

# **Pharmaceutical Industrial Advanced Training**

**School of Pharmacy and Pharmaceutical Sciences  
Faculty of Medical & Human Sciences**

**Student Programme Handbook**

**2009**

# Pharmaceutical Industry Advanced Training Programme

## PIAT Course Handbook

The PIAT programme is a text based distance learning programme in industrial pharmaceutical sciences. It was developed in co-operation with the UK pharmaceutical industry and is written and tutored by University staff and subject experts from the pharmaceutical industry. This handbook is designed to help you to understand the objectives, structure and operation of the PIAT Programme.

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### 1. Aims of the PIAT Programme

Using a flexible distance learning programme which encourages independent study, the aims of the course are:

- a) to provide newly recruited personnel in the Pharmaceutical Industry with missing knowledge in Pharmaceutical Technology
- b) to overcome difficulties in recruiting pharmacists and other scientists by offering the possibility of registering for a higher degree
- c) to retrain, upgrade and update existing staff

It seeks to do this by:

- providing relevant information in a form which can be understood and applied
- supporting the learning process by expert advice and guidance when required
- validating the learning process by assessment
- recognising success by University awards

### 2. Study Method

For each module you study, a text workbook containing teaching material and exercises will be sent to you. The text contains most of the information you will require and references to sources of additional material. Throughout your studies, a University appointed tutor is available to help you if required. You will be told how to contact your tutor when you receive the module. This is normally by fax, email or telephone. If you are studying for a module credit or award programme, you will be expected to complete the exercises, a written assignment and to attend a one day workshop and examination session at the University.

### Workbook

The workbook is not a textbook. In some ways it is rather like your lecture notes. That is, it is a working document and not for reference. We have left a large margin for you to use to put in notes, comments and any queries you may have. The workbook is there to help you learn, so put in any diagrams, footnotes, explanations etc. that help you to understand and absorb the topic.

In the text, there are a number of exercises for you to do. These are there to reinforce what you have learnt, and to help you check that you have fully understood the concepts. The answers to these in-text questions are given at the end of the module, or as part of the ensuing text. We suggest that you work through them first before looking at the answers. This will ensure that any misunderstandings can be cleared up earlier rather than later. The answers should be self-explanatory, but if there is something that you do not understand about the question, contact your tutor.

Use the blank pages or spaces in the workbook for answering these questions, as they will form part of your assessment. Any additional sheets or graphs required can be put into the workbook next to the question.

The workbook must be made available to your tutor after you have attended the workshop and completed the exam. This is to enable the tutor to verify that you have worked through the exercises in a satisfactory manner. No mark is awarded for this element of the programme but the workbook should provide evidence of your having completed the various tasks.

### **Assignment**

Your tutor will set and mark the assignment. Assignments are intended to represent a significant piece of work and requires the candidate to utilise/put into practice the skills and knowledge gained by working through the workbook. Assignments are not expected to be extended essays based on material gained from sources outside the workbooks. Whilst the assignment may require the gathering of data from alternative sources, it will not expect the candidate to use research methodologies. Assessment is based on factual content, logical presentation and the derivation of conclusions or findings. A general marking scheme is shown below. A word limit is placed on the submitted assignment of 3000 words, with a range of -10% down and +25% up allowed. The candidate is expected to spend no more than 30-40 hours of work in completing the assignment. **The assignment must be handed in before or at the time of the examination. Students must also submit an electronic version on CD along with every hard copy of the assignment.**

Where there is no written examination, multiple assignments of ca 6,000 words (range 5,400-7,500) words) must be submitted as a whole, and not in parts. Each topic will be marked on its own merit and a composite mark arrived at. Students failing any sector of a multiple assignment are allowed to resubmit the failed sector. **Please note the assignment/s must be submitted within twelve months of taking delivery of the module.**

Relevance to assignment set	15
Accuracy of content	15
Depth of content	30
Use of practical examples	20
Structure/presentation	15
References	5

## **Workshops**

Normally one workshop will be held in each academic year. The workshop will usually be of one half days duration (3-4hrs) and held the day before the October/November written examination. Students may opt to attend the workshop and sit the examination on separate or the same occasion. Attendance of the workshops is optional. The workshops will therefore not introduce new material. The intention of the workshop is to reinforce understanding of the modular material and provide the opportunity for discussion, individually or in groups, of the problems encountered during the study and from the assignments. Tutors are free to structure the workshops as they wish, but will probably have prepared 'Exercises' or 'Problems' for the group to tackle.

## **3. Progression and awards**

### **Guidelines for choosing PIAT specialist modules**

Students wishing to take the MSc in the Industrial Pharmacy Programme, will normally be expected to take the introductory module 1, Basic Principles. The choice of selecting PIAT modules from more than 1 different programme may influence the title of your award. If all modules are from the same programme your final award will be Certificate/Diploma/MSc in that programme, namely Industrial Pharmaceutical Sciences, Clinical Trials, Toxicology, Pharmaceutical Microbiology, or Pharmaceutical Business Development and Licensing. The title of the award will still bear the name of the principle modules selected, provided that the following number of modules in the programme are; Certificate 3 out of 4, Diploma 5 out of 8, MSc 5 out of 8.

You can study individual modules or a programme of modules. Module credits are awarded for the successful completion of each module. Each module has a credit rating of 15. The credit rating for each module is based on one module requiring 150 hours total study time. This can be broken down approximately as follows:

Time to complete module including reading, studying and completion of exercises – 80-90hrs.

Preparation and writing of assignment – 30-40 hrs.

Revision for examinations (or preparation and writing of assignments where required), attendance at workshop – 30-40 hrs.

The Diploma in Advanced Studies is awarded for the successful completion of an approved set of eight modules with a minimum pass mark of 40%, normally within five years of registration. This gives the required 120 credits for the award of the Diploma.

The Master of Science Degree in Industrial Pharmaceutical Sciences is awarded for the completion of an approved set of 8 modules plus a research project culminating in the presentation of a dissertation. The research project has a credit rating of 60.

The research project will normally be undertaken in the student's workplace. It will require approximately 600 hours of study and writing. For permission to proceed to the MSc stage, students must obtain an overall mark of not less than 50%, no more than 2 modules must be below 50% and no module must be less than 40%. Where an individual module has an assignment and examination, a student must obtain at least 40% in each component. Progression to the MSc stage cannot be undertaken until all 8 modules have been successfully completed at the required standard. However, students are advised to seek approval of the proposed project and the industrial supervisor prior to this so that work can be commenced immediately.

Two supervisors are appointed to the research project. One is a member of the University staff (appointed by the PIAT Research Co-ordinator) and the other a suitably qualified and approved member of staff in the student's workplace. The workplace supervisor would normally be expected to have a PhD degree and experience of supervising research. Through his/her working relationship with the student, the workplace supervisor will take responsibility for day-to-day supervision. The University appointed supervisor will be actively involved in organising and supervising the research programme through regular communication. The University appointed supervisor together with the research co-ordinator will be responsible for the approval of the project.

On completion of the research programme, the University supervisor will arrange for examination of the thesis. The thesis will be marked by two internal examiners, and the marks moderated by the External Examiner for the course.

The marking scheme used by the internal examiners is given below:

Candidates who obtain an average of not less than 70% in the taught components of the course, with no evidence of weakness in any subject area, and 70% or more for the dissertation will be considered for the award of an MSc with Distinction. To be eligible for a Merit the candidate must obtain an average of not less than 60% in the taught components of the course and 60% or more for the dissertation. A pass is an overall average of 50% in the taught components of the course and 50% or more for the dissertation. In all cases, the dissertation must be submitted by the end of the period of the programme. The external examiner sees all dissertations being considered for a distinction. The maximum time period for completion of the Diploma is four years and the MSc, five years. If circumstances arise in which you find it impossible to complete within this time period e.g. ill health, please inform the PIAT office and provide the necessary evidence. Under appropriate circumstances, we will request an extension (maximum 1 year) to the course.

### Marking scheme for PIAT MSc Dissertations

Introduction (Aims/Outcomes/ Project Design/Literature Review)	Relevance to project, comprehensive, properly referenced, objectives of project clearly stated. – 30%
Methods, Results and Interpretation	Are methods appropriate; are they adequately described; are results presented in a clear manner without duplication; are they adequately described in the text; has a sensible interpretation of the results been made. – 30%
Discussion, Evaluation and Conclusions	Is the interpretation of results correct considering the method of obtaining results; have sensible conclusions been drawn based on results; is there a statement of whether objectives have been met. Have the results been discussed in a wider context. – 30%
Presentation	Overall impression of the care taken in producing the dissertation, typographical errors, general structure of the work. – 10%

A copy of the University of Manchester's current Regulations for the Presentation of Theses and Dissertations is attached. **Please note that these change from time to time.** It is very important, therefore, that before preparing your dissertation for final preparation prior to submission, you phone the Student Services Centre at the University on 061 275 5000 to ensure you receive an up to date copy of the regulations in force at the time you wish to submit your dissertation.

#### 4. Contents

The modules of the PIAT Programmes are designed to be used for the study of individual subjects and as part of an integrated programme which can lead to the award of University postgraduate qualifications. For information on all Modules please visit our website [www.manchester.ac.uk/piat](http://www.manchester.ac.uk/piat).

#### 5. Entry Requirements

PIAT is an advanced level programme and some modules require an advanced level knowledge of physical and organic chemistry and mathematics. All modules require some work experience within the pharmaceutical industry.

If you want to study individual modules there are no special requirements, you will be an *enrolled* student.

If you want to study for a Diploma in Advanced Studies or the MSc degree you will be a *registered* student and should normally have a degree level scientific qualification and industrial experience and complete the 8 modules within 5 years.

If you do not have the required qualifications but prove your ability by successfully completing 4 modules as an enrolled student you can then register for the award programmes and will be credited with the modules studied.

#### 6. Assessment Procedures

If you are studying for University credits or the Diploma in Advanced Studies or the MSc degree you will be required to prove your competence in the subject. This is a two part process.

The first part is the assessment of your workbook and the completion of the written assignment. The assignment will normally be submitted at or before the formal examination.

The second part of the assessment process is a written examination of 2 hours, covering the subject matter of the module. The paper normally provides a choice of questions, normally three from five, and may require essay answers and/or, where appropriate, calculations. Sometimes, however, a compulsory question will be included in the paper.

In order to gain credit for a module you must satisfactorily complete both parts. The pass mark for the assignment and the examination is 40%. In compiling our records, which may be used to provide transcripts of individual student's performance, an overall mark is calculated for each module. This overall mark is weighted and comprises 30% from the assignment and 70% from the examinations. Module assignments which are required to be resubmitted carry a maximum mark of 40%. In order to proceed to the dissertation stage of the programme students require an average of 50% over eight modules.

**Note:** Modules: 11, 14 and 16 are assessed by assignments only, amounting to 6,000 words for each module. **Please note the assignment/s must be submitted within twelve months of taking delivery of the module.**

You will be notified of the results of your assessment as a pass/fail report as soon as possible after the examination session. If you fail to satisfy the examiners you will be informed why and will be allowed one opportunity to re-sit the module examination or resubmit the assignment. A re-sit/resubmission fee in accordance with the current University fee will be charged. Any re-assessment will be capped at 40%.

**If in the course of your study programme you fail the assessment of three modules you will not be eligible for a University award.**

A generalised marking scheme for examinations and assignments to give an indication of the levels required for the award of a range of marks is given below.

## **7. Timetable**

You can start your studies January, April, July and October. A concentrated session of workshops and examinations will be held over a short period in October / November of each year and a second examination only session in spring. These arrangements will help you to plan your study programme. If absences from work or distance from Manchester are important considerations you could reduce the number of times you come to Manchester by studying two or more modules in the same period.

If you do not want to sit the examination immediately after the workshop you will have a second opportunity in the Spring of the following year. A timetable of workshops and examinations is available from the PIAT office.

## **8. PIAT Personnel**

The PIAT programme is managed by the University for the pharmaceutical industry. A Board of Studies and Examinations Board are responsible for the overall academic content of the programme. An advisory group, consisting of University and Industry appointments assist the programme in both structure and direction. The overall responsibility for the programme is in the hands of an Executive Committee comprising the Head of The School of Pharmacy and Pharmaceutical Sciences, a designated member of the Professoriate of The School, the Academic Director of PIAT and a designated person from the Office of The Director of Finance.

The key personnel in the University are:

**Dr Brian Lockwood** is director of the overall PIAT programme, responsible for academic issues relating to quality standards, admissions, examinations and awards. Brian must approve your application to join an award programme and your selection of modules. Brian is also responsible for research dissertation aspects of the MSc programme. He works with you and your industrial supervisor to define a suitable project and appoints the academic supervisor.

**Janet Anderson** manages the PIAT office. She deals with the administration of admissions, module production and distribution, and the organisation of workshops and examinations. She is your first point of contact for help and advice. Also in the office to help you is **Nicholas Clarke and Karen Irving**.

## **9. Study Advice**

The module has been written to be self contained in that it gives the relevant information to enable you to study the topic to an advanced level. Other modules in the PIAT programme will also contain material which has a relevance to the topic you are about to study. If you want to obtain further details or advice on complementary modules, contact the PIAT office.

### **Studying at a Distance**

All the information you need to understand this topic is in this package. You will not need to attend lectures at a regular time each week. You can work through the material at your own pace this gives you a lot of control over how you study. You can set aside one long period for study each week, or work in a lot of short bursts during the week. However you study, you need to organise your time to get through the work.

## **Managing Time**

The most common problem that students face with a distance learning course, is actually finding the time to study. From our experience, we find that most students work better if they put aside time on a regular basis.

We expect that the module will take you between 60 and 90 hours to complete dependent upon your background and experience.

Although experience will tell you how much time you actually need, we suggest that initially, you set aside approximately 8 hours each week. If you need less, then that will be a bonus, and you can always readjust your timetable!

## **What help is available**

Studying from a package like this has many advantages. It is flexible, you can fit the studying in with your working and personal life, rather than the other way round. It is permanent, you can read exactly what is said as many times as you like. However, as someone studying on your own, you can feel very isolated. Fortunately, you are not completely on your own.

Firstly, you will have a tutor. He or she will be available to answer any queries you have about the course. For example, if your answer to an in-text question differs from that in the workbook, and you cannot see how the author got the answer, you can ring, fax or preferably email your tutor and ask. It is important that any misunderstandings are dealt with as soon as they arise, as concepts introduced in the early units will be developed later on in the module. Remember that your tutor cannot be available at your convenience. They have other duties to perform in their daily work and they also take holidays. Generally your tutor will be able to respond to your queries within 2-3 days. If delay creates problems then please contact the PIAT office.

You will also find colleagues at work are helpful. If some of them are also studying the material, it is useful to get together regularly to discuss the course and to provide mutual support. Some firms will have a senior member of staff who is responsible for ensuring that you are given the necessary help and support to assist you through the course. This help can be invaluable.

Secondly, there is a workshop (normally one per module). This is a session which is designed to complement what you have learnt. It will give you an opportunity to apply what you have learnt to practical situations. It will also give you a chance to meet your tutor, other industrialists and academics involved in the PIAT programme, and most important of all, other students. Details of the workshop programme will be sent to you separately.

## **11. Graduation**

Students who successfully complete the programme will be entitled to graduate, in person, at the Universities graduation ceremonies. These are held in July and December each year and you will be invited to attend the first ceremony which follows the successful completion of the course. You will receive details of the ceremonies once your result has been formally approved by the University.

# HOW TO USE THE MODULES

## SOME ADVICE FOR STUDENTS

### Introduction

The module you are about to study is part of the programme leading to the award of an Advanced Diploma or MSc degree in Industrial Pharmaceutical Sciences. We estimate that it will involve approximately 60-80 hours of study. We know that it will be stimulating and we hope that it will be enjoyable. It will also be hard work and we do not underestimate the effort that is required.

We have designed this course so that it gives you the specific skills the Pharmaceutical Industry wants. For this reason, we have assumed that you are currently working in the industry. This gives you a number of advantages. You will have the practical experience which comes from working in an industrial environment, so that you are able to apply what you have learnt to a real situation.

You may be studying this module alone and not as part of the programme leading to an award. The module has been written to be self contained in that it gives the relevant information to enable you to study the topic to an advanced level. Other modules in the PIAT programme will also contain material which has a relevance to the topic you are about to study. If you want to obtain further details or advice on complementary modules, contact the PIAT office.

### Studying at a distance

You may already be familiar with distance learning courses, perhaps having studied with the Open University or with one of the many providers of distance teaching material. It may though, be an entirely new way of studying. If you fall into the second category you are probably wondering what you have let yourself in for! There is no need to worry. Many students not only study successfully this way, they actually find it better than more traditional methods, since it is easier to fit in with their other commitments.

All the information you need to understand this topic is in this package. You will not need to attend lectures at a regular time each week. You can work through the material at your own pace. This gives you a lot of control over how you study. You can set aside one long period for study each week, or work in a lot of short bursts during the week. However you study, you need to organise your time to get through the work.

### Managing Time

The most common problem that students face with a distance learning course, is actually finding the time to study. From our experience, we find that most students work better if they put aside time on a regular basis. This will often mean prioritising the use of time. This helps to ensure that the studying actually gets done!

We expect that the module will take you about 150 hours to complete dependent upon your background and experience.

Although experience will tell you how much time you actually need, we suggest that initially, you set aside approximately 8 hours each week. If you need less, then that will be a bonus, and you can always readjust your timetable!

## **How to study**

The work book is not a text book. In some ways it is rather like your lecture notes. That is, it is a working document and not for reference. We have left a large margin for you to use to put in notes, comments and any queries you may have. The workbook is there to help you learn, so put in any diagrams, footnotes, explanations etc. that help you to understand and absorb the topic.

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You will also find colleagues at work are helpful. If some of them are also studying the material, it is useful to get together regularly to discuss the course and to provide mutual support. Some firms will have a senior member of staff who is responsible for ensuring that you are given the necessary help and support to assist you through the course. This help can be invaluable.

Secondly, there is a workshop (normally one per module). This is a session which is designed to complement what you have learnt. It will give you an opportunity to apply what you have learnt to practical situations. It will also give you a chance to meet your tutor, other industrialists and academics involved in the PIAT programme, and most important of all, other students. Details of the workshop programme will be sent to you separately.

## Assignment

Your tutor will agree the subject matter with you and will mark the assignment. The assignment is intended to represent a significant piece of work and requires you to utilise/put into practice the skills and knowledge gained by working through the workbook. Assignments are not expected to be extended essays based on material gained outside of the workbooks. Whilst the assignment is likely to require the gathering of data from alternate sources it will not expect you to research methodologies. A maximum word limit is placed on the submitted assignment of 4000 words. Assignments will generally be of ca.3000 words. The candidate is expected to spend no more than 30-40 hours of work in completing the assignment.

## Workshops

Normally one workshop will be held in each academic year. The workshop will usually be of one half day duration (3-4hrs) and timetabled the day before the September/October written examination. Students may opt to attend the workshop and sit the examination on separate or the same occasion.

Attendance of the workshops is optional. The workshops will therefore not introduce new material. The intention of the workshop is to reinforce understanding of the modular material and provide the opportunity for discussion, individually or in groups, of the problems encountered during the study and from the assignments. Tutors are free to structure the workshops as they wish, but will probably have prepared 'Exercises' or 'Problems' for the group to tackle.

If there are particular topics that you wish to be included within a particular workshop then please contact either your tutor or the PIAT office.

## Assessment

If you are studying this module as part of the Advanced Diploma or MSc degree you will be required to prove your competence in the subject. This is a two part process.

The first part is the assessment of your workbook and the completion of the written assignment. **The assignment must be submitted at or before the formal examination.** Failure to comply with this regulation will preclude a student from sitting the examination until the assignment has been submitted.

The second part of the assessment process is a written examination of 2 hours, covering the subject matter of the module. The paper normally provides a choice of questions and may require essay answers and/or, where appropriate, calculations. Sometimes, however, a compulsory question will be included in the paper.

In order to gain credit for a module you must satisfactorily complete both parts. The pass mark for the assignment and the examination is 40%. In compiling our records, which may be used to provide transcripts of individual student's performance, then an overall mark is calculated for each module. This overall mark is weighted and comprises 30% from the assignment and 70% from the examinations.

The additional requirement for the MSc is a dissertation on a workplace project, representing 600 hours of study, to be supervised jointly by a member of the University staff and an experienced person from your company.

Finally, if you do have any problems with your study or difficulties in getting in touch with your tutor then please contact the PIAT office.

## 10. Library Facilities

The John Rylands University Library provides information, resources and support throughout the programme. You will also be able to borrow textbooks and other titles and consult printed reference works and journals.

Students have been given their Student ID in their acceptance letter and they can use this to sign up for a computer account if they want to use the Library's Electronic Resources.

If students want a university ID card, they can give or send a photo, or send a scanned image to the PIAT Office and they will arrange for them to have a card. Your University identity card is also your library card and you will need it with you to enter the Library and borrow books.

To fully activate your Library access:

- Ask for your ID card to be encoded, so that you can also use it as a photocopying card: you will then need to add credit at one of the value-loading machines before it will work in the photocopiers.
- Ask for your library PIN: you can then log on to your Library account to renew a loan or reserve a book
- For up-to-date details of how to access the Library's electronic resources, a good place to start is this general information page:  
<http://www.library.manchester.ac.uk/usingthelibrary/elearning/students/>

Borrowing and returning books: as a postgraduate student, your loan allowance is 40 books for 12 weeks. Some books may be borrowed only for one week, or for one or two nights (Short Loan Collection), and some are for reference only; all these categories are clearly marked.

Get to know the Library's website- <http://www.library.manchester.ac.uk/> - it has up-to-date information for example on opening hours and photocopying, and it also provides access to many of the services you will be using, for example:

- Electronic Resources- online journals, books and databases
- Library Catalogue
- Reading Lists

Pharmacy Subject Information has its own "front page"- see

<http://www.library.manchester.ac.uk/subjects/pharmacy/>

Follow the links to the following sections:

- Contacts
- Current awareness services
- Databases
- Internet sites- general and specialised lists, checked for quality and relevance
- Literature searching
- Reference works
- Training and Guides
- Where to find printed stock

For further information contact The E-Learning and Distance Learning Co-ordinator:

Eleri Strittmatter. Tel: +44 (0)161 275 3725

Email: [eleri.g.strittmatter@manchester.ac.uk](mailto:eleri.g.strittmatter@manchester.ac.uk)

Help is also available at the Library's Information Desks

## **Literature Searching – Information Sources for Pharmacy**

One of the resources provided as part of the Library's Subject Information for Pharmacy is a Guide to Literature Searching: this can be accessed by following the "Literature Searching" link from the Pharmacy page: <http://www.library.manchester.ac.uk/subjects/pharmacy/>

or by going straight to the Guide:

<http://www.library.manchester.ac.uk/subjects/pharmacy/resources/literature/>

This guide is also available to download as a PDF document entitled Information Sources for Pharmacy: <http://www.library.manchester.ac.uk/media/media,60610,en.pdf>

The Guide is divided into sections to help you with the different stages of your essay or project work:

- 1. Getting ready for your research - using reference works**
  - 1.1 Get up to speed with the Library Catalogue
  - 1.2 Make the most of the Library's e-books and e-journals
  - 1.3 Check new terminology in a dictionary or encyclopaedia
  - 1.4 Look for basic information in a handbook or yearbook
  
- 2. Background reading for your topic - using textbooks and research monographs**
  - 2.1 Familiarise yourself with the topic using general student textbooks
  - 2.2 Identify recent issues and areas of debate in specialist books and research monographs
  
- 3. Finding up-to-date information - using databases to find journal articles**
  - 3.1 Select appropriate databases for your topic
  - 3.2 Follow up on discussions and check for newer issues by reading review articles
  - 3.3 Find the latest published work in research articles
  
- 4. Using the internet to explore further**
  - 4.1 Selected internet resources
  - 4.2 How to use the internet effectively
  
- 5. Writing up your work**
  - 5.1 Referencing your work
  - 5.2 Writing skills
  
- 6. Support for your search**
  - 6.1 Contacts
  - 6.2 Drop-In Search Clinics
  - 6.3 Guides and online help

## **Reference systems**

When you write your essay or put together your end-of-project report, you will be asked to "put references in a uniform acceptable style". This means choosing a reference system and using it accurately and consistently throughout your piece of work.

### **What is a reference?**

A reference is a description of a source of information that you have quoted from directly or referred to in a piece of written work. All the references are grouped together in a list at the end of your work.

### What is a citation?

A citation is created by inserting information into the text of your written work to tell the reader which item in the reference list has been used in making a particular quotation or statement.

### What is a reference system?

A reference system is a set of rules for constructing reference lists and citations.

### Which systems can I use?

Pharmacy students need to know about two major reference systems, because Pharmacy touches on a range of disciplines, some based in the sciences and others in the social sciences.

#### 1. The Vancouver System

The Vancouver System is used mainly in the sciences and biomedical subject areas

The Vancouver system is a numeric or author-number system. Documents cited, or referred to, are numbered in the order in which they appear in the text. Each time the same document is referred to its unique number is inserted in superscript - a small number above the text. A full list of the references cited in the text is included at the end of the essay, or in a longer document such as a thesis, at the end of each chapter. The order of these references follows their numerical order in the text.

Citations in the text:	References at the end of the essay – bibliography:
the study undertaken by Smith <sup>1</sup> in the north of England.....	Smith HJ. <i>Smith and Williams' introduction to the principles of drug design and action.</i> Harwood Academic, 1998
the conclusions drawn by Jones <sup>2</sup> in a recent paper...	Jones A. <i>Combining trastuzumab (Herceptin) with hormonal therapy in breast cancer: what can be expected and why?</i> Annals of Oncology 2003; 14(12):1697-704.
whilst Jones <sup>2</sup> found no evidence of ...	Note that should you refer, for example, to the paper by Jones again in the text, the same number should be used again.

#### 2. The Harvard System

The Harvard System is used mainly in the social sciences and humanities.

The Harvard System is an author-date system. When a document is cited in the text, the author's surname and the year of publication are included. A full list of the references cited in the text is included at the end of the essay or, in a longer document such as a thesis, at the end of each chapter. The references are presented in alphabetical order by author. If there is more than one publication by the same author, these are arranged by date, with the earliest first. If there is more than one publication by an author in the same year, then a letter is added (e.g. 2005a, 2005b)

Citations in the text:	References at the end of the essay – bibliography:
the study undertaken by Smith (1998) in the north of England.....	SMITH, H.J. (1998) <i>Smith and Williams' introduction to the principles of drug design and action.</i> Harwood Academic
the conclusions drawn by Jones	JONES, A. (2003) Combining trastuzumab

(2003) in a recent paper...	(Herceptin) with hormonal therapy in breast cancer: what can be expected and why? <i>Annals of Oncology</i> , 14, 1697-704.
whilst Jones (2003) found no evidence of ...	Note that should you refer, for example, to the paper by Jones again in the text, this is done in just the way as the first time.

Researchers submitting to academic journals will find that the instructions to authors specify the reference system to be used: this may be one of the major systems described above, or a slightly adapted version.

### Further information

For more detail, see the section headed **Writing Up Your Work**, in Chapter 5 of these two guides:

[Guide to the Library's Information Sources for Pharmacy](#) (printable version - PDF)

[Pharmacy and Pharmaceutical Sciences: Literature Searching](#) (online version – html)

### Special Circumstances

The School has a Mitigating Circumstances Committee, which meets prior to the Examination Boards to consider the effect of extenuating circumstances (e.g. medical/personal/family problems) on exam performance. Evidence can only be considered if presented in time for this Committee and in any event no later than the publication of the examination results. Any extenuating circumstances should be provided in writing by completing a Special Circumstances Form and handed in with strong third party evidence to the PIAT Office, by the deadline given. All information will be treated in strict confidence.

### Student Complaints Procedure

Student Complaints should be addressed to the Head of Academic Administration in the Faculty of Medical and Human Sciences, Chisholm Building.

The Regulation XVIII - Student Complaints Procedure can be found at the following url: -

<http://www.campus.manchester.ac.uk/ssc/appealspolicies/studentdisciplineappealsandcomplaints/>

### University policy on the use of calculators in examinations

Examinations may require students to perform simple calculations for which normal practice would be to use a calculator. It is necessary to ensure that students do not bring into the examination room any device that would enable them to obtain an unfair advantage. The following rules are designed to regulate the type of calculator that may be used and to do so in a way that is enforceable in practice by invigilators. Assessments that require complicated calculations may well be better conducted by means other than formal examinations.

#### Policy on the Use of Calculators in Examinations

1. Students may bring into the examination room any calculator, provided that it does not have any means of inputting or storing text, alphabetical or other symbolic information, including mathematical expressions (except that hexadecimal keys a to f are allowed); any means of transmitting or receiving information, including (but not restricted to) infra-red, microwave and wireless ports and cable connections such as USB ports.

2. In particular, these rules preclude the use of mobile phones, PDAs (personal digital assistants), and portable computers as calculators.
3. Calculators must be silent in operation and must have their own self-contained power supply. No recharging facilities will be available, and candidates must bring their own spare batteries.
4. Invigilators may examine any device a student brings into the examination room. If the device does not comply with these rules, it will be confiscated and returned only at the end of the examination; no replacement will be provided. A form will be completed to record the incident as suspected cheating.
5. A School may specify that no calculator is allowed in any examination for which it is responsible or that it requires students to use only a specified model (or models) of calculator or that it wishes to allow students to use calculators forbidden by the rules of paragraph 1, above. Where this is the case, clear and specific instructions must be notified to the students in advance of the examination, to the invigilators, and on the examination paper.
6. For students with disabilities these rules may be over-riden in specific, individual cases as agreed by the Disability Support Office.

### **Guidance to students on plagiarism and other forms of academic malpractice**

#### **Introduction**

1. As a student, you are expected to cooperate in the learning process throughout your programme of study by completing assignments of various kinds that are the product of your own study or research. For most students this does not present a problem, but occasionally, whether unwittingly or otherwise, a student may commit what is known as plagiarism or some other form of academic malpractice when carrying out an assignment. This may come about because students have been used to different conventions in their prior educational experience or through general ignorance of what is expected of them.
2. This guidance is designed to help you understand what we regard as academic malpractice and hence to help you to avoid committing it. You should read it carefully, because academic malpractice is regarded as a serious offence and students found to have committed it will be penalized. At the very *least* a mark of only 30% would be awarded for the piece of work in question, but it could be worse; you could be awarded zero (with or without loss of credits), fail the whole unit, be demoted to a lower class of degree, or be excluded from the programme.
3. Academic malpractice includes **plagiarism, collusion, fabrication** or **falsification** of results and anything else intended by those committing it to achieve credit that they do not properly deserve. In addition to the advice that follows, your School will give you advice on how to avoid academic malpractice in the context of your discipline. It will also design assessments so as to help you avoid the temptation to commit academic malpractice. Finally, you should take note that work you submit may be screened electronically to check against other material on the web and in other submitted work.

#### **Plagiarism**

4. **Plagiarism** is presenting the ideas, work or words of other people without proper clear and unambiguous acknowledgement. It also includes 'self-plagiarism' (which occurs where, for example, you submit work that you have presented for assessment on a previous occasion), and the submission of material from 'essay banks' (even if the authors of such material appear to be giving you permission to use it in this way). Obviously, the most blatant example of plagiarism

would be to copy another student's work. Hence it is essential to make clear in your assignments the distinction between:

- The ideas and work of other people that you may have quite legitimately exploited and developed, and
- The ideas or material that you have personally contributed.

5. To assist you, here are a few important do's and don't's

- **Do** get lots of background information on subjects you are writing about to help you form your own view of the subject. The information could be from electronic journals, technical reports, unpublished dissertations, etc. Make a note of the source of every piece of information at the time you record it, even if it is just one sentence.
- **Don't** construct a piece of work by cutting and pasting or copying material written by other people, or by you for any other purpose, into something you are submitting as your own work. Sometimes you may need to quote someone else's exact form of words in order to analyse or criticise them, in which case the quotation must be enclosed in quotation marks to show that it is a direct quote, and it must have the source properly acknowledged at that point. Any omissions from a quotation must be indicated by an ellipsis (...) and any additions for clarity must be enclosed in square brackets, e.g. "[These] results suggest... that the hypothesis is correct." It may also be appropriate to reproduce a diagram from someone else's work, but again the source must be explicitly and fully acknowledged there. However, constructing large chunks of documents from a string of quotes, even if they are acknowledged, is another form of plagiarism.
- **Do** attribute all ideas to their original authors. Written 'ideas' are the product that authors produce. You would not appreciate it if other people passed off your ideas as their own, and that is what plagiarism rules are intended to prevent. A good rule of thumb is that each idea or statement that you write should be attributed to a source *unless* it is your personal idea *or* it is common knowledge.

6. As you can see, it is most important that you understand what is expected of you when you prepare and produce assignments and that you always observe proper academic conventions for referencing and acknowledgement, whether working by yourself or as part of a team. In practice, there are a number of acceptable styles of referencing depending, for example, on the particular discipline you are studying, so if you are not certain what is appropriate, *ask your tutor or the course unit coordinator for advice!* This should ensure that you do not lay yourself open to charge of plagiarism inadvertently, or through ignorance of what is expected. It is also important to remember that you do not absolve yourself from a charge of plagiarism simply by including a reference to a source in a bibliography that you have included with your assignment; you should always be scrupulous about indicating precisely *where* and *to what extent* you have made use of such source.

7. So far, plagiarism has been described as using the words or work of someone else (without proper attribution), but it could also include a close paraphrase of their words, or a minimally adapted version of a computer program, a diagram, a graph, an illustration, etc taken from a variety of sources without proper acknowledgement. These could be lectures, printed material, the Internet or other electronic/AV source.

8. **Remember:** No matter what pressure you may be under to complete an assignment, you should *never* succumb to the temptation to take a 'short cut' and use someone else's material inappropriately. No amount of mitigating circumstances will get you off the hook, and if you

persuade other students to let you copy their work, they risk being disciplined as well (see below).

## **Collusion**

9. **Collusion** is any agreement to hide someone else's individual input to collaborative work with the intention of securing a mark higher than either you or another student might deserve. Where proved, it will subject to penalties similar to those for plagiarism. Similarly, it is also collusion to allow someone to copy your work when you know that they intend to submit it as though it were their own and that will lay both you and the other student open to a charge of academic malpractice.
10. On the other hand, collaboration is a perfectly legitimate academic activity in which students are required to work in groups as part of their programme of research or in the preparation of projects and similar assignments. If you are asked to carry out such group work and to collaborate in specified activities, it will always be made clear how your individual input to the joint work is to be assessed and graded. Sometimes, for example, all members of a team may receive the same mark for a joint piece of work, whereas on other occasion's team members will receive individual marks that reflect their individual input. If it is not clear on what basis your work is to be assessed, to avoid any risk of unwitting collusion you should always ask for clarification *before* submitting and assignment.

## **Fabrication or falsification of results**

11. For many students, a major part of their studies involves laboratory or other forms of practical work, and they often find themselves undertaking such activity without close academic supervision. If you are in this situation, you are expected to behave in a responsible manner, as in other aspects of your academic life, and to show proper integrity in the reporting of results or other data. Hence you should ensure that you always document clearly and fully any research programme or survey that you undertake, whether working by yourself or as part of a group. Results or data that you or your group submit must be capable of verification, so that those assessing the work can follow the processes by which you obtained them. Under no circumstances should you seek to present results or data that were not properly obtained and documented as part of your practical learning experience. Otherwise, you lay yourself open to charge of **fabrication** or **falsification** of results.

## **Finally ....**

12. If you commit any form of academic malpractice, teaching staff will not be able to assess your individual abilities objectively or accurately. Any short-term gain you might have hoped to achieve will be cancelled out by the loss of proper feedback you might have received, and in the long run such behaviour is likely to damage your overall intellectual development, to say nothing of your self-esteem. You are the one who loses.

## **WARNING**

Some or all of the work you submit for assessment may be checked electronically for plagiarism. This may be done in two ways:

- i. Phrases or sentences in your assessed work may be checked against material accessible on the world wide web, using commonly available search tools. You will not be informed before this type of checking is to be carried out.
- ii. The University subscribes to an online plagiarism detection service specifically designed for

academic purposes. On advice from the External Examiner PIAT is now required to keep an electronic version of your written assignments. Students will have to submit an electronic version on CD along with every hard copy of the assignment.

## **Penalties**

### **(Extracts from Regulation XVII - Conduct and Discipline of Students, Definition of misconduct)**

Without prejudice to the generality of statute XXI.1, a student may be liable to disciplinary action in respect of conduct which

- (i) Involves the possession of unauthorised material or the use or attempted use of unauthorised or unfair means (including academic malpractice such as plagiarism or collusion with other students or fabrication or falsification of results) in connection with any examination or assessment;

If a breach under paragraph 3(i) has been established, the penalties imposed may be one or more of the following. When determining the penalty to be imposed, account shall be taken of the consequences which the penalty will have for the academic progress of the student concerned:

- A. A reprimand and warning about future behaviour;
- B. The Board of Examiners to be informed that the piece of work be marked, if not already marked, and the mark awarded for the piece of work in which the unfair practice occurred;
- C. Cancellation (i.e. a recorded mark of zero), with or without loss of credit, of the examination paper or other assessed work in which unfair practice occurred;
- D. Cancellation (i.e. a recorded mark of zero), with or without loss of credit, of the examination paper or other assessed work;
- E. The student being not allowed a re-assessment;
- F. The student being allowed a re-assessment;
- G. Expulsion from the University, which means that the student shall cease to be a Member of the University and will lose all rights and privileges of Membership

## **Academic Appeals**

Student Appeals should be addressed to the Head of Academic Administration, Faculty of Medical and Human Sciences, Chisholm Building.

<http://www.campus.manchester.ac.uk/ssc/appealspolicies/studentdisciplineappealsandcomplaints/>