First and Second year Course Guide for the Undergraduate Degrees in Mathematics and Statistics

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1 General Information

This booklet is a guide prepared by the Department of Statistics for students on the Mathematics and Statistics degrees (GG14, GG17 and G1G3) who started their degree in October 2013 or later. The official statement of degree regulations is set out in the current issue of the University of Warwick Course Regulations Handbook which is available for consultation in the Library. A further extremely valuable source of information is the University’s online information site (insite) available at go.warwick.ac.uk/insite.

From here there are links to all student information and specifically to Start.Warwick where you can access information and resources that are personal to you. Further information is available from the Department’s web page at go.warwick.ac.uk/stats.

You should retain this booklet, as you will need to consult it from time to time throughout the year. If you are reading this in hard copy or PDF, please note that the up to date version of this booklet is maintained online at warwick.ac.uk/stats/courses/handbooks.

1.1 Background

These days all large organisations, industries, businesses, government departments and other services use mathematical and statistical methods extensively. Consequently the demand for mathematical statisticians has expanded so rapidly in recent years that both within and outside the academic world there is a severe shortage of well-qualified people. The Mathematics and Statistics degrees are designed for those students who want to specialise in both pure Mathematics and Statistics. They are taught jointly by the departments of Mathematics and Statistics — who have been consistently graded very highly in the exercises undertaken by HEFCE (http://www.hefce.ac.uk/) to assess the quality of the University research. The degrees possess considerable flexibility and allow the student a wide choice of options in Computing, Operational Research and all the other subjects available to Mathematics students.

1.2 Aims

The Mathematics and Statistics degrees are set out to provide three things: firstly, courses which will stimulate interest in mathematical concepts, with particular reference to the major application areas; secondly, to improve the quality and quantity of mathematically skilled people working, researching and teaching in these areas; thirdly, to satisfy the needs of those students who seek a continuous development of mathematics from school through university to postgraduate application. In common with other mathematical science degree courses at Warwick
we aim to:

- Attract well-qualified students.
- Provide an intellectually stimulating environment.
- Help students develop key intellectual skills.
- Provide a challenging education in mathematics/statistics and their applications.
- Produce high quality graduates who are well prepared for the next step of their professional lives whether this involves further research training or moving directly into a career.

Specific aims of these degree courses are to provide:

- Courses based on mathematics and statistics suitable for students aiming for a career as a statistician.
- The integrated Masters degrees enable students to study these areas more deeply.

Detailed objectives for each year are to be found at the start of the relevant section.

1.3 BSc in Mathematics and Statistics

This degree provides a thorough grounding in both Mathematics and Statistics, starting with the essential mathematical prerequisites. It is organised to produce graduates who are well trained in both the theory and practice of statistics. Graduates with this degree will find themselves in a good position to pursue a career in statistics or any of the areas using it, including accountancy, actuarial work, industry, management and the Civil Service.

1.4 Integrated Masters Degree in Mathematics and Statistics

The Department of Statistics also offers four year integrated Masters degrees in Mathematics and Statistics. Entry to the BSc Masters Mathematics and Statistics (G1G3) degree is at the end of the second year. Thus courses differ from the BSc only in the final two years of the (four year) integrated Masters degree.

The integrated Masters degree requires students to study a minimum of 120 CATS worth of modules at the Masters level and includes a 30 CAT Masters dissertation. This degree provides students with an excellent grounding both in Mathematics and Statistics enabling students to embark on research in statistics and probability whilst also providing them with a wide variety of career opportunities both as statisticians and quantitative scientists.
1.5 Careers

Naturally, there is a correspondingly wide choice of career opportunities for Mathematics and Statistics graduates in the spheres of application described above. See Section 8.1 of this Course Guide for detailed information on Careers. Students interested in the possibility of pursuing a career as an actuary should note that the Mathematics and Statistics degree is well received and can exempt them from a number of examinations (see Section 8.9).

1.6 RSS Accreditation

The BSc and the Integrated Master’s in Mathematics and Statistics are both unconditionally accredited by the Royal Statistical Society. Graduates* from accredited programmes are entitled (on application) to award of the Royal Statistical Society’s qualification of Graduate Statistician, and with a suitable period of approved professional training and experience may proceed to the full professional status of Chartered Statistician.

*For Undergraduate programmes, at least Second Class Honours is required to apply for Graduate Statistician status. A HEAR (Higher Education Achievement Report) transcript may be required to identify that conditions have been met.

Further information on the Royal Statistical Society can be found on their webpage:

http://www.rss.org.uk/

2 Summary of Course Regulations

2.1 The Definitive Source for Course Regulations

The University’s course regulations for the Mathematics and Statistics degrees (GG14, GG17 and G1G3) are at http://www2.warwick.ac.uk/services/academicoffice/quality/courserregs/

Students on GG17 follow the course regulations of GG14 with an intercalated year between years 2 and 3.

The lists of modules and other advice that appears below are provided as a convenience to students. Some of the information in the printed version of the Course Guide may become outdated as the academic year progresses. The definitive source for the course regulations is therefore the University web page mentioned in the previous paragraph.

Details for third year onwards can be found in the online course guide for Math-Stats at: warwick.ac.uk/stats/courses/handbooks.
2.2 First Year

After completing the first year the students will have:

- Made the transition in learning style and pace from school to university mathematics.
- Been introduced to the basic concepts in university mathematics, including the notion of proof, and the applications of mathematics to problems outside mathematics.
- Laid the foundations of knowledge, understanding and techniques necessary to proceed to the second year.

The minimum load in the first year is **120** CATS points (12 CATS points correspond to the equivalent of one 30 hour lecture module). The maximum load is **140** CATS points. The only exception is that for students taking 24 CATS of Language options the maximum load is **144** CATS points.

You must take the Core modules listed in the following table, (which gives for each module the code, the title, the CATS credit and the term in which it is taught). The core modules in the first year of the Mathematics and Statistics degree amount to 84 CATS credit and you must take optional modules to increase your workload to at least 120 CATS. You may, if you choose, take additional optional modules to increase your load to above 120 CATS.

Additional modules, taking your load over 120 CATS may have no effect on your overall average mark for the year (see Section 5.2 for an explanation of how your average mark is calculated). Bear in mind an extra module is a big commitment and you must be careful not to take on too much.

Any additional modules and the marks you gain in them will appear on your academic record. It can be worth doing additional modules for the skills you gain, as for example, in the case of foreign languages.

<table>
<thead>
<tr>
<th>Core Modules</th>
<th>CATS</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA106 Linear Algebra</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>MA137 Mathematical Analysis</td>
<td>24</td>
<td>1 and 2</td>
</tr>
<tr>
<td>MA138 Sets and Numbers</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>ST104 Statistical Laboratory</td>
<td>12</td>
<td>2 and 3</td>
</tr>
<tr>
<td>ST115 Introduction to Probability</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>ST116 Mathematical Techniques</td>
<td>12</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Optional Modules</th>
<th>CATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS126 Design of Information Structures</td>
<td>15</td>
</tr>
<tr>
<td>EC106 Introduction to Quantitative Economics</td>
<td>24</td>
</tr>
<tr>
<td>IB104 Mathematical Programming I</td>
<td>12</td>
</tr>
</tbody>
</table>
### Optional Modules

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>CATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA113</td>
<td>Differential Equations A</td>
<td>6</td>
</tr>
<tr>
<td>MA117</td>
<td>Programming for Scientists</td>
<td>12</td>
</tr>
<tr>
<td>MA125</td>
<td>Introduction to Geometry</td>
<td>6</td>
</tr>
<tr>
<td>MA133</td>
<td>Differential Equations</td>
<td>12</td>
</tr>
<tr>
<td>MA134</td>
<td>Geometry and Motion</td>
<td>12</td>
</tr>
<tr>
<td>MA136</td>
<td>Introduction to Abstract Algebra</td>
<td>6</td>
</tr>
<tr>
<td>PH123</td>
<td>Elements of Scientific Method</td>
<td>6</td>
</tr>
<tr>
<td>PH128</td>
<td>Descartes and Mill</td>
<td>12</td>
</tr>
<tr>
<td>PH136</td>
<td>Logic 1: Introduction to Symbolic Logic (for non-Philosophy Students)</td>
<td>15</td>
</tr>
<tr>
<td>PX101</td>
<td>Quantum Phenomena</td>
<td>6</td>
</tr>
<tr>
<td>PX144</td>
<td>Introduction to Astronomy</td>
<td>6</td>
</tr>
<tr>
<td>PX147</td>
<td>Introduction to Particle Physics</td>
<td>6</td>
</tr>
<tr>
<td>PX148</td>
<td>Classical Mechanics and Relativity</td>
<td>12</td>
</tr>
</tbody>
</table>

- The above lists contain all the options available to First Year students on the GG14/G1G3 degrees. These are consistent with the University Course Regulations.

- Any modules not listed (including foreign languages) are classed as ‘Unusual Options’ and permission to take these modules must be obtained by filling in an Unusual Option form available from the Student Support Office.

- Taking MA133 Differential Equations and MA134 Geometry and Motion are good ways to open up additional mathematics options in your second and third years. Note that you may only take either MA113 Differential Equations A or MA133 Differential Equations, but not both.

- IB104 Mathematical Programming 1 introduces mathematical optimisation techniques and is a good option to learn about applications of mathematics in business and industry.

- If you are interested in computational topics note that at least one first year programming module, or the ability to program in a high level language, is a prerequisite for most Computer Science modules. The module MA117 Programming for Scientists satisfies the programming prerequisite for Computer Science options.

- If you are interested in transferring to MORSE at the end of your first year you should take EC106 Introduction to Quantitative Economics and IB104 Mathematical Programming.
Assessment and Examinations

Some modules are assessed wholly or in part on written work submitted during the academic year. The deadlines for submission of such work will be announced by the lecturers and tutors responsible for teaching such modules. Failure to obey these deadlines will entail loss of marks. Most examinations are held in term 3. Exceptions are ST116 which will be examined at the end of Term 1, and MA137 and MA138 which are partially examined at the start of Term 2.

2.3 Second Year

After completing the second year the students will have:

- Covered a range of material in mathematics and statistics and studied some of it in depth.
- Acquired sufficient knowledge and understanding to be in a position to make an informed choice of options in their final years and to have covered the background necessary to pursue these options.

The normal load in the second year is 120 CATS points. The maximum load is 150 CATS.

Candidates for Honours are required to take the core modules and an appropriate number of optional modules.

Please see important notes at the end of this section.

<table>
<thead>
<tr>
<th>Core Modules</th>
<th>CATS</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA222 Metric Spaces</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>MA258 Mathematical Analysis III</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>ST202 Stochastic Processes</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>ST208 Mathematical Methods</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>ST218 Mathematical Statistics Part A</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>ST219 Mathematical Statistics Part B</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>ST221 Linear Statistical Modelling</td>
<td>12</td>
<td>2 and 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Optional Modules</th>
<th>CATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST222 Games, Decisions and Behaviour</td>
<td>12</td>
</tr>
<tr>
<td>MA117 Programming for Scientists</td>
<td>12</td>
</tr>
<tr>
<td>MA209 Variational Principles</td>
<td>6</td>
</tr>
<tr>
<td>MA225 Differentiation</td>
<td>12</td>
</tr>
<tr>
<td>MA228 Numerical Analysis</td>
<td>6</td>
</tr>
<tr>
<td>MA231 Vector Analysis</td>
<td>12</td>
</tr>
<tr>
<td>MA241 Combinatorics</td>
<td>12</td>
</tr>
<tr>
<td>MA243 Geometry</td>
<td>12</td>
</tr>
</tbody>
</table>
Optional Modules

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module Name</th>
<th>CATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA249</td>
<td>Algebra II: Groups and Rings</td>
<td>12</td>
</tr>
<tr>
<td>MA250</td>
<td>PDE</td>
<td>12</td>
</tr>
<tr>
<td>MA251</td>
<td>Algebra I: Advanced Linear Algebra</td>
<td>12</td>
</tr>
<tr>
<td>MA252</td>
<td>Combinatorial Optimisation</td>
<td>12</td>
</tr>
<tr>
<td>MA253</td>
<td>Probability and Discrete Mathematics</td>
<td>12</td>
</tr>
<tr>
<td>MA254</td>
<td>Theory of ODEs</td>
<td>12</td>
</tr>
<tr>
<td>MA256</td>
<td>Introduction to Systems Biology</td>
<td>12</td>
</tr>
<tr>
<td>MA257</td>
<td>Introduction to Number Theory</td>
<td>12</td>
</tr>
<tr>
<td>CS259</td>
<td>Formal Languages</td>
<td>15</td>
</tr>
<tr>
<td>CS260</td>
<td>Algorithms</td>
<td>15</td>
</tr>
<tr>
<td>CS262</td>
<td>Logic and Verification</td>
<td>15</td>
</tr>
<tr>
<td>EC204</td>
<td>Economics 2</td>
<td>30</td>
</tr>
<tr>
<td>EC220</td>
<td>Mathematical Economics 1A</td>
<td>12</td>
</tr>
<tr>
<td>EC221</td>
<td>Mathematical Economics 1B</td>
<td>12</td>
</tr>
<tr>
<td>IB132</td>
<td>Foundations of Finance</td>
<td>12</td>
</tr>
<tr>
<td>IB133</td>
<td>Foundations of Accounting</td>
<td>12</td>
</tr>
<tr>
<td>IB207</td>
<td>Mathematical Programming II</td>
<td>12</td>
</tr>
<tr>
<td>IB211</td>
<td>Simulation</td>
<td>12</td>
</tr>
<tr>
<td>IB217</td>
<td>Starting a Business</td>
<td>6</td>
</tr>
<tr>
<td>IE3E1</td>
<td>Introduction to Secondary School Teaching</td>
<td>24</td>
</tr>
<tr>
<td>PH136</td>
<td>Logic 1: Introduction to Symbolic Logic (for non-Philosophy Students)</td>
<td>12</td>
</tr>
<tr>
<td>PX268</td>
<td>Stars</td>
<td>7.5</td>
</tr>
</tbody>
</table>

For more information about modules offered by the Department of Mathematics see the Mathematics Department Undergraduate handbook at http://www2.warwick.ac.uk/fac/sci/maths/undergrad/ughandbook/.

Students should note that ST335 Finance and Financial Reporting cannot be taken in subsequent years if they have taken IB133 Foundations of Accounting in the second year.

Any modules not listed (including foreign languages) are classed as Unusual Options and permission to take these modules must be obtained by completing an Unusual Option form available from the Student Support Office.

2.3.1 Some specific advice for second year MathStat students

- Students who have taken IB133 Foundations of Accounting may not take ST335 Finance and Financial Reporting.
- Note that IB132 Foundations of Finance is a prerequisite for IB253 Principles of Finance 1 for Statistics students.
• Students may take at most one of the following: ST339 Introduction to Mathematical Finance or EC333 Topics in Financial Economics: Theories and International Finance or IB253 Principles of Finance 1

• Students who have taken ST339 Introduction to Mathematical Finance may not take IB254 Principles of Finance 2.

• The above will be particularly relevant to students planning to take the suggested Actuarial and Financial Mathematics or Probability Pathways for MMathStats where ST339 is a suggested option.

• The mathematical models used in Financial Mathematics make very extensive use of probability and stochastic processes. Indeed the whole subject is a combination of knowledge about finance and financial instruments, probability theory and stochastic processes (for the mathematical models) and statistics (for fitting models to data).

• The integrated Masters degree will require the use of the open-source statistical language R in the third year (and for many projects in the fourth year). R can be downloaded (along with a variety of tutorial materials) freely from http://cran.r-project.org. The language is taught in the second year module ST221 Linear Statistical Modelling. ST221 is compulsory for the MMathStat degree.

2.4 Module Descriptions

Full descriptions of module content, methods of assessment, etc., can be found online by following hyperlinks from the above module lists (see warwick.ac.uk/-stats/courses/handbooks for the fully up to date lists on the web).

3 Teaching and Learning

3.1 Lectures and Tutorials

The main form of teaching is the traditional lecture course. Lectures are usually very condensed and you are unlikely to understand everything the lecturer does at the time. As a result, most lecture courses in the first two years are supplemented by tutorials, supervisions, seminars or classes (the name varies according to the department concerned). Because the number of students in each group is usually quite small, these tutorials form your main opportunity for asking questions and clearing up difficulties. If you still have questions, you can ask the lecturer directly during their office hours.

The individual lecture courses that are combined to make up a degree course are known as modules.
For first year students the Mathematics Department arranges supervisions of one hour per week with a research student. These supervisions cover all Mathematics modules. For other modules and departments, the arrangements are usually made by individual lecturers. Background reading and the preparation of additional notes which amplify and explain the lectures are usually essential.

Only around 25 percent of your study time is spent in lectures and tutorials. The remaining 75 percent is for independent study. It is impossible to overstate how important this time, that you spend working on your own or with friends, is to developing your understanding of the material. Lecturers usually provide additional material (exercise sheets, extra reading) and working through this is essential. If you leave this work to the end of the year, you will find when revising that you are unable to prepare properly for the exam because you will not have developed the necessary understanding and skills. A loose analogy is that the exams are the equivalent to running a marathon, and if you haven’t spent the year training properly then you will not have developed the fitness that is necessary to do well in the race. There is more advice about study skills in Section 3.7.

3.2 Attendance and Engagement

Our duty as a department is to deliver a coherent degree course with well-presented lectures backed up by support, usually in the form of small classes. Your duty is to try hard to learn, and not to impede the attempts of others. In particular this means that you should attend lectures and support classes, having prepared for them by revising prerequisite material and by attempting all example sheets promptly. A failure to do this usually leads to boredom (through lack of understanding) and an inadequate performance.

Attendance at lectures and tutorials does not contribute formally to the award of a degree, nevertheless it is our expectation that you attend these. We collect records of attendance and work handed in for tutorials which become part of your academic record, even if the work is not for credit towards the assessment of a module. Personal tutors will see these records and will discuss your progress and engagement with the course at their meetings with you.

3.2.1 Attendance Monitoring Scheme

We are required by the University to monitor eleven separate ‘points of engagement’ each year for all undergraduate and post-graduate students in the Department. Details are posted on the student notice boards.

The monitoring points will also be listed on the web at http://www2.warwick.ac.uk/~go/statistics/courses/currentstudents/pointsofengagement.

We have deliberately chosen the points of engagement to be activities which it
is in your interest to do anyway (seeing personal tutors at start and end of each term, attending classes of certain core modules, etc). You should therefore aim to comply with all of these without fail. Should difficulties arise (for example, illness preventing you from attending at a particular time) then you should contact your personal tutor with an explanation as soon as possible.

International students should be particularly aware of the consequences of not meeting the required points of engagement. The Academic Office is obliged to report to the UK Border Agency of the Home Office if any student has been found not to be engaging with and attending their degree course. This has serious implications for your visa status.

The relevant University procedures are in Regulation 36, at www2.warwick.ac.uk/services/gov/calendar/section2/regulations/reg36registrationattendanceprogress.

### 3.3 The Personal Tutor System

Every student has a member of the academic staff assigned as their personal tutor. Your tutor is there to help sort out any problems connected with your university career, and you must make a point of seeing them at least twice a term (usually during the first couple of weeks and last couple of weeks), so that they know how you are getting on. You must respond promptly if they ask to see you and it is important to keep your personal tutor informed of any academic or personal problems that are affecting your performance.

Some specific ways in which your personal tutor can help are:

- Providing general academic advice on progress and development, including discussing possible option choices and disclosing exam marks and their implications.
- Giving you help and advice about pastoral and non-academic matters as far as they are able and advising you about where to find further help on the campus if you need it.
- Writing a letter of reference when you apply for jobs or grants (see also Section 8.7).

Personal Tutors should:

- Advertise two ‘office hours’ each week, starting on the half-hour, when students can consult them.
- Communicate with their students regularly, including via email.

In addition your personal tutor has certain formal duties to represent you at exam boards and in disciplinary matters.
First Year Tutorials: During the first term of the first year students meet with their personal tutors once a fortnight to discuss some mathematics exercises. A short exercise sheet will be made available beforehand with questions based on the Mathematical Techniques module. You must complete the exercises to the best of your ability and hand them in to your tutor, who will give you feedback on your written work. This feedback and the discussions with your tutor will help you make the adjustment to university level mathematics — with the emphasis it places on rigorous arguments and abstract concepts. It is also important for you to get used to tackling exercises in your own time. This is essential for your success at university.

3.4 Changing Tutor or Tutorial Group

Should you wish to change your personal tutor for any reason, please email the Undergraduate Support Officer (stats.ug.support@warwick.ac.uk) who will arrange a meeting to discuss this with you.

Similarly, if you wish to change tutorial/supervision groups, please discuss this with the Undergraduate Support Officer.

3.5 The Mentor System

The Statistics SSLC (Student Staff Liaison Committee) administers a mentor system, where older students help first year students settle in to their university life. A mentor provides an informal point of contact to students where they can ask questions about their course, modules and wider university issues such as nights out, accommodation, societies and sports.

The mentor system in no way replaces the Personal Tutor system. Students must meet with their personal tutors at least twice a term and keep their personal tutors informed of any academic or personal problems.

3.6 Personal Transferable Skills

As well as supporting your academic studies, the preparation of assessed work and your active participation in seminars and tutorials will also help you develop skills which will be invaluable in your later career and in job applications and interviews. These ‘personal transferable skills’ include the ability to write clearly and concisely, to explain your work clearly to others and to present your work in a professional manner through the use of word processing and other computer packages.

After completing your degree you will have:

- Acquired basic skills in IT and had the opportunity through the choice of
options and other activities to develop these further.

• Acquired independent study and working skills.

3.7 Study Skills

It is important to understand that university education is based on independent study. Lecture courses are very compressed. You will not learn everything from the lectures. You will need to spend time supplementing the lecture material, filling in the gaps, working through examples, and studying textbooks. Each module has an associated CATS weighting which you can use as a guide: a CAT represents 10 hours notional work so a 12 CATS course may contain 30 hours of lectures, 60 hours of independent study and 30 hours of revision.

Here are some specific recommendations to think about:

• Plan to spend 35-40 hours per week on academic work in term-time. However be flexible in order to give more time to any core modules which you are finding difficult.

• Be prepared! Ensure that lecture notes are re-read/understood before the next lecture. Always consult the textbook(s).

• Attempt example sheets as soon as possible — easy questions check/aid comprehension, harder ones deepen it.

• Attempt to understand the direction of a course (read the Aims and Objectives) — try to write a brief narrative or commentary on your notes at the halfway mark and again at the end.

• Praise and reward yourself when you perform well or understand something difficult.

• In accounting for study time, each hour between 10pm and 8am should only count as 30 minutes!

If you feel in any doubt about your study skills you should consult your personal tutor, seek advice from the University Senior Tutor’s office, and look out for notices advertising special study skills sessions which are posted on departmental notice boards.

If English is not your first language, it is important to practise at every opportunity. This department encourages the use of English at all times. If you wish to improve your skills, you should visit the English Language Teaching Unit who offer both Pre-sessional and In-sessional courses in English, [www2.warwick.ac.uk/fac/soc-al/learning_english/](http://www2.warwick.ac.uk/fac/soc-al/learning_english/).
3.8 Feedback to Students

Feedback is an essential part of learning as it identifies gaps in your knowledge and understanding and also provides guidance on how to improve. There are various means by which the department provides feedback but most are linked with coursework.

It is important that you attempt all coursework questions. This will give you immediate feedback on whether you have assimilated the material in the lectures and can apply it to example problems. Keep in mind that mathematics takes time, so if you cannot solve a problem straight away read the lecture notes or a textbook and then try again.

If you are still stuck, talk to some of your fellow students. They might be able to explain material that you have not understood and pick up on misconceptions. Some modules have online forums where you can post questions that will be read by your fellow students (and the module leader). Don’t be shy to ask questions. The fact that you have questions shows that you are engaging with the material! Contribute to the process by posting answers on the forum or explaining material to your fellow students. Explaining mathematics will help you develop your communication skills and deepen your understanding!

Make sure to hand in all coursework in a timely fashion. Even if the coursework is not for credit it is an important tool to obtain feedback and you limit your own learning if you do not submit your work. If you have managed to produce only partial solutions to the problems it is important that you submit these as this will influence how and what material the tutor is going to cover in the tutorial. Once coursework has been returned make sure to read carefully through the comments. If you are in doubt as to what the comments mean please ask the marker who will be happy to explain. If solutions are provided please compare these carefully to your own work. But keep in mind that attempting your own solutions engages you in much deeper learning than simply noting a provided solution.

Participate actively in lectures and support classes like tutorials by providing answers to questions but also by asking questions. This will give the lecturer or tutor a very immediate way to provide feedback to you. To do this effectively it is important that you prepare by revising your lecture notes and attempting the problem sheets.

All lecturers in Statistics have twice weekly office hours and they are happy to see students during these times. Module leaders will be happy to answer questions regarding their modules, although you should make sure you have spent some time on revision so that this can happen effectively. Please make sure to take note of the office hours. They are usually advertised next the lecturer’s office door. Some staff also advertise these on their web pages or state them at the start of the
module.

Finally, the personal tutor is available to provide academic advice. As above, personal tutors offer twice weekly office hours in which they are happy to receive students and provide feedback on their overall academic performance.

3.9 Undergraduate Skills Programme

You might like to consider using the Undergraduate Skills Programme (USP) to develop your personal, academic and career management skills, improve your marks, impress potential employers and network with other Warwick students. The USP (http://www2.warwick.ac.uk/services/skills/usp/) is free and available to all undergraduates at Warwick.

The Warwick Skills Workshops (WSW) are a series of skills-specific workshops designed to enable you to develop your personal, academic and career management skills. Each workshop will focus on a specific skill area and help you to enhance your confidence and competence in that area. At the end of the academic year you will receive a certificate of attendance listing each workshop you have attended. For further information see http://www2.warwick.ac.uk/services/scs/whatson/usp_workshops.

3.10 The Library

The Library has a designated Academic Support Librarian for each academic department. The Academic Support Librarians are able to provide advice about Library services.

Students can consult the Library website at http://warwick.ac.uk/library for general information and their subject web pages at http://warwick.ac.uk/library/tealea/ for support in starting research in their subject area.

The Library also manages a number of learning & teaching spaces:

- The Learning Grid (http://warwick.ac.uk/grid/);
- The Learning Grid Rootes (http://warwick.ac.uk/gridrootes/);
- The Learning Grid Leamington (http://warwick.ac.uk/gridleamington/);
- The Teaching Grid (http://warwick.ac.uk/teachinggrid/);

3.11 IT Services

IT Services provide the essential resources and support necessary to give all members of the University access to information technology for research, teaching, learning and administration purposes. If students have problems using the facilities or systems provided by IT Services, they can go to the Helpdesk located
on the ground floor of the Library building, telephone 024 765 73737 or email helpdesk@warwick.ac.uk.

Every student and member of staff is entitled to register to use the services provided by IT Services, which can be accessed from anywhere on campus. Information on setting up an account, accessing the network from on and off campus, printing and purchasing computers is available on-line at http://warwick.ac.uk/its. IT Services also produce information on acceptable use of University IT facilities for students and staff: http://warwick.ac.uk/regulation31.

### 3.12 Communication

The department expects to be able to communicate with you via your University email — and you should check your account regularly (at least once a day). Please go to the University’s Information Services to find out more. You should also check your pigeonhole and Departmental notice board at least once a day. You should let the Undergraduate Support Officer (stats.ug.support@warwick.ac.uk) know, in a timely manner, if you are going to be away from the University.

### 3.13 Student Staff Liaison Committee (SSLC)

The Department of Statistics has a Student Staff Liaison Committee covering its entire undergraduate programme. The committee brings together a group of academic staff with approximately fifteen elected student representatives selected from across the years of each degree course. The electoral process is designed to ensure that the views and interests of male and female students, from both the UK and overseas, are fairly represented. The SSLC meets twice a term to discuss a variety of academic issues, student welfare and social activities.

The SSLC is one of the most important places for staff and students to evaluate and comment on the teaching, the resources, the student guidance and support, and the social environment provided to undergraduates by the department. Its key functions include:

- Monitoring and receiving comments on the strengths and weaknesses of modules offered to undergraduates in the Department.
- Contributing to the discussions concerning module and course development.
- Commenting on relevant aspects of department policy developed and discussed by the departmental Teaching Committee. Recent examples include major course revisions, guidelines on timetables for the return of assessed work and the procedures surrounding cheating in assessed work.
- Providing feedback on all Statistics modules (see Section 3.14)
Looking at the computing, library and other resources and discussing ways of improving student familiarity with and access to these.

Helping to arrange social events.

The effectiveness of the SSLC depends largely upon the ability of student representatives to reflect the problems and interests of all students, but also upon the willingness of students to approach their representatives. We hope that you will be prepared to identify problems and make suggestions that your representatives can raise at meetings of the SSLC, and that you will want to find out about the committee’s discussions and activities (see SSLC notice board).

### 3.14 Student Feedback

#### 3.14.1 Introduction

Student feedback is important to the department. Lots of feedback is given informally to personal tutors and lecturers (and this is very useful to us), but there is also a formal mechanism for collecting it.

Halfway through, and at the end of the lecture courses taught by Statistics staff, you will be asked to complete a questionnaire (feedback form). This gives you the opportunity to express your view on various aspects of the course. However, feedback is only useful if it is provided in a considered and thoughtful way. These notes have been prepared to answer some of the questions students often ask about the feedback process, and to help ensure that the feedback you give provides a really helpful input to the Statistics Department’s teaching. Please take a few minutes to read them.

#### 3.14.2 Why is Feedback Collected?

The Department is constantly looking for ways to improve the learning experience we provide for our students. We can only do this if you let us know your reactions to our courses — not only to identify problems, so that members of staff can take steps to eliminate them, but also to learn about the things you find helpful, so that we can disseminate best practice in teaching and learning throughout the Department and further.

#### 3.14.3 What Constitutes Useful Feedback?

You are accustomed to being on the receiving end of feedback when your work is returned with comments from the marker. If you think about what you do and do not like as feedback on work, you will be in a good position to provide helpful feedback on courses. Here are some points to start you thinking:

**Be specific — be constructive:** For example, a bare mark on a piece of work is
not very helpful, since it gives no guidance as to what was wrong with it. In the same way, just saying that you did not like a course does not give any indication to the lecturer as to what steps he/she should take to improve the course. Was the pace too slow? Too fast? Did you find it hard to see the relevance of the material? Or is the fact that you didn’t enjoy the course perhaps nothing to do with the teaching, but rather means that you made a mistake in an option choice and chose a course which turned out not to fit in with your personal interests? Make good use of opportunities for open-minded comments to explain these points.

**Mention the positive as well as the negative:** It is always good to know what you got right but discouraging to read comments on work which only mentions what went wrong with it. When a lecturer is doing something well, and you let them know that, then it gives them encouragement to do it again. So when you comment on a course, try to mention any features which you particularly enjoyed or found helpful.

**Be honest with yourself:** People often talk about ‘teaching and learning’ to show that the educational process requires participation from two people — the teacher and the student. You cannot expect to get full benefit from a course if you simply attend lectures and do any assessments — you need to do the course reading, participate fully in example classes, etc. So before you indicate that you did not get much out of a course, ask yourself honestly what you put in.

**Try to separate personality from content:** During your time at Warwick you may be taught by several dozen members of staff. It would be surprising if you liked all of them equally as people, or if there were not some who had habits and mannerisms which irritated you! But try to keep your reaction to lecturers’ personalities separate from your reaction to their teaching. It is possible for you to regard someone as extremely irritating but still get a lot out of their teaching.

**Be considerate:** Lecturers are people with feelings just like students. Sometimes you may need to be critical of aspects of a course, but you should try always to offer criticism in a sensitive way. Comments such as ‘X is the worst lecturer I have ever had’ are neither useful nor constructive.

**Be conscientious:** *Please* complete feedback forms for all your courses. If we only get a small number of forms returned, then we may well get a biased idea of students’ views — and that idea may not coincide with yours. So don’t lose your opportunity to be heard!

### 3.14.4 What Happens to the Feedback?

1. Questionnaires are distributed by a member of the Student Staff Liaison Committee (SSLC). They collect completed questionnaires and produce a one-page summary.
2. The summary and questionnaires are passed to the Undergraduate Support Officer who forwards them for comment to the relevant lecturer(s).

3. The lecturer writes a response and returns everything to the Undergraduate Support Officer who forwards it to the Head of Department.

4. The Head of Department checks the questionnaires and response, noting for wider dissemination particular compliments or suggestions and returns everything to the Undergraduate Support Officer.

5. The response is copied to the SSLC, and then filed.

6. The SSLC considers the response and passes unresolved items to the Department’s Teaching Committee for further action/assessment.

Thus your constructive feedback is seriously considered and is essential to monitoring and improving teaching.

4 Module Registration

4.1 Registration of Modules

We use the University Online Module Registration System (eMR) which is accessed via https://start.warwick.ac.uk on the University’s intranet, insite. First year students will find that their core subjects are already registered on eMR, only requiring the addition of any chosen optional modules. Adjustments can be made to this initial list of modules at key times during the academic year. As a student it is your responsibility to ensure that you are registered for the correct modules and assessment methods and that you do this at the correct specified times. Details of registration procedures will generally be sent to you via the department at the appropriate points in the academic year. You must check your pigeonhole, your Warwick email address and the department UG notice boards regularly and follow the instructions provided.

The initial information you supply to eMR does not involve you making a permanent commitment to take the selected modules, nor stop you from following other modules. However, you must ensure that all details held on eMR are correct at the time of the final deadline for registration as these details constitute your final examination timetable. Full details will be circulated at the start of the academic year and at the beginning of each term.

Students should note that eMR may allow you to register for module combinations that may not comply with course regulations. Therefore it is important that you check your module choices against the course regulations: see Section 2 of the handbook. Modules that are not listed in the option lists of your year will require departmental approval as unusual options: see Section 4.3.1.
Module Registration Deadlines: Module registration through the eMR system opens in the first week of the Autumn term for first year students (returning students may access the system during the two weeks prior to the start of the Autumn term), and closes at the end of week three. Further amendments to your module registrations (both additions and deletions) can be made in the first three weeks of the Spring Term. The system then remains accessible for module de-registration only until the first day of the Summer term.

You must adhere to the deadline for registering for modules, otherwise we may ignore any marks awarded for that module. You must adhere to the deadline for de-registering: absence from any examination for which you are registered means a credit of zero. Students are advised not to leave finalizing the registration until the last day. Further, students should note that it is a university rule that if assessed work or class tests which contribute more than 10% towards the final mark for a module are submitted by the student for credit then it is no longer possible to de-register from the module even if this takes place before the general deadline for de-registration.

Pre-registration of selected modules for the following year: At the beginning of Term 3, both the Economics Department and Warwick Business School (WBS) run online pre-registration for their modules. This encourages you to start planning and choosing your options in advance and also assists these departments with timetabling. Some departments will cap a module if the numbers reach capacity, so pre-registration on popular modules is recommended. As WBS and Economics also run their own registration systems alongside eMR, they request that if you decide to register or de-register from a module at some stage mid-term, you advise them in person as well as changing your registration on eMR.

The WBS deadline for changing registering modules is Week 3, Term 1 for Autumn Term or full year modules, and Week 2, Term 2, for Spring Term modules. Please note that if you register on eMR but not on my.wbs, you will not be considered to have registered for the module.

4.2 Module Codes by Department

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<tr>
<th>Code</th>
<th>Department</th>
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<tr>
<td>ST</td>
<td>Statistics</td>
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<tr>
<td>MA</td>
<td>Mathematics</td>
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<tr>
<td>IB</td>
<td>Warwick Business School</td>
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<td>EC</td>
<td>Economics</td>
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<td>CS</td>
<td>Computer Science</td>
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<td>Philosophy</td>
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<td>LL</td>
<td>Language Centre</td>
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4.3 Choice of Optional Modules

There is an enormous range of optional modules. Compulsory modules and some of the optional modules are listed in the body of this handbook. However, in
principle, it is possible to take most modules available anywhere in the University as an unusual option but permission must be sought as described in Section 4.3.1 below.

In considering which options to take, the following points may help:

- Think about where your interests lie and what the module might lead to later.
- Check the prerequisites.
- You can try a module and deregister later if you decide not to offer it for examination. However, make sure that you adhere to de-registration rules and deadlines.
- Talk to your personal tutor and to your friends (especially those who have taken the module before!).
- For students starting in 2013 or later, additional modules taking your load over 120 CATS may have no effect on your overall average mark for the year, although they will still appear on your HEAR transcript. (See Section 5.2 for an explanation of how your average mark is calculated). An extra module is a big commitment and you must be careful not to take on too much.
- Further advice on optional modules can be found in sections 8.2 and 8.3.

It is a student’s responsibility to ensure that the modules they are following are permitted either because the modules are given explicitly as options by the regulations or because permission has been sought and granted by filling in an unusual option form.

4.3.1 Unusual Options

An unusual option is a module that is not listed within the option lists of your current year. Unusual options allow you to take modules tailored to your individual interests. Obtaining permission to take an unusual option is relatively straightforward, just follow the instructions given below.

To take a module as an unusual option you need to fill in an Unusual Option form which are available from the Student Support Office. After obtaining the agreement (and signatures) of the module leader and your personal tutor submit the form to the Student Support Office who will forward it to the Course Director for approval.

Deadlines:

Forms for Term 1 modules must be submitted to the Student Support Office no later than week 3 of term 1. Failure to submit the forms with the relevant signatures within the time-frame specified may result in your de-registration from the relevant module.
Students may register for Term 2 and Term 3 modules at the start of Term 2 provided a signed unusual option form is submitted no later than week 3 of term 2.

**Restrictions:**

In most cases there are no problems in obtaining everyone’s agreement however there are some restrictions that you should note:

- First and second year modules may not be taken as unusual options by students in their final years (including the third year of an integrated Masters degree) with the exception of Language Centre modules as permitted under the rule below.

- In the final year of a degree (year 3 of a 3 year degree and year 4 of a 4 year degree) students may not take a language option intended for a complete beginner.

- No more than 24 CATS credit of unusual options may be taken in any one year.

- Modules that are listed as core modules in subsequent years may not be taken as unusual options.

Failure to submit the forms with the relevant signatures within the timeframes specified may result in your de-registration from the relevant module.

The Institute for Advanced Teaching and Learning (IATL) offers a number of interdisciplinary modules which may be taken as unusual options subject to approval. Further information on these modules can be found at [http://www2.warwick.ac.uk/fac/cross_fac/iatl/activities/modules/](http://www2.warwick.ac.uk/fac/cross_fac/iatl/activities/modules/)

### 4.4 Foreign Language Modules

#### 4.4.1 General

In their first two years, students may take most modules offered by the Language Centre which are listed with CATS credits in the University Programme Regulations. All language modules taken for credit must be taken as unusual options and you must follow the procedure described above to register for them. Take particular note of those rules which restrict unusual language options during the final years of the degree.

#### 4.4.2 Language Centre

The Language Centre offers academic courses for exam credit in a variety of languages at a wide range of levels. Most languages can be taken as year-long 24 CATS modules, although some are available as 12 or 15 CATS modules running
only for one term. Further information is available from The Language Centre. The Language Centre is located on the ground floor of the Humanities Building.

There is also a full programme of leisure courses for which, after 6 terms of successful study, students may be eligible for the award of an Open Studies Certificate. There is a discounted fee for undergraduates on these leisure courses. These leisure courses carry no exam credit.

The Language Centre also offers language laboratory audiovisual and computer assisted self-access facilities with appropriate material for individual study (carrying no exam credit) in Arabic, Chinese, Dutch, English, French, German, Greek, Italian, Japanese, Portuguese, Russian and Spanish.

*Important note for students who pre-register for Language Centre modules:* It is essential that you confirm your module pre-registration by going to the Language Centre as soon as you can during week one of the new academic year. If you do not confirm your registration, your place on the module cannot be guaranteed. If you decide during the summer not to study a language module and to change your registration details, please have the courtesy to inform the Language Centre of the amendment.

The Italian Department offers modules in Italian language for all university students, whether they intend to take up Italian from scratch or to continue learning the language (and culture) at intermediate and advanced level. All modules are taught over three terms and fully accredited. Assessment consists of regular tests as well as oral and written examinations at the end of the year.

5 Examinations and Progression

5.1 Examinations

The Examinations Section of the Academic Office is responsible for organising university examinations. Their webpages http://www2.warwick.ac.uk/services/academicoffice/examinations contain comprehensive information about examinations.

Personal Tutors are allowed to disclose to their tutees provisional marks (as a percentage) for each exam/assessment taken by that tutee. Please note that such marks are provisional and are subject to ratification/amendment by the Senate of the University and by External Examiners.

Students should also be aware that in deciding a degree classification Boards of Examiners will take note of circumstances other than the candidates’ overall mark such as, for example, ill health of the candidate and exceptional performance on individual modules. However it is very important that documentary evidence of
any mitigating circumstances is communicated to the Exam Board via the Chief Exam secretary before the Board meets at the end of Term 3 (see Section 5.7).

5.1.1 End of Year Marks
The average mark for a given year is calculated as follows. If you have taken the core modules together with enough options to reach or just exceed the 120 CATS minimum load, but no further optional modules, then it is the average mark for your module marks weighted according to their CATS. If you have taken additional modules beyond the 120 CATS normal load, then the average mark for the year is either the arithmetic (CATS weighted) average of all your module marks, or the arithmetic (CATS weighted) average of some selection of your module marks whichever is the greater. We select which options to include in the calculation so as to maximise your resulting percentage, but we only consider selections which satisfy the course regulations (in particular, include all the core options).

5.1.2 Calculation of Examination Credits: BSc Degree
The first year counts 10%, the second year 30% and the third year 60% towards the final BSc degree mark; i.e. if $S_1$, $S_2$, $S_3$ denote the % credits obtained at the end of years 1, 2 and 3 respectively, then the overall degree % mark is

$$C = \left(\frac{10S_1 + 30S_2 + 60S_3}{100}\right).$$

The credits $S_1$, $S_2$, $S_3$ are calculated as follows:

$$S_k = \max\left(\frac{\sum x_i c_i}{\sum c_i}\right)$$

where $x_i$ is the score on module $i$ with CATS load $c_i$, and the maximum is taken over all subsets of the modules you have taken in year $k$ that satisfy the regulations for that year.

5.1.3 Calculation of Examination Credits: Integrated Masters Degree
The first year counts 10%, the second year 20%, the third year 30% and the fourth year 40% towards the final Integrated Master’s degree mark; i.e. if $S_1$, $S_2$, $S_3$, $S_4$ denote the % credits obtained at the end of years 1, 2, 3 and 4 respectively, then the overall degree % mark is

$$C = \left(\frac{10S_1 + 20S_2 + 30S_3 + 40S_4}{100}\right).$$

The credits $S_1$, $S_2$, $S_3$, $S_4$ are calculated as follows:

$$S_k = \max\left(\frac{\sum x_i c_i}{\sum c_i}\right)$$
where $x_i$ is the score on module $i$ with CATS load $c_i$, and the maximum is taken over all subsets of the modules you have taken in year $k$ that satisfy the regulations for that year.

### 5.2 First Year Examinations

Most modules are examined in the main term 3 exam period. However you should be aware that there is an examination for ST116 Mathematical Techniques at the end of Term 1, and exams in MA137 Mathematical Analysis and MA138 Sets and Numbers at the beginning of term 2.

The first year Exam Board for the Faculty of Science will consider your results at the end of term 3.

The possible outcomes of the first year examinations are as follows:

a. Permitted to proceed to the second year of study.

b. Required to resit.

In order to progress to the second year of the degree programme (outcome a) you must pass (with a module mark of 40 percent or above) the following modules:

- MA106 Linear Algebra
- MA137 Mathematical Analysis
- ST104 Statistical Laboratory
- ST115 Introduction to Probability

You must also pass at least 80 CATS of whole modules including MA137, MA106, ST104 and ST115, and have an average mark for the year of 40 percent or more. Your average mark for the year is calculated in the way described in Section 5.1.

For students allowed to proceed to the second year of study your average mark for the year will be used to determine a classification as follows:

- Class one-First
- Class two (division one)-II.I
- Class two (division two)-II.II
- Class three-Third III

This classification will not form part of your transcript but will give you an idea of how you are progressing.

If you do not meet the above requirements then the Exam Board will require you to resit certain modules in September, as detailed in Section 5.4 below).
There are two possible outcomes of the September resits:

a. Permitted to proceed to the second year of study.

b. Required to withdraw.

Your first year counts ten percent towards the total credit for your degree. If you have met the requirements for progression to the second year in June then it is your average mark for the year as calculated above that determines the contribution of the first year to your overall degree mark, which is then used to determine the classification of your final degree. If you are required to do resits in September the average mark carried forward is calculated with the marks for failed modules replaced by a pass mark of 40 for those modules which have been passed on resit.

5.3 First Year Examination Results

The first year Examination Board meets on the last Thursday of term 3. Pass lists are displayed on notice boards in the ground floor of University House as soon as possible after marks are released. You may collect your module marks from your personal tutor from 2pm onwards on this day.

You are strongly encouraged to meet with your tutor in person to discuss your results. If you are unable to meet with your tutor on Thursday afternoon you should let your Personal Tutor know in advance. In these circumstances it is likely that to obtain your module marks you will have to wait until they are available online via the Start.Warwick pages of university website from mid July onwards.

Students should note that Personal tutors are not usually available during the vacation, nor will they normally give marks out by email or phone. Personal Tutors will not disclose marks to any third party but you may make arrangements for a friend to check the Pass Lists and inform you of your classification. (This will not be possible, of course, if you have exercised your right not to appear on the Pass Lists).

If you are required to resit any modules then you will receive a letter from the Academic Office during the vacation. This will be sent to your permanent home address unless you have completed a vacation address form at the enquiry desk in the Academic Office. It is your responsibility to ensure that correspondence sent to you during the vacation is sent to the correct address.

5.4 First Year Resits

5.4.1 General

First year students who have failed to meet the required standard in any one of the 3 main modules listed in Section 5.2 will normally be offered the opportunity to resit the final examination before the start of the next academic year. These
resits are usually around the first week of September. You will be informed by your personal tutor of any resits you are required to take when you collect your examination results in the last week of the summer term.

University requirements are that all students must return to Warwick University to sit their examinations. The only students who are allowed to choose to sit overseas are those students whose registered home address is in India, in which case they are able to sit in New Delhi only, or those whose registered home address is in China or Hong Kong who will be able to resit examinations in Hong Kong. The Exams Office identifies these students and sends a resit letter offering them the option of taking resit exams abroad.

All students who are required to take resits will be notified by post, so if you have left University before the end of term and your contact details are incorrect you may not receive a resit letter in time.

Unless your resit is a first attempt (see below) the average mark carried forward is calculated with the marks for failed modules replaced by a pass mark of 40 for those modules which have been passed on resit. You are required to pass the resit examinations before you are allowed to proceed to the next year of your degree. If you fail your resit examinations you will then be Required to Withdraw.

Students should note that resit marks are calculated on a resit examination basis ONLY. Coursework marks are not taken into account when calculating the resit mark (with the exception of resits for WBS modules).

5.4.2 Resits ‘As a First Attempt’

In certain circumstances (for example, illness on the day of an exam) you may be permitted to resit as a first attempt. (See Section 5.7 below.) In this case your resit will be treated as the first instance of your sitting that exam, and it is that mark that you will carry forward.

5.5 Second Year Examinations

Most second year modules are examined in the main term 3 exam period. The University webpage at http://www2.warwick.ac.uk/services/academicoffice/-examinations/ contains general information on examinations.

In order to progress to the third year students must pass (at the 40% module pass mark) at least 60 CATS.

For candidates who registered from autumn 2011 onwards, to qualify for a BSc Honours degree a candidate must pass (at the 40% module pass mark) in the final two years contributing to the degree classification, whole modules equating to at least 168 credits in total, including at least 80 credits taken in the final year. To
qualify for an Integrated Masters Honours degree a candidate must pass (at the 40% level) at least 258 CATS in Years 2-4 including at least 90 CATS in the final year. For a Pass degree a candidate must pass (at the 40% module pass mark) in the final two years contributing to the degree classification, whole modules equating to at least 150 credits taken in the final two years and 50 credits taken in the final year. For more on this see http://www2.warwick.ac.uk/services/academicoffice/-quality/categories/examinations/conventions/ug08

Candidates who registered before Autumn 2011 should consult the Undergraduate Support Office for advice.

For any second year student (whether on Honours or Pass) the possible outcomes of the second year examinations are as follows:

a. Class one - First I
b. Class two (division one) - II.I
c. Class two (division two) - II.II
d. Class three - Third III
e. Permitted to proceed to the final year of an Honours course.
f. Permitted to proceed to the final year of a Pass course.
g. Fail.

In order to proceed to the third and fourth years a Masters student needs to obtain a class one or a class two (division one) result.

Students in group (e) have failed to obtain an overall Honours classification but have been permitted by the examiners to continue with an Honours course. Students in group (f) take a reduced load of exactly 90 CATS points in their third year. (Deviations from the third year Pass load require approval by the Department). The normal load for third year Honours is 120 CATS points.

Students in group (g) have the right to resit the second year examinations the following June without residence at the University. Special papers are not usually set, but examiners treat resit students as special cases.

5.6 Second Year Examination Results

It is your responsibility to ensure that you understand what actions are required from you when your results become available. So please talk to your personal tutor if the following instructions are not clear enough to you.

The Exam Board for second year students does not take place until the week after the end of the summer term so second year students cannot obtain their results from their personal tutors. However module marks will be made available to
students for all years via the my.data pages of Start.Warwick on the university website from mid-July and second year students are advised to check their results on these pages. Alternatively, they may collect their marks from their personal tutor at the beginning of the next term in October.

Within two weeks of the second-year exam board, the Department will also send letters to those students who are permitted to proceed to the third year of the integrated master’s degree. Letters will be sent to all students who are permitted whether they are registered for the integrated master’s degree or not. If you are registered for an integrated master’s degree but were not given permission to proceed you will also be sent a letter.

Second year students who are required to resit or withdraw, or whose degree status is otherwise changed will be sent a letter which provides the contact details of a senior member of the department who will be able to give additional guidance.

All letters (in particular, letters informing you of any resits you may be required to take) during the vacation will be sent to your permanent home address unless a vacation address form is completed at the Enquiry Desk in the Academic Office. It is your responsibility to make sure that any correspondence sent to you during the vacation is directed to the correct address.

You should note that Pass Lists will be displayed on notice boards on the ground floor of University House, and in departments, as soon as possible after the marks are released. You may therefore make arrangements for a friend to check the Pass Lists and inform you of your classification (unless, of course, you have exercised your right not to appear on the Pass Lists). As the second year results are not released until after the end of term the Pass List for second years will also be made available on a secured webpage you can access using your Warwick login.

You should be aware that staff dealing with examination results may not always be present at University in the vacations. You should not expect to be able to contact your Personal Tutor in the vacations, nor that requests or enquiries will be responded to within a matter of days, as might be expected in term-time.

5.7 Mitigating Circumstances

Mitigating or extenuating circumstances are those events which have had a detrimental effect on your study, to the point that it is in your interest to draw your department’s attention to them and ask for them to be considered in mitigation of poor performance. Such circumstances include (but are not limited to) illness, both bodily and emotional; the severe illness or death of a close family member; a shocking or traumatic personal experience. In addition, sudden, unexpected changes in family circumstances might affect your ability to make academic progress as a consequence of their demonstrable emotional impact upon
you, and may also be considered as mitigation.

The official University guidelines covering mitigating circumstances, including the procedure for submitting a Mitigating Circumstances Declaration form, can be found on the following web-page:

https://www2.warwick.ac.uk/services/aro/dar/quality/categories/examinations/-policies/u_mitigatingcircumstances/

The University is aware that in some cultures it is considered shameful or embarrassing to disclose the details of these kinds of circumstances to those outside one’s family. This is not the case in the prevailing UK culture and you should be aware that your department and the University are fully supportive of students in difficult circumstances and want to assist if at all possible. If you feel inhibited from talking to a tutor or other member of staff in the first instance, you may also consider talking to a member of your SSLC, the Students’ Union, or a counsellor for initial, informal advice.

Clearly, though, in order for your circumstances to be considered as mitigating by the department of Statistics, they must be conveyed formally. Mitigating circumstances which may have affected your performance in an examination or any part of an examination are reviewed by the Board of Examiners when considering your exam results provided evidence for such circumstances (with professional or other suitable documentary corroboration as appropriate) must be communicated in writing to the Secretary of the Board of Examiners in advance of the board meeting. This written evidence must be in English and should be submitted at the earliest possible stage and by such a date as may be required for the appropriate exam board meeting. Note that it is your responsibility to ensure that mitigating circumstances are communicated as described above.

When requesting medical evidence to support your application for mitigation you are advised to make clear to your doctor that the information will be shared with a number of people and to discuss with your doctor the most appropriate wording of the medical evidence. You might find it helpful to share this advice with your doctor.

Note that the University expects that you will disclose your circumstances before Exam Boards meet, so that they may be taken into account in good time. You should be aware that, in the event you feel you need to appeal the outcome of an Exam Board, offering extenuating or mitigating circumstances at that point will need to be accompanied by a good reason why you withheld the information earlier. Without wanting to invade your privacy, the University does expect that you bring such circumstances to your department’s attention in a timely manner, despite the discomfort you might feel in so doing. Failure to disclose such circumstances at a time when you could have done so may subsequently be problematic.
Your department will do all it can to support you in difficult situation.

5.8 Special Examination Arrangements
See Section 7.5.

5.9 Assessed Work
Assessed work means credit obtained by a means other than a conventional university-supervised examination.

5.9.1 Deadlines
Assessed work usually comes with a deadline for completion. The department and SSLC consider these essential to ensure fairness to all the students doing the work and to the markers. Deadlines are enforced by penalising late work. Different departments have different conventions.

In the Department of Statistics the lecturer giving the assessment will name a date as the deadline (this will not usually be a Friday). Work should be submitted by posting it into the appropriate postbox at the Student Support Office on or before the deadline dates and time when the postbox will be emptied. The normal deadline is 11am.

Pieces of work with a credit value of more than 2 CATS: A student who misses the deadline must personally hand their work to the Undergraduate Support Officer who will record the date it was received. The lecturer will automatically enforce a penalty of 5 marks per day. "Marks" mean marks on a percentage scale. A late piece of work that would have scored 65% had it been handed in on time would be awarded 60 if it were one day late, 55 if two days late etc. Penalties accrue only on working days (not weekends or public holidays).

Pieces of work with a credit value of less than or equal to 2 CATS: Such work will receive a mark of 0% if submitted late.

Weekly or fortnightly coursework which is submitted late will receive a mark of 0%.

Normally, feedback will still be offered on work which is submitted late.

The only circumstances in which the penalties for late submission will be waived is if the lecturer has received documented evidence of medical or similar extenuating circumstances. Such evidence must be communicated to the Statistics Chief Examinations Correspondent.

The penalty will not be waived for bad time management, so plan ahead and make allowances for the possibilities of unforeseen demands on your time, such as job interviews. If you write your work on your computer make sure you regularly
save your files. No excuses will be accepted due to problems you may suddenly have with your computer or printer.

The Department may require students to sit an examination in lieu of submitting a piece of assessed coursework.

5.9.2 Cheating (Including Plagiarism)

What constitutes cheating?

In the university regulations cheating is defined as an attempt to benefit oneself or another by deceit or fraud. The department recognises that discussing ideas about how to tackle questions is valuable part of the learning process. For assessments that are not explicitly group work you are required to work independently of other students. While collaboration in the sense of a discussion of general strategies or help of a general nature are allowed, detailed discussions and comparison of numerical results or computer code are not permitted. The work you submit should be written in your own words and you should not ask to see written work, computer code or computer output belonging to another student. If you hand work in claiming that it is your individual work and it is not this will be treated as cheating. Work produced by someone else may be included only provided it is appropriately acknowledged. Unacknowledged copying from either another student or from published sources including the internet is also treated as cheating.

Cheating also covers more obvious sins such as copying in tests, sharing calculators in tests and examinations, stealing work from other students, or taking your mobile phone into an examination. You are also guilty of cheating if you assist another student to do so, for example by allowing them to copy your work.

- Cheating is unacceptable and often easily spotted. Lecturers have been instructed to report students to the chair of the department who will give you the opportunity to explain yourself before deciding on a penalty. You have the option of appealing against the decision to the University authorities.

- We keep records! Personal Tutors may be required to write references to prospective employers testifying to honesty and integrity, if your file records that you are guilty of the offence of cheating, then this could lead to serious difficulties for you.

- If the matter goes to an Investigating Committee (and second offences will!) then you could end up thrown out of the university.

- Cheating by students from the Statistics department in modules taught by other departments will be dealt with within that other department and reported back to the Statistics Exam Board. It works the other way round too as the Statistics Department will deal with all cases of suspected cheating in
Statistics modules and report the outcome to a student’s home department.

**Formal procedures followed in cases of suspected cheating in coursework:**

The University sets out the formal procedures in Regulation 11 of the University Calendar (see [http://www2.warwick.ac.uk/services/gov/calendar/section2/-regulations/cheating](http://www2.warwick.ac.uk/services/gov/calendar/section2/-regulations/cheating)). These are briefly described in the following paragraphs.

- No incident of suspected cheating should be dealt with informally by the lecturers or examiners. All incidents should be reported to the Chair of the Department. In particular no penalty should be imposed on a student outside the formal procedure laid out below.

- The Chair of the Department shall inform the student of the allegations and provide the student with reasonable opportunity to make representation on his/her behalf before determining whether an offence has occurred and, if so, determining the appropriate penalty. In the absence of mitigating circumstances this shall normally be a mark of zero in the piece of work concerned.

- The student may accept the penalty determined by the Chair as a final decision. Then a report of the circumstances of the case and the penalty imposed shall be lodged with the appropriate Board of Examiners and be recorded in the student’s file.

- The student may seek the jurisdiction of an Investigating Committee of the Senate as detailed in Regulation 11 of the University Calendar.

- Should the Chair of the Department consider it appropriate then he/she may refer any case to an Investigating Committee of the Senate. Second offences of misconduct shall normally be so referred.

### 5.9.3 Marks and Marking

The marks given for assessed work are always provisional and may be changed by the Board of Examiners. Students should retain all of their assessed work because it may have to be resubmitted to the department just before the Board of Examiners meeting.

Students may choose to have their major projects and essays marked anonymously, just quoting their University number. However, anonymous marking leads to difficulties in quickly returning marked work. Such work cannot be returned via students’ pigeonholes and there are further problems when numbers are incorrectly quoted. Consequently, following SSLC and Science Sub-Faculty discussions, students must quote their names on all individual Statistics, Mathematics and other Science Faculty assessments which account for less than 30% of that particular module’s credit.
5.10 Student Academic Appeals Procedure

Under certain defined circumstances and as per the University Calendar (University Regulations) students may appeal against decisions relating to their academic progress or outcomes. These may be summarised broadly as follows:

- Final-year undergraduate students may appeal against the award of a particular degree class or if they have not been awarded a qualification. For an appeal to have any chance of success it should be based on relevant evidence which was not available to the Board of Examiners when its decision was reached. Further the reason why the evidence was not available at the time the Board met should be provided.

- First-year and intermediate-year undergraduate students have the right to appeal only against a decision that they be required to withdraw from their course of study, and then only if they are in possession of relevant evidence which was not available to the Board of Examiners when its decision was reached.

Further information and details of the process can be found in the University Calendar (see Regulations 8, 37.5 and 38.9) or at http://www2.warwick.ac.uk/services/aro/studentappeals

5.11 Departmental Assessment Strategy

The Department of Statistics has a Departmental Assessment Strategy, which can be viewed at: http://www2.warwick.ac.uk/fac/sci/statistics/courses/assessmentstrategy

Assessment is a mixture of formal examinations and assessed coursework. The assessment arrangements for STxxx coded modules can be found in the Assessment Handbook: http://www2.warwick.ac.uk/fac/sci/statistics/courses/-assessment_table_1516.pdf

5.12 Use of Calculators in Examinations

Concerning the use of calculators in examinations the Department of Statistics follows the University rule which states that except for the display of error or function messages, calculators with non-numeric displays are not allowed. In other words prohibited calculators are those which can accept alphabetical data. Note that this includes most graphical calculators of the type acceptable in GCSE and A-level examinations. It is your responsibility to ensure that your calculator fulfils the University’s criterion and that your calculator is not of the prohibited type. Otherwise you may find yourself denied the use of your calculator and be involved in disciplinary proceedings.

Suggested suitable calculators for incoming students which are in line with rec-
ommendations from the Computer Science Department are Casio fx82, fx83 or fx85. All of these are available from SU and from well known retailers. They are also reasonably priced.

Please remember:

- Calculators must not be passed from candidate to candidate during the examination;
- Responsibility for the calculator’s proper functioning is entirely that of the student;
- Students taking examinations other than those of the Department of Statistics must ascertain the regulations governing the use of calculators from the Department concerned.

In particular, calculators are not allowed in ST115 or examinations organised by the Mathematics Department (these are all MAxxx module exams). In general, the same rule applies to tests for credit in MAxxx modules, unless students are otherwise informed by the lecturer running the test.

6 Change of Course

6.1 Transferring to Another Degree

It is possible, with the permission of the relevant department, to transfer from the first year of Mathematics and Statistics to closely related degree schemes such as, MORSE, Mathematics and Economics, and so on. In every case it is necessary to fill in and sign an official change of course form. Course transfers are only permitted during term 1, the first week of term 2 and at the end of the academic year when examination results are known.

Transfers from MathStat to the integrated Masters or vice versa can take place at any time during the first two years. However where Student Finance England (SFE) or Local Authority (LA) funding for the fourth year is a consideration, it is advisable to make this decision earlier rather than later. During the third year of study, we will not permit any changes between degrees after the end of the first term.

Fourth year students can elect to leave with a Bachelor’s degree at any point between the release of results in the summer at the end of their third year and noon on the Friday of Week 3 in Spring term. Students would need to make a request in writing to the Head of Department, but such requests would normally be granted. Later transfers would only be considered in exceptional circumstances. Students should be aware that if they opt to leave their degree classification would have to be recalculated to allow for the different weightings across years used in the BSc
degree. It would not be possible to attend graduation with students from the same cohort on the BSc degree.

Also decisions taken to transfer degree programme to the three year course taken after registrations have been made on the four year programme may result in the student HEAR (Higher Education Achievement Report) transcript including the modules which were due to be taken in the fourth year with a mark of zero. Where there are modules on the integrated Masters only (including third year modules) which are associated with actuarial exemptions, students who elected to leave without completing the fourth year of the programme would not be eligible for these exemptions.

6.2 Intercalated Year

Statistics students may take a degree course entitled Mathematics and Statistics (with Intercalated Year) (GG17), which entails four years of study, rather than the usual three. Registration for this degree should take place as early as possible in the previous year, otherwise local authorities may object to giving you financial support for the fourth year. The intercalated year takes place at the end of the second year. On their return, students join the third year of study. The intercalated year entails either working in industry, or studying at a university abroad and must be approved by the student’s Personal Tutor and Head of Department. Approval is not guaranteed and largely depends on current academic achievement (no less than 2:1). A Course Transfer form will have to be completed. During the intercalated year you must contact the Statistics Department Senior Tutor at least once during each University term (typically by email or phone) with a brief summary of your experience, and also inform the Senior Tutor as soon as possible if any difficulties arise. Please also be aware that, as this intercalated year forms part of your formal degree programme, half ‘home’ student fees are payable. For further information about this contact Student Finance in University House.

Undergraduates who have in the past succeeded in finding a job in industry have found this a very helpful experience. There is unfortunately no help available from the department in finding a job, and students who are interested in this are recommended to seek help from the Careers Office. The main criterion is that the job should provide learning experiences which are related to the degree course. After your return from the Intercalated year you will be required to file a report with the Department during the first week of the first term on this learning experience.

ERASMUS, a European Union educational scheme, provides an opportunity for Warwick students to spend a year at a partner university in another European country. If you are interested in the ERASMUS scheme, you will get advice and help from the International Office in University House, see www2.warwick.ac.uk/-
study/studyabroad/outgoing/erasmus.

7 Welfare

The University has a strong and well-established network of welfare and support services provided for students and, in many cases, staff. The services set out below, which are provided across the campus, are diverse and intended to meet the many and varied needs of the University community. Please refer to the following web-page for further details:

www2.warwick.ac.uk/insite/topic/healthsafety/welfare

7.1 Illness

If your work is affected by illness you must get a sick note from your doctor, ensure both your personal tutor and the lecturers expecting assessments know, and that a copy of the sick note is given to the Undergraduate Support Officer. This is most important in relation to Boards of Examiners who require legitimate evidence before making due allowance for adverse circumstances.

If your illness affects your attendance to the extent that you miss a monitoring point (please refer to http://www2.warwick.ac.uk/fac/sci/statistics/courses/-currentstudents/points-of-engagement for the list of current engagement points) please contact the Undergraduate Support Office in the first instance so that we can correctly record the reasons for absence.

7.2 The University Senior Tutor and Counsellors

The University Senior Tutor (http://www2.warwick.ac.uk/services/tutors) and University Counsellors (http://www2.warwick.ac.uk/services/tutors/counselling/) provide help and advice to students from all departments. The help and advice can take the form of both individual counselling and group sessions on topics ranging from study skills to relaxation. A list of the workshops offered by the Counselling Service can be found at http://www2.warwick.ac.uk/services/tutors/-counselling/workshops/. These services are entirely confidential and nothing is passed to any third party (e.g. your department) without your permission. The Senior Tutor (telephone extension 23761) and the Student Counsellors are both located in the Student Development and Support Section of University House.

7.3 Equal Opportunities

The department subscribes to the University’s Equal Opportunities Statement:

*The University of Warwick, recognising the value of sustaining and advancing a safe and welcoming learning environment, strives to treat both employees and*
students with respect and dignity, treat them fairly with regards to all assessments, choices and procedures, and to give them encouragement to reach their full potential. Therefore the University strives to treat all its members, and visitors, fairly and aims to eliminate unjustifiable discrimination on the grounds of gender, race, nationality, ethnic or national origin, political beliefs, religious beliefs or practices, disability, marital status, family circumstances, sexual orientation, spent criminal convictions, age or any other inappropriate ground.

7.4 Sexual and Racial Harassment

Sexual and racial harassment are totally unacceptable: we will support those subjected to it and, when appropriate, will take disciplinary action against offenders. Within the department help and support will be provided by all members of staff. Outside the department you may seek help from the University Senior Tutor, the Student Counsellors and the Student Union Welfare Staff.

The University and the Students’ Union have prepared Guidelines on Sexual, Racial and Personal Harassment (http://www2.warwick.ac.uk/insite/topic/healthsafety/welfare/harassment/). The guidelines include advice on identifying and addressing harassment, formal procedures which can be followed and details of sources of support. The guidelines are also available from the office of the Director of Student and Ancillary Services.

If you feel able to make it clear to the person causing you offence that their behaviour is unacceptable that may be enough to stop it. But if you do not feel able to tackle the person, you should feel free to seek assistance from those listed above or from fellow students to put an end to it.

7.5 Special Examination Arrangements

If you are aware that you will require special arrangements during the examination period (such as extra time required for religious or medical reasons), would you please contact the Undergraduate Support Officer as soon as possible. The University has a system for requesting special arrangements for eligible students while taking their examinations.

These arrangements are only for students whose requirements are due to a medical condition or other significant reason. In all cases, any requests needing approval for the first time must be supported by properly documented and appropriate medical/psychological evidence. Once accepted this arrangement will continue for the duration of your degree course.

Cases of temporary illness or injury will be granted a temporary arrangement at the time, which will not carry over to the following year. If you have any questions relating to this please contact the Undergraduate Support Officer.
For referral to the University’s Disability Coordinator, please speak to your Personal Tutor or the Undergraduate Support Officer.

7.6 Health and Safety
The Departmental Safety Officer is the Departmental Administrator, Mrs Paula Matthews, and any matters relating to safety within the department should be referred to her by email, paula.matthews@warwick.ac.uk.

7.7 Complaints Procedures
The University has a clear three-stage Student Complaints Resolution Pathway for informal and formal concerns or complaints. Further information about the Pathway, including the rules and required timescales, are set out in the formal Procedure:

http://www2.warwick.ac.uk/services/aro/studentfeedbackandcomplaints/-student_complaints/

Stage 1 of the Student Complaints Resolution Pathway is through frontline/local resolution. Many problems can be dealt with on an informal basis, and in the first instance you can contact your personal tutor, or a member of the SSLC. You can also get advice from the University Senior tutor and the Students Union.

If you then wish to pursue the matter more formally, Stage 2 of the Student Complaints Resolution Pathway is to write to the Head of the Statistics Department who will provide an initial response within five working days.

Having contacted the Head of Department, if you remain dissatisfied with the outcome of consideration of your complaint, Stage 3 of the Student Complaints Resolution Pathway is to initiate a formal Institutional Review.

Early resolution of the complaint should be sought and it is expected that the vast majority of complaints will be resolved through a local/frontline response. Should any complaint not be resolved through this internal three stage process, students are able to request that their complaint be independently reviewed by the Office of the Independent Adjudicator (OIA).

Appeals against decisions of the examination board are subject to special procedures. Further details are available at Section 5.10.

8 Careers

8.1 What Do Statistics Graduates Do?
Graduates from the Department of Statistics enter a diverse range of careers. Many opt to work within the Financial Services sector with the Actuarial, Ac-
counting and Investment Banking opportunities being particular favourites. These roles often involve the study for professional qualifications such as ACA, CIMA, CFA and the actuarial examinations. Other frequent career choices include e-Commerce, Business and Industrial Consultancy, Operational Research, Marketing, Scientific Research, and Government. Statistics graduates develop a strong range of transferable skills including excellent numerical, problem-solving and analytical abilities. These along with your ability to communicate complex ideas effectively are highly sought after by employers.

A number of students decide to continue in academia, studying for either a Statistics related Masters or PhD. Alternative study routes have included the study of Management Science & Operational Research or the PGCE teaching qualification.

8.2 Careers Guidance

Making good career decisions involves thinking about your interests and qualities and also spending time researching possible occupations. If you would like to discuss your ideas or feel you need support with working through your options and developing ideas then please contact the Centre for Student Careers & Skills (see go.warwick.ac.uk/careers). To contact the Careers Office, please email careers@warwick.ac.uk.

8.3 Careers Information Resources

A wide range of materials is available in the Careers Hub, based in the Learning Grid at University House. Their website also gives you access to masses of information on career planning, job seeking, interview skills, and much more. You can register online to receive personal news, jobs and events information through go.warwick.ac.uk/mycareers. Don’t forget to check out the vacancy database which provides access to hundreds of opportunities for work experience and internships, as well as graduate vacancies.

8.4 Careers Events

An extensive programme of events including skills development workshops, presentations on particular sectors and mock interviews are available throughout the year. Statistics students are advised to keep an eye on the Student Careers & Skills events calendar and e-mails publicising upcoming activities.

Don’t miss the valuable opportunity to meet employers face to face. Explore your options, compare organisations and find out what skills employers are looking for by visiting the Careers Fairs, employer presentations and alumni evenings. You will need to book online for most events as places are limited.
8.5 Making the Most of Your Time at University

Alongside the achievement of a good degree, employers are looking for students who have maximised the use of their time at university and got involved in a wide range of extracurricular activities. Many students help in the running of societies which helps to build personal skills such as communication, leadership, problem solving and team working. Some students work toward the Undergraduate Skills Programme or take part in Business Challenges. Find something you enjoy and get involved!

Work experience can greatly increase your chances of receiving a graduate job offer. Student Careers and Skills has a new service, the Placement Learning Unit, which helps students to develop the skills to make high quality placement applications and to gain maximum reflective learning from their experience. It also provides bursaries to support students in accessing opportunities appropriate for them.

Further information can be found via Student Careers and Skills: www2.warwick.ac.uk/services/scs/experience. Appointments can be booked via MyAdvantage which also provides access to a database on work experience opportunities (http://myadvantage.warwick.ac.uk/).

Both employers and postgraduate course providers will expect you to be knowledgeable and assertive about the intellectual and personal skills which you have gained during your degree course. They are concerned about what you can do, in addition to what you have studied, and will require you to substantiate the claims you make when making applications. They will look at your past experiences, choices and behaviour to find evidence of these skills.

8.6 International Students

If you are hoping to find employment in the UK after graduation, and English is not your first language, think about ways in which you can improve your conversational English. To be successful at an interview you will need very good verbal communication skills, and sometimes our international students – despite having excellent academic results – will not be able to progress beyond this point because their spoken English isn’t good enough.

The Centre for Applied Linguistics (CAL) runs classes for our non-native speaking students: see ‘Learning English’ at www2.warwick.ac.uk/fac/soc/al. You can apply what you have learnt by joining clubs and societies and regularly mixing with students who are native English speakers.
8.7 Letters of Reference

When you apply for employment or further training you will probably be asked for two academic referees. One of these will normally be your Personal Tutor, the other should be someone familiar with your work such as a lecturer who has marked some of your coursework or supervised a project. Please note:

- Obtain early agreement from your referees to write references for you, and keep them informed of the applications you make.
- Request references at least 2 weeks before any related deadline, and provide the referees with up-to-date supporting material (CV, personal statement, etc.)
- If you have difficulty finding a suitable person to act as a second referee, then the department has a process by which an academic member of staff will write a reference for you. If you wish to use this service you should contact the Undergraduate Support Officer as soon as possible, giving details of your applications and providing your CV, personal statement etc. Note however that references written by this system are likely to be limited to factual information, such as your academic performance to date.
- Please allow for more time during the months of summer vacation.

8.8 Careers in Teaching: Warwick in Schools

If you
- are intending to take a PGCE (Post Graduate Certificate in Education) after your degree,
- have secondary teaching as one of your career options but you are unsure, or
- are a ‘high flyer’ and want to know if teaching can offer opportunities for you

then Warwick in Schools could be for you!

As one of the leading providers of Initial Teacher Training, the University’s Institute of Education is once again offering undergraduates the opportunity to try a ‘taster’ of teaching. If you join the Warwick in Schools scheme (WinS) you will receive bursary funded training which will prepare you for the expectations of a professional environment. You will look at some of the issues concerned with effective teaching and learning, and you will be given help and support to prepare for your school visits.

If you do your PGCE at Warwick, you would achieve a ‘training credit’ which would mean that you could complete the course earlier in the year than normal.

Teaching Maths in Johannesburg: For the last two years Warwick has provided the funding to send WinS students (26 last year) to teach maths in Johannesburg
and surrounding townships during the Summer.

**Who can apply?**

- Statistics students in their penultimate or final year who are able to show that they have a genuine interest in looking at teaching as a career.
- Students planning to opt for the module “Introduction to Secondary School Teaching” IE3E1 which carries 24 CATS.

**How to Apply**

- Online applications open at the beginning of the autumn term (Term 1) and can be accessed from the WinS website: [http://www2.warwick.ac.uk/fac/soc-ces/students/wins/](http://www2.warwick.ac.uk/fac/soc-ces/students/wins/).
- for further information, contact: pam.price@warwick.ac.uk.

### 8.9 Actuarial Exemptions

Exemptions from the professional actuarial examinations are not given automatically. The actuarial profession only awards exemptions if a student has achieved a satisfactory overall percentage as well as a satisfactory percentage on the relevant University courses. Our current syllabus enables exemptions as follows:

- **CT1 Financial Mathematics** through ST334 Actuarial Methods
- **CT2 Finance and Financial Reporting** through ST335 Finance and Financial Reporting
- **CT3 Probability and Mathematical Statistics** through ST218 and ST219 Mathematical Statistics (A & B) for students in the Department of Statistics. (Students from other Departments may gain exemption from CT3 through satisfactory performance in all of the following modules: ST111 Probability A, ST112 Probability B, and ST220 Introduction to Mathematical Statistics.)
- **CT4 Models** through ST338 Actuarial Models
- **CT6 Statistical Methods** through ST402 Risk Theory
- **CT7 Economics** through EC106 Introduction to Quantitative Economics and EC220/EC221 Mathematical Economics (A and B) or
- **CT7 Economics** through EC106 Introduction to Quantitative Economics and EC204 Economics 2
- **CT8 Financial Economics** through ST339 Introduction to Mathematical Finance and ST401 Stochastic Methods in Finance

Recommendations for exemptions from CT1, CT2, CT4, CT6, and CT8 will be made following the third and fourth year examinations. CT3 and CT7 have to be
applied for independently. Further information about the actuarial examination system can be found at www.actuaries.org.uk. In particular information on applying for exemptions can be found at http://www.actuaries.org.uk/students/pages/-exemptions-exams.

8.10 Final Thoughts
Make sure you enjoy your time at Warwick and take advantage of the vast array of opportunities on offer. Visit the Centre for Student Careers & Skills sooner rather than later. For details, see http://go.warwick.ac.uk/careers/. The Centre for Student Careers & Skills looks forward to welcoming you.

9 People and Dates

9.1 Dates of Terms
www2.warwick.ac.uk/study/termdates

<table>
<thead>
<tr>
<th>Academic year 2015-16</th>
<th>Term 1 (weeks 1-10)</th>
<th>Monday 5th October 2015 - Saturday 12th December 2015. Lectures commence Tuesday 6th October.</th>
</tr>
</thead>
</table>

| Academic year 2016-17 | Term 1 (weeks 1-10) | Monday 3rd October 2015 - Saturday 10th December 2016 |

9.2 Contact Details
The normal point of contact for general information is the Student Support Office. The Office is open to student enquiries Monday to Friday (excluding holidays) between 9:30am to 11:30am and between 13:30pm to 15:30pm. If you need to contact the Department urgently, in the first instance you should contact the Student Support Office in person, by email, or by phone.

Postal Address
Student Support Office, Department of Statistics, University of Warwick, Coventry, CV4 7AL
In the event of an incident requiring the emergency services (ambulance, police or fire and rescue), telephone 22222 (Internal) or 02476 522222 (External).

### 9.3 Officers 2015-2016

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>U/G Course Director</td>
<td>Dr Ewart Shaw</td>
</tr>
<tr>
<td>U/G Senior Tutor</td>
<td>Professor Jane Hutton</td>
</tr>
<tr>
<td>SSLC Academic Convenor</td>
<td>Professor Jane Hutton</td>
</tr>
<tr>
<td>Undergraduate Admissions Officer</td>
<td>Dr Anastasia</td>
</tr>
<tr>
<td></td>
<td>Papavasiliou &amp; Dr Julia Brettschneider</td>
</tr>
<tr>
<td>Undergraduate Publicity</td>
<td>Dr Julia Brettschneider</td>
</tr>
<tr>
<td>Head of Department</td>
<td>Professor Mark Steel</td>
</tr>
<tr>
<td>Deputy Head of Department (Teaching and Learning)</td>
<td>Professor David Hobson</td>
</tr>
<tr>
<td>Secretary of the Board of Examiners</td>
<td>Dr David Croydon</td>
</tr>
<tr>
<td>First Year Examination Secretary</td>
<td>Dr Anastasia</td>
</tr>
<tr>
<td></td>
<td>Papavasiliou</td>
</tr>
<tr>
<td>Second Year Examination Secretary</td>
<td>Dr Ric Crossman</td>
</tr>
<tr>
<td>Timetable Officer</td>
<td>Mr David Kinmond</td>
</tr>
<tr>
<td>Undergraduate Support Officer</td>
<td>Ms Lucy Ward</td>
</tr>
</tbody>
</table>

Email Address: stats.ug.support@warwick.ac.uk  
Telephone: +44 (0)2476 523066 (Internal: 23066)