <p>Chemistry element: CH4442 and TWO other modules chosen from CH4611, CH4612, CH4613, CH5611, CH5612, CH5613, CH5614.(By special arrangement only, BL4201 may be taken instead of CH4442; but modules chosen from # must then be eliminated .)</p> <p>Chemistry: Direct entry into Level 2000 is possible, in which case 120 advanced standing credits at level 1000 are given.</p> <p>In the case of students who spend part of the Honours Programme abroad on a recognised Exchange Scheme, the Programme Requirements will be amended to take into account courses taken while abroad.</p> <p><b>Other Information:</b> This course is recognised by the Royal Society of Chemistry (RSC) for professional membership.</p>

**Chemistry – 1000 & 2000 Level 2008/09 – August 2008**

<b>Degree Programmes</b>	<b>Programme Requirements at:</b>
<p>(B.Sc. Honours): <b>Chemical Sciences</b></p>	<p><b>Chemical Sciences (B.Sc. Honours Degree):</b>  <b>Level 1:</b> 40 credits comprising pass or bypass for CH1001, pass in CH1004 and 4 other level 1000 modules or                      From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 60 credits comprising passes at 11 or better in CH2101 and CH2102 or CH2103 or                      From 2008-09 : 90 credits comprising passes at 11 or better in CH2501, CH2601 and CH2701</p> <p><b>Level 3:</b> 120 credits comprising CH3431, CH3441, CH3511, CH3512, CH3521, CH3611, CH3612, CH3621, CH3711, CH3712, CH3721</p> <p><b>Level 4:</b> 120 credits comprising CH4442, 4 from (CH4511, CH4611, CH4612, CH4711), and 4 from (CH4512, CH4613, CH4712, CH4713, CH5513-5, CH5612-4, CH5616, CH5712-4)</p> <p><b>Other Information:</b> 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 40 credits from the Level 3000 and Level 4000 modules listed above can be replaced with modules from other Schools.                      This course is recognised by the Royal Society of Chemistry (RSC) for professional membership.</p>
<p>(B.Sc. Honours): <b>Chemistry</b></p>	<p><b>Chemistry (B.Sc. Honours):</b>  <b>Level 1:</b> 40 credits comprising pass or bypass for CH1001, pass in CH1004 and 4 other level 1000 modules. or                      From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 90 credits comprising passes at 11 or better in CH2101, CH2102 and CH2103 or                      From 2008-09 : 90 credits comprising passes at 11 or better in CH2501, CH2601 and CH2701</p> <p>Students may be allowed to enter this Honours programme with CH2101 and one of CH2102 and CH2103, but some extra work may be required.</p> <p><b>Level 3:</b> 120 credits comprising CH3431, CH3441, CH3511, CH3512, CH3521, CH3611, CH3612, CH3621, CH3711, CH3712, CH3721.</p> <p><b>Level 4:</b> 120 credits comprising CH4442, CH4461, 2 from (CH4511, CH4611, CH4711), 2 from (CH4512, CH4613, CH4713), either CH4612 or CH4712, and 2 from (CH5513-5, CH5612-4, CH5616, CH5712-4).</p> <p><b>Other Information:</b> This course is recognised by the Royal Society of Chemistry (RSC) for professional membership.</p>

**Chemistry – 1000 & 2000 Level 2008/09 – August 2008**

<b>Degree Programmes</b>	<b>Programme Requirements at:</b>
<p>(B.Sc. Honours):  <b>Chemistry and Computer Science,                      Internet Computer Science,                      Mathematics</b></p>	<p><b>Chemistry element of Joint Honours Degree (B.Sc. Honours):</b></p> <p><b>Level 1:</b> 40 credits comprising pass or bypass for CH1001, pass in CH1004 or                      From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 60 credits comprising passes at 11 or better in CH2101, either CH2102 or CH2103 or                      From 2008-09: 60 credits comprising passes at 11 or better in CH2501 and CH2701</p> <p><b>Level 3:</b> 60 credits comprising 3 from (CH3431, CH3512, CH3612, CH3621, CH3711, CH3721), 30 credits from (CH3441, CH3511, CH3521, CH3611, CH3712)</p> <p><b>Level 4:</b> 60 credits comprising CH4442, 1 or 2 from (CH4511, CH4611, CH4612, CH4711), 1 or 2 from (CH4512, CH4613, CH4712, CH4713)</p> <p><b>Other Information:</b> These courses are recognised by the Royal Society of Chemistry (RSC) for professional membership.</p> <p>In total (between the two Schools) 240 credits are required at Level 3 and Level 4 of which at least 90 credits must be achieved at Level 4.</p>
<p>(B.Sc. Honours):  <b>Chemistry and Geoscience</b></p>	<p><b>Chemistry - Geoscience Joint Degree:</b></p> <p><b>Level 1:</b> 40 credits comprising Pass or bypass for CH1001, pass in CH1004 and 40 credits comprising passes in GS1001 and GS1002 or                      From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601 and 40 credits comprising passes in GS1001 and GS1002</p> <p><b>Level 2:</b> 60 credits comprising passes at 11 or better in CH2101, either CH 2102 or CH2103 or                      From 2008-09: 60 credits comprising passes at 11 or better in CH2501 and either CH2601 or CH2701 and                      60 credits comprising passes at 11 or better in (GG2003, GG2004, GS2001, and GS2002) or (GS2011 and GS2012)</p> <p><b>Level 3:</b> 120 credits comprising CH3431, CH3521, CH3711, CH3511, CH3721, CH4512, and GS3004, normally GS3081* and 1 from (GS4083 or GS4084).</p> <p><b>Level 4:</b> 120 credits comprising 3 from (CH4511, CH4611, CH4711, CH4712 and CH5711), CH4448§, CH5515, normally GS4083 or GS4084**, GS4005, GS4010, GS4009, 1 from (GS4088, GG3067, GG3068, GG3069 and GG3082)</p> <p><b>Other Information:</b> This course is recognised by the Royal Society of Chemistry (RSC) for professional membership.</p> <p>In total (between the two Schools) 240 credits are required at Level 3 and Level 4 of which at least 90 credits must be achieved at Level 4.</p> <p>* With the approval of the Geoscience Adviser of Studies, a student may replace GS3081 and (GS4083 or GS4084) by 2 from GG3067, GG3068, GG3069, GG3082 in semester 2.</p> <p>** With the approval of the Geoscience Adviser of Studies, a student may replace GS4083 or GS4084 by a second module from the list GS4088, GG3067, GG3068, GG3069 and GG3082</p> <p>§With the approval of the Directors of Teaching, under some circumstances, students might conduct an integrated 35 credit project, ID4441, combining CH4448 with GS4009 and presenting a single, extended report.</p>

**Chemistry – 1000 & 2000 Level 2008/09 – August 2008**

<b>Degree Programmes</b>	<b>Programme Requirements at:</b>
<p>(B.Sc. Honours): <b>Chemistry with Catalysis</b></p>	<p><b>Chemistry with Catalysis (B.Sc. Honours):</b>  <b>Level 1:</b> 120 credits comprising pass or bypass for CH1001, pass in CH1004 and 4 other level 1000 modules. or                      From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 60-90 credits comprising Passes at 11 or better in CH2101 and either or both of CH2102 and CH2103 or                      From 2008-09 : 90 credits comprising passes at 11 or better in CH2501, CH2601 and CH2701</p> <p><b>Level 3:</b> 120 credits comprising CH3431, CH3441, CH3511, CH3512, CH3521, CH3611, CH3612, CH3621, CH3711, CH3712, CH3721.</p> <p><b>Level 4:</b> 120 credits comprising CH4442, CH4461, CH5511, CH5713, 2 from (CH4512, CH4613, CH4713), 2 from (CH4511, CH4611, CH4711), either CH4612 or CH4712.</p> <p><b>Other Information:</b> This course is recognised by the Royal Society of Chemistry (RSC) for professional membership.</p>
<p>(B.Sc. Honours): <b>Chemistry with Materials Chemistry</b></p>	<p><b>Chemistry with Materials Chemistry (B.Sc. Honours):</b>  <b>Level 1:</b> 120 credits comprising pass or bypass for CH1001, pass in CH1004, CH1005, PH1011, PH1012 and MT1002. Or                      From 2008-09: 120 credits comprising passes in CH1401, CH1402, CH1602, PH1011, PH1012 and MT1002</p> <p><b>Level 2:</b> 120 credits comprising passes at 11 or better in CH2101, CH2102, CH2104 and either PH2011 or MT2001. Or                      From 2008-09: 120 credits comprising passes at 11 or better in CH2501, CH2602, CH2701 and either PH2011 or MT2001</p> <p><b>Level 3:</b> 120 credits comprising CH3441, CH3513, CH3711, CH3712, CH3715, CH3722, PH3002, PH3074 and two other 3000 level modules.</p> <p><b>Level 4:</b> 120 credits comprising CH4442, CH4711, CH4712, CH4452 and a further three 10 credit 4000 or 5000 level modules.</p> <p><b>Other Information:</b> This course is recognised by the Royal Society of Chemistry (RSC) for professional membership</p>
<p>(B.Sc. Honours): <b>Chemistry with Medicinal Chemistry</b></p>	<p><b>Chemistry with Medicinal Chemistry:</b>  <b>Level 1:</b> 120 credits comprising pass or bypass for CH1001, pass in CH1004 and 4 other level 1000 modules. or                      From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 60-90 credits comprising passes at 11 or better in CH2101 and either or both of CH2102 and CH2103 or                      From 2008-09 : 90 credits comprising passes at 11 or better in CH2501, CH2601, CH2701</p> <p><b>Level 3:</b> 120 credits comprising CH3433, CH3441, CH3511, CH3512, CH3521, CH3611, CH3612, CH3613, CH3621, CH3716, CH3721,</p> <p><b>Level 4:</b> 120 credits comprising CH4442, CH4462, CH4511, CH4611, CH4612, CH4613, CH5611, 2 from (CH5612-4 and CH5616).</p> <p><b>Other Information:</b> This course is recognised by the Royal Society of Chemistry (RSC) for professional membership.</p>

**Chemistry – 1000 & 2000 Level 2008/09 – August 2008**

<b>Degree Programmes</b>	<b>Programme Requirements at:</b>
<p>(B.Sc. Honours):  <b>Chemistry with French<sup>^</sup> or German<sup>^</sup> or Spanish<sup>^</sup></b></p> <p><sup>^</sup>also available as 'With Integrated Year Abroad Degrees'</p> <p><b>Not available to entrants from 2008-09</b></p>	<p><b>Chemistry element of Major Degree with French or German (B.Sc. Honours):</b></p> <p><b>Level 1:</b> 40 credits comprising pass or bypass for CH1001, pass in CH1004 or From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 60 credits comprising passes at 11 or better in CH2101 and either CH2102 or CH2103 or From 2008-09: 90 credits comprising passes at 11 or better in CH2501, CH2601 and CH2701</p> <p><b>Level 3:</b> 90 credits comprising CH3441, and 70 credits from (CH3431, CH3511, CH3512, CH3521, CH3611, CH3612, CH3621, CH3711, CH3712, CH3721)</p> <p><b>Level 4:</b> 90 credits comprising CH4442, 5 from (CH4461, CH4511, CH4512, CH4611, CH4613, CH4711, CH4712, CH4713)</p> <p><b>Other Information:</b> These courses are recognised by the Royal Society of Chemistry (RSC) for professional membership.                      In total (between the two Schools) 240 credits are required at Level 3 and Level 4 of which at least 90 credits must be achieved at Level 4.</p>
<p>(B.Sc. Honours):  <b>Chemistry with Pharmacology</b></p>	<p><b>Chemistry with Pharmacology (B.Sc. Honours):</b></p> <p><b>Level 1: Chemistry element:</b> 40 credits comprising a pass or bypass for CH1001, pass in CH1004 and 2 other level 1000 modules. or                      From 2008-09: 60 credits comprising passes in CH1401, CH1402 and Ch1601</p> <p><b>Biology element:</b> Passes in or exemption from BL1001, BL1201. Passes in or exemption from BL1003 and BL2007 are also required for entry to all Honours courses in the School of Biology</p> <p><b>Level 2:</b> 120 credits comprising passes at 11 or better in BL2101, BL2104, CH2501 and CH2601</p> <p><b>Level 3:</b> 80 credits comprising CH3433, CH3512, CH3612, CH3621, CH3716, CH3721, 20 credits from (CH3441, CH3511, CH3611, CH3613) and 40 credits from BL3312, BL3313</p> <p><b>Level 4:</b> 50 credits comprising CH4447, CH4462, and 70 credits from CH4511-2, CH4611-3, CH4711-3, CH5611-4, CH5616</p> <p><b>Other Information:</b> This course is recognised by the Royal Society of Chemistry (RSC) for professional membership. The project (CH4447) will be supervised jointly by staff from Chemistry and Biology.</p>

**Chemistry – 1000 & 2000 Level 2008/09 – August 2008**

<b>Degree Programmes</b>	<b>Programme Requirements at:</b>
<p>(M.Chem. Honours): <b>Chemistry (M.Chem.) 5 years</b></p>	<p><b>Chemistry (M.Chem.) Degree:</b></p> <p><b>Level 1:</b> 120 credits comprising pass or bypass for CH1001, pass in CH1004 and 4 other level 1000 modules or</p> <p>From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 90 credits comprising passes at 15 or better in CH2101, CH2102 and CH2103 or</p> <p>From 2008-09: 90 credits comprising passes at 15 or better in CH2501, CH2601 and CH2701</p> <p><b>Level 3:</b> 120 credits comprising CH3431, CH3441, CH3511, CH3512, CH3521, CH3611, CH3612, CH3621, CH3711, CH3712, CH3721.</p> <p><b>Level 4:</b> 120 credits comprising CH4442, CH4511, CH4512, CH4611, CH4612, CH4613, CH4711, CH4712, CH4713.</p> <p><b>Level 5:</b> 120 credits comprising CH5461, CH5441, CH5511, CH5611, CH5711, 4 from (CH5513-5, CH5612-4, CH5616, CH5712-4).</p> <p><b>Other Information:</b> This course has been accredited by the Royal Society of Chemistry (RSC) for professional membership.</p>
<p>(M.Chem. Honours) <b>Chemistry with Medicinal Chemistry (M.Chem.) 5 years</b></p>	<p><b>Chemistry with Medicinal Chemistry (M.Chem)</b></p> <p><b>Level 1:</b> 120 credits comprising pass or bypass for CH1001, pass in CH1004 and 4 other level 1000 modules or</p> <p>From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 60 credits comprising passes at 15 or better in CH2101, CH2102 and CH2103 or</p> <p>From 2008-09: 90 credits comprising passes at 15 or better in CH2501, CH2601 and CH2701</p> <p><b>Level 3:</b> 120 credits comprising CH3433, CH3441, CH3511, CH3512, CH3521, CH3611, CH3612, CH3613, CH3621, CH3716, CH3721</p> <p><b>Level 4:</b> 120 credits comprising CH4442, CH4511, CH4512, CH4611, CH4612, CH4613, CH4711, CH5612, CH5614.</p> <p><b>Level 5:</b> 120 credits comprising CH5441, CH5462, CH5511, CH5513, CH5514, CH5515, CH5611, CH5613, CH5616</p> <p><b>Other Information:</b> This course has been accredited by the Royal Society of Chemistry (RSC) for professional membership.</p>

**Chemistry – 1000 & 2000 Level 2008/09 – August 2008**

<b>Degree Programmes</b>	<b>Programme Requirements at:</b>
<p>(M.Chem. Honours):  <b>Chemistry with Medicinal Chemistry and External Placement (M.Chem.) 5 years</b></p>	<p><b>Chemistry with Medicinal Chemistry and External Placement (M.Chem):</b>  <b>Level 1:</b> 120 credits comprising pass or bypass for CH1001, pass in CH1004 and 4 other level 1000 modules or                      From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 60 credits comprising passes at 15 or better in CH2101, CH2102 and CH2103 or                      From 2008-09: 90 credits comprising passes at 15 or better in CH2501, CH2601 and CH2701</p> <p><b>Level 3:</b> 120 credits comprising CH3433, CH3441, CH3511, CH3512, CH3521, CH3611, CH3612, CH3613, CH3621, CH3716, CH3721</p> <p><b>Level 4:</b> 120 credits comprising CH4441, CH4451.</p> <p><b>Level 5:</b> 120 credits comprising CH5441, CH5462, CH5511, CH5611-6</p> <p><b>Other Information:</b> This course has been accredited by the Royal Society of Chemistry (RSC) for professional membership.</p>
<p>(M.Chem. Honours):  <b>Chemistry with External Placement (M.Chem.) 5 years</b></p>	<p><b>Chemistry with External Placement (M.Chem):</b>  <b>Level 1:</b> 120 credits comprising pass or bypass for CH1001, pass in CH1004 and 4 other level 1000 modules or                      From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 90 credits comprising passes at 15 or better in CH2101, CH2102 and CH2103 or                      From 2008-09: 90 credits comprising passes at 15 or better in CH2501, CH2601 and CH2701</p> <p><b>Level 3:</b> 120 credits comprising CH3431, CH3441, CH3511, CH3512, CH3521, CH3611, CH3612, CH3621, CH3711, CH3712, CH3721,</p> <p><b>Level 4:</b> 120 credits comprising CH4441, CH4451.</p> <p><b>Level 5:</b> 120 credits comprising CH5441, CH5461, CH5511, CH5611, CH5711, 4 from (CH5513-5, CH5612-4, CH5616, CH5712-4).</p> <p><b>Other Information:</b> This course has been accredited by the Royal Society of Chemistry (RSC) for professional membership.</p>



**Chemistry – 1000 & 2000 Level 2008/09 – August 2008**

<b>Degree Programmes</b>	<b>Programme Requirements at:</b>
<p>(M.Chem. Honours):  <b>Chemistry with French (M. Chem.)</b>  <b>5 years</b></p> <p><b>Not available to entrants from 2008-09</b></p>	<p><b>Chemistry with French (M.Chem. Honours) (5 year degree) :</b>  <b>Level 1:</b> 120 credits comprising pass or bypass for CH1001, pass in CH1004 and 4 other level 1000 modules or</p> <p>From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 90 credits comprising passes at 15 or better in CH2101 and CH2102 or CH2103 or</p> <p>From 2008-09: 90 credits comprising passes at 15 or better in CH2501, CH2601 and CH2701</p> <p><b>Level 3:</b> 90 credits comprising CH3441, and 70 credits from (CH3431, CH3511, CH3512, CH3521, CH3611, CH3612, CH3621, CH3711, CH3712, CH3721 )</p> <p><b>Level 4:</b> 90 credits from CH4441</p> <p><b>Level 5:</b> 90 credits comprising CH5441, CH5461 and 40 credits from (CH5511, CH5513-5, CH5611-4, CH5616, CH5711-4).</p> <p><b>Other Information:</b> This course has been accredited by the Royal Society of Chemistry (RSC) for professional membership.</p>
<p>(M.Chem. Honours):  <b>Chemistry with Mathematics</b>  <b>(M. Chem.) 5 years</b></p>	<p><b>Chemistry with Mathematics (M.Chem. Honours) (5 year degree) :</b>  <b>Level 1:</b> 120 credits comprising pass or bypass for CH1001, pass in CH1004, pass in MT1002 and 3 other level 1000 modules or</p> <p>From 2008-09: 60 credits comprising passes in CH1401, CH1402 and CH1601</p> <p><b>Level 2:</b> 120 credits comprising passes at 15 or better in CH2101, MT2001, (either CH2102 or CH2103) and (either MT2002 or MT2003) or</p> <p>From 2008-09: 60 credits comprising passes at 15 or better in CH2501 and CH2701</p> <p><b>Level 3:</b> 125 credits comprising CH3441, and 60 credits from (CH3431, CH3511, CH3512, CH3521, CH3611, CH3612, CH3621, CH3711, CH3712, CH3721), two of (MT3501, MT3503, MT3504), MT3600 or MT3601</p> <p><b>Level 4:</b> 115 credits comprising CH4442, 3 of (CH4511, CH4212, CH4611, CH4612, CH4613, CH4711, CH4712, CH4713) and 3 further 3000 or 4000 level MT modules.</p> <p><b>Level 5:</b> 120 credits comprising CH5441, CH5461, CH5711, CH5712, CH5713, CH5714, 3 from (CH5511, CH5513-5, CH5611-6).</p> <p><b>Other Information:</b> This course has been accredited by the Royal Society of Chemistry (RSC) for professional membership.</p>

## Chemistry – 1000 & 2000 Level 2008/09 – August 2008

Degree Programmes	Programme Requirements at:
<p>(M.Sci. Honours):  <b>Chemistry and Physics (M.Sci. Honours) 5 years</b></p>	<p><b>Chemistry element of Chemistry-Physics M.Sci. Degree:</b>  <b>Level 1:</b> 40 credits comprising a pass or bypass in CH1001, CH1004 or                      From 2008-09: 40 credits comprising passes in CH1401 and CH1402</p> <p><b>Level 2:</b> 60 credits comprising passes at 15 or better in CH2101 and either CH2102 or CH2103 or CH2104 or                      From 2008-09: 60 credits comprising passes at 15 or better in CH2501 and CH2701</p> <p><b>Level 3:</b> 120 credits comprising CH3431, CH3441, CH3511, CH3512, CH3611, CH3711, CH3712, CH3721, CH4711, CH4712, CH4713</p> <p><b>Level 5:</b> 40 credits from CH5441 or 60 credits from PH5101, at least 30 credits from CH5515, CH5711-CH5714</p> <p><b>Other Information:</b> This course is recognised by the Royal Society of Chemistry (RSC) for professional membership.</p>
<p>(M.Sci. Honours):  <b>Materials Science 5 years</b></p>	<p><b>Materials Science M.Sci. Degree:</b>  <b>Level 1:</b> 120 credits comprising a pass or bypass in CH1001, CH1004, CH1005, PH1011, PH1012 and MT1002 or                      From 2008-09: 120 credits comprising passes in CH1401, CH1402, CH1601, PH1011, PH1012 and MT1002</p> <p><b>Level 2:</b> 120 credits comprising passes at 11 or better in CH2101, CH2102, CH2104 and either MT2001 or PH2011 or                      From 2008-09: 120 credits comprising passes at 15 or better in CH2501, CH2602, CH2701 and either PH2011 or MT2001</p> <p><b>Level 3:</b> 120 credits comprising CH3441, CH3513, CH3711, CH3712, CH3715, CH3722, CH4711, CH4712, PH3002 and PH3074.</p> <p><b>Level 4:</b> 120 credits comprising CH4441, CH4452</p> <p><b>Level 5:</b> 120 credits from CH5441, CH5515, CH5712, CH5713, CH5716, CH5717, CH5718, PH5208</p> <p><b>Other Information:</b> This course is recognised by the Royal Society of Chemistry (RSC) for professional membership.</p>

## Modules

### InterDisciplinary (ID) Modules

This School contributes to the following InterDisciplinary modules – **SD1002 Sustainability: ensuring our common future (Section 22)** and **ID2003 Science Methods** and **ID2004 Science Ethics (Section 23)**.

## **Chemistry (CH) Modules**

### **CH1202 Introductory Chemistry**

Credits: 10.0 Semester: 1

Anti-requisites: CH1201, CH1401, CH1402, CH1601.

Description: This module provides an introduction to some of the fundamental aspects of Chemistry and is primarily aimed at students entering the Chemistry B.Sc. and M.Chem courses directly into second year. The module will cover structure and bonding in inorganic chemistry, states of matter and an introduction to thermodynamics and the solid state in physical chemistry and bonding, stereochemistry and reaction mechanisms in organic chemistry.

Class Hour: 9.00 am

Teaching: Two lectures

Assessment: One-and-a-half Hour Examination = 100%

Re-Assessment: One-and-a-half Hour Examination = 100%

### **CH1301 The Impact of Chemistry**

Credits: 20.0 Semester: 1

Prerequisites: Standard Grade or GCSE Chemistry (Students with no formal qualification in chemistry may be admitted but should expect to undertake additional tutorial work and private study)

Anti-requisites: CH1002.

Description: This module explores the impact that Chemistry has on all our lives and all aspects of society. Starting with the chemical origins of life in the primordial soup, it will explore fuel and energy, the great challenge of global warming, forensic chemistry, chemistry and the environment, and chemistry in food production.

Class Hour: 12.00 noon

Teaching: Four lectures and one group project hour

Assessment: Continuous Assessment = 30%, 2 Hour Examination = 70%

Re-Assessment: Continuous Assessment = 30%, 2 Hour Examination = 70%

### **CH1401 Introductory Inorganic and Physical Chemistry**

Credits: 20.0 Semester: 1

Prerequisites: Higher or A-Level Chemistry (Students with Standard Grade or GCSE Chemistry may be admitted but should expect to undertake additional tutorial work and private study)

Anti-requisites: CH1001, CH1202.

Description: The module includes lectures on the origin of the elements, atoms and the Periodic Table, shapes and properties of molecules, chemistry of the elements, states of matter, thermochemistry, thermodynamics and kinetics.

Class Hour: 11.00 am

Teaching: Four lectures, one tutorial and three hour practical

Assessment: Continuous Assessment = 40%, 2 Hour Examination = 60%

Re-Assessment: Continuous Assessment = 40%, 2 Hour Examination = 60%

### **CH1402 Inorganic and Physical Chemistry 1**

Credits: 20.0 Semester: 2

Prerequisites: CH1401 or Higher or A-Level Chemistry

Anti-requisites: CH1202.

Description: The module includes lectures on bonding in simple molecules, inorganic solids, chemistry of the elements, properties of solids, properties of solutions and introductory spectroscopy.

Class Hour: 10.00 am

Teaching: Four lectures, one tutorial and three hour practical

Assessment: Continuous Assessment = 40%, 2 Hour Examination = 60%

Re-Assessment: Continuous Assessment = 40%, 2 Hour Examination = 60%

## Chemistry – 1000 & 2000 Level 2008/09 – August 2008

### CH1601 Organic and Biological Chemistry 1

Credits:	20.0	Semester:	2
Prerequisites:	Higher or A-Level Chemistry (Students with Standard Grade or GCSE Chemistry may be admitted but should expect to undertake additional tutorial work and private study)		
Anti-requisites:	CH1004, CH1202.		
Description:	The module includes lectures on the structure, stereochemistry and nomenclature of simple organic compounds, fundamental organic reaction mechanisms, organic functional groups and their reactions, introductory bioorganic chemistry, and organic spectroscopy.		
Class Hour:	11.00 am		
Teaching:	Four lectures, one tutorial and three hour practical		
Assessment:	Continuous Assessment = 40%, 2 Hour Examination = 60%		
Re-Assessment:	Continuous Assessment = 40%, 2 Hour Examination = 60%		

### CH2201 A First Course in Organic Chemistry

Credits:	20.0	Semester:	1
Prerequisites:	Available to non-graduating students only		
Anti-requisites:	CH1004, CH1201, CH1202, CH1601		
Description:	This module is an introductory course in Organic Chemistry. It covers aspects of structure, bonding and stereochemistry in Organic Chemistry. The syllabus includes the chemistry of alkanes, simple cycloalkanes, alkenes and alkynes together with functional group chemistry, largely that of singly-bonded functional groups. The chemistry is discussed and rationalised with reference to reaction mechanisms. The lecture course is complemented by a laboratory course.		
Class Hour:	9.00 am		
Teaching:	Four lectures, two seminars, one tutorial, one or two practical classes. In addition a total of 3 or 4 half day visits to hospitals.		
Assessment:	Continuous Assessment = 40%, 2 Hour Examination = 60%		
Re-Assessment:	Continuous Assessment = 20%, 2 Hour Examination = 80%		

### CH2501 Inorganic Chemistry 2

Credits:	30.0	Semester:	1
Prerequisites:	CH1402 or Advanced Higher Chemistry or A-Level Chemistry		
Anti-requisites:	CH2101		
Co-requisites:	CH1202 if Direct entrant to 2000-level		
Description:	The module includes lectures on metal complexes and organometallics, descriptive transition-metal chemistry, atmospheric chemistry, inorganic spectroscopy, solid-state chemistry and descriptive main-group chemistry.		
Class Hour:	11.00 am		
Teaching:	Five lectures, one tutorial and five hours of practicals		
Assessment:	Continuous Assessment = 40%, 3 Hour Examination = 60%		
Re-Assessment:	Continuous Assessment = 40%, 3 Hour Examination = 60%		

### CH2601 Organic Chemistry 2

Credits:	30.0	Semester:	2
Prerequisites:	CH1601 (or Advanced Higher Chemistry or A-Level Chemistry + CH1202 if Direct entrant to 2000-level)		
Anti-requisites:	CH2103, CH2602		
Description:	The module includes lectures on carbon-carbon bond formation, interconversion of functional groups, aromatic and heteroaromatic reactivity, mechanistic biological chemistry, organic spectroscopy and organic polymer chemistry.		
Class Hour:	12.00 noon		
Teaching:	Five lectures, one tutorial and five hours of practicals		
Assessment:	Continuous Assessment = 40%, 3 Hour Examination = 60%		
Re-Assessment:	Continuous Assessment = 40%, 3 Hour Examination = 60%		

## Chemistry – 1000 & 2000 Level 2008/09 – August 2008

### CH2602 Organic Chemistry 2 (Materials)

Credits:	30.0	Semester:	2
Prerequisites:	CH1601 (or Advanced Higher Chemistry or A-Level Chemistry + CH1202 if Direct entrant to 2000-level)		
Anti-requisites:	CH2104, CH2601		
Description:	The module includes lectures on carbon-carbon bond formation, interconversion of functional groups, aromatic and heteroaromatic reactivity, semiconductor science, organic spectroscopy and organic polymer chemistry.		
Class Hour:	12.00 noon		
Teaching:	Five lectures, one tutorial and five hours of practicals		
Assessment:	Continuous Assessment = 40%, 3 Hour Examination = 60%		
Re-Assessment:	Continuous Assessment = 40%, 3 Hour Examination = 60%		

### CH2701 Physical Chemistry 2

Credits:	30.0	Semester:	2
Prerequisites:	CH1402 (or Advanced Higher Chemistry or A-Level Chemistry + CH1202 if Direct entrant to 2000-level)		
Anti-requisite:	CH2102		
Description:	The module includes lectures on quantum mechanics, thermodynamics and electrochemistry, kinetics, molecular spectroscopy and diffraction and mathematical tools for chemistry.		
Class Hour:	11.00 am		
Teaching:	Five lectures, one tutorial and five hours of practicals		
Assessment:	Continuous Assessment = 40%, 3 Hour Examination = 60%		
Re-Assessment:	Continuous Assessment = 40%, 3 Hour Examination = 60%		

**The details of the Honours modules – that is 3000, 4000 and 5000 level modules – which relate to the programmes listed in this section, are available in the Honours Course Catalogue.**

