DOLLAR ACADEMY

FORM VI Units and Modules
2024/2025

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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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

CREATIVE THINKING (SCQF level 6 – equivalent to Higher/UCAS tariff rated)

Entry requirement - At the discretion of the Head of Department. Prior study of Art and Design, Graphic Communication, or Design and Manufacture at certificate level is desirable but not essential.

Our human world is changing, increasingly shaped by the development of new technologies that challenge existing roles across a multitude of industries. The ability to draw inspiration from moments of spontaneity, and develop creative solutions in response, remains something that is intrinsically human. As society, and our roles within it, evolves, creative thinking is at heart of the innovative process and is an essential skill for everyone in this fourth industrial revolution. Using a wide variety of strategies, ideating, and testing you discover new solutions for issues in every area of life, including at school and work. Creative thinking challenges our assumptions and allows us to discover new things about ourselves.

ASSESSMENT
Assignment - 100% (no written examination)
The course structure incorporates a progressive approach to assessment. There is no written examination component to the course, the course award is evidenced exclusively through a project-based approach. The assessment framework employs five learning outcomes. Achievement of these outcomes can be presented flexibly, embracing a multimedia approach, allowing pupils to utilise their existing range of skills when deciding how to create work.

In summary, the outcomes are:

- Research:
    - Use both primary and secondary research to explore a problem; Make effective use of a variety of research methods and draw conclusions from the outcomes.
- Conceptualise:
    - Propose creative ideas based upon the research conducted; Propose imaginative and challenging creative concepts informed by research outcomes.
- Fail & Fix:
    - “Fail and fix” initial ideas. Test and improve ideas; compare, contrast, and develop solutions, utilising user testing and iteration to inform decisions.
- Communicate:
    - Clearly and creatively communicate and evaluate ideas; Independently select and utilise appropriate media to articulate ideas and present critical reflection.
- Evaluate:
    - Demonstrate critical evaluation of independent work; Consider, identify, and articulate the socio-cultural context, impact, and potential of outcomes.

COURSE STRUCTURE
Pupils will complete a minimum of two large-scale projects over the course of the session, with evidence supporting achievement of the five learning outcomes being generated holistically across the whole year's work. Projects have been designed collaboratively with industry partners such as the LEGO Agency, the Ellen MacArthur Foundation, Studio LR, Acrylicize Agency, and Edinburgh Napier University. Here is an example of an active project:

"Forestopia: Designed in Collaboration with Ellen MacArthur Foundation and IDEO. Create an eco-theme park inspired by the forest ecosystem. Learners will be able to choose between designing the rides and immersive experiences, catering facilities and services or shopping and merchandise."

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This module will take 2-3 hours a week.

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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.

GARDENING

Pupils will be introduced to the concepts and practises of horticulture whilst gaining hands-on experience in the school polytunnel and kitchen garden area. Through engaging in gardening activities, pupils will develop practical skills that can be applied in both personal and community garden contexts.

Within the module, pupils will generate ideas and plan the next stage of the school gardens. Development of a plant identification system will be included within the course as well as the opportunity to assist prep school pupils and gardening clubs in school. Garden produce from Dollar Academy will be entered into the Dollar Horticulture Show in September. Pupils participating in this module will help with the organisation of entries to this event.

Knowledge and experiences will include:

- Basic plant biology.
- Soil types and the importance of plant nutrition, including the role of fertilisers.
- Seed starting and plant propagation, this will include using our hydroponic farming tier.
- Garden maintenance and irrigation.
- Pest and disease management, including control methods.
- Sustainable gardening practices.
- Harvesting and utilising produce.
- Pruning and trimming.
- Weed control, including the identification of weeds.
- Garden planning and designing.
- Seasonal planting.

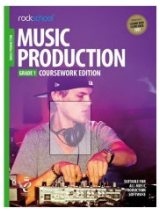
HOME ECONOMICS (Practical Cookery Skills)

Learning how to cook healthily on a budget are vital life skills and ideal preparation for student life. This one hour per week course allows pupils to gain confidence and develop practical cookery skills through the completion of a different recipe each week. Learning a variety of cookery terms, processes and skills allows pupils the opportunity to achieve the REHIS (Royal Environmental Health Institute of Scotland) Elementary Cooking Skills and Food Hygiene Awards, both of which are widely recognised within the hospitality industry.

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.

International Sustainability Diploma (SCQF level 6 – equivalent to Higher/UCAS tariff rated)

There is a unique opportunity to take a new qualification, the FIDA Sustainability Diploma. This has been developed at Dollar Academy, with support from Scottish Government, as a new national qualification to complement traditional single-subject examinations. Pupils will learn in a different way: by undertaking three 'Global Challenge' projects rooted in the UN Sustainable Development Goals. They will learn and use the principles of Design Thinking to develop innovative solutions to real-world problems. They will also have the opportunity to work with the University of Stirling Enterprise Team to translate their ideas into action. The aim of the course is to deepen understanding of sustainability and develop key skills such as independent research, problem-solving, critical thinking, collaboration, communication and entrepreneurship, which are increasingly sought by universities, colleges and employers. The FIDA Sustainability Diploma will be worth 24 points at SCQF Level 6 – equivalent to one Higher. Assessment is based on the portfolio of work pupils build throughout the year, and there are no examinations.

ITALIAN – BEGINNERS

The intention of this (up to) 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.

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 an ideal way to add to your leadership skills.

MANDARIN

In this option, pupils will gain basic language skills, sufficient for survival, a foundation in this fascinating language. As well as learning about China's 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.

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.

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.

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.

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.

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.

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 three tests. Please see a list of universities below which accept and/or require these as part of the application process.

STEP: Cambridge, Warwick and Imperial
TMUA: Bath, Cambridge, Cardiff, Durham, Nottingham, Lancaster, Sheffield, LSE, Southampton & Warwick
MAT: Oxford, Imperial

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.

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.

THINKING SKILLS

This module is designed for those who wish to sharpen up their problem solving and critical thinking skills. It would suit pupils who enjoy stretching themselves to their limits and doing some serious thinking with other like-minded students.

The module is based around an A-level qualification called ‘Thinking Skills’ which is administered by Cambridge International Education (CIE). The module is structured in a similar way to the CIE qualification but with our own Dollar agenda built in for pupils to practice for Olympiad papers and entrance exams for competitive universities.

The course is not geared towards a particular subject or subject group and is instead focussed on developing thinking skills, it could also be a pragmatic choice for those who are required to sit entrance exams and aptitude tests for university entrance. There is inbuilt flexibility with this module, each individual pupil is able to prioritise what suits them best but the default option would be that each pupils does a bit of everything on offer.

A pupil wishing to study Law would benefit from the critical thinking components, a pupil who wished to study Engineering would benefit from the problem-solving components, and a pupil who wished to study Medicine would benefit from both these components. Pupils who wish to practice Olympiad papers in the Sciences would be able to spend time going over past exam papers to help them gain the highest award possible in these elite competitions.

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