Chemistry Department Foundation Year

Course Handbook

2016 - 2017
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# Calendar 2016 - 2017

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<th>Week</th>
<th>Dates</th>
<th>Notes</th>
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<tbody>
<tr>
<td>September</td>
<td>Monday 26&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 1</td>
<td>Autumn Term &amp; 1&lt;sup&gt;st&lt;/sup&gt; Semester begins</td>
</tr>
<tr>
<td>October</td>
<td>Monday 3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>WEEK 2</td>
<td></td>
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<td></td>
<td>Monday 10&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 3</td>
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<td>Monday 17&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 4</td>
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<td>Monday 24&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 5</td>
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<td>November</td>
<td>Monday 7&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 7</td>
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<td>Monday 14&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 8</td>
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<td>Monday 21&lt;sup&gt;st&lt;/sup&gt;</td>
<td>WEEK 9</td>
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<td>Monday 28&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 10</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>Monday 5&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 11</td>
<td>Autumn Term ends Friday 9&lt;sup&gt;th&lt;/sup&gt; December</td>
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**CHRISTMAS VACATION (4 weeks)**

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<th>Month</th>
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<tbody>
<tr>
<td>January</td>
<td>Monday 9&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 12</td>
<td>Spring Term and Exams begin</td>
</tr>
<tr>
<td></td>
<td>Monday 16&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 13</td>
<td>Exams end Friday 20&lt;sup&gt;th&lt;/sup&gt; January</td>
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## Semester 2: 23 January 2017 – 23 June 2017

<table>
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<tr>
<td>January</td>
<td>Monday 23&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>WEEK 14</td>
<td>Semester 2 begins</td>
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<tr>
<td></td>
<td>Monday 30&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 15</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>Monday 6&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 16</td>
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<td>Monday 13&lt;sup&gt;th&lt;/sup&gt;</td>
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<td>WEEK 18</td>
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<td>Monday 27&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 19</td>
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<td>March</td>
<td>Monday 6&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 20</td>
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<td>Monday 13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 21</td>
<td></td>
</tr>
<tr>
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<td>Monday 20&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 22</td>
<td>Spring Term ends Friday 24&lt;sup&gt;th&lt;/sup&gt; March</td>
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**EASTER VACATION (5 weeks)**

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<td>May</td>
<td>Monday 1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>WEEK 23</td>
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<td>Monday 8&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 24</td>
<td>Revision Week</td>
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<tr>
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<td>Monday 15&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 25</td>
<td>Exams begin Monday 15&lt;sup&gt;th&lt;/sup&gt; May</td>
</tr>
<tr>
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<td>Monday 22&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>WEEK 26</td>
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</tr>
<tr>
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<td>Monday 29&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 27</td>
<td>Exams end Friday 2&lt;sup&gt;nd&lt;/sup&gt; June</td>
</tr>
<tr>
<td>June</td>
<td>Monday 5&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 28</td>
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<td>WEEK 29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monday 19&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 30</td>
<td>Summer Term ends Friday 23&lt;sup&gt;rd&lt;/sup&gt; June</td>
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<table>
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<th>Week</th>
<th>Dates</th>
<th>Notes</th>
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<tbody>
<tr>
<td>August/September</td>
<td>Monday 4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>WEEK 23</td>
<td>Resit Exams begin Monday 4&lt;sup&gt;th&lt;/sup&gt; September</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Resit Exams end Saturday 9&lt;sup&gt;th&lt;/sup&gt; September</td>
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*For those students who did not pass their modules and have to resit/sit the failed modules in September*

## TERM DATES AT A GLANCE

- **Autumn Term**: 26 September 2016 – 9 December 2016
- **Spring Term**: 9 January 2017 – 24 March 2017
- **Summer Term**: 1 May 2017* – 23 June 2017

* Summer term officially starts on Bank Holiday Monday, teaching starts on the Tuesday following the Bank Holiday
Welcome from the Head of Department

It is pleasure to welcome you to the Department of Chemistry at the University of Leicester. You join a department which is renowned for the quality of its teaching and its highly rated research. We pride ourselves on being a friendly department whose staff are always willing to help and you should never feel reticent about approaching a particular member of staff for advice and assistance.

This handbook provides a great deal of information not only about the content of your course, but also about issues such as welfare, university regulations and your responsibilities as a student. There is quite a lot to read here but it is important that you do read it all at the start of your course so that you are familiar with key issues. If you are not clear about something in this handbook, a good place to start for clarification is to ask your personal tutor.

Arriving at university for the first time is always exciting but is also a step into the unknown. Many of you will settle in quickly and others will take a little more time to adapt to the change in lifestyle and the nature of university studying. However, I hope and expect that you will develop knowledge and skills that will prepare you for an exciting future. It is also my sincere hope that you enjoy your time here and look back on your undergraduate years with pride in your achievements and fondness for the university.

With best wishes,

Professor Andrew M. Ellis
Head of Department

Introduction

This handbook has been written to provide information to all our undergraduate students. It aims not only to explain the workings of the Department but also to provide information that you will require throughout your degree programme. Its contents will:

- outline the structure and organisation of the Department;
- advise on study skills and written work;
- explain our teaching and assessment methods;
- outline our programme structures and module content;
- advise on the aims and objectives of each degree programme;
- offer information on support services for students.

Further information will be provided for you at appropriate times during your studies. In the meantime, we would be pleased to receive your suggestions and ideas for topics that might be included in this handbook in future by e-mail to chemadmin@le.ac.uk
Induction

An Induction for BSc/MChem Degrees

During the first week of Semester One there are no module lectures or classes in Chemistry for foundation students. Students participate in induction programmes during this week, following registration in the Department of Physics on Monday 26th September at 12pm and registration with the University via online computer registration. There will be an induction talk in the Molecular Modelling Laboratory in the Department of Chemistry at 10am on Wednesday 28th September.

The induction programme introduces students to staff, tutors and the working methods of the Department. Issues relating to study skills, learning and teaching (including computer-based learning) are addressed in a variety of ways.

All students are expected to attend these sessions.

Induction programme timetables are distributed at registration to new students on undergraduate degree programmes.

The Induction Programme (for students newly joining the Department)

Registration

The University’s Registry will already have sent the instructions to you about how to register but we hope to provide the important elements below.

Step 1: Online Registration

You need to register for your degree programme online by proceeding to this link https://register.le.ac.uk. Instructions as to how to complete the process are available at http://www2.le.ac.uk/offices/sas2/registration and includes further information and contact information if you should need any help or advice.

As a student of the University, you are provided with a computer account that gives you an e-mail address, access to a wide range of resources and computing facilities both on and off campus. On completion of the registration process, you are provided with the computer account, an e-mail and a SMS message confirming your registration. This may take up to 24 hours after registration. Please ensure you remember your login and password. You must complete online registration before you can attend the induction with the Department.

Step 2: Central Registration

This is applicable to INTERNATIONAL STUDENTS ONLY: (those students who pay the international fee level). Once you have completed online registration, you must report to University Visa Checkpoint in the Charles Wilson Sports Hall before proceeding to Departmental induction (step 3). When you have to do this is detailed in the ‘Visa Checkpoint for International (non-EU) students’ section of the guide on the following link: http://www2.le.ac.uk/offices/sas2/registration/centralregistration/register-centrally.

Step 3: Departmental Induction

Wednesday 28th September 2016: Induction with the Department

PLEASE NOTE THAT YOU MUST COMPLETE ONLINE REGISTRATION BEFORE YOU CAN ATTEND THE INDUCTION WITH THE DEPARTMENT

Induction for all Foundation students will start in the Department of Physics at 12pm on Monday 26th September. All Chemistry Foundation students should report to the Chemistry Department in the George Porter Chemistry Building MML at 10am on Wednesday 28th September. Please note that you will not be able to participate in the induction programme in the Department outside of the times advertised. A map of the Campus can be found here http://www2.le.ac.uk/maps.
Please ensure you have completed the online registration process before arriving. If you do not, you will not be able to participate in the induction programme. To speed up your induction, you can bring with you a copy of the e-mail or the SMS message the University of Leicester sent to you that confirms you have completed online registration, but this is not a requirement for you to participate in the induction programme.

**Freshers Fair and Student Societies**

**Freshers Fair**

The University of Leicester Students’ Union organises a week-long activity during the first week of term to welcome you and to offer you the opportunity to join societies and associations. With over 200 groups and societies in the Union, there is something for virtually everyone! Further information is available from the Students Union (Percy Gee Building) or can be found at [http://leicesterunion.com/](http://leicesterunion.com/).

**Any Further Questions**

If you are unsure about any aspect of the above information, please feel free to contact a member of the Department’s Reception between 08:00 and 17:00 or by e-mailing chemadmin@le.ac.uk.

**Special Equipment**

At the start of your course you will be provided with a locker in the Chemistry department and a locker combination lock. You will need to pay a £10 deposit for this lock. The money will then be returned to you at the end of your course on receipt of your combination lock.

If you forget your lock combination please come to the departmental reception and one of the team will reset your lock for you.

You will be provided with a lab coat and a molecular modelling kit when you start your degree. You can collect these during your induction week in the Chemistry department (George Porter building).

**Department Details**

The Department of Chemistry at the University of Leicester is recognised both internationally for its research and its excellence in teaching. We have invested in modern, state-of-the-art facilities for carrying out agenda setting research and for the provision of high quality undergraduate teaching.

With substantial funding for industrial and government sponsored research, our research interests are multidisciplinary, focussing on diverse topics such as biological chemistry, green chemistry, atmospheric chemistry and laser spectroscopy.

This research ranges from fundamental cutting-edge work on bio-inspired nanomaterials to global studies of chemicals and their effect on climate change. Recent research work has led to the formation of "spin-out" companies and three purpose built demonstrator units to display our technology to industry.

The Department is a friendly and supportive environment in which to both study and carry out research and consistently we have been rated very highly in the National Student Satisfaction Survey (95% overall satisfaction in the 2016 survey).

What sets us apart from other departments is our dedication to providing student-focussed, multi-media learning methods to ensure high quality modern teaching. The result is that our graduates are equipped with both the specialist chemistry knowledge and a host of important transferable skills highly valued by employers.
Research in the Department of Chemistry

The academic and teaching staff of the Department are researchers as well as teachers. In addition to teaching the discipline of Chemistry to students at the undergraduate and postgraduate levels, they actively contribute to the development and dissemination of new ideas in Chemistry.

The close relationship between teaching and research is one of the great advantages of studying at University. You will come into contact with staff who are actively engaged in the subject – not just teaching it as a fixed body of knowledge.

Members of the Department of Chemistry at Leicester are active in many different research areas. With substantial funding from government and industrial sponsors, our research interests are multidisciplinary and diverse, which enables the Department to offer a wide choice of topics for undergraduate research projects.

Full details can be found at: http://www2.le.ac.uk/departments/chemistry/research
### Departmental Communications

### Staff List and Key Contacts

As well as administrative staff and your personal tutor you may need to contact other staff members if you have a specific query. Please e-mail them at the below e-mail address with your query or to book an appointment with them.

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
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<tbody>
<tr>
<td><strong>Head of Department (HoD)</strong></td>
<td>Prof. Andrew Ellis</td>
</tr>
<tr>
<td><strong>Programme Co-ordinators and Tutors</strong></td>
<td></td>
</tr>
<tr>
<td>Chemistry (USA/Ind/EU)</td>
<td>Dr Sandeep Handa</td>
</tr>
<tr>
<td>Chemistry with Forensic Science (USA/Ind/EU)</td>
<td>Prof. Rob Hillman</td>
</tr>
<tr>
<td>Pharmaceutical Chemistry (Ind)</td>
<td>Dr Sandeep Handa</td>
</tr>
<tr>
<td>Erasmus Co-ordinator</td>
<td>Dr Antonio Guerreiro /Dr Sandeep Handa</td>
</tr>
<tr>
<td>Foundation Year</td>
<td>Prof. Dai Davies</td>
</tr>
<tr>
<td>Level 1</td>
<td>Dr Mark Lowe</td>
</tr>
<tr>
<td>Level 2</td>
<td>Dr Dylan Williams</td>
</tr>
<tr>
<td>Level 3</td>
<td>Dr Greg Solan</td>
</tr>
<tr>
<td>Level 4</td>
<td>Dr Sandeep Handa</td>
</tr>
<tr>
<td><strong>Officers &amp; Tutors</strong></td>
<td></td>
</tr>
<tr>
<td>Careers Tutor &amp; Personal Development Plan Co-ordinator</td>
<td>Dr Kal Karim</td>
</tr>
<tr>
<td>Special Needs Tutor (AccessAbility)</td>
<td>Prof. Paul Cullis</td>
</tr>
<tr>
<td>Director of MSc Postgraduate Admissions</td>
<td>Prof. Eric Hope</td>
</tr>
<tr>
<td>Senior Tutor</td>
<td>Prof. Andy Abbott</td>
</tr>
<tr>
<td>Head of Teaching</td>
<td>Dr Sandeep Handa</td>
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<td>Postgraduate Tutor</td>
<td>Prof. Karl Ryder</td>
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<td>Admissions Officer</td>
<td>Dr Richard Blackburn</td>
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<tr>
<td>Examinations Officer</td>
<td>Dr Andrew Hudson</td>
</tr>
<tr>
<td>Department Safety Officer</td>
<td>Dr Michael Whitcombe</td>
</tr>
<tr>
<td>Building Safety Supervisor/Technical Manager</td>
<td>Dr Dominic Banks</td>
</tr>
<tr>
<td>Plagiarism Officer</td>
<td>Dr Kal Karim</td>
</tr>
<tr>
<td>Outreach Officer</td>
<td>Dr Barbara Villa-Marcos</td>
</tr>
<tr>
<td>Library Liaison Officer</td>
<td>Dr Dylan Williams</td>
</tr>
<tr>
<td>Athena SWAN</td>
<td>Dr Alison Stuart</td>
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</tbody>
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Administrative Staff

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Administration Manager</td>
<td>Claire Cartwright</td>
</tr>
<tr>
<td>Programme Administrator</td>
<td>Zahira Ahmed</td>
</tr>
<tr>
<td>Programme Administrator</td>
<td>Caroline Bilson</td>
</tr>
<tr>
<td>Programme Administrator</td>
<td>Vicky Robbins</td>
</tr>
<tr>
<td>Administrative Assistant</td>
<td>Gigi Law</td>
</tr>
</tbody>
</table>

Staff Directory

Day-to-day queries should be sent to chemadmin@le.ac.uk. We would recommend using this e-mail address to ensure you receive the most efficient response. If you need to contact a member of staff individually please see the contact list below. You can also find up-to-date contact details on the Department’s website: [www.le.ac.uk/departments/chemistry/people](http://www.le.ac.uk/departments/chemistry/people)

<table>
<thead>
<tr>
<th>Name</th>
<th>Room Number</th>
<th>Phone Number</th>
<th>E-mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Staff</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prof. Andrew ABBOTT</td>
<td>MC 021</td>
<td>2087</td>
<td><a href="mailto:apa1@le.ac.uk">apa1@le.ac.uk</a></td>
</tr>
<tr>
<td>Dr Steve BALL</td>
<td>1.12</td>
<td>2139</td>
<td><a href="mailto:sb263@le.ac.uk">sb263@le.ac.uk</a></td>
</tr>
<tr>
<td>Dr Richard BLACKBURN</td>
<td>2.11</td>
<td>2093</td>
<td><a href="mailto:rb436@le.ac.uk">rb436@le.ac.uk</a></td>
</tr>
<tr>
<td>Prof. Paul CULLIS</td>
<td>0.13</td>
<td>2130</td>
<td><a href="mailto:pmc@le.ac.uk">pmc@le.ac.uk</a></td>
</tr>
<tr>
<td>Prof. Dai DAVIES</td>
<td>1.14</td>
<td>2092</td>
<td><a href="mailto:dld3@le.ac.uk">dld3@le.ac.uk</a></td>
</tr>
<tr>
<td>Prof. Andrew ELLIS</td>
<td>0.08</td>
<td>2138</td>
<td><a href="mailto:ame2@le.ac.uk">ame2@le.ac.uk</a></td>
</tr>
<tr>
<td>Dr Corey EVANS</td>
<td>-1.19</td>
<td>3985</td>
<td><a href="mailto:cje8@le.ac.uk">cje8@le.ac.uk</a></td>
</tr>
<tr>
<td>Dr Antonio GUERREIRO</td>
<td>2.19</td>
<td>4670</td>
<td><a href="mailto:ag398@le.ac.uk">ag398@le.ac.uk</a></td>
</tr>
<tr>
<td>Dr Sandeep HANDA</td>
<td>2.10</td>
<td>2128</td>
<td><a href="mailto:sh78@le.ac.uk">sh78@le.ac.uk</a></td>
</tr>
<tr>
<td>Prof. Rob HILLMAN</td>
<td>MC 020</td>
<td>2144</td>
<td><a href="mailto:arh7@le.ac.uk">arh7@le.ac.uk</a></td>
</tr>
<tr>
<td>Dr James HODGKINSON</td>
<td>TBC</td>
<td>TBC</td>
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<tr>
<td>Prof. Eric HOPE</td>
<td>0.10</td>
<td>2108</td>
<td><a href="mailto:egh1@le.ac.uk">egh1@le.ac.uk</a></td>
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<tr>
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</tbody>
</table>

**MC = Materials Centre**

**Administrative & Support Staff**

Day-to-day teaching and administrative enquiries – chemadmin@le.ac.uk

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</table>
Student Communications and Personal Details

The University keeps a record of your personal details such as your full name, addresses i.e. home address and term-time address, telephone numbers, personal email address and your emergency contact details. It is important to keep your details up to date as this will help you to receive information about your studies and exams and also ensure that official documents are provided to you with the correct name details.

You can check and update your details by logging-in to MyStudentRecord http://mystudentrecord.le.ac.uk using your University username and password. Click on the My Details tab and you will then be able to review and change your personal details.

It is important that you check your University email account frequently to ensure that you do not miss any important communication from the University. If you are experiencing any difficulties with your computer account, you should advise IT Services who will attempt to assist you in resolving the problem.

Information on the Web

Departmental Website: http://www.le.ac.uk/chemistry/

Department Facilities

Instrumentation and specialist facilities

Cutting-edge chemistry requires access to all sorts of specialised facilities. This includes modern instruments for chemical analysis. Knowledge and the use of these instruments is an important part of your training as a chemist.

The Department contains a wide variety of equipment, including numerous small instruments such as FTIR spectrometers and gas/liquid chromatographs (e.g., GC, GC/MS and HPLC), through to major specialised equipment such as high-field NMR spectrometers, atomic force microscopes, high-resolution mass spectrometers, and a X-ray diffractometer.

You will encounter these, and much more during your undergraduate studies. The Department also has extensive technical support from its own mechanical, electronic, and glassblowing workshops.

Teaching laboratories

The Department is equipped with spacious fully equipped teaching laboratories. In the summer of 2014 the teaching labs were expanded and refurbished. Different parts of the teaching laboratory now focus on specific areas of chemistry. For example, a section of the laboratory is setup specifically for Physical Chemistry experiments. This allows students to experience both synthetic and physical chemistry experiments in a given semester. This also results in better overlap between experiments and course modules enhancing the student learning experience. There are also instrument rooms which contains a variety of spectrometers (e.g., UV-Vis/FTIR/HPLC/GC) for routine undergraduate use.

First year students will have laboratory sessions in the undergraduate teaching lab. This is on the first floor of the George Porter building and is fully equipped with all items needed for level experiments.
Computers

Computer skills are vital in the modern world and will form an important part of your training. The university has over 850 networked PCs linked to a central server, which students will have access to. Furthermore, the department has WiFi so students can access the internet anywhere in the building.

An enormous range of software is accessible, all of which runs under Windows. This includes Office 2013, graphical analysis software, specialised chemistry programs (e.g., ChemDraw), and access to the internet and email (via your IT account).

There are PCs in many different locations on and around campus including the Department (Chemistry Computer Room on the second floor), the main library and the halls of residence.

The department has a colour and a black and white student printer. The colour student printer is located in the computer room on the second floor, the black and white student printer is on the ground floor next to the bus shelter.

Lecture theatres

The Chemistry Department houses three lecture theatres. These lectures are used by all Departments in the University.

Student Reading Room (2nd Floor)

A spacious student Reading Room provides a quiet working area for students. The Reading Room can be used by anyone; however, it is predominantly used by Chemistry students to complete tutorial problems sheets, write laboratory reports, or simply as a place to do some reading. The Reading Room also has a selection of text books available for student use. Please note that the reading room is centrally booked teaching space and at times will be used for teaching activities for Chemistry and other departments.

Molecular Modelling Laboratory

The molecular modelling laboratory in the Department is an ideal space for holding seminars, tutorials or workshops sessions as well as a quiet study area for students.

The Molecular Modelling Laboratory can be booked out for student use. In order to book this please e-mail chemadmin@le.ac.uk or come into the main office during office hours (8am – 5pm) and the team will be happy to book this for you if possible.

Students are also welcome to use the foyer for group discussions so long as they do not disturb lectures taking place in nearby lecture theatres.
Learn at Leicester

Whatever your subject or level of study, there are many, many different ways in which you can access academic advice and support. The Learn at Leicester webpage provides you with further details of this support, together with direct links to a wide range of resources and services to help you:

- Make the most of the Library
- Develop your IT skills
- Manage your own learning
- Improve your English language
- Get independent advice about your course
- Manage your student information
- Sharpen your mathematics and statistics skills
- Improve problem solving
- Improve teamwork
- Improve ability to present with confidence

You can access all of this by visiting: [www.le.ac.uk/learnatleicester](http://www.le.ac.uk/learnatleicester)

University Library

The Library is your gateway to high quality information relevant to your studies. Using it effectively contributes directly to your success.

The Library provides you with:

- access to a huge range of specialist digital and print information resources for your subject;
- help in finding and using information - online, face to face and by telephone;
- individual and group study space;
- PCs and wireless networking for your own device throughout the David Wilson Library;
- services for distance learners.

The Library is a shared resource for all members of the University. Please respect it and observe the Library regulations available at [www.le.ac.uk/library/about](http://www.le.ac.uk/library/about).

To get started, visit [www.le.ac.uk/library](http://www.le.ac.uk/library).

For information about your subject, please visit [http://www2.le.ac.uk/library/find/subjects/chemistry](http://www2.le.ac.uk/library/find/subjects/chemistry)
IT Services

Whilst studying at the University you will have a University IT account and email address. There are hundreds of University PCs available with Office 2013 and many specialist programs to help you with your studies.

Visit www.le.ac.uk/it4students for more information about:

- **Student email**: access your email and calendar anywhere; on your laptop or mobile device
- **Printing**: print from any device to a University printer
- **Microsoft Office**: available at no cost whilst you study at the University
- **IT Help**: visit the Help Zone in the Library, phone 0116 252 2253, ithelp.le.ac.uk for IT Self Service, web chat or email ithelp@le.ac.uk
- **IT Training**: attend our workshops in Word, PowerPoint and Excel
- **Wifi**: free access to eduroam wifi on campus, in student accommodation or at other universities
- **PCs on campus**: there are over 900 PCs available, with 350 located in the David Wilson Library (including 24/7 access during exam periods)
- **OneDrive**: the online storage location for all your files
- **Blackboard Virtual Learning Environment**: support and information for all your courses
- **Leicester Digital Library**: access to journals, databases and electronic books online

Student Learning Development

Studying for a degree is a stimulating, challenging and rewarding experience. In order to make the most of this experience, the University of Leicester provides a wide range of resources and services to support and enhance your academic development in areas such as essay-writing, critical thinking, independent learning and time-management. The Student Learning Development Team is here to help you develop the skills and abilities you need in order to succeed in your studies.

To find out more about how we can help you develop your academic skills and abilities, visit our website: www.le.ac.uk/succeedinyourstudies.

Students’ Union Education Unit (ED)

Education help and advice is provided by the Students’ Union for all students.

If you would find it helpful to talk to someone outside of your department, we offer a free, confidential service to help and advise you about where to go and what to do. If you wish to come and talk to us about your personal circumstances or academic worries, for example, exams or putting together an academic appeal, we will provide professional and friendly support.

You will find the Education Unit staff in the Students’ Union Building on the first floor, within the West Wing. Opening hours are 10.00 am to 4.00 pm, and you can either pop in or book an appointment by contacting us on the following details:

**Contact**: Students’ Union Education Unit (ED), Students’ Union (First Floor)
+44 (0)116 223 1132 | educationunit@le.ac.uk | http://leicesterunion.com/support/education

Online chat facilities are also available for appointments and drop in sessions.

Facebook – https://www.facebook.com/talktoED (Drop in on Wednesdays, 3:30pm-4:30pm)

Skype - @ed_ucation1 (Drop in on Tuesdays, 9am-10am)
Learn a New Language with *Languages at Leicester*

There are many benefits to learning a new language. Not only could you *enhance your career prospects* and broaden your cultural horizons, but studies show that you could also improve your literacy skills, boost your memory, increase your attention span and even help to grow your brain!

Study with the *Languages at Leicester* Team on campus, and you will be taught by expert native tutors who are based within our School of Modern Languages, which has been *ranked 3rd in the country in the University League Tables, The Guardian University Guide 2016.*

We offer **16 different languages** including Arabic, British Sign Language, Chinese, German, Korean and Spanish to name just a few, six levels of learning and two course lengths, so you can study in a way that suits you. Classes take place during evenings and Wednesday afternoons, as well as intensive ‘fast track’ courses on Saturday mornings.

Find out more about *Languages at Leicester*, including fees and term dates at: [www.le.ac.uk/ml/lal](http://www.le.ac.uk/ml/lal).

The successful completion of a *Languages at Leicester* course will appear on your Higher Education Achievement Report (HEAR) when you graduate. For further details about the HEAR, please visit: [www.le.ac.uk/hear](http://www.le.ac.uk/hear).

*Contact:* Languages at Leicester +44(0)116 252 2662 | lalenquiries@le.ac.uk | [www.le.ac.uk/ml/lal](http://www.le.ac.uk/ml/lal)

Other University Facilities

English Language Training Unit (ELTU) [http://www2.le.ac.uk/offices/eltu](http://www2.le.ac.uk/offices/eltu)

Languages at Leicester [http://www2.le.ac.uk/departments/modern-languages/lal](http://www2.le.ac.uk/departments/modern-languages/lal)

Victoria Park Health Centre [http://www.victoriaparkhealthcentre.co.uk](http://www.victoriaparkhealthcentre.co.uk)

University Chaplaincy & Prayer Rooms for students [http://www2.le.ac.uk/institution/chaplaincy](http://www2.le.ac.uk/institution/chaplaincy)

University Regulations

Senate Regulations ([www.le.ac.uk/sas/regulations](http://www.le.ac.uk/sas/regulations)) contain rules and other important information about being an undergraduate or taught postgraduate student at the University of Leicester. The Regulations are part of the formal contract between you and the University; you will have confirmed when completing registration that you will comply with procedures defined in the University’s Regulations.

The Quick Guide to Student Responsibilities ([www.le.ac.uk/sas/regulations/responsibilities](http://www.le.ac.uk/sas/regulations/responsibilities)) summarises some of your most important responsibilities as a student at Leicester, as defined in detail in the Regulations. These responsibilities relate to:

- attendance
- submission of work by set deadlines
- term time employment (full-time students – Home/EU and International)
- illness or other circumstances impacting upon studies
- maintaining your personal details
- the additional responsibilities of international students

Failure to adhere to student responsibilities can have serious consequences and may lead to the termination of your studies.
Student Responsibilities

The University expects its students to behave responsibly and with consideration to others at all times. The University’s expectations about student behaviour are described in:

- the Student Charter
- the Regulations governing Student Discipline
- the Student Code of Social Responsibility
- the Code of Practice governing Freedom of Speech
- the University’s regulatory statement concerning Harassment and Discrimination
- These can be found at www.le.ac.uk/senate-regulations
- It is reasonable for teaching staff to expect students to:
  - observe the University’s regulations and code of conduct;

(See http://www.le.ac.uk/sas/regulations or http://www.le.ac.uk/sas/regulations/responsibilities for full details);

- attend all classes and arrive on time;
- meet assessment deadlines and submit only original work for assessment; you will lose marks if you miss deadlines; see later for policy on cheating and plagiarism;
- register for modules and exams by the set deadline;
- keep a diary of appointments and classes;
- manage their own time and workload and use study periods in a disciplined way;
- inform the Department as soon as possible if you cannot attend a class or keep an appointment;
- make optimum use of the University's opportunities and resources.
- check e-mails, Blackboard, notice board and pigeon holes regularly for communication from staff;
- fill in module questionnaires to provide feedback.

Attendance and Engagement Requirements

Attendance and engagement with your course is an essential requirement for success in your studies. The University’s expectations about attendance are defined in Senate Regulation 4: governing student obligations (see www.le.ac.uk/senate-regulation4). Full-time students must reside in Leicester, or within easy commuting distance of the city, for the duration of each semester. You should attend all lectures, seminars, practical sessions and other formal classes specified in your course timetable, unless you have been officially advised that attendance at a particular session is not compulsory or you have received formal approval for absence. You are also expected to undertake all assessments set for you.

The University operates a Student Attendance Monitoring procedure. Your attendance will be monitored throughout the academic year and if sessions are missed without an acceptable explanation being provided to your department then neglect of academic obligations procedures will be initiated. This may result in your course of study being terminated.

If you are an international student and your course is terminated this will be reported to UK Visas and Immigration (UKVI), in line with University sponsor obligations.
Neglect of Academic Obligations

You are expected to attend all learning and teaching events which are timetabled for you. These include lectures, tutorials or practical classes. You are also expected to submit work within the deadlines notified to you. Persistent failure to attend taught sessions and/or to submit work, without good cause, will be considered to be a neglect of academic obligations. Departmental procedures for dealing with neglect are set out within the University’s regulations (see http://www.le.ac.uk/senate-regulation#‘Neglect of academic obligations’). In the most serious of cases of neglect the University has the right to terminate a student’s course.

Examination Regulations

If your course involves any exams you must ensure that you are familiar with the University’s Examination Regulations (www.le.ac.uk/sas/assessments/examregs). These contain a variety of regulatory information and instructions relating to exams, including the rules governing:

- scheduling
- admittance
- student conduct
- permitted and prohibited items and clothing
- use of calculators and dictionaries
- absence due to illness
- cheating

You can also find information about exams in the Students’ Guide to Exams (www.le.ac.uk/sas/assessments/examsguide).

Course details

Programme and Module Specifications

View the programme and module specifications for your course via www.le.ac.uk/sas/courses

In the programme specification you will find a summary of the aims of your course of study and its learning outcomes, alongside details of its teaching and learning methods and means of assessment. The programme specification also identifies the core modules that make up the course and any choice of optional modules. Each module has its own specification that formally records that module’s aims, teaching and learning methods, assessment components and their percentage weighting.

Attendance Requirements

Attendance is an essential requirement for success in your studies. The University’s expectations about attendance are defined in Senate Regulation 4: governing student obligations (see www.le.ac.uk/senate-regulation#). Full-time students must reside in Leicester, or within easy commuting distance of the city, for the duration of each semester. You should attend all lectures, seminars, practical sessions and other formal classes specified in your course timetable, unless you have been officially advised that attendance at a particular session is not compulsory or you have received formal approval for absence.

In addition to other attendance monitoring practices, departments will monitor international student attendance at two ‘checkpoints’ during each academic year, typically at a compulsory learning and teaching session appearing in course or examination timetables. Students will not normally be notified of checkpoint dates in advance. If you are an international student and you fail to meet attendance and/or checkpoint requirements this may result in the termination of your course and the subsequent reporting of this to UK Visas and Immigration (UKVI), in line with University sponsor obligations.
‘Swipe Green to be Seen’
A new way of registering your attendance at timetabled taught events has been introduced at the University. Most of our teaching spaces have card readers installed inside. When you attend a teaching event, all you need to do is touch your student ID card against one of the readers in the room until it turns green. This will register your attendance at this event. When you do this for the first time, this may take up to five seconds as your card is being activated.

You should attend all lectures, seminars, practical sessions and other formal classes specified in your course timetable. You’ll need to register your attendance by touching your student ID card against a card reader at all of these sessions (unless otherwise notified).

You can register your attendance up to 10 minutes before the start time of a teaching event. If you arrive late, please ensure you still touch your card against a reader.

For further information please see the following webpage https://www2.le.ac.uk/offices/sas2/attendance-management/attendance-management-for-students?uol_r=36e30b25

Teaching Timetable
The academic year is divided into two semesters.

**Semester one:** the first week is used mainly for induction and is followed by 10 full teaching weeks. After the Christmas vacation, there is a two week exam period.

**Semester two:** consists of 10 teaching weeks (which may be broken by the Easter vacation), followed by one week for revision classes and an examination period.

The Calendar inside the front cover gives the dates of each semester this year and the week number.

Lectures (and tutorials) last for 50 minutes in order to allow a 10 minute break between consecutive classes. The timetable will be communicated to students and any changes to teaching times and locations will also be communicated. Ensure that you check the departmental Blackboard site regularly to keep up to date with any changes.

**Lectures**
In general, lectures define the examinable syllabus. You will need to develop the technique of writing a coherent set of notes of the essential points of each lecture to help you consolidate your understanding as the course develops.

For many of you, the lecture will be an unfamiliar form of teaching. You may find that pressure of time and the large lecture audience means that there is little, if any, opportunity for discussion. However, you can always approach a lecturer after the lecture to seek clarification of points which have arisen. A further opportunity is given to discuss chemistry in tutorials and workshops.

**Tutorials**
Tutorials provide you with a regular opportunity to develop your ideas, discuss your difficulties and explore your interests with a member of academic staff and to receive feedback on how well you understand the material. You will normally be tutored in a small group of 4-6 fellow undergraduates allowing you the chance to address your individual problems. Small tutorial groups will build up a close working relationship between students and tutors so long as all members of the group pull their weight.
At the beginning of the course you will be given clear guidance about handing in written work, which you should do in preparation for your tutorial. The success of a tutorial depends largely on your attitude. (Not only should you have done the set work beforehand, but also to bring to the tutorial questions and problems which have arisen during your studies. You should also ask questions if you do not understand points made by others in discussion). You will not be penalised for lack of understanding.

Your attendance at tutorials and record of handing in work will be recorded and assessed. You must hand work in by the deadline to receive a mark.

1 = a token effort; 2 = a modest effort; 3 = a good attempt; 4 = a very good attempt; 5 = an excellent attempt

If you fail to attend a tutorial and do not provide satisfactory evidence of reasonable mitigating circumstances then you will receive a mark of zero for that week. All evidence will need to be submitted within 7 days of the original tutorial.

When you hand in your work you must attach a cover sheet which has your name, your tutorial group e.g. B2, and the name of the member of staff taking the tutorial. If this information is omitted or incorrect you will be given a mark of zero.

Coursework Submission

You should make sure that you submit your assignments by their due date to avoid any marks being deducted for lateness. Penalties for late submission of coursework follow the University scheme defined in Regulations governing the assessment of taught programmes (see www.le.ac.uk/senate-regulation or www.le.ac.uk/sas/assessments/late-submission).

Change of Course/Module

Discuss your options with your personal tutor, or another appropriate member of staff in your department if you are considering a change of course or module. Changes of course or module require approval by your department and will only be allowed in certain circumstances.

The change of course form can be downloaded from the website or a paper form can be collected from the main office.

See www.le.ac.uk/sas/courses/transfercourse or www.le.ac.uk/sas/courses/transfermodule for details of the procedures involved and deadlines that apply.

Marking and Assessment Practices

Student anonymity will be preserved during the marking of all formal examinations. Summative coursework (i.e. coursework that contributes to your module mark or grade) will be marked anonymously unless there are sound educational reasons for not doing so, or the type of assessment makes marking impractical.

Each programme at the University has one or more External Examiners, who are members of staff of other institutions that review the academic standards at the University and confirm that these are appropriate and comparable with other Universities.

The External Examiners for your courses are listed at: www.le.ac.uk/sas/assessments/external/current-undergraduate
Feedback and the Return of Work from Staff

Coursework

The Department complies with the University’s policy for the return of marked coursework (see www.le.ac.uk/sas/quality/student-feedback/return-of-marked-work for details of the full policy:

General principles:

- Feedback and provisional grading on coursework will be returned within 21 days of the submission date;
- In exceptional circumstances where this is not possible, you will be notified in advance of the expected return date and the reasons for the longer turn-round time and where possible staff will provide some interim feedback: for example in the form of generic feedback to the class regarding common errors and potential areas for improvement.

Written feedback will be given for all tutorial, PBL and practical work either on a cover sheet or through Blackboard within 21 days of the submission date. To improve your performance you should act on this feedback. In exceptional circumstances where this is not possible, you will be notified in advance of the expected return date and the reasons for the longer turn-round time.

[For full details see http://www.le.ac.uk/sas/quality/student-feedback/return-of-marked-work]

At the end of all theory modules there will be an opportunity for you to comment on the difficulty of the course, quality of the lectures, handouts and associated workshops or tutorials. This information is used by the Department to improve the quality of the courses. The results will be fed back to the Student/Staff Committee in the following academic year.

Examinations

The Department complies with the University’s policy for the return feedback on examinations (see www.le.ac.uk/sas/quality/student-feedback/return-of-marked-work for details of the full policy:

General principles:

- Following the approval of the provisional results by examination boards, departments will make the results available to students within 14 days. Where appropriate this will include a breakdown at the level of the examination and coursework.
- Departments will arrange for feedback on examination performance to be provided.

Progression and Classification of Awards

The University’s system for the classification of awards and the rules of progression are defined in Senate Regulation 5: Regulations governing undergraduate programmes of study (www.le.ac.uk/senate-regulation5) Alternatively, refer to the Student and Academic Services website for information about degree classification and progression: www.le.ac.uk/sas/assessments/progression-ug

Any specific progression requirements for your course are stated in its programme specification (see www.le.ac.uk/sas/courses/documentation)

Referencing and Academic Integrity

Principles of academic integrity apply to the work of everyone at the University, staff and students alike, and reflect the University’s commitment to maintaining the highest ethical and academic standards. A key part of this is acknowledging where and when, in the process of producing your own work, you have drawn on the work of others. In practice, this means that the ideas, data, information, quotations and illustrations you use in assignments, presentations, reports, research projects etc. must be credited to their original author(s). This
process of crediting the work of others is achieved through referencing (see the section below on ‘Referencing styles’). Failure to do this properly is to risk committing plagiarism: the repetition or paraphrasing of someone else’s work without proper acknowledgement.

What we mean by ‘plagiarism’, ‘self-plagiarism’ and ‘collusion’

Plagiarism is used as a general term to describe taking and using another’s thoughts and writings and presenting them as if they are our own. Examples of forms of plagiarism include:

- the verbatim (word for word) copying of another’s work without appropriate and correctly presented acknowledgement;
- the close paraphrasing of another’s work by simply changing a few words or altering the order of presentation, with or without appropriate and correctly presented acknowledgement;
- unacknowledged quotation of phrases from another’s work;
- the presentation of another’s concept as one’s own;
- the reproduction of a student’s own work when it has been previously submitted and marked but is presented as original material (self-plagiarism).

Collusion is where work is prepared or produced with others but then submitted for assessment as if it were the product of individual effort. Unless specifically instructed otherwise, all work you submit for assessment should be your own and must not be work previously submitted for assessment either at Leicester or elsewhere. For more detailed information on how the university defines these practices, see also: [www.le.ac.uk/sas/assessments/plagiarism](http://www.le.ac.uk/sas/assessments/plagiarism)

The University regards plagiarism and collusion as very serious offences and so they are subject to strict penalties. The penalties that departments are authorised to apply are defined in the Regulations governing student discipline (see [www.le.ac.uk/senate-regulation11](http://www.le.ac.uk/senate-regulation11) ‘Plagiarism and collusion: Departmental penalties for plagiarism and/or collusion).

Resources and advice to help you study with integrity and avoid committing plagiarism

Negotiating these various rules, regulations and conventions can sometimes be a challenge, especially if they are new or different from previous experiences of studying. Check the Student Learning Development website for guidance on how to manage your studies so that you meet the required standards of critical scholarship and academic integrity: [www2.le.ac.uk/offices/ld/resources/study/plagiarism-tutorial](http://www2.le.ac.uk/offices/ld/resources/study/plagiarism-tutorial)

If you are in any doubt about what constitutes good practice, ask your personal/academic tutors for advice or make an appointment with Student Learning Development for individual advice. You can book an appointment online by visiting: [www.le.ac.uk/succeedinyourstudies](http://www.le.ac.uk/succeedinyourstudies)

One of the most important practices in ensuring the academic integrity of your work is proper referencing. The following section contains details of how to ensure your work meets the specific referencing requirements for the discipline(s) you are studying.

Referencing style

You must use a consistent referencing style when referring to books and other publications that you have read for your coursework. Most subject areas have a specific referencing style which you are required to use. If you are on a Joint or Major/Minor programme you may find that your subjects use different referencing styles and it is important that you use the correct ones. To find out which referencing style each department uses, and for information and help on each referencing style, please visit [http://www.le.ac.uk/library/help/referencing](http://www.le.ac.uk/library/help/referencing).
Requirements differ on how to arrange bibliographies (complete list of all reference and other sources at the end of your coursework) and whether references are included within the word count for your coursework – please refer to any separate guidance provided on these points.

**Mitigating Circumstances**

The University recognises that students may suffer from a sudden illness or other serious event or set of circumstances which adversely affects their ability to complete an assessment or the results they obtain for an assessment. In such cases the mitigating circumstances regulations and procedures may be applied. These regulations are designed to ensure the fair and consistent treatment of all students.

You must keep your department(s) informed at all times of any personal circumstances that may impact upon your ability to study or undertake assessments. Tell your department(s) or Distance Learning Hub about any such circumstances at the time they occur. You need to fill out a mitigating circumstances form which can be found at the link below. You need to supply supporting documentation (e.g. a medical certificate) as soon as possible and no later than the deadline relevant to the assessment(s) affected. Normally, the deadline for submission of a mitigating circumstances claim will be no later than five working days after the assessment deadline to which it relates.

See [www.le.ac.uk/sas/regulations/mitigation](http://www.le.ac.uk/sas/regulations/mitigation) for full details of the mitigating circumstances regulations and procedures, including the University’s definition of a mitigating circumstance.

The Chemistry Department procedures for mitigating circumstances and absence from the University are described below (see also Blackboard site CH5001).

**Absence from the University**

Your attendance at lectures, workshops, practicals, tutorials and all other sessions (e.g. Problem Based Learning) is monitored and if you miss more than 3 sessions in a 2 week period you will be e-mailed to visit your personal tutor to explain your absence. Continued lack of attendance will be dealt with by the senior tutor, Professor Abbott, or the Head of Department. Serious lack of attendance could result in a Gross Neglect Warning which may result in the removal of the right to resit any exams you fail.

If you have any problem which is affecting your work or causing you to miss any of your commitments, you should discuss this with your personal tutor who will respect the confidentiality of your discussion. Your personal tutor may advise you to see a Student Counsellor or a Chaplain (see above). Students who are absent from the university are required to report this to the Department:

(a) if the illness leads to absence from classes at which attendance is compulsory (tutorials, workshops, laboratory sessions, assessments or university exams);

(b) where it might be a contributory factor in a failure to meet deadlines or to perform up to expectations in any academic assignment.

This should be done using the appropriate online form.

[https://www2.le.ac.uk/departments/chemistry/current-students/ug/mitigating-circumstances-and-absence-reporting](https://www2.le.ac.uk/departments/chemistry/current-students/ug/mitigating-circumstances-and-absence-reporting)

Minor illness/absence for a period of up to five working days

Students must self-certify absence by filling in the online form as soon as they return, giving details of the reason for the absence and submit any corroborating evidence.
Illness/absence is of six or more days duration.
In this case medical advice should be sought and a medical certificate obtained and submitted. Students are responsible for collecting medical certificates from the Victoria Park Health Centre (or their own GP) and supplying a copy to the Department. Students should fill in a form after 1 week and a second one when they return to the University.

Serious or on-going medical problem
If you have a serious or on-going medical condition it is up to you to decide (in consultation with your personal tutor and/or student counsellor) if you are fit to continue with your studies. The University does not allow us to continue making allowances for an on-going condition unless the condition worsens, i.e. if you continue to study you are agreeing that you are fit to study and that the illness/condition is not significantly affecting your performance. You always have the right to withdraw temporarily and restart your studies the following year if your condition has improved.

You should fill in the appropriate form.

Absence from University exams in January, May/June or September
In this case a medical certificate is required regardless of the duration of the absence. The form must be submitted before the end of Week following the exam period (Jan/June) or by the Monday immediately following the exam period in September.

The examiners are unable to make allowance for your illness unless you fill in the form and submit appropriate documentation.

Personal Support for Students

Departmental Student Support Arrangements
From discussion of academic progress, to friendly advice on personal matters; personal tutors are there to provide support, advice and guidance on an individual level. Common topics for discussion may include course changes, study progress, module choices, exam results, career opportunities or more personal problems such as accommodation or financial difficulties. The Department’s personal tutor system operates in accordance with the Code of Practice on Personal Support for Students: www.le.ac.uk/sas/quality/personaltutor

Equal Opportunities
The Department’s Equal Opportunities officer is Professor Paul Cullis (pmc@le.ac.uk). If you would like to raise any concerns related to equal opportunities (ethnicity, gender, disability etc.) please contact Paul at the e-mail address above.

Athena SWAN
The Department of Chemistry was successful in achieving a Bronze Athena SWAN award in September 2013. This achievement shows the department’s commitment to advancing women’s careers in higher education and research in science, technology, engineering, maths and medicine (STEMM).

The beliefs underpinning the Athena SWAN Charter are:

- The advancement of science, technology, engineering, maths and medicine is fundamental to quality of life across the globe.
- It is vitally important that women are adequately represented in what has traditionally been, and is still, a male-dominated area.
• Science cannot reach its full potential unless it can benefit from the talents of the whole population, and until women and men can benefit equally from the opportunities it affords.

The good practice that arises from implementation of the Athena SWAN ethos is of benefit to everyone in higher education.

• Good practice is of benefit to all staff and students; bad practice adversely affects the careers of women more than men.
• Good practice does not target initiatives solely at women, processes that are transparent and fair are of benefit to everyone.

For further information on Athena SWAN please see the following webpage: [http://www2.le.ac.uk/departments/chemistry/athena-swan-1](http://www2.le.ac.uk/departments/chemistry/athena-swan-1)

If you have any suggestions for embedding the Athena SWAN ethos in the Chemistry department, or would like to get involved in Athena SWAN activities, please contact the Chair of the departmental Athena SWAN committee, Dr Alison Stuart (amc17@le.ac.uk).

### University Student Support Arrangements

Please note that the University of Leicester offers a holistic service to meet your needs in the major areas of student life, health and well-being, practical matters and learning and career development.

#### AccessAbility Centre

The Centre offers a range of services to all students who have specific learning difficulties, such as dyslexia, disabilities or long-term conditions including mental health which have a substantial day to day impact on their studies. Staff offer one to one support, the co-ordination of alternative examination arrangements and assistance with applications for the Disabled Students' Allowance. It is possible to be screened for specific learning difficulties and access to formal assessment is available. Students are means tested to see if they are eligible for assistance with the cost of formal assessments. The open access Centre acts as a resource base for students and staff and is a relaxed place for students to work. Its computers are equipped with specialised software for screen enlargement. Essay planning and speech output software is on the University network. The Centre has some specialised equipment (CCTV, enlarged keyboard, and chairs) and some for loan (chairs, writing slopes and digital recorders). Photocopying and printing facilities are also available. The Centre welcomes self-referrals as well as referrals from academic staff.

Contact: AccessAbility Centre, David Wilson Library
Tel/minicom: +44 (0)116 252 5002 | Fax: +44 (0)116 252 5513 | accessible@le.ac.uk |
[www.le.ac.uk/accessability](http://www.le.ac.uk/accessability)

Please note that the departmental AccessAbility officer is Professor Paul Cullis ([pmc@le.ac.uk](mailto:pmc@le.ac.uk)), who would be happy to answer any questions you may have.

#### Student Welfare Centre

The Student Welfare Service offers wide ranging practical support, advice, and information for students.

Financial advice is offered, with information on budgeting and funding. Specialised staff can advocate over late loans and other financial issues. Students can apply for hardship grants and loans through the Service.

Information, advice and guidance is available on finance issues and budgeting. In addition, students can apply for hardship awards and loans through the welfare service.
For international students, the Student Welfare Service coordinates The International Welcome Week in September and January. Expert immigration advice is available and students are strongly advised to renew their visas through the scheme provided by Student Welfare. Specialised Officers also support students who experience financial or personal problems.

**Contact:** Student Welfare Service, Charles Wilson Building.
Tel: +44 (0)116 223 1185 | Fax: 0116 223 1196 | welfare@le.ac.uk | www.le.ac.uk/welfare

**Counselling and Wellbeing Service**

This Service offers a range of expertise and support for the psychological aspects of health and wellbeing.

Services on offer include

**Student Counselling Support**

Time-limited, free and confidential one-to-one counselling to help students find ways of dealing with academic-related or personal issues that may be affecting ability to study or engage with student life. Helping students to build on their skills to cope with the challenges of study, work and relationships through workshops.

For information see our website: www.le.ac.uk/counselling

**Contact:** Student Counselling Service
+44 (0)116 2231780 | counselling@le.ac.uk

**Student Mental Wellbeing Support**

Practical, emotional and skills based one-to-one support to students managing mental health issues whilst at the University. Helping students to build on their skills to cope with the challenges of study, work and relationships through workshops.

**Contact:** Student Support (mental wellbeing)
+44 (0)116 252 2283 | mentalwellbeing@le.ac.uk
www2.le.ac.uk/offices/ssds/student-support-mental-wellbeing

**Student Healthy Living Service**

The Student Healthy Living Service provides direction to health care and health related activity which will contribute to wellbeing and help students to enjoy a balanced life. Students should register for health care local to the University; The University works closely with the Victoria Park Health Centre where staff have expertise in student health. More information can be found on the Healthy Living Service website.

**Contact:** Student Healthy Living Service
+(0)116 223 1268 | healthyliving@le.ac.uk | go.le.ac.uk/healthyliving

**Health Care and Registering with a Doctor**

Illness can affect any one of us at any time and for this reason the University strongly advises you to register with a doctor in Leicester. The Victoria Park Health Centre (www.victoriaparkhealthcentre.co.uk) has expertise in student health and has provided medical care to the University’s students for many years. The Health Centre is located conveniently close to the main-campus and registration is free.

If when you come to University you are already under the care of a ‘specialised team’, have a known medical condition including mental health or waiting for an appointment it is still advisable to register at the Victoria Park Health Centre. Soon after arrival, make an appointment to discuss with one of the doctors who will then be in a
better position to communicate with the relevant doctors and help you to manage your condition to avoid any unnecessary disruption to your studies. Please take with you information from your current doctor or consultant which includes diagnosis, current management, including medication (provide a certified English translation if the original is not in English). This is essential for international students as some conditions may be managed differently in this country, particularly in relation to medication which may be licensed differently and may need changing to something which is available to prescribe in this country. If you take medication for your condition you must bring 12 weeks supply with you to ensure continuity until the registration process is complete.

More information about registering with a doctor and other health and well-being services can be found at: http://www2.le.ac.uk/offices/healthy-living-for-students/new-students/uk-students

Careers and Skills Development

Career Development Service

With your drive and determination, the Career Development Service can help you develop the skills and abilities that will not only help get you to where you want to be after university, but will stay with you for life.

Career development at Leicester isn’t just about getting some work experience and writing a CV; we make sure that you get personal support to achieve your aspirations. We’re here for you from the moment you arrive, through to your graduation and beyond. We’ll give you the opportunity to try new things and to figure out what you want from your career— what it is that really drives, motivates and inspires you.

We’ll also help you identify your personal strengths and what you need to develop to be ahead of the crowd. Even if you’re not sure what it is you want to do yet, we can help you develop the skills and experience that you need to get that first job out of university, but also the ability to manage your own career development and succeed on whichever path you choose.

It’s your career development journey and you decide where it is that you want to go. By working with us you make sure that you’re giving yourself the best possible chance to get there. We’ve got the knowledge and resources to spur you on to success so, by working with us, you really will make the most of you!

When you arrive at Leicester you’ll have access to MyCareers: https://mycareers.le.ac.uk, our career management system, by simply using your university username to login. This is the gateway to:

• Booking one-to-one appointments with our career consultants for support with career planning, job hunting, CVs and applications, and mock interviews
• Booking workshops, such as mock assessment centres and psychometric testing
• Meeting employers who are coming on campus
• Finding all the opportunities available exclusively for Leicester students such as paid internships, volunteering, and extra-curricular activities

If you are looking for part time work whilst studying, make sure you sign up to Unitemps, based in the Students’ Union, for opportunities on campus and in the city.

We’re here to support you throughout your time at university so make sure that you come and visit us and log-in to your MyCareers account to get started!

Contact the Career Development Service:

0116 252 2004 | careershelp@le.ac.uk | www.le.ac.uk/careers
@uolcds | fb.com/uolcds
Feedback from Students

Student Feedback Questionnaires

The Department values your feedback on all of our teaching activities and makes every effort to act upon it to improve the teaching experience for all of our students. You will have the opportunity to give your feedback on every module that you take in the Department through the end of module questionnaires which are made available on Blackboard. Your feedback from these questionnaires is considered by the module convenor during the annual course review which takes places over the summer and each convenor must propose a plan of action to deal with any substantial issues that may have been raised. The Departmental Learning & Teaching Committee oversees the process and ensures that appropriate changes are indeed made in response to feedback. A summary of the list of actions from the course review is made available to students through the Student Staff Committee (SSC) and Blackboard during semester 1.

We appreciate that sometimes students will want to raise specific issues during a module rather than wait until the questionnaire. You can do this through the SSC, your personal tutor and/or the year tutors or by contacting the Head of Teaching (Dr Handa) directly. We would encourage you to raise any potential issues through one of these channels as soon as possible so that we can respond quickly and take any necessary action. Any actions arising as a result will be reported back through the SSC and/or Blackboard.

Listed below are just some of the changes that we have made during the last two years specifically* in response to student feedback.

(We have also made other changes to improve the student educational experience but the ones below were in response to issues raised through module questionnaires / the SSC / feedback to year tutors).

All Levels:

- Introduced lecture capture for the majority of core modules (for teaching events where rooms were equipped for lecture capture).
- Improved exam feedback – giving students a chance to look through their marked exam scripts.
- Tutorial feedback (Levels 1 & 2) – an opportunity for students to indicate difficult topics on the cover sheets.

Level 1:

- Introduced some additional revision sessions for students failing semester 1 modules.
- CH1003 (maths) - switched delivery from lecture followed by workshop to workshop then lecture, this allowed students to get help first and then review their answers in the lecture. Also provided detailed model answers for a representative selection of the problems.
- CH1002 & 1006 – lecture note booklets now provided.
- CH1007 – increased the amount of time spent covering topics students indicated as particularly difficult and also updated lecture notes for these areas.
- CH1031/32 – Moved parts of the introductory biology material from semester 2 to semester 1. Also reviewed material to provide more of a chemistry perspective on biochemistry topics.

Level 2:

- CH2005 – answers to workshop questions now supplied.
- CH2007 – increased the amount of time spent covering topics students indicated as particularly difficult and also updated lecture notes for these areas.
- CH2009 – lectures notes for aromatic / heteroaromatic chemistry rewritten to improve presentation and content.
CH2013 – removed final exam from the assessment, careers activities moved earlier (to help those applying for industrial placements) & changed timing of continuous assessments to avoid clashes with other Level 2 assessments.

CH2023 - students allowed to work in groups for problem classes / continuous assessment (previously done independently).

CH2040 – lecture notes for Dr Evans part completely revamped and updated.

Level 2 practical – reviewed length and instructions for some experiments to ensure enough time for lunch breaks and suggested points where breaks could be taken.

Pharm Chemists - arranged for access to lecture captures for some Level 1 Biochemistry material to help with background for the BS2013 module.

**Level 3:**

CH3201 – introduced short videos of worked examples of spectroscopy problems.

CH3202 - practice B’board questions made available for the continuous assessment.

CH3203 – increased the fraction of the continuous assessment (now 100%) based on previous exam questions.

CH3204 – drop in / revision sessions arranged for after Easter.

BSc projects – introduced a formative feedback exercise for the practical element to allow students to gauge their performance against the marking criteria.

MChem practical – improved mark sheet & feedback forms for the Phys chem labs; simplified proformas for the synthetic techniques.

Industry students – put procedures in places to allow students to take end of semester examinations at their placement company and so avoid having to travel back to Leicester.

**Level 4:**

Changed programme specifications so that modules now run across the whole year. This has two consequences – students now have greater choice over module options (no longer restricted to 2 modules each semester) and also allows paced delivery of material throughout the year (with more time for assimilation).

Added two extra module choices to Level 4 (Bioinorganic Chemistry & Nanotechnology)

Introduced some module choice for Pharmaceutical Chemists (previously the programme specifications had none).

MChem projects – introduced a formative feedback exercise for the practical element to allow students to gauge their performance against the marking criteria.

CH4201 – introduced written answers to selected spectroscopic problems to allow for individual feedback (previously this was a group exercise with feedback at group level).

CH4202 – changed the continuous assessment to focus on unseen retrosynthetic problem solving with detailed individual feedback.

CH4203 – added two classes on calculations & numerical problems (practice for the unseen problems on the final exam).

CH4204 – introduced a new essay based continuous assessment to give students training and practice in analysis of research papers (helpful for the final exam).

CH4206 – some additional formative coursework introduced.
Student Staff Committees

Student representatives are invited to sit on the Student/Staff Committee (SSC), usually from each year group, one representative for each degree course. The Committee meets at least once each semester to discuss any issues about the courses or other matters of concern. If you wish any matters to be raised, please contact your year/course representative. Elections for student representatives are usually held by the Student Union, early in the first semester (or at the end of the previous year for returning students).

The Agenda for committee meetings are circulated by email to all members at least one week prior to the meeting date and minutes are circulated as soon as possible following.

For more information about the SSC please see the noticeboard in the George Porter foyer.

The terms of reference will be circulated to all representatives at the start of the year but are also located at: http://www2.le.ac.uk/offices/sas2/quality/codes/documents/sscommittees.pdf

To see the elected representatives for this year: https://www.leicesterunion.com/top-navigation/voice/academic-representation/current-representatives

Societies

ChemSoc is the department’s Chemistry society. ChemSoc organises regular social and academic events for anyone with an interest in Chemistry. Events include joint socials with other societies, the ChemSoc Easter Ball, curry nights, laser tag, quiz nights, post-exam celebrations and pre-exam relaxation. The ChemSoc chair for the 2016-17 academic year is Angus Hope (ah521@student.le.ac.uk). For further information on ChemSoc please see their noticeboard in the foyer.

Safety and Security

As part of your induction and when you first start using the department’s labs you will be given detailed safety and security information. Specific safety information is covered under ‘Laboratory Work’.

Problem Classes and Laboratory Information

Problem Classes

These will usually involve demonstrations or supervised learning and/or problem solving. You will often be expected to work in small groups. In addition these sessions will be used to provide an induction to skills training, e.g. writing and oral presentation skills.

Laboratory Work

Laboratory work is designed to make you familiar with practical methods available to the chemist, to give you confidence in your ability to use these methods and to keep proper records, and to give you an opportunity to handle experimental data. Doing practical work also helps you to appreciate the experimental basis on which theoretical concepts are founded and thus should enhance your understanding of these concepts. Later in the course you will also learn how to plan experiments to solve problems, and this will culminate in research projects at Level Three or Four.

Demonstrators in the laboratory are there to give advice about your practical technique and to help you to understand the other lessons which can be learned from each experiment. You will get the most benefit out of laboratory work only if you bring your difficulties to the attention of demonstrators. Although practical work is
assessed, you will not be penalised for discussing your problems with demonstrators before you have finished an experiment. Furthermore, it is essential to hand in your practical reports/book for assessment on time.

**You cannot proceed to the next level of the degree without passing the practical course. There are no resit practical examinations.**

If you are ill and miss a practical session you must complete a mitigating circumstances form or you will be given zero for that session. If you miss several sessions through illness you will be offered the opportunity to catch up. If you do not complete at least 75% of your scheduled sessions, you will fail practical and your course will be terminated.

Sometimes it may happen that, through no fault of your own, an experiment may fail - for example through instrument breakdown. Should this occur, you should not be penalised either by scoring low marks or by having to spend extra time completing the experiment. You must explain immediately to the senior demonstrator on duty what has happened so that he/she can advise you on the correct course of action. This will vary with circumstances, but may (for example) involve giving you a sample with which to continue working or giving you specimen data to interpret. Whatever happens, you must record this in your completed laboratory report. Some of your practical work will be carried out with a partner, especially in Physical Chemistry. When this is so, it is not possible for both of you to carry out every technical or practical manipulation, but it is important, as with work done individually, that you observe and understand each part of the experiment. You must discuss the processing and the interpretation of data with your partner.

**Laboratory Books for recording your experiments**

A special notebook for recording your experiments is provided in your starter pack.

**Broken glassware**

If your glassware breakages total more than £50, you will be invoiced for breakages over and above this amount.

**Safety in the Chemistry Laboratories**

Every effort is made to teach you the hazards associated with handling chemicals. Special risks are identified in the laboratory manuals. For women who are pregnant or are anticipating pregnancy, it is essential that they see the University 'Guidance Notes for New or Expectant Mothers'. This booklet and advice can be obtained from the Students' Union Welfare Office.

**Pregnancy**

The Department has a duty of care for everyone working in the Chemistry buildings, however under current health and safety legislation pregnant workers are considered to be at special risk. The most important aspect for a student who becomes pregnant is to inform the Department as soon as their pregnancy is confirmed.

The Departments primary advice to a student in this situation is to take temporary withdrawal from their degree course or defer their registration.

In exceptional cases the Department recognises this may not be practicable and will then consider each case on an individual basis. If the Department decides to allow the student to continue it will advise the student of the risks involved and will instigate the following procedures to minimise the risk.

- The Course Convener with co-operation from other staff as required will produce a full risk assessment of all the practical’s being undertaken by the student in the UG laboratory, assessing the implications to a pregnant worker.
- Further risk assessments (including COSHH) will also be undertaken of the chemicals you use and may come into contact with in your practical studies in the various laboratories you may work in.
• The completed risk assessment will be given to you and a copy will be retained by the Department for their records.
• If the Course Convener deems it necessary, a written protocol will be issued highlighting the procedures the student must follow.
• The written protocol will be issued to you and also held by the Department for their records.
• Where practicable further consideration will be given to other experimental work being carried out in the shared laboratories when you are present, any special advice regarding risk from other work will be communicated to you and a record held by the Department.

The Department will strive to minimise the risks you may encounter working in a shared UG laboratory, however all risks cannot be eliminated.

On receipt of the risks assessments and any special instructions from the Course Convener you will be required to sign a declaration that you agree to adhere to the risk assessments, follow any special instructions, have read and understood the course of action that the Department is taking to enable you to continue your studies while pregnant and that you have considered and accept the risk involved to you and your unborn child.

**Personal Belongings**

Your personal belongings are not covered by the University’s insurance. You are therefore advised to check whether your parents’ or family policies provide adequate protection. If not, private insurance arrangements should be made.

A lost property service operates from the Security Lodge, which is situated at the far end of the Fielding Johnson Building on Wyggeston Drive, University entrance No. 1.

Bicycles may be brought onto the main campus but must be placed in the cycle racks provided, and appropriate security measures taken to help to prevent theft and damage. For advice on preventing cycle theft and details of the University’s Coded Cycle Scheme visit: www.le.ac.uk/estates/facilities_&_services/security/CodedCycleScheme.html

**Complaints and Academic Appeals Procedures**

The University has robust systems in place governing the quality and standards of its degree programmes and your experience as a student here. We are confident that, like the vast majority of students here, you will enjoy and be satisfied with your course. In most instances your department will be able to resolve any issues that do occur but we recognise that this will not always be possible. For this reason, the University has official procedures that allow eligible cases to be formally reviewed.

Information about these procedures, including the relevant forms, can be found on the Student and Academic Services website: see www.le.ac.uk/sas/regulations/appeals-complaints. These pages should be read in conjunction with the University's Regulations governing student appeals (www.le.ac.uk senate-regulation10) and Regulations governing student complaints (www.le.ac.uk senate-regulation12).

**Personal Tutors**

Your personal tutor is probably the first member of the academic staff to whom you speak at length. She/he will take a general interest in your progress at the University and provide you with feedback advice, encouragement and support as necessary, as well as monitoring your academic performance.

You should feel free to turn to her/him if you have difficulties of any kind, and in particular you should discuss any circumstances which may affect your academic work or your enjoyment of University life. Your relationship
should be informal and friendly, and your own attitude will play an important part in determining how far this is possible. Do remember that your tutor has many tutees, both academic and personal and will not be able to search you out to keep in touch. It is important that you keep your tutor up to date with developments. If your personal tutor needs to contact you urgently, he/she will usually send an e-mail. You are required to see your personal tutor in the first week of term and again in weeks 6 and 16 (to discuss your PDP Skills portfolio). In addition you will see your tutor to collect your end-of-semester exam results in February.

Very occasionally, a student has wished to change personal tutor. Should you ever wish to do this, you should raise the matter with Prof Dai Davies, the Tutor with special responsibility for all foundation year students, or, if this is not possible with the Head of Department.

**Student Skills Record/Personal Development Planning**

During your course you will be expected to keep a record of your learning and skills development. This is useful in helping you identify your strengths and weaknesses. Many employers now ask to see this record. You should discuss this with your Personal Tutor.

Personal Development Planning (PDP) is a structured and supported process designed to give you the opportunity to reflect on your progress and plan for your future development. In doing so, it is hoped that PDP will better enable you to improve and enhance both your academic performance and your prospects for professional and career success after graduation. PDP will help you to:

- recognise the skills and abilities you are developing;
- identify areas for improvement and development; and
- think about how you can improve your employability and career prospects

In addition, Learning Development provides some more general information about what PDP is, and how you can engage with it: [www2.le.ac.uk/offices/id/personal-development-planning-pdp](http://www2.le.ac.uk/offices/id/personal-development-planning-pdp).

**The Weighting of Modules for your Degree**

**Module Assessment**

Assessment of performance is relative to defined criteria, which means that your mark depends only on your performance and not on that of the rest of your class. The bulk of the assessment of each module consists of the end-of-semester exam. For details of the amount of continuous assessment and length of the exams see the individual module details (appendix).

Students must be available to attend examinations on any date within the formal assessment periods, including Saturdays.

**Examinations**

**Finding out your exam marks**

You will be able to see your exam results by logging onto MyStudentRecord. For Midsummer exams, marks will be available just before the end of term.

**Calculators**

Permitted calculators are the Casio FX83 and FX85 models. See [http://www.le.ac.uk/sas/assessments/examsguide](http://www.le.ac.uk/sas/assessments/examsguide) for the most up to date information.
Anonymity

Formal University end of semester exams are marked anonymously. You will need to take your student ID card with you to all exams, this has your candidate number on it. During the first semester you will be sent confirmation of modules for which you have registered. Ensure that you cross check this.

Progression to Level 1 for the Chemistry Degrees

If you pass all the modules, you automatically progress into Level 1 of the Honours Degree course. This would be the expectation of most students.

Course Transcript

At the end of an academic year if you need a transcript you can order one at the following website http://www2.le.ac.uk/offices/sas2/studentrecord/transcripts/year

If you need information on your marks (for instance for an interview) before the end of an academic year please contact the administrative team in the front office or by e-mail to chemadmin@le.ac.uk and a letter with your marks to date can be produced. Please note that marks are subject to change before the end of the academic year and this letter will state this.

Private Study and Vacations

Time for private study is not timetabled, but it is the most important aspect of your work while you are at University. Private study includes the time you will need to spend consolidating your understanding of the information given during lectures (e.g. by watching the lecture capture or reading a textbook). It is very important that you do this as the course proceeds and that you do not think that hasty revision just before a formal examination will be adequate. Study in the Christmas and Easter vacation periods are particularly important since examinations are held soon after your return.

Private study also includes reading round the subject and putting some flesh on the skeleton provided by the formal course. This means not only reading the recommended texts, but also thinking about them and questioning them, and making additional notes to supplement the lectures. **On average you should be doing around two hours’ private study for each lecture.** You should also read books of general scientific interest and periodicals such as the New Scientist and Scientific American. As the course progresses you will be, increasingly, reading more specialist chemical journals. You will find copies of most of the basic chemistry text books in the Main Library: you should explore this collection at an early stage.

Some students find it very productive to study together in groups of 3 or 4. This can generate a good work atmosphere, provide mutual support and an opportunity to help each other with difficulties and even supply an element of competition.
Assessment Deadlines

Almost all of the modules that you are taking will have some continuous assessment that contributes towards the final mark. These assessments can take a variety of forms e.g. tutorial work, practical reports, written assignments (some under exam conditions), Blackboard tests, presentations, poster exercises etc. During the course of the year you will need to meet numerous deadlines for submitting these assessments and will also need to plan your work accordingly such that you are prepared for any tests. To help you plan your time the Department will list the major assessment deadlines/dates of continuous assessment test at the start of each semester (available on Blackboard). You should note that the list of deadlines is only provisional and the actual date may change slightly (any changes will be communicated to you by the module convenor/lecturer), however you should find them useful when planning ahead.

Foundation year modules for Chemistry students

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(a) Year long 30 credit module split roughly 15:15 over the semesters
(b) CH0064 Methods and Techniques this is a variant of NS0021 but with some bespoke content for Chemists. Chemists will not do the computer programming part.
Module Specifications

FS0011 Science 1: Materials

Module coordinator Dr Paul Howes

Module period Semester 1, Module credits 15

Assessment: Core Learning exercises 30%, PBL Project 15%, Journal Club 15%, Examination 40% (2 hours)

Intended learning outcomes

Students will be able to:

- Describe the nuclear, atomic, chemical and elastic properties of materials
- Explain the properties of solids, liquids and gases
- Discuss the relationships between the nuclear, atomic, chemical and elastic properties of materials
- Model and solve simple problems involving the nuclear, atomic, chemical and elastic properties of materials

Teaching and Learning Methods

Each of the core Science modules will have a similar structure. The syllabus will be taught by means of two (flipped) lectures per week. Essential pre-lecture study material will be signposted in the course handbook. Each week, learning will be supported by means of tailored core learning exercises which will be completed in supervised group sessions and private study and then submitted as coursework for formative and summative feedback.

Each module will contain a problem-based learning project. PBL begins with a "real world", open-ended problem designed to stimulate learning. Students work in group (in facilitated sessions) to research the subject material and obtain the knowledge they need to produce a group "deliverable" which is submitted for assessment and feedback.

In addition to the lectures and PBL, each core science module will contain a Journal Club. Students will be given scientific articles (at an appropriate level of difficulty for Year 0, for example, New Scientist/Scientific American, Physics World) and will be required to make a ten minute presentation and evaluation of the paper and answer questions from their peers. The students' grasp of the science, presentations skills and engagement will be assessed by staff.

Assessment Methods

- Weekly core learning exercises
- PBL deliverable
- Journal Club presentations
- End of Semester examination.
**FS0031 Mathematics**

**Module coordinator** Dr Paul Howes

**Module period** Semester 1, **Module credits** 15

Assessment: Coursework 65%, Examination (2 hours) 35%

**Intended Learning Outcomes**

After completing this module students should be able to:

- Carry out basic calculations with fractions and decimals
- Carry out basic algebraic manipulations
- Solve algebraic equations
- Use elementary functions, trigonometric functions, exponential and logarithms
- Differentiate elementary functions using the basic rules of calculus
- Integrate elementary functions using the basic rules of calculus
- Find maxima and minima
- Sketch graphs of simple functions
- Find areas and volumes of simple geometrical objects
- Recognise the methods of solution of differential equations
- Solve simple differential equations

**Teaching and Learning Methods**

The mathematics module has been designed to cater for students with a wide range of mathematical experience and qualifications. The challenge is to bring all students up to a level of knowledge and competence equivalent to Advanced level mathematics without the course being too challenging for weaker students or unstimulating for more advanced students.

**Assessment Methods**

The coursework assessment will be in two parts: weekly competency based core learning exercises (CLEs) that all students will be expected to attempt and more advanced extension tasks designed to stretch the more able students.
FS0013 Science 3: Heat and Energy

Module coordinator Dr Paul Howes

Module period Semester 2, Module credits 15

Assessment: Core Learning Exercises 30%, PBL Project 15%, Journal Club 15%, Examination (2 hours) 40%

Intended Learning Outcomes

Students will be able to:

- Describe various forms of energy
- Explain the behaviour of a system subject to conservation of energy
- Discuss and apply the first law of thermodynamics to various scenarios.
- Model and solve simple problems involving heat, energy and power

Teaching and Learning Methods

Each of the core Science modules will have a similar structure. The syllabus will be taught by means of two (flipped) lectures per week. Essential pre-lecture study material will be signposted in the course handbook. Each week, learning will be supported by means of tailored core learning exercises which will be completed in supervised group sessions and private study and then submitted as coursework for formative and summative feedback.

Each module will contain a problem-based learning project. PBL begins with a "real world", open-ended problem designed to stimulate learning. Students work in group (in facilitated sessions) to research the subject material and obtain the knowledge they need to produce a group "deliverable" which is submitted for assessment and feedback.

In addition to the lectures and PBL, each core science module will contain a Journal Club. Students will be given scientific articles (at an appropriate level of difficulty for Year 0, for example, New Scientist/Scientific American, Physics World) and will be required to make a ten minute presentation and evaluation of the paper and answer questions from their peers. The students' grasp of the science, presentations skills and engagement will be assessed by staff.

Assessment Methods

Weekly core learning exercises

PBL deliverable

Journal Club presentations

End of Semester examination.
CH0061 Introduction to Chemistry

Module convenor Dr Richard Blackburn

Module period Year long, Module credits 30

Assessment: Continuous assessment (including MCQ tests) 25%, Exam assessment 75% (Exam length 2 hours)

Intended learning outcomes

At the end of this module students should be able to:

- Explain the nature of atoms and molecules and the concept of moles and stoichiometry and perform appropriate calculations.
- Identify and describe protons, neutrons and electrons in terms of their relative charges and relative masses; distinguish between isotopes on the basis of different numbers of neutrons present.
- Explain the different regions of the electromagnetic spectrum and how electromagnetic radiation interacts with matter and hence how it can be used to probe the electronic structure of atoms and molecules
- Be able to draw representations of s, p and d-orbitals and work out electronic configurations from the position of an element in the Periodic Table.
- Discuss some basic chemistry of elements from Groups 13-17
- Define what is meant by the term oxidation state and be able to work out the oxidation state of an element in a compound
- State the aims and terminology of thermodynamics, including the first and second laws, enthalpy, entropy, Gibbs energy, chemical potentials, and chemical equilibrium. Describe these concepts on a qualitative and quantitative level.
- Explain the concepts of reversible reaction and dynamic equilibrium, state Le Chatelier’s Principle and apply it to deduce qualitatively the effects of changes in temperature, concentration or pressure, on a system at equilibrium.
- Explain what is meant by the term pH (and pKa). Calculate pH and pKas from appropriate data.
- Describe (qualitatively and quantitatively) the thermodynamic theory of electrochemical processes, using half cell equations determine which species are oxidising agents and which are reducing agents.
- Discuss the basic principles of reaction kinetics and calculate the effect of various parameters, e.g. concentrations, temperature and activation energy on the rates of chemical reactions. Be able to plot concentration versus time data and hence determine the order of a chemical reaction.
- Explain the difference between exothermic and endothermic reactions. Be able to draw a simple plot of energy versus reaction progress to illustrate the overall energy of a reaction and the activation energy.
- Name simple organic molecules using IUPAC rules,
- Draw accurate representations of inorganic and organic molecules
- Explain what is meant by regiochemistry and stereochemistry and give appropriate examples
- Explain what is meant by a chiral molecule be able to draw a chiral molecule and its mirror image
- Explain the structure and reactivity of a range of important functional groups and the interconversions of these groups in the synthesis of organic compounds;
- Recognise electrophiles and nucleophiles and be able to use curly arrows to depict a reaction mechanism

Teaching and Learning Methods

Lectures, workshops, formative MCQ tests, weekly drop in surgery
CH0062 Introductory Chemistry Practical

Module convenor Prof. Dai Davies, Module coordinator Dr Villa Marcos

Module period Semester two, Module credits 15

Assessment: Assessment of laboratory work, laboratory write-ups and additional workshops and exercises (100%)

Aims: This module aims to develop the technical skills and other attributes of the responsible laboratory scientist.

Learning Outcomes:

Subject knowledge: at the end of the module students should be able to:

- Isolate and purify natural products and organic compounds using solvent extraction, column chromatography and recrystallisation.
- Perform calculations involving moles, volumes and concentrations of solutions
- Use chromatography (GLC, TLC) for analysis and IR spectroscopy and melting point for characterisation and identification.
- Carry out a simple organic transformation and isolate and characterise the product.
- Carry out simple experiments in physical chemistry on topics such as thermodynamics, acid-base titration and spectroscopy.
- Prepare and spectroscopically characterise metal complexes.
- Carry out qualitative analyses for a range of metal ions.

Key Skills:

- Develop manipulative skills.
- Develop observational skills.
- Interpret experimental observations and data.
- Perform experiments safely and proficiently.
- Record accurate experimental details and observations.
- Write appropriate laboratory reports.
- Meet deadlines
- Teaching and Learning Methods
- Practical classes with appropriate demonstration, supported by occasional lectures and workshops and exercises on topics such as spectroscopy and molecular structure
Methods and Techniques

Module Coordinator: Dr Richard Blackburn, Module period: Year long, Module credits: 15
Assessment: 100% Coursework

Intended Learning Outcomes:
- Develop effective individual research skills and create a detailed portfolio of notes to support your future studies and provide an effective revision resource.
- Develop effective group working skills including leadership and conflict management skills, describe key benefits of using the University Library, find relevant online support materials e.g. tutorials and guides provided by the Library, conduct basic searches to find library resources.
- Use a basic framework for evaluating information recognise the significance of peer review.
- Describe and apply referencing principles when citing and referencing sources.
- Critically evaluate a piece of information.
- Use reference management software to save and manage your references.
- Describe how the skills you have developed can be applied in the work context.
- Effectively read and interpret information from a variety of written sources, especially those including mathematical equations.
- Rewrite/Paraphrase information from different sources.
- Organise individual work plans in order to meet deadlines and assessment criteria; recognise how this skill is applicable to future research and careers in general.
- Explain what plagiarism is in broad terms and specifically as set out by the University's regulations.
- Avoid plagiarism in your own work by appropriately paraphrasing material or providing a correctly formatted citation to the original work. Recognise plagiarism in others work and take steps to correct it.
- Generate draft plans for essays/ reports paying particular attention to including relevant subject content and producing a logical, coherent argument throughout the deliverable.
- Critically analyse your own writing skills and utilise both University of Leicester and online resources to ensure that you have a good grounding in: sentence construction, grammar and spelling.
- Determine audience and utilise appropriate scientific vocabulary and writing styles e.g. active or passive voice; technical jargon versus simple concepts etc.
- Apply the writing skills outlined above to Deliverables and CLEs.
- Critically analyse your own writing skills and utilise both University of Leicester and online resources to ensure that you have a good grounding in: sentence construction, grammar and spelling.
- Determine audience and utilise appropriate scientific vocabulary and writing styles e.g. active or passive voice; technical jargon versus simple concepts etc.
- Apply the writing skills outlined above to Deliverables and CLEs.
- Reflect and act upon previous coursework feedback.
- Recognize the difference between common phrases in questions such as: define, discuss, draw etc.
- Develop effective revision techniques.
- Identify the employability skills that employers are looking for. Create a portfolio of skills that will contribute to a future CV, create an Action Plan for self reflection and goals.
- Recognize the importance of engagement with the audience needed for an effective presentation.
- Discuss the structure of an effective presentation, critically evaluate a selection of peer-presentations.
- Critique the use of graphic design principles to enhance your presentation; discuss how incorrectly applied design can obscure your presentation.
- Create effective PowerPoint presentations.
- Be able to make a simple spreadsheet, use Excel to plot data and find a line of best fit, be able to present data in different ways.
- Be able to draw clear representations of molecular structures using chemical conventions. Be able to use appropriate software to draw such diagrams.

Teaching and Learning Methods:
- The module is concerned with core skills that underpin university level study in scientific disciplines. The diverse range of skills within the module will require a broad range of pedagogical approaches.
- Some topics, such as the library introduction, will be taught as discreet, seminar- or lecture-based activities.
- Note-taking and organisational skills will be taught through seminars and encouraged by means of tutorial style interviews in which students present their portfolio of notes. The assessment will be competency based.
- Writing and presentation skills will be developed and assessed throughout the module.
- Use of excel will be tested in the lab module as well as by specific tasks through the year.

Assessment methods:
This skills module will be assessed entirely by coursework.
Presentation and writing skills will be assessed at various points during the year.
CH0064 Chemistry in Society

**Module Coordinator** Dr Richard Blackburn

**Module period** Semester two, **Module credits** 15

**Assessment methods** oral and poster presentation (20%), Exam (50%), PBL including essay (30%)

**Intended Learning Outcomes**

At the end of these lectures students should be able to:

- Discuss some applications of chemistry in medicine and industry.
- Discuss some of the factors which determine the success and failure of a chemistry based industrial enterprise.
- Be able to discuss the formulae, structure and reactivity of chemicals found in the home
- Be able to explain in lay terms the nature and impact of chemistry at home e.g. food, materials,
- Be able to discuss the nature of scientific evidence and the difference between precision and accuracy
- Be able to analyse chemical issues taken from popular science magazines and or newspapers and be able to distinguish genuine risks from scare stories. Appreciate the nature of peer reviewed results.
- Analyse the key points in a complicated chemical argument and give an explanation at their level of understanding.
- Be able to discuss the chemical aspects of some key global issues, e.g. global warming, energy sources

**Key skills:** at the end of this module students should be able to:

Obtain new information from textbooks, describe relevant chemistry and discuss it with peers and teachers, written communication, including writing a short word processed essay, solve problems.

**Teaching and Learning Methods**

Lectures, independent study, group work

**Assessment Methods**

Various exercises including making a poster, giving a presentation, writing a short essay