

**UNIVERSITY OF  
BIRMINGHAM**

**School of Computer Science**

**MRes in Natural Computation**

**Handbook  
2011/2012**

This handbook has been prepared as a convenient summary of information you may need at the start of your degree programme. The School has endeavoured to ensure that it is correct at the time of preparation. However, if there are discrepancies, University Regulations always take precedence over the Handbook.

This handbook is prepared well in advance and there may be alterations to modules or facilities. You are strongly advised to consult the School's WWW server for the latest information.

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## Important Dates

### Academic Year 2011/2012

26 September 2011	Semester 1 and Autumn Term start. Induction meeting at 10:00am in Room 225.
28 September 2011	Induction meeting for international students, 16.30-17.30, UG40, School of Computer Science
29 September 2011	Reception for postgraduate students, 17.00-19.00, Atrium, School of Computer Science
7 October 2011	Last date for changing first term modules
1600 hrs, 14 October 2011	Declaration of 1st semester mini-project
9 December 2011	Semester 1 and Autumn Term end
9 January 2012	Semester 2 and Spring Term start
1200 hrs, 9 January 2012	Hand in two copies of 1st mini-project report to School Office
Week beginning 23 January 2012	Meeting with academic supervisor - 1st semester mini-project review
23 March 2012	Semester 2 and Spring Term end
23 April 2012	Summer Term starts; Revision Period start
8 May 2012	Semester 1 and 2 Examinations start
1 June 2012	Examination Period end
15 June 2012	Summer Term ends
20 August 2012	Supplementary (resit) Examinations start
31 August 2012	Supplementary (resit) Examinations end

## Vital and useful sources of information and URLs

### *Registration*

The University requires you to register online. You can access the web registration pages via the student portal at: [my.bham.ac.uk](http://my.bham.ac.uk)

Also see: [www.birmingham.ac.uk/welcome/registration/](http://www.birmingham.ac.uk/welcome/registration/)

### *School of Computer Science Research Student Handbook*

[www.cs.bham.ac.uk/internal/research\\_students/](http://www.cs.bham.ac.uk/internal/research_students/)

### *The University Graduate School*

The University Graduate School works on behalf of research students at the University to ensure the best possible research and educational environment.

[www.graduateschool.bham.ac.uk/index.shtml](http://www.graduateschool.bham.ac.uk/index.shtml)

### *Timetables*

The School's timetables are at:

[www.cs.bham.ac.uk/internal/timetables/](http://www.cs.bham.ac.uk/internal/timetables/)

### *Academic Services Enquiry Services*

These web pages include help on registration, ID cards, visas and council tax:

<http://www.as.bham.ac.uk/faq/>

### *University Policies*

#### *University Student Charter*

[www.as.bham.ac.uk/faq/charter/](http://www.as.bham.ac.uk/faq/charter/)

#### *Harassment and bullying policy*

[www.as.bham.ac.uk/sca/harassment/](http://www.as.bham.ac.uk/sca/harassment/)

#### *Equality and diversity policies*

[www.equality.bham.ac.uk/policy/](http://www.equality.bham.ac.uk/policy/)

#### *Students with disabilities and specific learning difficulties support information*

[www.as.bham.ac.uk/studentlife/disability/](http://www.as.bham.ac.uk/studentlife/disability/)

#### *Health and safety policy and guidance*

[www.intranet.bham.ac.uk/university/hsu/](http://www.intranet.bham.ac.uk/university/hsu/)

#### *Data Protection Act*

[www.legalservices.bham.ac.uk/dppolicy/](http://www.legalservices.bham.ac.uk/dppolicy/) **and** [www.legalservices.bham.ac.uk/dpa/](http://www.legalservices.bham.ac.uk/dpa/)

## Key staff

### *Head of School*

Professor Achim Jung

### *Research Students Tutor*

Dr Steve Vickers

Room 215

Availability: <http://www.cs.bham.ac.uk/~sjv/timetable.html>

Email: [S.J.Vickers@cs.bham.ac.uk](mailto:S.J.Vickers@cs.bham.ac.uk)

### *Programme Director*

Professor Xin Yao

Room 211

Availability: [www.cs.bham.ac.uk/~xin/timetable.html](http://www.cs.bham.ac.uk/~xin/timetable.html)

Email: [X.Yao@cs.bham.ac.uk](mailto:X.Yao@cs.bham.ac.uk)

### *Deputy Programme Director*

Dr Shan He

Room UG36

Availability: [www.cs.bham.ac.uk/~szh/timetable.html](http://www.cs.bham.ac.uk/~szh/timetable.html)

Email: [S.He@cs.bham.ac.uk](mailto:S.He@cs.bham.ac.uk)

### *Postgraduate Research Administrator*

Patrycja Sliwa

Room 227

Email: [P.Sliwa@cs.bham.ac.uk](mailto:P.Sliwa@cs.bham.ac.uk)

## Your degree programme

Natural computation is the study of computational systems that use ideas and get inspirations from natural systems, including biological, ecological and physical systems. It is an emerging interdisciplinary area in which techniques and methods are studied for dealing with large, complex, and dynamic problems. This exciting programme will cover a number of topics, such as evolutionary algorithms, co-evolution, evolutionary design, nature-inspired optimisation techniques, evolutionary games, novel learning algorithms, artificial neural networks, theory of natural computation, molecular computation and quantum computation. The primary aim of this research-orientated master degree is to provide a solid foundation in natural computation for graduates to pursue a research and/or development career in industry or to pursue further studies (e.g., PhD).

The MRes in Natural Computation is an advanced degree programme which aims to allow you to both broaden and deepen your knowledge in natural computation. You can broaden your knowledge by studying advanced topics not studied as part of your first degree. The programme includes a substantial amount of independent research work that ensures that you deepen your knowledge of specific topics.

We have designed this advanced degree programme for students who have completed an undergraduate degree in computer science/engineering or a closely related subject (with significant computing components). Graduates from this course are expected to work on advanced project development and in research sections of companies, or move into research for a doctorate. This course's mixture of individual in-depth study and taught modules is an ideal preparation for these kinds of advanced work.

This Masters degree by research means you are taught core principles and then you develop these skills by doing interesting, innovative research, supported by academic staff and peers. It is structured so that you learn how to plan, organise and manage your time; you learn what it is to be a scientific researcher; you help contribute to the development of new knowledge; you learn intellectual skills such as argumentation, exposition, and reasoning; and develop as an individual by improving your communication skills, writing, collaborative working and creativity.

The programme has a strong emphasis on research and research skills in comparison with taught Masters programmes. However, you will also complete some taught modules as part of your degree. There are two compulsory modules in the first semester which comprise of 40 credits, and you will choose an additional 20 credits from a list of optional modules.

The compulsory research project (MRes thesis project), consists of solving a substantial problem using natural computation techniques (including hybrid techniques). Industrial co-supervisors will be used whenever appropriate. The research project requires students to apply the knowledge and skills they acquired in the programme to solve a difficult problem.

The programme specification and the programme requirements contain further information on your degree programme:

<http://www.cs.bham.ac.uk/internal/programmes/2011/MResNC-spec.html>

<http://www.cs.bham.ac.uk/internal/programmes/2011/MResNC.html>

# The taught part of your programme

## Modules

As part of your degree programme, you will study two compulsory modules:

1. *Research Skills* (06 06991, 10 credits): This module provides the student with the basis of transferable knowledge and skills necessary for a successful research-oriented career in industry or academia, with a particular orientation to computing-based disciplines.
2. *First semester mini-project* (06 07953, 30 credits): This module consists of a research project on the in-depth investigation of a chosen topic coming from industry (strongly encouraged) or academe.

In addition to the two compulsory modules, students take another 20 credits of optional modules over Semesters 1 and 2, to an overall total of 60 credits. There is an examination period after the end of the second semester.

1. *Introduction to Neural Computation* (06 12412, 10 credits): This module provides the first introduction to the most common topics in neural computation, including biological neural networks, artificial neuron models, feed-forward artificial neural networks, learning and generalisation, back-propagation, radial basis function networks, self-organising maps, and committee machines.
2. *Introduction to Evolutionary Computation* (06 22753, 10 credits): Evolutionary computation is the study of computational systems that use ideas and get inspirations from natural evolution. Its techniques can be applied to optimisation, learning and design. Example topics covered in this module include natural and artificial evolution, genetic algorithms, chromosome representations, search operators, co-evolution, constraint handling techniques, niching and speciation, genetic programming, classifier systems and theoretical foundations.
3. *Intelligent Data Analysis (Extended)* (06 20233, 10 credits): The module introduces a range of state-of-the-art techniques in the fields of statistical pattern analysis and data mining. The 'information revolution' has generated large amounts of data, but valuable information is often hidden and hence unusable. Pattern analysis and data mining techniques seek to unveil hidden patterns in the data that can help us to refine web search, construct more robust spam filters, or uncover principal trends in the evolution of a variety of stock indexes..
4. *Intelligent Robotics (Extended)* (06 15267, 20 credits): Artificial Intelligence is concerned with mechanisms for generating intelligent behaviour. When this behaviour occurs in the everyday physical world, with its uncertainty and rapid change, we find that all kinds of new problems and opportunities arise. We will try to understand some of these in the context of robotics. In a series of lectures we will look at some theories of how to sense the real world, and act intelligently in it. In a series of labs you will build your own robots to see how well (or badly) these theories actually work.
5. *Planning (Extended)* (06 20234, 10 credits): The basic notions and problems of planning are presented, including plan-space and state-space planners, the frame problem, and hierarchical task networks. The module looks at a range of different planning problems, and a number of algorithms for solving them. These include STRIPS, UCPop, Graph Plan, SAT Plan, and HTN planners. In addition, some recent advances in planning will be looked at. These may include decision-theoretic planning, robotic architectures for planning, scheduling, and planning under uncertainty. The advantages and disadvantages of the different approaches are discussed. **Note: This module is not offered in 2011-12.**

## Assessment

Your degree programme is governed by regulations that specify the requirements to be awarded a degree, amongst other things. You should read the Regulations so that you know what is required of you.

[www.birmingham.ac.uk/Documents/university/legal/regulations-part7.pdf](http://www.birmingham.ac.uk/Documents/university/legal/regulations-part7.pdf)

It is a part of the requirements of your degree that you attain a satisfactory standard (achieve credit) in all your taught modules (Regulation 7.4.1 (b)).

General guidance on the assessment of taught modules can be found in the Code of Practice on Taught Programme and Module Assessment:  
[www.birmingham.ac.uk/Documents/university/legal/taught-programme-module-assess.pdf](http://www.birmingham.ac.uk/Documents/university/legal/taught-programme-module-assess.pdf)

## Welfare Team

We use the term 'welfare matters' to cover all extenuating circumstances of a *non-academic* nature that interfere with your *academic* work, for example, illness, bereavement, family crises or financial problems. The School has a team of trained **Welfare Tutors** to give advice in such cases. It is important to note that only very rarely will they be able to address the cause of a welfare problem (they are not medical doctors, for example); instead their role is to *recommend professional help services* and, most importantly, to **limit the damage** that the problem could have on your studies. Thus they can arrange for a deadline to be extended for you, or for a particularly serious issue to be brought to the attention of the examination board.

It is your responsibility to inform the Welfare Team in a timely fashion of any welfare matter that might affect your studies. The Welfare Tutors will generally not be able to help you if informed too late.

To contact the Welfare Team begin by sending an e-mail to [welfare@cs.bham.ac.uk](mailto:welfare@cs.bham.ac.uk). Alternatively, attend the Welfare Hour of a member of the Welfare Team, which you will find on their office door. Up-to-date information is available at <http://www.cs.bham.ac.uk/internal/students/welfare/>

Our School's Welfare Team follows the University's Code of Practice on Extenuating Circumstances and Fit to Sit Procedure:  
<http://www.birmingham.ac.uk/Documents/university/legal/extenuating-circumstances.pdf>

Changes of address and absences from the University *must* be reported to the School Office. We do need to know where you are, whether you are unwell, and so forth.

The School's International Student Tutor (currently Dr Ata Kaban) acts on a more informal basis as an additional Academic Advisor to international students in relation to academic and related issues. Students from Overseas have further support within the School, see [www.cs.bham.ac.uk/resources/studentinfo/overseas.html](http://www.cs.bham.ac.uk/resources/studentinfo/overseas.html)

The English For International Students Unit (EISU) provides free English Language support to all registered students and staff at the University of Birmingham whose first language is not English, see [www.eisu.bham.ac.uk/courses/insession/](http://www.eisu.bham.ac.uk/courses/insession/)

A detailed summary of the student support services offered by the University can be found at: <http://www.as.bham.ac.uk/support/index.shtml>

## Extensions (taught modules only)

This has to be authorised by a member of the Welfare Team. Inform the Welfare Team either by email or by seeing one of the Welfare Tutors. In general, to be granted a deadline extension you need to present contemporaneous supporting evidence from an independent third party, such as a note by a GP, a letter from a counsellor, or a death certificate. However, we allow for **one self-certified** illness per term, provided the illness only lasts up to 5 consecutive days and no major assessment is affected. You need to fill in and submit a medical self-certification which can be found at [http://www.as.bham.ac.uk/sca/documents/ec\\_medical\\_form.pdf](http://www.as.bham.ac.uk/sca/documents/ec_medical_form.pdf) together with the University guidelines for medical certificates [http://www.as.bham.ac.uk/sca/documents/ec\\_medical\\_guidelines.pdf](http://www.as.bham.ac.uk/sca/documents/ec_medical_guidelines.pdf).

The Welfare Team will advise relevant members of staff whether or not your claim can be accepted. The final decision on what action to take - whether to grant an extension up to a specified length of time or whether to take some other action - will be taken by the module lecturer, since it depends on further factors such as whether solutions have already been published.

All required supporting evidence or medical self-certification has to be received within 2 working days of a given extension, unless otherwise specified by a Welfare Tutor. We will not issue a reminder if no evidence has been submitted in time. We can also not make enquiries to obtain evidence on your behalf.

Some circumstances that will **not normally be considered** as Extenuating Circumstances and are therefore **not welfare matters** include:

1. minor illnesses (such as coughs and colds);
2. computer problems (we expect you to make adequate provisions for backing up your work) or inadequate planning preventing completion or submission of coursework;
3. stress and panic attacks caused by examinations that are not diagnosed as an illness or documented in a Student Support Agreement;
4. assessments or examinations scheduled close together;
5. personal or domestic events, such as moving house or attending a wedding;
6. holidays or travel arrangements;
7. consequences of paid employment;
8. sports activities.

See also the University's code of practice for more detail:

<http://www.birmingham.ac.uk/Documents/university/legal/extenuating-circumstances.pdf>.

**There is a different process for extensions to your research thesis. Please refer to the section on the Research Project below.**

### **Serious conditions that may interfere with your exam performance**

In serious cases you may ask **before the exams take place** to postpone exams to the next possible resit opportunity. These requests have to be received by a nominated member of the Welfare Team either in person or in writing **before the exams take place** together with contemporaneous supporting evidence from an independent third party. The School's welfare tutor will then make a decision whether to accept or reject your application, or if additional evidence is required.

By being present at an examination you declare yourself 'Fit to Sit'. A subsequent request for deferral or other action by reason of Extenuating Circumstances will not normally be accepted.

Only in exceptional circumstances you can submit a case for consideration by the Extenuating Circumstances Panel. You must then provide reasoning for not applying for an extension during the term or a deferral of your exam at the appropriate time. The submission must be made known to the School **in writing**. A form for this purpose is available which you should submit to the School together with any supporting documentation: [http://www.as.bham.ac.uk/sca/documents/ec\\_student\\_form.pdf](http://www.as.bham.ac.uk/sca/documents/ec_student_form.pdf).

Note that it is not enough to have spoken to someone (be it your academic advisor or a member of the Welfare Team). The deadline for the submission to Extenuating Circumstances Panel will be announced via email and on the School's welfare pages: <http://www.cs.bham.ac.uk/internal/students/welfare/>

The Extenuating Circumstances Panel will decide whether your application can be accepted. If accepted the panel will make a suggestion to the exam board how to handle your application and it is at the discretion of the exam board whether or not to follow this suggestion. It is also at the discretion of the exam board to allow you to take an examination again but as a 'first sit' (rather than a resit). For deriving the degree classification it is at the discretion of the exam board to disregard some results. However, please note that marks themselves will **not** be adjusted on the basis of extenuating circumstances.

After the examiners meeting has taken place, the School cannot take into consideration any additional new evidence that you may have. The only possibility then is to appeal (<http://www.cs.bham.ac.uk/internal/students/handbook/2011/#appeal>) against a decision. However, be advised

that the regulations only allow truly exceptional circumstances to be admitted in an appeal. The message is that if you think that extenuating circumstances apply to you, you must not wait until the exam results are out, but have to submit them to the School before the examiners meeting.

More information on the University's extenuating circumstances and fit to sit procedure can be found at <http://www.as.bham.ac.uk/sca/extcirc/index.shtml>.

## **Mini-project**

### ***What is a mini-project?***

As its name suggests, the mini-project is a smaller version of the research project. Precisely, the research project is comprised of a notional 120 credits, whereas a mini-project has 30 credits. Essentially, a mini-project functions as a full project, but on a smaller scale.

The first semester mini-project is an essential part of the degree programme. Its purpose is to give you the opportunity to develop a number of skills and techniques:

- definition of aims, objectives and feasible working plans
- project management and time management skills
- systematic literature searching skills
- communication skills both in written reports and in verbal presentations to supervisors.

### ***How to choose a mini-project***

There are many different ways in which students choose mini-projects. Here are some of the approaches that have been used previously and which you might use:

- you have an interest in a particular topic and want to study it in greater depth
- you want to be supervised by a particular member of staff and are willing to accept their topic interests
- you feel that you have not covered a topic in your previous studies and want to take the opportunity to study it now
- your sponsor requires you to develop expertise in a particular area
- by studying particular topics, you will be able to complement the taught modules you have chosen

As an MRes student, your mini-project will be closely related to your MRes thesis project. It can be the literature review and feasibility study parts of your MRes thesis project. You are expected to discuss and agree the exact topic and scope of the mini-project with your academic supervisor.

### ***Defining your mini-project***

Whatever the reason or reasons for choosing a particular topic, you need to negotiate a topic with your supervisor. You need to address the following points:

#### ***Aim***

Each mini-project must have a clearly articulated aim or aims. One way of thinking about aims is to think about why you are doing the project. For instance, your aim might be “to study neural networks in greater depth” or “to develop a knowledge of co-evolution in machine learning”. Alternatively, the aim might be firmer: for instance “to develop a constrained evolutionary algorithm for global optimisation”.

In brief, your aims should be devised in such a way that you and your examiners are able to evaluate, in broad terms at least, whether you have met your aims.

#### ***Objectives***

Whatever your aim or aims, you should be able to define a number of things you will achieve on the way to completing your mini-project. Objectives differ from aims. At the end of the mini-project, it may be possible to argue about whether or not you have satisfied your aims: you may or may not have succeeded in, for instance, achieving learning in depth when studying neural networks. However, it should be absolutely clear whether or not you have achieved each objective.

So, objectives should be activities that have a beginning and an end; for instance writing a particular piece of program code, to review a set of papers, or to install and use a piece of software. It follows from the setting down of clear objectives that you have the basis of a plan of work for the mini-project.

#### *Project management skills*

As part of the supervision process, you will be expected to devise a management plan and evaluate your progress against that plan.

#### *Systematic literature skills*

All mini-projects should include a specific element of literature survey and review. The amount of literature survey and review required will vary from project to project. For instance, if the aim is to gain a knowledge of a particular topic, then there is likely to be a large degree of literature survey and review. For mini-projects focused on a piece of software, there is likely to be less searching needed, but never none at all.

It is extremely important that you distinguish between literature survey and literature review. The later is much harder but strongly encouraged.

#### *Communication skills*

A basic level of practise in these skills comes with the normal process of supervisory meetings and report writing. Students and supervisors are encouraged to consider making mini-project work the basis of presentations in one of the School's informal seminar series.

#### *Writing-up your mini-project*

Guidance on writing mini-project reports is given separately (see [http://www.cs.bham.ac.uk/resources/programmes/postgraduate-taught/msc-acs/msc\\_acs\\_nc\\_project\\_writing.pdf](http://www.cs.bham.ac.uk/resources/programmes/postgraduate-taught/msc-acs/msc_acs_nc_project_writing.pdf)).

You should also seek the advice of your supervisor.

Students are reminded that at any form of plagiarism is taken extremely seriously and heavily penalised by the School.

See also the School's online guidance notes on plagiarism, at:  
[www.cs.bham.ac.uk/resources/studentinfo/handbook.html#PLAG](http://www.cs.bham.ac.uk/resources/studentinfo/handbook.html#PLAG)  
[www.cs.bham.ac.uk/resources/studentinfo/plagiarism.htm](http://www.cs.bham.ac.uk/resources/studentinfo/plagiarism.htm).

#### *Declaring your mini-project*

You need to complete a mini-project declaration form (see Appendix) and get the signature of your supervisor. This form should be completed by the date given in the *Important Dates* section of this booklet and posted in the appropriate assessed work pigeon hole (next to the Reception). **You must keep a copy of the form as it is required as an appendix in your mini-project report.**

#### *Assessing your mini-project*

Your mini-project will be assessed by your supervisor and moderated by a member of the programme team. It will be assessed in part on the inherent quality of your work and in part in the success you have had in meeting your aim and objectives, and displaying research skills of project management, literature review and communication skills. You will be given feedback in the form of a brief written report and a grade.

#### *Late submissions*

The submission deadline for the mini-project is listed on page 1 of this handbook. Should you experience significant medical problems or personal problems, you may apply for an extension. Extensions can only be granted with authorisation by a member of the Welfare Team, who will require a written submission by the student on a standard form ([www.cs.bham.ac.uk/resources/studentinfo/welfare/extensions.pdf](http://www.cs.bham.ac.uk/resources/studentinfo/welfare/extensions.pdf)) with supporting evidence where appropriate. For details see the section on Extensions of this handbook. It is always a good idea to discuss any such application with your mini-project supervisor, Personal Advisor and / or the Programme Director.

If no extension has been granted, or there is not sufficiently good cause for work being submitted late, then a

penalty of 5% on the mark actually achieved will be imposed for each day the assignment is late until 0% is reached.

## Plagiarism

Plagiarism is taking someone else's thoughts or words and presenting them as your own. Weaker students are often tempted to copy one or more sentences from books or web pages into their project reports and essays. Occasionally students will use an author's words and change them to disguise that they have copied the author's ideas. Very occasionally, students try to copy programs from books and the web and pretend they have written the programs themselves.

Plagiarism – the copying of other people's ideas or words and pretending they are your own – is unacceptable. You must always reference your sources and place quotation marks when you copy other people's words. The key rule is: the reader should always be able to see what are your ideas and what are other people's ideas.

The School of Computer Science and the University take plagiarism very seriously. In previous years, a small number of students have attempted to deceive by copying from books or the web. When a student has copied a small amount of text (for instance less than 50 words), they have had their mark reduced for the module. Where a student has copied larger amounts, the range of discipline measures have been from the failure of a whole module (with the student paying to repeat the module in the next academic year and receiving their degree late) to the student being required to leave the course with no degree and no return of fees.

The simple message is: **if it is not your idea, add a reference.**

The University's rules on plagiarism and cheating in exams can be found at:

<http://www.as.bham.ac.uk/sca/plagiarism/index.shtml> and  
<http://www.birmingham.ac.uk/Documents/university/legal/conduct-centrally-coordinated-exams.pdf>

## The research project (MRes thesis)

### Monitoring your progress

The School uses the method of Thesis Groups which report to a committee called the *Research Students Monitoring Group* - usually called the "RSMG" for short – to monitor your progress with your research project. You can find more information in the Research Students Handbook:

[http://www.cs.bham.ac.uk/internal/research\\_students/monitoring.php](http://www.cs.bham.ac.uk/internal/research_students/monitoring.php)

### Problems impeding your research

Sometimes your work may be impeded for reasons beyond your own control. If this is happening to you, it is important to seek out the people who might be able to help you. If possible, discuss it with your supervisor and maybe your Thesis Group members (particularly your RSMG rep).

If it cannot be sorted out at that level, you should discuss the matter with the Research Students Tutor. You should certainly do this if you have a major illness, for instance, or if relationships between you and your supervisor (or Thesis Group members) look like breaking down. For personal issues such as illness you may prefer to consult the School's welfare team, email [welfare@cs.bham.ac.uk](mailto:welfare@cs.bham.ac.uk).

The Research Students Tutor will have to be involved if you need a leave of absence, or an extension to your thesis, or if you need to change your supervisor or Thesis Group.

If you feel the Research Students Tutor does not or cannot give a satisfactory response, you can take the matter to the Head of School. By this stage you may be wondering about how to make a complaint.

Remember that any discussion between you and members of staff on welfare issues can be kept confidential if you wish. The general rule is that if you disclose confidential details to a member of staff, they may make their own assessment of the impact on your studies, and report that assessment to others, but they will not pass on the confidential details.

### Leave of absence and extensions

There are two ways to gain extra time.

A leave of absence is for a period when you are not working, or cannot work, on your studies. A common reason is illness, but there are other situations where a leave of absence would be appropriate. It is assumed that during that period you do not need facilities or supervision, and you do not pay fees. Your submission deadline is delayed by the length of the leave of absence.

An extension is a recognition that you simply need a longer period of working in order to complete. Our aim is always to avoid extensions, since the School's effectiveness in research student supervision is judged in part (by the University and public funding bodies) on the rate of on-time submission. One focus of thesis group meetings in the later stages is to look for ways to ensure that submission is on time. However, we will generally approve an extension if it is necessary.

Note that you cannot submit late without an extension.

The Graduate School website has guidance and request forms for Leave of Absence (including a whole Code of Practice) and Extensions. In both cases you download the form and fill it in, and then get it signed by your supervisor who will pass it on to the Research Students Tutor for School approval. It then goes to the University for central approval. Always download a fresh form. Do not use old paper forms - sometimes the forms are updated in important ways.

For most cases of extensions, the Research Students Tutor will expect to see that the extension has been discussed in a Thesis Group meeting and that the Thesis Group are explicitly recommending it. Important questions there are -

- Is it possible to scale back the ambitions of the thesis so that it can be finished by the deadline but still be passable?
- If not, how long an extension is needed?
- What is the workplan for finishing within the extension? (Any extension application has to include a workplan.)

Remember that while you are writing up you should still be producing regular progress reports and holding meetings if your Thesis Group have any doubts about your progress. So an extension application should naturally follow a Thesis Group meeting.

Also refer to the online Research Students Handbook:

[http://www.cs.bham.ac.uk/internal/research\\_students/problems.php#LoAextn](http://www.cs.bham.ac.uk/internal/research_students/problems.php#LoAextn)

Graduate School website on Leave of Absence:

<http://www.graduateschool.bham.ac.uk/rsa/absence.shtml>

Graduate School website on Extensions:

<http://www.graduateschool.bham.ac.uk/rsa/extensions.shtml>

### **Writing-up your research project**

The research project report is to be written up in the form of a thesis. You should seek the advice of your supervisor.

The University's regulations require you to study for a minimum period of one year before submitting your thesis. You must submit within two years of when you first started the programme (before the end of your maximum registration period). To submit early or for an extension to the deadline you must make a special application to the University.

Students are reminded that any form of plagiarism is taken extremely seriously and heavily penalised by the School.

Also refer to the online Research Students Handbook:

[http://www.cs.bham.ac.uk/internal/research\\_students/writing\\_up.php](http://www.cs.bham.ac.uk/internal/research_students/writing_up.php)

### **Submitting your thesis**

The regulations lay down word limits for theses - for example, 15,000 words for the MRes-, and when you submit you must fill in a word length declaration form declaring the word length. Your thesis *will not be accepted* if your declared word length is greater than the limit.

Late submissions, even if only one day late, will not be accepted. You will have to apply for an extension (see above).

The University requires you to tell Student Services that you intend to submit a thesis. Guidance and downloadable forms are available online. Fill in the form and send it in three months before you intend to hand in your thesis. (In practice, the University will accept this form less than three months before you hand in your thesis but you may find that your viva will be delayed.) What is this form for? From your point of view, the main function of this form is that it starts the process of appointing your examiners and chairperson for your viva. So, it is important to:

- complete this form in time;
- ensure your supervisor has your examiners selected.

When you submit your thesis before your viva, you will need to provide two copies in a "temporary" binding. This is simple. Take two copies of your thesis (and your forms) to the Bindery and they will bind your thesis for you for a modest charge.

After you have successfully completed your viva, and made any required modifications, you will have to provide two copies of your thesis in a permanent binding. (Otherwise you will not be able to graduate.) This is also

simple. Take two copies of your thesis (and your forms) to the Bindery and they will bind your thesis for you for a less modest charge - but it will look beautiful.

Further sources of information:

Online Research Students Handbook:

[http://www.cs.bham.ac.uk/internal/research\\_students/submitted\\_a\\_thesis.php](http://www.cs.bham.ac.uk/internal/research_students/submitted_a_thesis.php)

Graduate School website:

<http://www.graduateschool.bham.ac.uk/rsa/>

Presenting Your Thesis: Notes on the arrangement of theses and their preparation for binding and deposit:

<http://www.library.bham.ac.uk/searching/guides/sk05presentingthesis.pdf>

Word length declaration form:

<http://www.graduateschool.bham.ac.uk/rsa/docs/worddeclarationform.doc>

Notice of intention to submit your thesis:

<http://www.graduateschool.bham.ac.uk/rsa/notice.shtml>

The Bindery:

<http://www.bindery.bham.ac.uk/>

### **Assessing your project**

There will be one internal and one external examiner. Your thesis will be assessed in accordance with the University Code of Practice on Assessment of Research Degree Theses:

<http://www.birmingham.ac.uk/Documents/university/legal/assess-research-degree-theses.pdf>

Also refer to Section 7 of the University Regulations:

<http://www.birmingham.ac.uk/Documents/university/legal/regulations-part7.pdf>

## Registration

You need to register with the University before you start your studies. This is now online and you can (and should) register before the first day of term. See:

<http://www.as.bham.ac.uk/registration/> and [my.bham.ac.uk](http://my.bham.ac.uk)

You will need your username and password that has been sent with your registration details. If you do not have this information, you should contact the University's Student Services:

[www.birmingham.ac.uk/welcome/registration/contact.aspx](http://www.birmingham.ac.uk/welcome/registration/contact.aspx)

## Attendance

The University has a Code of Practice on Student Attendance and Reasonable Diligence:

<http://www.birmingham.ac.uk/Documents/university/legal/student-attendance-reasonable-diligence.pdf>

If you do not show reasonable diligence as outlined in the Code of Practice, we will initiate the procedures set out in the Code of Practice, which might result in your being required to withdraw from your programme.

The School has mechanisms in place to monitor your attendance. In particular, we will monitor your attendance at 10 contact points over the academic year, as part of the University's obligations to monitor the attendance of non-EEA students in accordance with the Points-Based System.

For international students, the UK Border Agency stipulates that all educational institutions who are licensed to sponsor students that require a visa must monitor their students' engagement with their programmes of study. As such, the University has a legal duty to report international students with a visa who do not fully engage with their programme of study. Being reported to the UK Border Agency would have serious implications for a student's immigration status and their ability to remain in the UK. It is therefore essential that regular attendance and active engagement (as outlined above) is maintained throughout your programme of study.

If you are an international student, you are strongly advised to contact the International Students Advisory Service (ISAS) in the Aston Webb Building if you have any concerns about your visa or your immigration status. ISAS can be contacted at +44 (0)121 414 8464, or by email to [isas@contacts.bham.ac.uk](mailto:isas@contacts.bham.ac.uk).

## Student representation

At the beginning of each year you will be invited to vote for the student representatives of your degree programme. Please consider standing yourself and definitely take part in the elections. Many School committees have statutory student representation, and the opinion of students is taken very seriously in the decision process.

If you have forgotten who your representative is, you can check the page

<http://www.cs.bham.ac.uk/internal/staff/handbook/Posts.html#Heading9>

All student representatives meet twice a term with members of staff in the **Student-Staff Consultative Committee (SSCC)**. It is a forum where we can discuss all matters that affect you *as a group of students*. Discussions are minuted and at the next meeting there is an opportunity to review the progress that has been made on the issues raised. Note, though, that going via the SSCC would usually be too slow and roundabout a process for resolving issues with individual modules. For these you should seek a discussion with the member of staff responsible as soon as the issue becomes apparent.

Your student rep will also be a member of the **Staff/Research Student Consultative Committee (SRSCC)**. SRSCC provides a forum for consultation and discussion between student representatives and staff responsible for programme provision on all relevant matters affecting research students within the School. Further information, including current membership, can be found at:

<http://www.cs.bham.ac.uk/internal/staff/handbook/Management.php#srsc> and

<http://www.cs.bham.ac.uk/internal/staff/handbook/Posts.php#Heading10>

On each taught module you will be asked to complete, anonymously, a standard questionnaire twice in each

semester. The primary purpose of these is to enable the School to monitor the quality of module delivery. The questionnaire responses will be displayed on the web at:  
<http://www.cs.bham.ac.uk/internal/courses/questionnaires>

# Appendix

Mini-project declaration form

# The University of Birmingham

School of Computer Science

## MRes in Natural Computation

### First semester mini-project

This form is to be used to declare your choice of mini-project in the first semester of the degree programme. Please complete this form, obtain the signature of your supervisor and post it in the appropriate assessed work pigeon hole.

**Deadline: 16.00 hrs, 14th October 2011**

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Name:

Student number:

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*Mini-project title:*

*Mini-project supervisor:*

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The following questions should be answered in conjunction with a reading of the handbook.

<i>Aim of mini-project</i>	
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<i>Objectives to be achieved</i>	
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/PTO

<p><i>Project management skills</i></p> <p><i>Briefly explain how you will devise a management plan to allow your supervisor to evaluate your progress</i></p>	
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<p><i>Systematic literature skills</i></p> <p><i>Briefly explain how you will find previous relevant work</i></p>	
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<p><i>Communication skills</i></p> <p><i>What communication skills will you practise during this mini-project?</i></p>	
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Signed (student)

Date:

Signed (supervisor):

Date: