

Notes on Course Choice

Pupils intending to undertake a university computing qualification should take Computing, especially at Higher. It gives a taster as to what their future course will be like and they can discover whether they have an aptitude and liking for the subject.

Links

Departmental

The Computing Department works closely with the Business Education Department in sharing the delivery of a number of courses. Computing content has obvious links with other subject areas such as Physics, Technology, Mathematics, Art, Media Studies and Music. The links with these other disciplines will become increasingly established as we embrace the holistic approach of the Curriculum For Excellence.

Co-Curricular

We seek to broaden the range of IT related experiences offered to pupils. For the past two years a Dollar Academy team has won first place in the annual Strathmore Trophy competition run by the University of Dundee. The 'Connecting with AI' workshops delivered last December by Edinburgh's School of Informatics in the Maquire Building were warmly received by Form II pupils. The after-school Multimedia Club continues to meet weekly.

Resources

The school network comprises over 560 PCs running Windows 7, each with a high bandwidth link to the Internet. The main departmental classrooms are equipped with a data projector and interactive whiteboard. In addition to many departmental IT rooms, there are three shared computer suites and also workstations in various other locations available for general use in the school. The software library includes many of the best industry-standard applications packages available today.

Future Developments

Radical changes to Scotland's school curriculum and qualifications are imminent. Many of these changes involve computing.

Application and awareness of the use of new or developing resources and technologies will continue to be a major priority. In today's highly competitive job market, it is those people who are confident and creative with modern software who will stand a better chance of getting certain jobs in IT and other areas such as engineering, design, media, research, business and finance.

The goal of the Computing Department is to prepare our students to be the IT developers and innovators of the future, using a hands-on approach to learning. Future opportunities in computing can be unpredictable and are without boundaries.

"The Internet? We are not interested in it."

- Bill Gates, 1993



The Department

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(Computing and ICT Co-ordinator)

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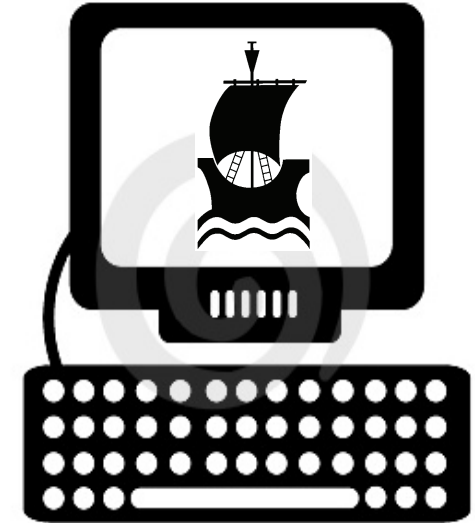
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DOLLAR ACADEMY



Computing Department

Session 2011/2012

5 Good Reasons To Study Computing

1. It is an exciting and constantly changing subject.
2. Practical computing skills are now essential.
3. It develops logical thinking and creativity.
4. A wide range of future career opportunities can result.
5. It promotes both individualism and teamwork.

Making the simple complicated is commonplace; making the complicated simple, awesomely simple, that's creativity.

- Charles Magnus

The Courses

Form I and II

Form I BEC - 1 period a week

The BEC (Business Education and Computing) course provides pupils with a taster in business and computing subjects. Multimedia and Office IT tools are used to illustrate ideas in both these subject areas. The Software Development Process is exemplified and Crocodile Clips software is used to introduce programming.

Form II Computer Science - 1 period a week

This course looks briefly at the rapid developments of computers in the 20th century and builds on the fundamentals of hardware and software introduced in BEC. Programming is an excellent developer of problem solving and logical skills. Pupils have the opportunity to write programs using the programming languages Scratch and Visual Basic. There are many opportunities to use a variety of multimedia tools including graphics manipulation, animation creation, video and audio editing, and web design. The interesting and important topic of Artificial Intelligence is explored.

Certification Courses

Form III and IV

Intermediate 2 Computing - 3 periods a week

This course involves not only learning about current hardware and software but also about providing pupils with the knowledge, understanding and the practical problem-solving skills to enable them to become the IT users and designers of the future. It complements many of the other courses available at this level. It is also a good subject choice for pupils wanting to increase their computing skills and knowledge but not necessarily intending to take the subject past Form IV. It consists of 3 Units:

Computer Systems develops an understanding of how computers work.

Software Development introduces the pupil to developing and writing software using the programming language Visual Basic.

Multimedia Technology develops skills in audio, graphics, video and authoring applications.

ICT - 1 period a week

This compulsory course is shared with the Business Education department. It aims to provide all pupils with basic Office skills and enable them to have acquired the IT Core Skills Award at Higher level by the end of the two years. Many pupils will also embark on the ECDL (European Computer Driving Licence) course in Form IV and, if necessary, can complete any outstanding ECDL modules in Form VI. This means that pupils have the opportunity to leave Dollar Academy with an international qualification in IT that is recognised by a wide spectrum of employers and institutions.

"Tell me and I forget. Teach me and I remember. Involve me and I learn."

- Benjamin Franklin

Note that the ICT qualifications should not be confused with a specialised computing course qualification.

Form V and VI

Higher Computing - 5 periods a week

This is a more technically demanding course, so a grade A or B at Intermediate 2 is usually a necessity although entry to the course is at the discretion of the department; there have been many successful "crash" pupils in recent years. The course takes an in-depth look at many aspects of *Computer Systems* and spends more time developing problem solving, logical and creative skills in *Software Development*. For the optional topic in 2010/2011, we once again chose to teach the *Multimedia Technology* topic which continues to be popular with pupils.

Advanced Higher Computing - 5 periods a week

This course follows on from the Higher but has an even greater practical element. Pupils continue their study of *Software Development* and *Computer Architecture* (including a short course on assembly language programming). A third of the course time is spent carrying out a project (for 40% of the final examination marks). Some excellent software has been produced by pupils as coursework.

ECDL Modules - 1 to 3 periods a week

The school is an accredited ECDL test centre. The ECDL course at Dollar builds on the skills developed by pupils in Forms III and IV. The overall award is obtained by gaining passes in the 7 modules:

1. IT Security for Users
2. Using the computer and managing files
3. Word processing
4. Spreadsheets
5. Databases
6. Presentations
7. Web browsing and communication