

A LEVEL PROSPECTUS

Respect Excellence International Mindedness



2023-2024

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HEAD OF SECONDARY'S WELCOME

A warm welcome to the International School of Central Switzerland!

ISCS is a British International school located in the heart of Switzerland in Cham in the beautiful Canton of Zug. Zug is a highly desirable area with an International influence that attracts families, professionals and big businesses. Our school is the only school to provide a British curriculum in our area via the World renowned Cambridge International accreditation, and as a result, is an attractive choice for our students.

A Level study is highly academic and requires students to not only demonstrate their aptitude but to demonstrate enthusiasm, cooperation, preparation, commitment, hard work and positivity in their approach. Your previous teacher's recommendations will also play a vital part in your acceptance.

We have extremely high expectations of our students and we encourage them to be ambassadors for and involve themselves fully in the ISCS community, and to be role models for the rest of the school body.

The ISCS Curriculum culminates in Key stage 5 for students aged 17-18 years. At this stage, there is greater emphasis on student responsibility for their own self-directed study time, their independence and resilience. This along with the support of their tutor and subject teachers, provides our students with the stepping stone required for their transition to University, Apprenticeship or the World of Work.

At Key Stage 5, our Year 12 students can **choose from a list of 12 A Level subjects** that they will study for the **2 year course**. A Level qualifications are highly regarded and recognised all around the World.

At Key Stage 5, we typically have 8 to 10 students per year group and 15 students is our maximum figure per class. Currently, we have 5-8 students in each subject lesson.

A Level study is a good academic option for students from all over the World. The smaller class sizes at ISCS guarantee **individualised teaching and learning**, support and advice that is intrinsic to students reaching their **academic potential**.

The ISCS Secondary Team looks forward to discussing your options with you and supporting you with making your future goals happen!

We hope that you will trust us with the next stage of your journey!



Mrs Rebecca Bradley

HEAD OF FUTURES WELCOME

Welcome to the Advanced Secondary Programme at ISCS. Eleanor Roosevelt once said, "the world of the future is in our making." We want to help you to create your future and your world.

The Advanced Secondary programme is a two year experience where you prepare for the next stage of your professional and educational journey, all whilst honing the skills you need to navigate future challenges. Our bespoke Leadership Programme, Futures Programme and Personal Development Curriculum are designed to help you develop aptitudes and skills beyond the taught curriculum as well as thinking outside the box for personal and professional opportunities.

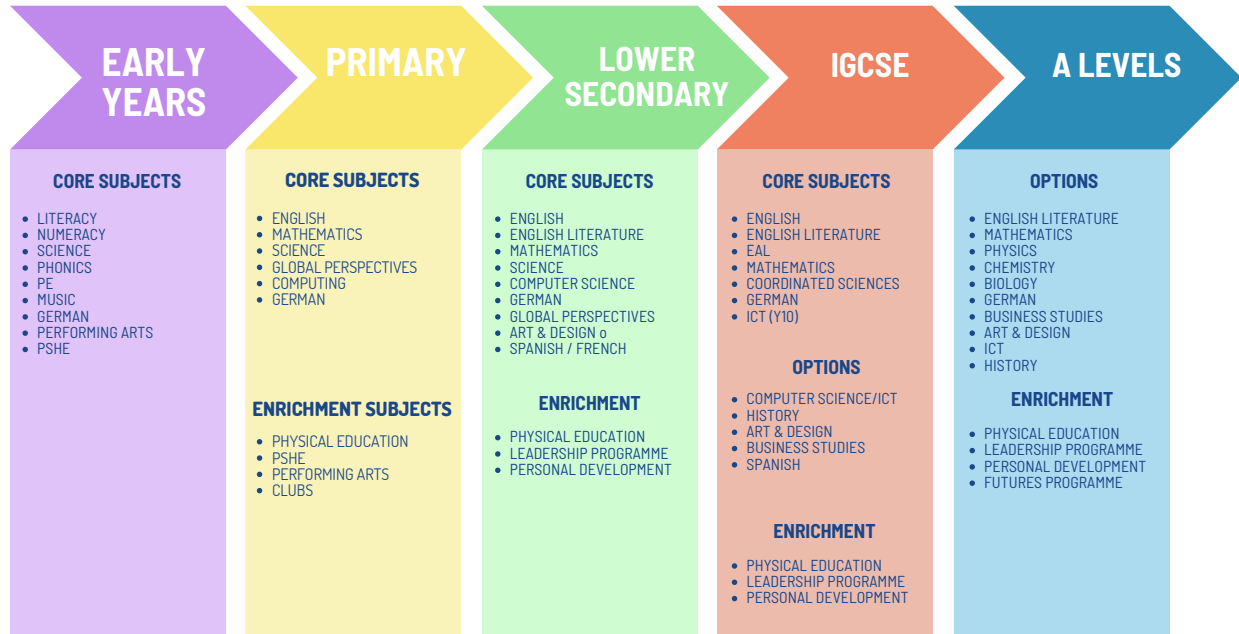


A Levels are academically rigorous; they are the stepping stones to the most prestigious universities in the world. So, in order to join us we ask that you have a firm foundation from previous studies. If you have studied IGCSEs, **our requirement is that you have obtained at least five IGCSE subjects at grade C or above.** If you have studied in a different local or international system, we ask for an equivalent level of study. Furthermore, we require that, for the subjects you are interested in at A-level, potential ISCS students have obtained at least a B or higher or the equivalent. We pay special attention to the recommendation of previous teachers and school referees who can send their references directly to our Admissions Department.

If you think you are ready to step up to the mark and excel in the next part of your academic journey, we would love for you to join us.

Mr Ryan Hopton

CURRICULUM OVERVIEW & STUDENT TESTIMONIALS



ISABELLA SAENZ: YEAR 13

Hello, I take mathematics, physics, biology and English language. A levels allow me to further my understanding of IGCSE subjects I found most interesting. In comparison to IGCSEs, A levels provide more information and a greater variety of methods to find solutions to problems. For me, the best way to learn all of these subjects is to be consistent and practice what you learn everyday.

ANNEMIJN VAN ONSELEN: YEAR 13

Hello, I am in Year 13 and I take four A levels. These are Mathematics, History, German and English Language. Compared to the IGCSEs, the A levels are definitely a higher level, but they provide a nice challenge in learning. Many parents think that the small amount of classes will leave the students with too much time, but I can assure you that I have never had a single free study period, as the amount of homework fills them all.

Apart from the courses themselves, we also have careers every week, where we work on Unifrog. This is a very useful program which helps students to find what they want to do after school and also supports them in writing their CV.

I hope this gives some insight into the A levels.

JADE ANDRIEU-GUITRANCOURT: YEAR 13

Hi there! I'm a year 13 student and I took German, Maths and Art as A levels. Since the beginning of the year, I have enjoyed Art, German. They have been pretty relaxed compared to Maths. Maths really pushes my limits, which also furthers my knowledge to a whole new level, one I wouldn't have achieved during IGCSEs. But overall, I have been enjoying all my classes a lot.

GABRIEL LEVY: YEAR 13

Hi, I am in Year 13 and I am doing History, Mathematics and Physics as A Levels. Honestly, these are difficult subjects, but with effort, I can learn a lot and be ready for university after I finish school.

A LEVEL COURSE CARDS

ART & DESIGN

ENTRY REQUIREMENTS:

5 GOOD IGCSE PASSES (OR EQUIVALENT) INCLUDING ENGLISH & ART
ENTHUSIASM & DEDICATION

AWARDING BODY:

CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:

IDENTITY, DESIGN PROCESS, PRESENTATION

LEAD TEACHERS

MRS R. BRADLEY



BIOLOGY

ENTRY REQUIREMENTS:

5 GOOD IGCSE PASSES (OR EQUIVALENT)
GRADE B IN IGCSE SCIENCE OR EQUIVALENT
GRADE C IN MATHS (EXTENDED PAPER) & ENGLISH IGCSE OR EQU.

AWARDING BODY:

CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:

CELL STRUCTURE, BIOLOGICAL MOLECULES, TRANSPORT IN PLANTS & MAMMALS, BIODIVERSITY, GENETIC TECHNOLOGY

LEAD TEACHER

MISS L. PREDOULI



BUSINESS STUDIES

ENTRY REQUIREMENTS:

5 GOOD IGCSE PASSES (OR EQUIVALENT)
GRADE C IN MATHS & BUSINESS STUDIES

AWARDING BODY:

CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:

PEOPLE IN BUSINESS, MARKETING, BUSINESS FINANCE AND GLOBALISATION

LEAD TEACHER

MR R. HOPTON



CHEMISTRY

ENTRY REQUIREMENTS:

5 GOOD IGCSE PASSES (OR EQUIVALENT)
GRADE B IN IGCSE SCIENCE OR EQUIVALENT
GRADE B IN MATHS (EXTENDED) & ENGLISH IGCSE.

AWARDING BODY:

CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:

ORGANIC & INORGANIC CHEMISTRY, STOICHIOMETRY, RATES OF REACTION, EQUILIBRIUM

LEAD TEACHER

MISS L. PREDOULI



A LEVEL COURSE CARDS

COMPUTER SCIENCE*

ENTRY REQUIREMENTS:

5 GOOD IGCSE PASSES (OR EQUIVALENT) INCLUDING COMPUTER SCIENCE & MATHS

AWARDING BODY:

CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:

LEAD TEACHER

MR D. ALVAREZ



ENGLISH LITERATURE

ENTRY REQUIREMENTS:

5 GOOD IGCSE PASSES (OR EQUIVALENT) INCLUDING A GRADE C IN ENGLISH

AWARDING BODY:

CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:

Shakespeare, Plays, Novels and Poems (written before 1900 and after 1900).

LEAD TEACHER

MR TURNER



FRENCH

ENTRY REQUIREMENTS:

5 GOOD IGCSE PASSES (OR EQUIVALENT) GRADE A IN IGCSE FRENCH

AWARDING BODY:

CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:

FAMILY, LAW & ORDER, CULTURE, POLLUTION, THE MEDIA

LEAD TEACHER

MRS R. BRADLEY



GERMAN

ENTRY REQUIREMENTS:

5 GOOD IGCSE PASSES (OR EQUIVALENT) GRADE B IN IGCSE GERMAN (FIRST LANGUAGE) GRADE A IN IGCSE GERMAN (FOREIGN LANGUAGE)

AWARDING BODY:

CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:

FAMILY, LAW & ORDER, PHILOSOPHY & BELIEF, FOOD & DRINK

LEAD TEACHER

MR R. NAYMA



A LEVEL COURSE CARDS

HISTORY

ENTRY REQUIREMENTS: 5 GOOD IGCSE PASSES (OR EQUIVALENT) INCLUDING HISTORY

AWARDING BODY:
CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:

LEAD TEACHER
MR R. HOPTON



ICT

ENTRY REQUIREMENTS: 5 GOOD IGCSE PASSES (OR EQUIVALENT) INCLUDING ICT

AWARDING BODY:
CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:
IDENTITY, DESIGN PROCESS, PRESENTATION

LEAD TEACHER
MR D. ALVAREZ



MATHEMATICS

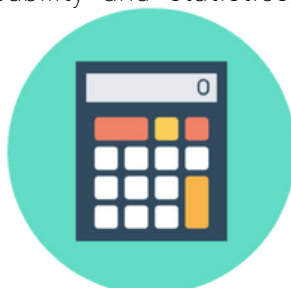
ENTRY REQUIREMENTS: 5 GOOD IGCSE PASSES (OR EQUIVALENT) GRADE B IN IGCSE MATHS (ADVANCED PAPER)

AWARDING BODY: CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:
Integration, derivation, probability and statistics, mechanics, etc.

LEAD TEACHER
MISS B. PIKE



PHYSICS

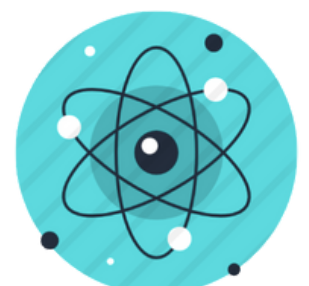
ENTRY REQUIREMENTS: 5 GOOD IGCSE PASSES (OR EQUIVALENT) GRADE B IN IGCSE SCIENCE OR EQUIVALENT GRADE C IN MATHS & ENGLISH IGCSE OR EQU.

AWARDING BODY: CAMBRIDGE INTERNATIONAL

TYPE: A LEVEL 2 YEAR

EXAMPLE TOPICS:
Motion, Dynamics, Thermodynamics, Nuclear Physics, etc.

LEAD TEACHER
MR M. EVISON



ART & DESIGN

Lead Teacher: Mrs R. Bradley
Subject Teachers: Mrs R. Bradley & Mr F. Santos
Awarding Body: Cambridge International



Entry Requirements

Students are welcome to study Art at A Level if they have achieved the following:-

- Grade B or higher in an IGCSE Art course or an equivalent qualification.
- Grade C or higher in IGCSE English or equivalent.

During the course independent gallery and Art-based visits are recommended for all A Level artists.

Course Description

Art & Design is a 2 year course that provides opportunities for learners to develop their personal practice, enrich their understanding of key concepts and improve their practical skills in a wide range of traditional and contemporary techniques.

The A Level involves both practical outcomes (50%) as well as a written Personal Investigation (50%) and it is important that students have a good level of English at Grade C or above.

Both outcomes are assessed on the following features:-

RECORD: This is making a record of initial ideas, mind-mapping and recording what is seen, imagined or planned for and can be done in many forms e.g. drawing, painting, printing, digital processes or mixed-media.

EXPLORE: This means formulating thoughts and ideas, techniques, styles and concepts and students can tailor their outcomes to suit their own personal interests and strengths.

DEVELOP: This means experimenting with media and techniques, methods and materials, and selecting those that are most appropriate to your own outcome.

PRESENT: This means making your own personal, polished and practised drawings, paintings, mixed-media pieces, sculptures and a portfolio of work that makes sense to the viewer.

Progression

Art & Design helps to equip learners with lifelong skills such as creativity, confidence, enthusiasm, adaptability and problem solving. This is a creative and enriching subject that promotes an overall innovative and ideas-driven approach that can be utilised in all professions. Some professions from the creative sector include graphic design, gallery & museum curation, architecture, publishing, advertising, game & software design, interior design, furniture design, fashion design and purchasing, set design & theatre production, beauty & makeup artistry, restoration, art dealing, forensic portrait making, web development, journalism and marketing.

Art combines well with all subjects and offers creativity to your set of qualifications.

BIOLOGY

Lead Teacher: Miss L. Predouli
Subject Teachers: Miss L. Predouli
Awarding Body: Cambridge International
Course duration: 2 year A Level



Entry Requirements

Students who have successfully completed IGCSE Double Award Science or IGCSE Biology or the equivalent at KS4 will have received sufficient grounding in Biology to enable them to study A Level Biology.

Certain requirements are expected to be met in order to access this course:

- Grade B or higher in IGCSE Science qualification
- Grade C or higher in IGCSE Mathematics (Extended Paper)
- Grade C or higher in IGCSE English qualification

Course Description

A Levels Biology is a two years course clearly distinguished in AS topics studied during the first year and A Level topics studied in the second year of the course. The learners are going to sit five exam papers; three at the end of the first year and two at the end of the second year.

Course components/Exam styles

- Multiple Choice
- Extended Questions (for AS and A Levels)
- Practical Skills
- Planning, Analysis and Evaluation of experiments & experimental techniques

Example topics

- Cell structure & membranes
- Biological molecules & enzymes
- Mitosis & Meiosis
- Nucleic acids & protein synthesis
- Transport in animals & plants
- Infectious diseases & immunity
- Photosynthesis & respiration
- Hormones, neurons and muscle movement
- Inheritance and genetic technology
- Evolution & Ecology

Progression

Biology A Level will provide the skills to make associations and connections with all living things as well as provide a solid and clear understanding of the functioning of the human body. Although it is a wide-ranging subject, students will discover their area of interest. Biology is a facilitating subject which is required for entry in most leading universities in the world and unlocks the following professional opportunities to include:

- Medicine, Dentistry & Genetics
 - Conservation & Marine biology
 - Pharmaceuticals
-

BUSINESS

Lead Teacher: Mr R. Hopton
Subject Teachers: Mr R. Hopton
Awarding Body: Cambridge International
Course duration: 2 year A Level or 1 year AS



Entry Requirements

In order to study Business at AS or A Level, students need at least 5 IGCSEs or equivalent at Grade C or above. This should include at least a B in Maths and/or Business Studies. Students should be open to contributing to discussions, practising their skills of data analysis and dedicating time to widening their knowledge and learning vocabulary. This course involves pre-reading, case study evaluation and interpretation of opinions; therefore, students with a love of decision-making are encouraged!

Course Description

The study of AS and A Level Business allows students to take the first step towards a career in private or public organisations or progress with confidence to a degree in business and management related subjects. We teach Business through the following themes:

- Change is the only constant.
- Management is relevant to every person in a business.
- Customer focus means a business will design and produce goods and services that people want to buy.
- Innovation enables a business to re-invent itself and stay ahead of the competition.
- Creating value is the core reason why any organisation exists.
- Strategy is about knowing where you are, where you want to get to and how you are going to get there.

Assessment at AS Level is through two examinations (1 hour 15 minutes and 1 hour 30 minutes), with a third taken to create the complete A Level.

Progression

A Level Business Studies is an excellent route to University courses or professional opportunities in the following areas:-

- Business Management & Administration,
 - Finance & Accountancy
 - Retail Management
 - Tourism
 - International Business
-

CHEMISTRY

Lead Teacher: Miss L. Predouli
Subject Teachers: Miss L. Predouli
Awarding Body: Cambridge International
Course duration: 2 year A Level



Entry Requirements

Students who have successfully completed IGCSE Double Award Science or IGCSE Chemistry or the equivalent at KS4 will have received sufficient grounding in this subject to enable them to study A Level Chemistry.

Certain requirements are expected to be met in order to access this course:

- Grade B or higher in an IGCSE Science qualification or equivalent
- Grade B or higher in IGCSE Mathematics or equivalent
- Grade C or higher in IGCSE English qualification or equivalent

Course Description

A Levels Chemistry is a two years course clearly distinguished in AS topics studied during the first year and A Level topics studied in the second year of the course. The learners are going to sit five exam papers; three at the end of the first year and two at the end of the second year.

Course components/Exam styles

- Multiple Choice
- Extended Questions (for AS and A Levels); including problem solving
- Practical Skills
- Planning, Analysis and Evaluation of experiments & experimental techniques
-

Example topics

- Physical & Inorganic Chemistry
 - Stoichiometry
 - Structure of the atom
 - Periodicity
 - Bonding
 - Energy changes & equilibria
 - Chemical reactions & rates of reactions
- Organic Chemistry
 - Nomenclature
 - Structural groups of hydrocarbons and organic molecules
 - Polymers & production techniques

Progression

A Level Chemistry is essential for the pursuit of progression in Chemistry, Chemical Engineering, Medicine, Dentistry and Veterinary Science at University level. Zug is a huge employer of Chemists who can be employed in pharmaceutical companies, biotech, beauty & detergent companies, agrochemical companies, textiles & dyes as well as paints and cosmetics.

Zug is a European hub for such companies, which include Johnson & Johnson, Roche, AstraZeneca and Biogen.

COMPUTER SCIENCE*

Lead Teacher: Mr D. Alvarez
Subject Teachers: Mr D. Alvarez
Awarding Body: Cambridge International
Course duration: 2 year A Level



Entry Requirements

At least 5 good IGCSE passes or equivalent to include qualifications in Computer Science and Mathematics at a Grade B or higher.

*A Level Computer Science will run based on student numbers. Entries will be at the discretion of the school.

Course Description

In AS and A level Computer Science, students learn the principles of computation and algorithms, computer programming, machine data representation, computer systems (hardware and software), computer organisation and architecture, communications and networking, databases and the consequences of using computing.

Progression

Students who study Computer Science at A Level may go on to study a related course at University or may wish to progress to apprenticeship or employment where they can utilise the skills gained such as adaptability, coding and advanced computational skills.

ENGLISH LITERATURE

Lead Teacher: Mr J. Turner
Subject Teachers: Mr J. Turner & Mr R. Davies
Awarding Body: Cambridge International
Course duration: 2 year A Level



Entry Requirements

At least 5 IGCSE or equivalent at Grade C or above, one of which must be in a B or above in an English qualification. Students who are enthusiastic and committed are encouraged to apply. The course on offer at ISCS is A Level English Literature.

Course Descriptions

Cambridge International A Level English Literature provides the opportunity to gain further knowledge and understanding of international poetry, prose and drama, with candidates studying all genres. Learners will study a range of inspiring set texts which is designed to encourage **stimulating classroom discussion** and build a **range of skills**. In the first year learners will study three set texts and prepare for one unseen text. In the second year of the course, they will study four further set texts. Throughout the course learners will be encouraged to practise their skills in close reading through the study of literary extracts and unseen texts; developing skills of analysis and interpretation of texts, alongside their expression of personal response to the texts studied. Learners will explore the conventions of genres of texts and the contexts in which works have been written, read and received. The skills gained in this course are highly transferable and can help learners in other subject areas, as well as equipping them for higher education and/or employment.

Progression

English is a highly regarded facilitating subject that is well received by all International Universities as well as businesses. English works well alongside most subjects and is an important element of careers based in Education, Journalism, Business, Human Resources Management, Law, Science, the Arts and many more.

FRENCH

Lead Teacher: Mrs R. Bradley
Subject Teachers: Mrs R. Bradley & Miss R. Orford
Awarding Body: Cambridge International
Course duration: 2 year A Level



Entry Requirements

In order to study French as a Modern Foreign Language at A Level, students must have 5 good IGCSE passes or the equivalent and one of those must be a Grade B or higher in French.

Students should be open to contributing to lessons, practising their language and dedicating time to widening their knowledge and learning vocabulary.

This course involves a literature component and students with a love of language and reading are encouraged.

Course Description

The French A Level is an excellent opportunity to further your linguistic knowledge and develop an increased awareness of the French language and the Francophone culture in a Global context. A Level French concentrates on culture & contemporary society through an array of topics, an onus on communication, analytical skills and a research based assignment. Throughout the course, we will read 3 literary texts from traditional to contemporary.

Course components

- Speaking
- Reading & Writing
- Essay
- Texts (Literature)

Example topics

- Travel & tourism
- Law & order
- Pollution
- Technological Innovation
- Young People
- The Media
- Philosophy & Belief
- Patrimoine

Example literary texts

- No et moi (Delphine de Vigan)
- Un Secret (Philippe Grimbert)
- Bonjour Tristesse (Françoise Sagan)
- Les jeux sont faits (Jean-Paul Sartre)

Progression

A Language at Advanced Level is a facilitating subject which means it is always looked upon favourably by Universities and other Higher educational institutions and may assist entry for further language study as well as alternative academic courses.

The skills required to learn an additional language are highly desirable and combine well with a host of other subject specialisms, particularly Maths, Chemistry, Physics, English, German and the Arts subjects.

The need for a language in the professions of the future is extremely important. Every career path chosen by our International students will require the skills that learning a Modern Language offers.

GERMAN

Lead Teacher: Mr R. Nayman
Subject Teachers: Mr R. Nayman
Awarding Body: Cambridge International
Course duration: 2 year A Level



Entry Requirements

In order to study German at A Level, students must have 5 good IGCSE passes or the equivalent and one of those must be a Grade B or higher in German as a First Language or a Grade A/A* in German as a Foreign Language. The program is geared towards native speakers but open to very strong Foreign Language Learners, who are committed and willing to put in effort. Students should be open to contributing to lessons, practising their language and dedicating time to widening their knowledge and learning vocabulary. This course involves a literature component and students with a love of language and reading are encouraged to enrol.

Course Description

The German A Level program is an excellent opportunity to further your linguistic knowledge and develop an increased awareness of the German language and German culture in a Global context. A Level German concentrates on culture & contemporary society through an array of topics, an onus on communication, analytical skills and a research based assignment. Throughout the course, we will read 3 literary texts from traditional to contemporary.

Course components

- Speaking
- Reading & Writing
- Essay
- Texts (Literature)

Example topics

- Family
- Travel & tourism
- Law & order
- Pollution
- Technological Innovation
- Young People
- The Media
- Food & Drink
- Philosophy & Belief

Example literary texts

- Tschick (Wolfgang Herrndorf)
- Demian (Hermann Hesse)
- Zweier ohne (Dirk Kurbjuweit)
- Homo faber (Max Frisch)

Progression

A language at Advanced Level is a facilitating subject which means it is always looked upon favourably by Universities. A Level German in particular is an entry requirement for native German speakers, who apply to University in Germany, Austria or Switzerland and is seen very favourably as a subject choice for non-native applicants to University, potentially replacing the need to submit a B2/C1 language diploma for entry to University in Germany, Austria or Switzerland. The need for a language in the professions of the future is extremely important and German in particular opens a lot of opportunities both in the German speaking world and beyond.

HISTORY

Lead Teacher: Mr R. Hopton
Subject Teachers: Mr R. Hopton
Awarding Body: Cambridge International
Course duration: 2 year A Level or 1 year AS



Entry Requirements

In order to study History at AS or A Level, students need at least 5 IGCSEs or equivalent at Grade C or above. This should include at least a B in English and/or History. Students should be open to contributing to discussions, practising their skills of evidence analysis and dedicating time to widening their knowledge and learning vocabulary. This course involves pre-reading, source evaluation and interpretation of opinions; therefore, students with a love of language and reading are encouraged!

Course Description

AS and A Level History is an interesting and thought-provoking course covering modern history in the nineteenth and twentieth centuries. The emphasis is on both historical knowledge and on the skills required for historical research. In History, students develop an understanding of cause and effect, continuity and change, similarity and difference, and use historical evidence as part of their studies.

At ISCS, to reflect the wide variety of backgrounds that students bring, we study the International and European options.

As AS, this includes topics such as:

- Empire and the emergence of world powers
- The League of Nations and international relations
- China and Japan

In the second year of the A Level, this includes topics such as:

- Mussolini's Italy
- Stalin's Russia
- Hitler's Germany
- Churchill's Britain

Progression

History is known as an 'enabling' subject which means that it is a highly desirable course for University entrance requirements because it promotes independence of thought and questioning. It combines well with the majority of other A Level qualifications, particularly social and political sciences, law and humanities - it is a stepping stone to a range of future careers.

ICT

Lead Teacher: Mr D. Alvarez
Subject Teachers: Mr D. Alvarez
Awarding Body: Cambridge International
Course duration: 2 year A Level



Entry Requirements

At least 5 IGCSE or equivalent at Grade C or above to include Mathematics, English & ICT.

Course Description

Cambridge International AS & A Level Information Technology encourages learners to meet the needs of Higher Education courses in Information Technology as well as employers. In a world where IT is constantly changing, individuals increasingly need technological and information literacy skills that include the ability to gather, process and manipulate data. The impact of IT on society is enormous and as the percentage of businesses and households connected to communication networks such as the internet grows, so does the need for individuals who understand these new technologies. This syllabus encourages learners to become effective and discerning users of IT. It helps them to develop a broad range of IT skills, knowledge and understanding.

The key concepts for Cambridge International AS & A Level Information Technology are:

- **Impact of IT:** The application of technology to process information impacts all aspects of our lives. The enormity of the impact can be seen in industry and commerce, transport, leisure, medicine, in the workplace and the home. Communications using technologies have made the world seem smaller.
- **Networks:** Computer systems can be connected together to form networks allowing them to share data and resources. The central role networks play in the internet, mobile and wireless applications and cloud computing has rapidly increased the demand for network capacity and performance.
- **The internet:** The internet is a global communications network that uses standardised communications protocols to allow computers worldwide to connect and share information in many different forms. The impact of the internet on our lives is profound. While the services the internet supports can provide huge benefits to society they have also introduced issues, for example security of data.
- **New technologies:** As the information industry changes so rapidly, it is important to keep track of new and emerging technologies and consider how they might affect everyday life.

Progression

Students who study ICT at A Level may go on to study a related course at University or may wish to progress to apprenticeship or employment where they can utilise the skills gained. The adaptability of the course and strengths such as heightened problem solving and logical thinking combine well with other A level courses and lends itself to professional opportunities in the workplace.

MATHEMATICS

Lead Teacher: Miss B. Pike
Subject Teachers: Miss B. Pike & Mr J. Eid
Awarding Body: Cambridge International
Course duration: 2 year A Level



Entry Requirements

For students to consider this as one of the A-level subjects, it is mandatory that they have obtained a B as the minimum acceptable grade. Even though in specific circumstances this requirement can be negotiable, it is necessary to point out that the subject requires dedicated students interested in the syllabus.

Course Description

During these two years students study a variety of topics from mathematical approaches and methods to more applied mathematics that involves the study of mechanics and probability and statistics. The first year encompasses pure mathematics where foundation knowledge such as algebra, coordinate geometry, derivation and integration are taught. Furthermore, in this year we also go through mechanics, which connects mathematics with the mechanical world. Topics such as motion, energy, collisions are part of the syllabus. In the second year we come back to theoretical knowledge involving a more in depth study of derivation integration and trigonometry and we explore new topics such as complex numbers. To finalise the programme we address probability and statistics, where students learn about topics such as interpreting data, permutations and combinations, and the normal distribution, to mention some.

Progression

Mathematics is a facilitating subject that is highly regarded for entry to universities around the World. It is a valuable supporting subject for most other academic areas and related professional choices include:- Engineering, Economics, Architecture, Accountancy, Medicine, IT, Teaching & Design

PHYSICS

Lead Teacher: Mr M. Evison
Subject Teachers: Mr M. Evison
Awarding Body: Cambridge International
Course duration: 2 year A Level



Entry Requirements

Physics is a highly academic subject at A Level and requires:-

- 5 IGCSE or equivalent passes at Grade C or above
- Grade B in an IGCSE Science qualification or the equivalent
- Students of the Advanced or Higher Tier IGCSE paper only
- Recommended that students study A Level Mathematics but not essential

Course Description

During the first year of this course, students will obtain the basic knowledge of the subject. Natural phenomena such as motion, waves, magnetism, electricity, and atomic physics encompass this year. The second year delves into more specific topics that will require previous knowledge and at the same time show the applications in different fields such as industry, medicine, astronomy and energy production. It is indeed a comprehensive programme that shows students the different fields of application so they can have a sound understanding of the different topics the subject encompasses, including nowadays activities.

Progression

Physics is the study of the universe and influences many things in our daily lives from Scientific breakthroughs to the development of mobile technology. As a result, Physics has many transferable skills that provide a pathway to countless professions. These can include:-

- Engineering
- Mathematics
- Medicine
- Veterinary Science
- IT
- Other Science specialisms
- Medicine

Physics is a facilitating subject that is recognised by the leading universities in the World.

NEXT STEPS



REGISTRATION & APPLICATION

Now that you have information about our A Level provision, please consider the A Levels that are the best fit for you. In making your decision you can:-

CONTACT

Contact our subject specialist lead teachers via the dedicated email aleveloptions@iscs-zug.ch to ask them questions related to specific A Level subjects or courses.

Contact Mr Hopton or Mrs Bradley via this email address if you have any general questions regarding the ISCS provision of A Level, possible combinations of A Level courses or individualised guidance.

REGISTRATION OF INTEREST

Please register your initial interest for a place at ISCS for the academic year 2022/2023 via the Google Form. During this time the ISCS Team may contact you to support your decision process.

DEADLINE FOR EXISTING STUDENTS: 1ST DECEMBER 2022

DEADLINE FOR EXTERNAL STUDENTS: ONGOING

APPLICATION

The **online application form** for the academic year will begin on **January 1st 2023** and will be available to fill in on the ISCS website. The link will also be sent to all students and their parents who registered interest via the Google Form.

During this time, the ISCS Team will contact you to discuss your set of A Level choices.

START DATE: 1ST JANUARY 2023

DEADLINE FOR EXISTING STUDENTS: 31ST MARCH 2023

DEADLINE FOR EXTERNAL STUDENTS: ONGOING

OFFICIAL ENROLMENT FOR THE ACADEMIC YEAR 2023/2024

All students will need to attend school on the afternoon of **MONDAY 21ST AUGUST 2023** to officially register onto the A Level course beginning academic year 2023/2024.

We look forward to hearing from you and supporting you in the next academic year!

