



DOLLAR ACADEMY

FORM VI Units and Modules 2023/2024

This part of the booklet gives details of the Units which are available. Modules will only run if there is sufficient demand, and if suitable resources are available.

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FIDA

One of the great achievements of Dollar Academy in recent years has been the development of our Futures Institute (<https://fida.world/>). Innovative projects rooted in the United Nations' Sustainable Development Goals have been created to allow young people to learn in new ways, both online and in person. FIDA is now playing an important part in the national conversation on the shape of education in Scotland for years to come.

A brand new qualification – the FIDA Sustainability Diploma – is going through the process of accreditation as a national qualification. Pupils taking this module will have a vital role in developing, trialling and modifying course content in preparation for a national release. There will be opportunities to work with a BBC Executive Producer to gain experience in research skills and digital content creation.

This module will be of particular interest to pupils with an interest in sustainability and also for those considering careers in education, journalism and digital media production.

HIGHER MEDIA

From television to cinema, radio to podcasts, social media to blogs and vlogs, and everything in between –the media plays a huge part in our everyday lives. This is a fast-paced subject that requires you to move with the times. As you look at the role of the media in contemporary society, you will recognise aspects of other subjects in your studies, including history, sociology, philosophy, psychology, and politics. You will gain the ability to think critically about media texts, identifying techniques used to manipulate audiences' attitudes and behaviours, and get the chance to create your own media content too. This is an ideal way to gain a further Higher and is a fully certified course taught over 4 lessons a week, with an additional period for project work.

PHILOSOPHY

What is Knowledge? How can we prove we exist? Do we have free will? What is it to be moral? Can war ever be justified?

Have you ever thought about these questions?

The central aim of this course is to encourage pupils to develop philosophical methods of enquiry applicable to a range of contexts, encourage critical thinking and expose pupils to several key philosophical ideas.

In the first term the class will focus on different aspects of Moral Philosophy and the different philosophical approaches to such ethical questions as Punishment, Euthanasia and War. The ideas of Immanuel Kant and J.S.Mill will be examined and their relative strengths and weaknesses estimated.

Further study will take account of the areas of Epistemology, where the problems of Induction and Scepticism will be introduced, the ideas of Rene Descartes examined. A study of Metaphysics, where the existence of God and the "Mind-Body" problem will be undertaken alongside the central question of Free Will, bringing the course to an end. Films such as "The Matrix" and "Blade Runner" will be used to illustrate particular philosophical theories and to indicate just how profound the impact of philosophical ideas has been on popular culture.

The class is discussion based but there will be opportunities for pupils to undertake several written assignments throughout the session.

INFORMATION TECHNOLOGY (EUROPEAN SCIENCE PROJECT)

This session, we are running a European project (the Erasmus STEPS project) which aims to produce resources for primary teachers so that they can run practical science lessons themselves. As part of this project pupils will work with Mr Simpson from the Business Studies Department for part of the session. We will also spend several days in November working alongside pupils and staff from Croatia, Spain and Belgium, teaching practical lessons to local primary pupils, although this part of the module is entirely optional.

VOLUNTEERING to teach Primary Science

This module is suitable for anyone with an interest in working with people (e.g. in teaching, social work, medicine etc.) or in volunteering. It could also be relevant for pupils with an interest in Science. Pupils studying this module will learn how to carry out and teach several practical science lessons to primary pupils. We will teach pupils in at least 3 local schools over the course of the session and all training will be given beforehand – no experience of Science is required.No previous knowledge or experience is required as all training will be provided.

SPORTS LEADERSHIP

Pupils undertaking a module in Sports Leadership will learn and demonstrate important life skills such as effective communication and organisation whilst learning to lead basic physical activities to younger people, their peers, older generations and within the community.

The course involves both guided & peer-to-peer learning and supervised leadership to ensure that pupils have all the skills they need to lead basic physical activities to other people.

The sessions use sport to deliver fun and engaging physical activities with other pupils and within the community. Pupils will plan, lead and evaluate sports/physical activity sessions over a number of tutored hours and then demonstrate their leadership skills as part of their assessment.

This SLQ Sports Leadership course will give you valuable skills and experiences relating to various aspects of leadership. It will also give you a UCAS recognised qualification.

A LANGUAGE SURVIVAL GUIDE

The intention of this 1-hour per week module is to teach language to complete beginners. The focus will be language required when visiting the country or having a conversation with a native speaker. Communication is key! This can be offered in French, German, Spanish, Italian or Mandarin, dependent on forthcoming interest.

LANGUAGE AMBASSADORS

This offers the opportunity to Form VI pupils to use their language skills in a variety of ways. It is designed for those pupils doing an AH in a language or those who have gained a Higher in Form V and want to continue to use their skills. Pupils can assist in language lessons with Juniors and Form I, offer homework support, organise language events e.g. the European Day of Languages . . . the list is endless and Form VI pupils can bring their own ideas. This is a ideal way to add to your leadership skills.

ITALIAN – BEGINNERS

The intention of this three-hour module is to teach the language to complete beginners. The emphasis will be communication – understanding and being understood in the beautiful language of a beautiful country. That said, dedicated learners will have the option of taking an SQA qualification at the end of the year; pupils have in the last three years achieved National 5, and even Higher, from a standing start.

MANDARIN

In this option, pupils will gain basic language skills, sufficient for survival, a foundation in this fascinating language. As well as learning about Chinese culture, pupils can work towards elementary HSK certification. HSK is China's only standardized test of Chinese language proficiency for non-native speakers. It certifies the possession of Chinese language skills when applying for a job in China. It also fulfils admission requirements when applying to different types of schools at various levels in China. It is also one of the requirements for applying for scholarship and grants for a gap year in China. The option of working towards a N5 or Higher can also be considered.

MATHEMATICS ADMISSIONS TESTS UNIVERSITY PREPARATION (MATHUP)

This course is designed primarily for pupils who are wishing to apply to a University for a course which will involve a Mathematics-based entrance test (all Sciences, Engineering and Maths based courses). It will cover topics and mathematical techniques which may appear on such tests, some of which are currently outside the Scottish Mathematics Curriculum. We will focus on preparation for the following 3 tests with a list of universities which accept and/or require these as part of the application process for specific courses provided below.

STEP: Cambridge, Warwick and Imperial

TMUA: Bath, Cambridge, Cardiff, Durham, Nottingham, Lancaster, Sheffield, LSE, Southampton & Warwick

MAT: Oxford

CODING

Coding is now a valuable skill to have in various jobs and a requirement for some university degree courses. This is a practical module and the coding languages taught will be pupil led. For example, if you have a desire to become a web developer, you will focus on HTML, CSS, JavaScript and SQL. If you plan to do a Physics degree, then learning to code in Python would be advisable. A budding mechanical engineer would benefit from learning the fundamentals of the C programming language.

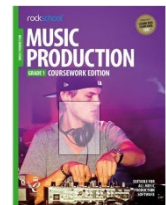
1 period per week

MUSIC PERFORMING (2 – 3 hours per week)

For those pupils who already play an instrument and/or sing but who are unable to complete a full Music course, the department offer opportunities to complete a performing unit. This consists of rehearsing a number of pieces of music and recording them, completing a short programme note about one of them and keeping a log or diary to show progress and practice over the year. There are 3 levels of unit, Grade 3, Grade 4 or Grade 5. These units can be completed during 1 or 2 non-contact periods per week or as part of instrumental lessons.

MUSIC TECHNOLOGY (2 – 3 hours per week)

There are a number of Music Technology options available for Form VI pupils who have not had the opportunity to follow this subject as a course but who have an interest in popular music and music recording and editing. Units vary from live recording, mixing and editing to an assessed course through Rockschool Music Production qualifications. Units start at beginner level and progress through to HNC depending on pupils' previous experience and class uptake. Units can be taught over 2 or 3 periods per week, To discuss further, pupils should speak with Mr Brown in G12 or see Mrs Timney.



MUSIC THEORY and AURAL (2 hours per week)

This is an option for any pupil sitting ABRSM Music exams who need Grade 5 theory to progress to higher grades. There is flexibility to include aural training elements too from the ABRSM and TRINITY Exam syllabus as well as those pupils hoping to study Music after school. In addition, any pupils who are considering a higher education music course could select this option if they would like to work on audition material or any other additional practice or preparation.

MUSIC THEATRE (2 – 3 hours per week)

We hope to run a timetable of music theatre activities during Form VI for those interested in taking part in a mini show during the 2nd term. This would be dependent on the number who sign up, at which point a show will be chosen to work on and a schedule of rehearsals created to fit in around existing music activities. These sessions would also include some acting, vocal coaching and dance tuition. There are awards/ certifications available in this genre through Rock School and other external bodies. Discussion can take place when people sign up.

ASTRONOMY (2 periods per week)

No prior knowledge of Astronomy or Physics is necessary to take the Astronomy module. In recent years, some pupils who have chosen Astronomy have done so purely for interest but the course also caters for pupils who wish to further their knowledge in preparation for study of the physical sciences at university; the Astronomy module has very broad appeal. We use the GCSE Astronomy course as a framework.

The topics we study include:

Earth, Moon and Sun

- Planet Earth
- The Moon
- The Sun
- Earth-Moon-Sun interactions

Planetary Systems

- Our Solar System
- Comets and Meteors
- Solar System Discoveries
- Exoplanets

Stars

- Constellations
- Observing the Night Sky
- Physical Properties of Stars
- Evolution of Stars

Galaxies and Cosmology

- Our Galaxy – the Milky Way
- Galaxies
- Cosmology

Astronomy is a practical subject so there will also be practical activities such as night time viewing sessions, safely observing the sun, performing simple astronomical experiments to help understand the earth, moon and sun better etc. You will learn how to make astronomical observations using the naked eye (unaided observations) and also with astronomical equipment (aided observations) such as binoculars, cameras and telescopes (both manual and robotic). We have access to telescopes around the world which we can operate using the internet to produce images such as the one below of the stunning Sombrero Galaxy.



APPLIED RESEARCH in CHEMISTRY

Many Dollar pupils are destined to pursue careers in Science, Medicine or Engineering. This module equips pupils with a knowledge of practical techniques and research skills that often form part of first-year Undergraduate courses. Students will gain experience in undertaking applied research and will learn how to present their findings to different types of audience.

Research skills covered include;

- Practical laboratory skills and instrumental techniques
- Literature searching
- Experimental Design
- Science writing (for publication)
- Public outreach
- Team working

The 2-hour per week module involves extensive practical work. Previous pupils on a similar Dollar Academy module produced experimental investigation packs, devised spectacular demonstration experiments and produced teaching materials used in schools across Scotland.

Pupils studying the module may be eligible for a formal STEM Leader award, credit rated by the SQA at SCQF levels 4, 5 or 6.

FORENSIC SCIENCE

This module introduces fundamental techniques of forensic science, including blood typing, chromatography and bullet trajectories. The breadth of the course will allow pupils to develop skills in Biology, Chemistry and Physics in this contemporary context. Pupils will have the opportunity to develop basic research and information handling skills by investigating forensic evidence in a documented case and look at current developments in forensic science technology.

The unit is suitable for anyone with an interest in general science and its practical applications as well as for those who are looking to access further studies in forensic related areas.

Entry requirements – minimum of one science at National 5 level.

This module will not be assessed, but is at SCQF level 5.

BIOLOGY FOR MEDICAL SCIENCE

This two hour per week course is aimed at pupils planning to study Medicine, Dentistry or Veterinary Medicine at University.

The aim of the course is to allow pupils to explore topics relevant to medical science in more detail than the syllabus allows. There is flexibility regarding the topics studied meaning current issues and personal interests can be accommodated but typical topics studied include immunology, cancer, CVD, diabetes and drug testing. There will also be the opportunity to practice relevant interview techniques and dissection skills.

PRACTICAL BIOTECHNOLOGY

This hands-on practical module focuses mainly on Microbiology. We will complete one Intermediate 2 unit and one Higher Biotechnology Unit on practical biotechnology.. Pupils will learn how to carry out activities such as making media, pouring plates, culturing microorganisms, biochemical tests, DNA fingerprinting and genetic engineering of bacteria. These practicals have been described by past pupils as very relevant to pupils who plan to study any Biological Science, Medicine, Dentistry or Veterinary Medicine but no previous experience of Science or future plans to study one of these courses is required.

PSYCHOLOGY

ENTRY REQUIREMENT - None

This course is offered to Form VI pupils with an interest in Psychology – the study of the mind. It runs for two hours per week and introduces pupils to the main domains of Psychology. In addition, pupils have the opportunity to pass a Higher Psychology Unit on “Individual Behaviour” through the study of sleep, dreams and sleep disorders.

MEDICAL PHYSICS

This is a module based upon material from the A-level Physics syllabus. It would be useful for those who wish to go on to study Medicine or Physics at University, or for anyone with a general interest in the subject. As well as classroom based activities, trips to the Medical Physics department at Ninewells Hospital in Dundee and Radiography Department at Forth Valley Hospital in Larbert will be organised. You will get a chance to learn and experience the cutting edge of applied physics which may well give you an advantage when it comes to your university interview.

DAYDREAM BELIEVERS (potential certification)

Rooted in design activities and innovation, this module provides an opportunity to develop your skills in creative thinking, problem-solving and critical thinking. There is the opportunity to complete assessments in order to attain certification in these transferable skills. As you work with others on projects you will learn new skills to help you solve real-world problems with innovation and creativity. You will use a range of resources that have been developed by universities and industry and will consider aspects such as the circular economy, climate change and sustainability whilst showing creative bravery.

PRACTICAL CRAFT SKILLS

This course is suitable for pupils who wish to develop their manual dexterity, spatial awareness, tenacity and creativity whilst learning both traditional and contemporary craft skills. Through the use of a variety of media, including wood, metal and acrylic, you will get the opportunity to design and create unique artefacts. From the traditional wood-turning lathe to the state-of-the-art laser cutter, a broad array of projects will be offered.

This module offers pupils the opportunity to design and manufacture an electric guitar.

FASHION & TEXTILE TECHNOLOGY

A new format of learning part-based online, part-based in school art studio (2 lessons in school, 1 hr at home) this course is experimental and practical with opportunities to learn about the fashion industry and develop and communicate your own ideas for fashion design. Using research methods including, photography, collage, textile printing, fashion drawing, sewing and fashion construction skills, pupils will style and make their own concepts. With mainstream brands just beginning to scratch the surface of addressing sustainability through clothing this course also looks at environmental issues in the fashion world. Develop a design and make it while looking at issues of sustainability in fashion.

HOME ECONOMICS (Cookery Skills)

Learning how to cook healthily on a budget are vital life skills and ideal preparation for student life. Each week a new recipe is made which allows pupils to develop their confidence, practical and organisational skills in the kitchen.

Pupils are also offered the opportunity to achieve the REHIS (Royal Environmental Health Institute of Scotland) Elementary Cookery Skills and Elementary Food Hygiene Awards.

A recipe booklet is issued to all participants of the course.

SCOTTISH BACCALAUREATE IN EXPRESSIVE ARTS, LANGUAGES, SCIENCE & SOCIAL SCIENCES

The Scottish Baccalaureate (Scot Bacc) in Expressive Arts, Languages, Science and Social Sciences a group Award comprised of several Highers and Advanced Highers from a pupil's portfolio of qualifications. of current Higher and Advanced Higher qualifications in their respective areas. But what makes a Scottish Baccalaureate unique is the **Interdisciplinary Project (IDP)**.

The Interdisciplinary Project (IDP)

Have you got an idea that you would like to explore in more depth? Would you like to see how your subject knowledge could be used in real-life? How about the opportunity to understand how all the subjects that you study can fit together to create something valuable? Undertaking the Interdisciplinary Project will enable you to do these things - and so much more besides.

The IDP is an independent research project that is carried out by a pupil or group of pupils. From the initial idea; through to the planning, execution and delivery of the final output this is pupil driven and is designed to develop skills that are valuable at University and beyond. As part of this, you will develop, and exemplify skills such as collaboration, problem-solving, communication, negotiation, independent learning, critical thinking and analysis. The IDP can provide you with a wealth of evidence to show that you have deepened your understanding of the area that you wish to study further at University as you will be pursuing a research area of your choice.

The final output of your project will be whatever you determined as being appropriate during your project planning stage. This may well be a report, but is just as likely to be a leaflet, poster, event, YouTube video or app; whatever is the best way for you to communicate your findings to the relevant audience.

In terms of UCAS points, the IDP is equivalent to half an Advanced Higher.

Further information, and examples of projects, can be found on the SQA website;
<https://www.sqa.org.uk/sqa/34638.1567.html>