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**ADAM SMITH COLLEGE**  
INSPIRING LEARNING

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# Course Handbook

**HNC Computing  
(Technical Support Stream)**

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## Welcome to Adam Smith College

This is the Course Handbook for the HNC Computing. On behalf of the Course Team I would like to warmly welcome you to Adam Smith College. We feel sure that you will enjoy your time spent here.

To help you make the most of your time at College and to familiarise you with your course we have produced this course handbook. In here you will find information about the structure of your course, the teaching and learning styles used and the ways in which your work will be assessed and graded.

There is a considerable amount of information contained in this handbook, some of which will be of greater relevance to you as you work through the course than it is at the start of your studies in the College. However, we recommend that you read this Course Handbook through carefully **now**, then keep it safely - you will need to use it through your course.

We hope you will find the handbook a useful guide to your course and wish you every success in your studies.

Charlie Keenan

Curriculum Head: HNC Computing

## Information about your course

Your course is:

HNC Computing

Your Curriculum Head is:

Charlie Keenan

His/Her office is:

Priory Campus, Mezzanine Floor

His/Her telephone number is:

01592 223747

His/Her email address is:

[charliekeen@adamsmith.ac.uk](mailto:charliekeen@adamsmith.ac.uk)

Scheduled guidance time:

PDP Class

## **Your Curriculum Head**

Each course in the Adam Smith College is assigned a Curriculum Head, whose role is to provide you with advice and support through your course of study. This falls roughly into two categories – guidance related to your studies and pastoral care to help you deal with any difficulties you might encounter of, for example, a personal, financial or health-related nature.

At the beginning of your course you will agree your learning targets with your Curriculum Head. These will be recorded on your Learner Agreement which both of you will sign. Throughout your course, your Curriculum Head will monitor your progress and meet with you regularly during the year to discuss how you are getting on.

Your Curriculum Head will also be available at a set time each week when you can meet if there's something you need to discuss. However, if something comes up which has to be dealt with urgently, you can ask to speak to your Curriculum Head at any time. He/she might not be able to meet you immediately – Curriculum Heads have classes to teach and other students to look after – but he/she will offer you an appointment as soon as possible or refer you to another appropriate member of staff.

Your Curriculum Head may not always be able to personally provide you with the sort of help or support you need, in which case he/she might recommend that you are referred to a member of the College's Guidance or Learning Support staff.

So, if at any time throughout your course, you experience difficulties which are affecting your progress as a student, your Curriculum Head should be your first contact. Please remember that unresolved problems rarely just go away. On the contrary, they tend to get worse the longer they're not dealt with. So, speak to your Curriculum Head sooner rather than later.

## **Your attendance at college and part-time employment**

Your success as a student depends on full and regular attendance at **all** classes. You should inform your Curriculum Head as soon as possible if you have problems with attendance. Our records show that students who do not attend all their classes have a very high risk of failure.<sup>1</sup>

We recognise that you may need to undertake part-time work, but we strongly advise you not to take employment of more than 15 hours a week if you are a full time student. Should you need to take employment of more than 15 hours per week we recommend you register as a part time student. A full time student is expected to follow their timetable and negotiate work times around it.

## **Your learning**

Your College course will provide you with constant opportunities to learn new skills and acquire knowledge in your chosen subject areas. In order to make the most of all the opportunities available, you need to organise and plan your learning and also to manage your time effectively.

You must attend **all** your timetabled classes. You also need to study in your own time and you should plan to spend several hours a week to fulfil your commitment as a full-time student. You need to allocate time for this in your diary.

Prepare for lectures and tutorials by doing any reading or exercises in advance. Always make some notes – there is usually a handout provided. Review these after the class and ask your lecturer if there is anything you do not understand.

Note assignment deadlines and exam dates in your diary and remember to begin assignments early. You will enjoy researching and planning your work if you allow yourself plenty of time. Make sure you understand what you need to do and plan how you are going to tackle it. Seek advice from your lecturer or Curriculum Head if there is anything that needs clarification.

For full details of regulations about attendance, see the College Attendance Policy and Procedure.

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<sup>1</sup> For full details of regulations about attendance, see the College Attendance Policy and Procedure.

In summary:

- ❖ plan your learning strategy
- ❖ allocate enough time
- ❖ attend **all** of your classes
- ❖ start assignments well in advance
- ❖ seek advice and help
- ❖ use the learning resources offered
- ❖ enjoy the learning experience!

## **Credit for previous learning**

Some students have previous experience or qualifications for which they may receive credit on their present course of study. If you have any qualification that may exempt you from part of your course, for example from school or another college, you may apply for Accreditation of Prior Learning (APL). Similarly, if you have undertaken work, paid or voluntary, that has resulted in learning skills or knowledge that is equivalent to units you will be studying here, you may apply for Accreditation of Prior Experiential Learning (APEL). Together these are known as AP(E)L and it means you do not have to duplicate study you have done previously. It does not necessarily have to be in your chosen subject, but it must be at the same level as your course of studies here.<sup>2</sup>

If you wish to claim for APL/AP(E)L please speak to your Curriculum Head.

## **The aims of your course**

The aims of your course are:

- ❖ to develop your knowledge of the facts, theories, concepts, applications, development and importance of planning, analysing, and synthesising.
- ❖ to enhance your practical skills in computing.
- ❖ to provide a sound basis for those of you who may decide go on to a more advanced course of study;
- ❖ to give you experience of the equipment, materials, processes and practices currently used in the computer support industry;
- ❖ to encourage your development of effective learning strategies.

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<sup>2</sup> For full details of the scheme for crediting previous learning, see the College Credit Transfer and APL/APEL Procedure.

## The structure of your course

The course consists of 13 units, with a total value of 15 credits.

The course consists of 3 days of formal classes each week along with individual study and coursework.

The units you will study in Semester 1 are:

| Semester 1 |   |        |
|------------|---|--------|
| Unit Code  | Unit Title  | Credit |
| DM35 34    | Supporting Users and Troubleshooting a Desktop Operating System | 2      |
| DH2T 34    | Computer Architecture 1   | 1      |
| F1XA 34    | PC Hardware and Operating Systems Essentials                    | 1      |
| DH35 34    | Computing: Planning   | 1      |
| DH33 34    | Computer Operating Systems 1                                    | 1      |
| D75X 34    | Information Technology: Applications Software 1                 | 1      |
| DH30 35    | Software Development: Applications Development                  |        |

The units you will study in Semester 2 are:

| Semester 2 |   |        |
|------------|---|--------|
| Unit Code  | Unit Title  | Credit |
| F1X9 34    | PC Hardware and Operating Systems Support                 | 1      |
| DH30 35    | Software Development: Applications Development            | 2      |
| DE3R 34    | Personal Development Planning                             | 1      |
| DM34 34    | Supporting Users and Troubleshooting Desktop Applications | 1      |
| DH21 34    | Working Within a Project Team                             | 1      |
| DH2W 35    | Computer Hardware: Building a network PC                  | 1      |
| DH36 34    | Computing: Graded Unit 1                                  | 1      |

## The content of your course

Here are brief descriptions of the units which make up your course:

### **D75X34 - Information Technology: Applications Software 1**

This core unit is designed to enable students to use Information Technology (IT) systems and applications independently to support a range of information processing activities. The Unit is designed to develop a broad knowledge of the theoretical concepts, principles, boundaries and scope of IT applications. These activities will be centred on using software applications packages to meet complex information requirements while paying attention to security and the needs of other users.

On completion of the Unit the candidate should be able to:

1. Operate a range of IT equipment independently, giving attention to security and to other users
2. Use a range of software application packages to meet complex information requirements

### **DH2T34 - Computer Architecture 1**

This core unit is designed to develop broad general knowledge and understanding of the theoretical concepts, principles, boundaries and scope of the mechanisms that underpin the use of digital computers. This includes the way in which the internal representation used within the machine can be translated to give human readable values. Study of the Unit also provides a foundation knowledge of the mechanisms used by a processor to communicate with memory and external devices, how a processor deals with requests from external sources, and the characteristics and requirements of the devices that processors can be regularly expected to deal with. The study of the Unit will be of particular benefit to those who wish to undertake further study in the fields of computer programming, providing technical support to other users or new media production.

On completion of this Unit the candidate should be able to:

1. Demonstrate an ability to manipulate and translate data representations.
2. Demonstrate an understanding of the functions of computer system components.
3. Demonstrate an understanding of the principles of Central Processor Unit (CPU) operation.

### **DE3R34 - Personal Development Planning**

This unit helps candidates to take responsibility for their own learning and development. In particular it provides a framework for the development of the personal and general skills and qualities which employers seek in the workplace and which are increasingly recognised as underpinning success in personal life, in citizenship and in lifelong learning. The contexts of progression to employment, or from college to university, or developing Core Skills, can be used. Through a process of Personal Development Planning<sup>1</sup> candidates will identify their skills, abilities and development needs and review these in the context of their own personal, educational and career aims. They will devise a personal action plan, then undertake and evaluate that plan. They will gather, organise and present evidence of each stage of the plan - including personal reviews - in their personal development portfolio.

On completion of the Unit the candidate should be able to:

1. Create and maintain a personal development portfolio and a personal action plan.
2. Implement his/her personal action plan.
3. Monitor and evaluate the plan and its implementation.

### **DH2W35 - Computer Hardware: Building a Network PC**

This Unit is designed to enable candidates to work effectively in a computer hardware technical support role. It prepares them for this task by ensuring they possess the underpinning knowledge required to understand the operation of modern personal computer hardware. Practical experience is then gained of designing and building a PC, including faultfinding and the installation and configuration of low-level software such as device drivers. It is primarily intended for candidates who expect to work in an IT support role, but is also relevant to all those on an IT programme of study who require a deeper or more practical understanding of computer hardware.

On completion of the Unit the candidate should be able to:

1. Describe the major sub-systems and operation of a modern personal computer.
2. Identify risks and use safe working practices.
3. Design and build a PC configuring hardware components and peripherals as required.
4. Research, design and configure a PC for Peer to Peer networking.

### **F1XA34 - Computing: PC Hardware and Operating Systems Essentials**

This Unit is designed to provide competencies associated with an entry level IT professional working in the lab or field, installing, building, configuring, troubleshooting and performing preventative maintenance on basic PC hardware and operating systems. It is intended for candidates undertaking an HN in Computing, Computer Networking or a related area who require an understanding of computer hardware. On completion of the Unit the candidate should be able to:

1. Describe PC and laptop fundamentals.
2. Install, optimise and upgrade current operating systems.
3. Install and configure printers and scanners.
4. Implement basic networks and security.
5. Describe basic end user support.

### **F1X934 - Computing: PC Hardware and Operating Systems Support**

This Unit is designed to provide competencies associated with an entry level IT Professional working as a field service or PC technician, upgrading, configuring, troubleshooting and performing preventative maintenance on PC hardware and operating systems. It is intended for candidates undertaking an HN in Computing, Computer Networking or a related area who require an understanding of computer hardware and operating systems. On completion of the Unit the candidate should be able to:

1. Implement advanced features of PCs and laptops.
2. Operate advanced operating system features.
3. Implement advanced printing and scanning features.
4. Implement advanced network features and security.
5. Identify safety and environmental issues and communicate with an end user.

### **DH2134 - Working within a Project Team**

This core unit can be delivered in a variety of curriculum areas and is designed to provide candidates with the experience of working in a team to negotiate goals, roles and responsibilities, support co-operative working and present agreed project outcomes within the timescale prescribed by the team. Individual team members (candidates) should be able to identify and gather appropriate evidence, evaluate written information related to the task, contribute to formal meetings and group discussions, apply methodologies from (a) selected area(s) of the award to the project, track and record progress and produce a written report to a prescribed format with supporting, referenced documentation where appropriate. As the final

part of the written report, candidates should also be able to evaluate and draw conclusions in relation to their own contribution.

On completion of the Unit the candidate should be able to:

1. Individually gather and/or read and evaluate written, graphical or pictorial information on a team task, and in co-operation with others, decide on a course of action for completing the project.
2. In co-operation with others, plan, organise and carry out the task.
3. Individually, produce a written report, in a prescribed format, reflecting on what has been done and drawing conclusions for the future.

### **DH3035 - Software Development: Applications Development**

The Unit is designed to extend the candidate's ability to use application software packages to develop user defined applications with efficient user friendly interfaces. The application software package may relate to word processing, spreadsheet or database, however, this is not an exclusive list. The importance of an analytical approach to the requirements of the user will be encouraged. The development process will utilise the automated features provided by the package. The scripting or programming language of the package may also be used. The Unit is intended for candidates who may be asked to develop application packages for a particular purpose where the developed application will improve efficiency of data entry and required output.

On completion of this Unit, the candidate should be able to:

1. Use development techniques to develop application modules
2. Implement a solution from design
3. Test the completed product
4. Create technical and user documentation

### **DH3334 - Computer Operating Systems 1**

This core unit is designed to enable candidates to gain an understanding of typical desktop computer operating systems. Candidates will learn how to use and install both operating system and applications software. Candidates will also gain experience of installing and configuring system-level software, (e.g. device drivers) within the operating environments as well as applications software. It is intended for candidates on any computing or IT course who require knowledge and skills in operating system function and operation.

On completion of this Unit the candidate should be able to:

1. Describe the structure and function of an operating system.
2. Use a graphical environment to operate a computer.
3. Install and configure an operating environment.

4. Install and configure system and application software.

### **DH3534 - Computing: Planning**

This core unit is designed to enable candidates to develop generic knowledge and practical skills in the stages and techniques of planning. It is aimed at candidates following an HN Computing group award programme and hence the skills and techniques used should be such as to support the planning of computing tasks.

On completion of the Unit the candidate should be able to:

1. Produce a precise specification from a given brief.
2. Derive a detailed design for the required specification.
3. Produce a test plan for the required specification.

### **DH3634 - Computing: Group Award Graded Unit 1**

#### **Assessment Instrument: Closed Book Examination**

This group award core Graded Unit is designed to provide evidence that the candidate has achieved the following principal aims of the HNC Computing:

- To develop the candidate's knowledge and skills such as planning, analysing and synthesising
- To develop study and research skills
- To prepare students for progression to further study in Computing or a related discipline.

### **DM3434 - Supporting Users and Troubleshooting Desktop Applications**

This Unit is designed to introduce candidates to the role of a desktop application support technician involved in supporting users and troubleshooting desktop applications on a client operating system. It is intended for candidates undertaking an HN in Computing or a related area who require a broad knowledge of client operating systems. On completion of the Unit the candidate should be able to:

1. Configure and troubleshoot applications
2. Resolve issues related to usability and application customisation
3. Configure and troubleshoot network connectivity and security settings for applications

### **DM3534 - Supporting Users and Troubleshooting a Desktop Operating System**

This Unit is designed to introduce candidates to the issues involved in configuring, troubleshooting and maintaining a client operating system. It is intended for candidates undertaking an HN in Computing or a related area, who require a broad knowledge of client operating

systems and desktop support. On completion of the Unit the candidate should be able to:

1. Perform an installation of a desktop operating system using different installation methods.
2. Configure, manage and troubleshoot access to resources, desktop and user environments.
3. Troubleshoot network protocols and services.

## **Assessment of your work**

Throughout your course, your work will be assessed in a number of different ways, depending on the different criteria in individual units.<sup>3</sup>

The majority of courses delivered in the College are assessed partly or wholly on a continuous basis – in other words, you will be assessed on parts of your work as you go along rather than all of it at the end of the unit. This assessment is carried out by the lecturer teaching the unit.

So that assessments can be fair to all students, and whoever teaches them, internal assessments are checked by other lecturers teaching the same, or similar, units. This is a process called 'internal moderation'.

Over and above the internal moderation of assessments of student work, awarding bodies check that colleges are assessing work appropriately by a process called 'external verification'. This process involves the awarding body carrying out checks on College staff's assessments of student work. This is done by sending 'external moderators' to the College, where they check assessments against national standards.

Only after these three stages have been completed can you be sure of your results, the certificates for which will be sent to you directly by the awarding body, not the College.

Internal assessment is not just about judging whether you have passed or failed. It also provides both you and your lecturers with important information about what you're doing well and where you have shortcomings in your knowledge, understanding or skills. Assessment is closely linked to the learning process in the sense that the feedback you will receive from your lecturers will help you improve your work in the future.

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<sup>3</sup> For full details of the College's regulations about assessment, see the College's Assessment Procedure.

Finally, a range of courses delivered in the College are assessed by means of an externally-set and externally-assessed examination. The examining body will inform you directly whether or not you have completed your course successfully. College lecturers are not in a position to tell you whether you have passed or failed, until they have been informed by the examining body (usually at the same time as you will know directly from the examining body). If in doubt, please ask your lecturer about the procedures used.

### **Re-assessment of your work**

If you are unsuccessful in an internal assessment, you will be offered the opportunity to be re-assessed. Depending on the arrangements for re-assessment laid down for a particular unit, this may involve retaking either the whole assessment or just part of it.

You will normally only be allowed one (or, in exceptional circumstances, two) re-assessment opportunities.

### **Submission of your coursework**

You should hand all coursework in to your subject lecturer.

All coursework for assessment will have a specified deadline for submission. It is essential that you meet the submission deadline to ensure fairness amongst all students and to enable staff to mark efficiently.

Your subject lecturer may allow you an extension to a submission date if there are valid circumstances affecting your ability to meet the deadline.

Any coursework (for which there are no mitigating circumstances or an agreed extension) handed in after the submission deadline will normally receive a mark of 0.

If you are unwell when completing assessed coursework or sitting examinations, or have any other specific difficulties that may affect your performance in assessed coursework or examinations, you should notify your Curriculum Head in writing of the circumstances as soon as possible, and make immediate arrangements for medical certificates or other letters of support to be submitted.

## ***Cheating and plagiarism***

There are various forms of academic dishonesty but in the student's context it means cheating in examinations or presenting work for assessment which is not your own.

Plagiarism as a form of cheating takes place when the student 'borrows' or copies information, data or results from an unacknowledged source, without quotation marks or any indication that the presenter is not the original author or researcher.

If carried out knowingly, cheating and plagiarism have the objective of deceiving examiners and this threatens the integrity of the assessment procedures and the value of your award.

Work produced by someone else may be summarised or repeated providing it is referenced to the original author. As well as text, work such as diagrams, maps and charts must also be acknowledged. In addition to the use of quotation marks when quoting from original sources and secondary material, full reference for both quotes and paraphrases or summaries of published material must be given. All references should then be included in a bibliography at the end of the piece of work. Appropriate references for web-based material must also be given, including the relevant URL.

Any student found to have used unfair means in any examination or assessment procedure will be penalised.<sup>4</sup>

## ***Support for your learning***

The College has a positive policy of supporting students with learning difficulties or disabilities and their interests are represented by the Diversity Committee which reports directly to the Principals Group. The College has a Learning Support team, which can provide help and advice on all aspects of learning support and coping with learning difficulties.

The College offers support in making alternative arrangements for exams and assessment, support with study skills and advice with applications for the Disabled Students Allowance. Support and advice

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<sup>4</sup> For full details of the College's regulations on cheating and plagiarism, see the College Academic Deceit Procedure.

can also be provided in the specification and purchase of specialist equipment and the use of Information Technology.

In order to ensure that you are provided with the appropriate advice and support from the start of your studies it is important that you discuss any difficulties and special requirements with the Learning Support Manager, or with your Curriculum Head, as early as possible.

## **Your feedback**

The College requires all courses to have a formal system through which students are invited to comment routinely, in confidence, upon the teaching they have received. This helps us to check that students have a clear idea of our aims in teaching particular units, and of what we expect them to do; that our classroom teaching is effective and stimulating; that our advice and feedback to students on individual work is helpful; and that our resources are adequate.

Questionnaires are the primary mechanism for this formal 'feedback'. You will be asked to complete a questionnaire for each unit you are taught. We appreciate that they can be tiresome to complete in large numbers, but hope that you will take the time to give a full and detailed response. Both negative and positive feedback is important. In order to be able to assess the feedback and to attempt to take appropriate action it is important that when making comments you indicate **why** you feel that something is good or bad, not just that you think it is.

Each lecturer responsible for a unit will prepare a short report analysing the questionnaire returns, highlighting any criticisms or suggestions. The report and the questionnaires for each unit will then be passed on to the Curriculum Head, who will present the reports at meetings of the Course Committee. The reports will also be discussed at appropriate meetings of staff within the department so that appropriate action can be taken. A summary of the student feedback and the action taken will be included in the Institute's Annual Report which is presented to the College Academic Board.

## **Your representation**

Each course in the College is required to have a Course Team. This meets at least twice a year to review the course and consists of the Curriculum Head, all member of staff who teach units on the course and two representatives from the students on the course.

Prior to each meeting, your course representatives will be given a copy of the agenda and will be asked to consult their fellow students about the items listed and be prepared to report to the meeting on any issues raised.

Following the meeting, the class representatives will receive a copy of the Course Review report to share with their fellow students on the course.

The existence of the formal system of student representation doesn't mean that you should feel this is the only channel open to you. You may of course raise issues directly with a lecturer or your Curriculum Head. Individual problems are often likely to be more easily and quickly resolved in this way.

## **Your comments, complaints or compliments**

Naturally, we hope that your experience at the Adam Smith College will be an enjoyable and rewarding one. However, we do recognise that sometimes things can go wrong and encourage you to make your comments or complaints known to us so that we have the opportunity to resolve the problem and improve our services to you.

Problems are often most quickly and easily sorted by being dealt with informally. So we would ask that, in the first instance, you raise the matter with the appropriate member of staff. If you're not satisfied with the outcome, you can discuss the matter with your Curriculum Head.

Comments or complaints can also be put forward through your course representatives.

Where informal methods have failed to resolve the problem, you can make a formal complaint through the College's Complaint Form, which is available at Reception on all College campuses and in outreach centres or through the Students' Association.

It's always good to hear about what you think we do well and we encourage you to use the Compliments Form available at Reception. Every compliment received will be passed on to the person or department it's about.