Grade 9 and 10
Academic Learning Programme

In Grade 9 students embark on a two-year academic learning programme that consists of both International General Certificate of Secondary Education (IGCSE) and UWCSEA courses. This balanced international curriculum is suitable for students of all nationalities and all levels of ability. IGCSE is taken in over 100 countries worldwide and is recognised by universities and employers around the world as evidence of academic ability. The academic programme is one of five interlinking elements of the UWCSEA learning programme which includes academics, activities, outdoor education, personal and social education and service. UWCSEA students are expected to participate fully in all aspects of the learning programme which gives them multiple opportunities to develop the qualities and skills of the UWCSEA profile.

In this guide you will find detailed information about the Grade 9 and 10 academic programme. Our curriculum is made up as follows:

1. Coordinated Science – this course counts as two IGCSEs and combines Biology, Chemistry and Physics; it prepares students to study any of these options at IBDP level (both Higher and Standard Level)
2. Digital Perspectives – a course that combines digital skills, creativity and critical thinking skills
3. Global Perspectives UWCSEA – the course embodies the values of UWCSEA and is excellent preparation for the IBDP
4. Mathematics
5. English Language and Literature or English as a Second Language (ESL)
6. One other language chosen from French, Spanish, Chinese as a foreign language (for non-native speakers) or First Language Chinese (native speakers), or a School Supported Self-Taught language
7. Humanities – one subject must be selected from Economics, Enterprise, Geography or History
8. Physical Education (examination or non-examination subject) – all students take a double period of PE each week
9. A creative subject – one subject must be selected from Art and Design: Fine Art, Art and Design: Graphic Design, Drama, Music, Design and Technology: Food and Nutrition, Design and Technology: Resistant Materials or Design and Technology: Systems and Control
10. Study Skills – this offers students extended support for their learning and students must be recommended by their teachers or HOG for this course

Points to consider when selecting subjects

There is open access to most Grade 9 and 10 subjects, and students are free to select what they will study within the broad guidelines. It is not advisable to change examination courses during this two-year period, so serious consideration is needed in making choices.

Choices should be influenced by the following points:
- Is the student sufficiently interested in a particular course to follow it successfully for two years?
- How well has the student progressed in each of the subjects he or she is thinking of choosing?
- Which subject may the student consider studying in future?
- How well has the student progressed in each of the subjects he or she is thinking of choosing?
- If a student is likely to leave UWCSEA to join another school in the next two years, parents are advised to check that the subjects chosen are available in that school
- Students should not select a subject simply because they like the teacher or because friends are choosing the same subject

Exceptions in subject selections

Students entering Grade 9 with no previous study of a foreign language or with previous study of a foreign language for which we do not offer a continuation course, will study Beginners Chinese.

If the student is studying English as a Second Language (ESL) they should make private arrangements to maintain a high level of fluency (spoken, listening, reading and writing) in their mother tongue, as this is essential when opting to continue study of that language in the IB Diploma Programme (IBDP).

Students who experience difficulties with English as their first language may be exempted from the study of a second language in the IGCSE programme in negotiation with the Head of Grade.

Assessment

Assessment patterns differ slightly from subject to subject, however many include a coursework, practical or oral component, meaning the final grade is based on examination results and on work done during the two-year course. Coursework, which counts for more than 20% in some subjects, is initially marked by the teacher, where it is internally moderated within the department. It is then subject to moderation by the examining group to monitor the marking standards.

The inclusion of coursework can be a great advantage for students. It means that everything does not depend on a few hours in an examination room at the end of two years of study.

It allows a wider range of skills and abilities to be included in the assessment, rather than examination skills alone. For example, in Geography fieldwork is assessed.

Examination board

All of our IGCSE courses follow courses provided by either the University of Cambridge International Examinations, or Edexcel Boards. If you would like to view the syllabus for each of the subjects we are offering, please access it on the following link: www.cie.org.uk/qualifications/academic/middlesec/igcse/subjects www.edexcel.com/international/Pages/default.aspx
Coordinated Science

This course is designed to stimulate curiosity, interest and enjoyment in science, to provide students with the knowledge and skills in order for them to appreciate the world around them, and to become confident citizens in a technological world.

Students acquire an understanding of the concepts, principles and applications of Biology, Chemistry and Physics in sufficient depth and breadth for them to make a more informed decision about the science to choose in the IB DP, and the course is good preparation for either IB Standard or Higher level courses.

Course content

The course is taught as a series of Biology, Chemistry and Physics units and contains a high level of related practical activities. Students develop the abilities and skills that are relevant to the study and practice of science. There are often links between each subject area.

Two teachers teach the course; each teacher takes one of the three subjects (Physics, Chemistry or Biology) and the third subject is split between the two teachers.

Biology content – characteristics of living organisms and cells, plant nutrition, ecology, enzymes and nutrients, transport in plants, transport in humans, respiration and gas exchange, coordination and response, homeostasis, plant reproduction, animal reproduction, inheritance.

Chemistry content – particles and atomic structure, bonding, periodic table and chemical equations, acids and bases, rates of reaction, identification tests for ions and gases, metals, organic chemistry, electricity and chemistry, industry and agriculture.

Physics content – motion, kinetic theory, electricity, light, forces and density, atomic and nuclear physics, work and power, thermal physics, electric circuits, waves and sound, magnetism.

Skills developed

The course promotes independent learning, communication and presentation skills, fine motor skills, logic and problem solving. Students are also trained to develop the ability to question the validity and reliability of data and appreciate the value of scientific method and reasoning.

Assessment

External assessment – 80%
(paper 1 and 3 - extended students or paper 1 and 2 - core students)
- paper 1 (all students) – 30% multiple choice questions
- paper 2 (core level students only) – 50% short structured answers covering the core syllabus only; grades C to G can be obtained
- paper 3 (extended level students only) – 50% longer, structured answers covering the extension syllabus; grades A* to G can be obtained

Internal assessment – 20%
Teacher assessment of practical work in the following areas:
- using and organising techniques, apparatus and materials
- observing, measuring and recording
- handling experimental data and observations
- planning, carrying out and evaluating investigations

Digital Perspectives

The importance of digital solutions in a world where information is dynamic and alive is clear and inarguable. Our students are digital natives and the Digital Perspectives course treats them as such. It aims to provide students with the opportunity to explore the capability of digital solutions through exposure to a variety of Information and Communications Technology (ICT) applications and skills and to analyse the value of such approaches.

This is a unique course that builds on the Grade 8 Digital Perspectives course and encourages students to act imaginatively and to enhance and develop digital creativity. Digital Perspectives provides opportunities for students to develop and demonstrate many of the skills and qualities of the UWCSEA profile while acquiring experience of creative ICT applications. Another aspect of the Digital Perspectives course is that it has natural links with the elements of the UWCSEA learning programme and provides opportunities for students to demonstrate their learning across all areas of the programme.

Digital Perspectives recognises the importance of the design process and develops a range of cognitive and practical abilities and aims to introduce a range of ICT applications through units of study that are ‘real,’ relevant and challenging. The Digital Perspectives course has an emphasis on critical, divergent thinking and communicating ideas through a digital medium; excellent preparation for further study in High School and beyond school.

Course content

The course is structured as a series of units that take the learning and content from other subject areas and elements of the UWCSEA learning programme and requires students to create an original digital product as an alternative way of presenting ideas.

Students will also experience authentic project-based learning that requires the creation of a digital product that meets a specification set by a client within the UWCSEA community.

The explicit learning and content is around digital skills and students are assessed in the application of these skills and the documentation of the learning process that took place.

Skills developed

Digital Perspectives encourages students to:
- experience, enjoy and appreciate the design process
- develop creative skills through the use of a range of ICT applications
- build confidence through the development and application of skills in unfamiliar ICT applications
- think creatively to produce original works
- develop knowledge and understanding from different disciplines in the creation of digital solutions
- develop critical understanding through personal, analytical responses to their own work and that of others
- develop an appreciation for alternative solutions to problems and to identify and evaluate possible future scenarios
- work independently as well as part of a team and to direct much of their own learning
- communicate ideas sensitively and effectively through a range of different presentation strategies
Assessment

Digital Perspectives is project-based and students are assessed against four subject specific criteria:
• developing a specification
• digital skills and composition
• critical understanding
• presentation and communication of ideas

Global Perspectives UWCSEA

This course makes students more aware of the key personal, social and global issues that inspired and are inherent in the UWC philosophy. Designed to strengthen critical thinking skills of all types, the course teaches students to discern biases and to reflect on their own reactions to, and formulate educated opinions on, a wide variety of issues. Students also become more aware of the significance of the UWC philosophy and are better prepared to serve as representatives of its ideals.

Course content

The course is made up of the following units:
• personal identity and viewpoints
• popular culture and popular media
• cultural oppression and stereotyping
• ethics and value systems
• world religions and ideologies
• human rights issues
• environmental philosophies
• wealth and poverty

Skills developed

In addition to developing critical thinking skills, students experience interdisciplinary connections between subjects and practise and strengthen vital academic skills, including:
• research and enquiry skills and the ability to cite sources correctly through footnotes and bibliographies
• collaboration and presentation skills
• formulating reasoned arguments in both essays and debates

Assessment

Assessment is both portfolio and project based. Electronic portfolios are divided into two sections: the basic studies covering personal, popular and alternative perspectives and the substantial studies covering the Global Perspectives units that form the major focus of this subject. The final assessment is the Critical Challenge Project, which is a carefully planned action-based group project responding to a key area of interest based on previous units. The Portfolios and Critical Challenge Projects are externally moderated by the University of Cambridge International Examinations Board (CIE).

• Basic studies – 20%
  units covering personal and popular culture, and alternative perspectives (faith, ethics and ideology)
• Substantial studies – 50%
  based on three topic-based units: Human Rights, Wealth and Poverty and The Environment.
• Critical challenge project – 30%
  based on a topic of the student’s own choice

Mathematics

The Mathematics department at UWCSEA aims for students to:
1. appreciate the power, usefulness, elegance and beauty of mathematics and to have an enjoyment of and passion for the subject
2. be given opportunities in their learning to develop and demonstrate the qualities and skills of the UWCSEA profile
3. communicate mathematically

All students follow a two-year course in Mathematics and take the Cambridge International Mathematics IGCSE examination in June of Grade 10. A small number of students also follow the Additional Mathematics IGCSE over two years and have the option of taking the Cambridge Additional Mathematics Examination in June of Grade 10.

Course content

Students follow a course that develops their knowledge and skills in a number of branches of Mathematics, including:
• number
• algebra
• geometry
• trigonometry
• statistics and probability

Their knowledge and skills are developed using a variety of teaching methodologies, incorporating relevant and appropriate use of technology as an integral part of the syllabus. Students are encouraged to become independent thinkers with the ability to see patterns and generalise through investigations and open-ended problems.

Recommended calculator

Students are expected to purchase a graphical calculator, the TI-nspire CX, as our mathematical modelling concepts make direct use of this piece of technology. This can be purchased from the School Shop.

Skills developed

It is challenging to predict the necessary mathematical skills that our students will require in the future, as technology continues to develop rapidly. Skills prospective employers appreciate are the ability to think logically and independently, to express oneself clearly and to apply theoretical knowledge to solve problems in real world situations. Mathematical modelling, critical thinking and clear communication are key aptitudes that will serve our students well in their future lives. Mathematical exploration can sharpen the ability to sift through information and focus on what is relevant in order to develop analytical skills. A sound knowledge of mathematics is important in many areas of science, economics, medicine and engineering.

Assessment

All assessment is external and by examination.

External assessment – 100%
• paper 1 – 20%
  short response questions (no calculator)
• paper 2 – 60%
  medium to extended response questions (TI-nspire CX required)
• paper 3 – 20%
  investigation and modelling question (TI-nspire CX required)
English Language

English Language is for students who have English as a first or near native language. Although embedded with the English Literature programme, it leads to a separate qualification. The course is dynamic and creative, with emphasis placed on original writing, and speaking and listening, as well as stylistic analysis of non-fiction texts.

Course content

Whilst some parts, such as the exam board anthology of fiction and non-fiction works, are compulsory, there is flexibility that allows for opportunities to further prepare students for the rigorous demands of IBDP English Language and Literature. The department has developed units of extension work designed to emphasise the importance of independent and critical thinking, and to introduce students to some of the different forms of assessment in the IBDP. These include the study of English as a global language and exploration of the many different forms of storytelling. They ask students to consider questions like the following:

• Why do people write?
• Is there really such a thing as non-fiction?
• Is a story a different story when it is told in a different way?
• Do journalists tell truths or construct them?
• How does my use of English define me?

Skills developed

The course develops confidence in speaking and listening, an ability to write with skilful originality for different audiences and purposes, and a capacity for close stylistic analysis. More importantly, students critically engage with all sorts of text types and produce work reflective of their individuality and creativity.

At all times, students are taught to identify and distinguish between correct and incorrect, appropriate and inappropriate language forms, in order to take ownership of their progress. Students learn the importance of planning, drafting and redrafting as part of the writing process.

Assessment

External assessment (written examination) – 70%

• paper 2 (reading—extended) – 50%
  primarily a reading examination; students are expected to read two unseen prose extracts, from either fiction or non-fiction, and show an ability to understand and develop text content, to analyse authors’ style and to identify and summarise textual details.

• paper 3 (directed writing and composition) – 50%
  primarily a writing examination to which there are two sections. The first section requires students to understand and evaluate the content of a stimulus text and then develop discursive or argumentative content in response, using an appropriate style as indicated by the task. The second section requires students to craft an extended composition in response to a choice of one descriptive and one narrative writing prompt.

English Literature

While Literature is assessed separately from the English Language, the two are taught together. Literature explores a variety of classic, contemporary and dynamic works from different genres, cultures and periods, with an emphasis on developing analytical understanding and appreciation.

Course content

Literature involves the study of a diverse range of novels, plays and poems, fostering an appreciation of the development of literature through the ages and across cultures, and encouraging wider reading for pleasure. The course emphasises creative writing, imaginative presentations and rigorous literary discussion as a means of further inquiry and analysis about ourselves and our world.

While some elements of the syllabus are compulsory, such as the prescribed examination texts, the IGCSE’s flexibility allows students further opportunities to prepare for the rigorous demands of IBDP English Literature. Students are encouraged to use the school’s excellently resourced library and classroom libraries to read a wide selection of texts beyond the course requirements. Each student completes an independent reading programme, with guidance from the teacher, to develop their reading pleasure, depth and stamina. Teachers confer with students about their reading, encouraging personal response to literary study and the ability to make perceptive and original connections.

Extension units created by the department are designed to instil the importance of wider reading and independent thinking, and to introduce the different forms of assessment in the IBDP. These units include the study of texts in context and the political potency of literature, and ask students to consider questions like the following:

• Why read?
• Do we need to know the author to understand their work?
• Should writers use their work to hold a mirror up to life or to try to change it?
• Can protest literature transcend time and place?
• What do poems do that prose cannot?

Writers’ Fortnight, an event that welcomes professional authors to the school, is an opportunity for students to consolidate and apply their reading and analytical experiences in a personal and creative way.

Skills developed

The course encourages critical appreciation of the writers’ achievements through close analysis and interpretation of literary texts, while also inviting students to explore the relationship between literature and life on a personal level. Students develop an ability to respond to literary works in a variety of formal and creative ways in preparation for both the IGCSE and IBDP assessments.

At all times, students are taught to identify and distinguish between correct and incorrect, appropriate and inappropriate language forms, in order to take ownership of their progress. Students learn the importance of planning, drafting and redrafting as part of the writing process.

Assessment

External assessment (written examination) – 50%

• unseen – critical commentary in response to one of two unprepared extracts, one poetry and one prose

• set texts – essay responses to one extract-based question and one essay question on one or two of the set texts
Internal assessment (portfolio) – 50%
• critical essay in response to a play, novel, short stories or poems
• empathic response to a play or novel
• oral response to a play, novel, short stories or poems

IGCSE English as a Second Language (ESL)

IGCSE ESL is for students whose mother tongue is a language other than English. The course primarily aims to develop global literacy skills for academic and general communication, and for the requirements of the IGCSE ESL examination. Students also experience a broad range of literary and non-literary text types to develop critical response and analysis skills. The course is designed to enable students whose English language progresses to near-native level to transfer to IGCSE English A at any point of the programme.

Course content

Reading
Literary texts are studied to introduce students to an exploration of contemporary issues. The books chosen are accessible and popular with students, promoting classroom discussion and debate.

Non-fiction texts such as newspaper and magazine articles, reports and advertisements are studied to introduce students to a variety of professional texts, which cover a wide variety of issues concerning social and global issues. In this way, students learn to think critically as well as develop confident and effective English language skills.

Texts are also used for vocabulary and grammar development, and as the stimulus for a variety of written responses.

Writing
Students produce a variety of pieces based on the following areas:
• imaginative and personal writing
• factual, argumentative and persuasive writing

These include: letters, articles, reports, speeches, chapter summaries, character sketches and diary entries.

Students also learn the fundamentals of good essay writing, thereby developing the academic writing skills essential for use in English and other subjects, and as a foundation for the IBDP.

Speaking
Students are actively involved in classroom activities and are expected to participate in discussions, debates, interviews and presentations based on the topics studied in class.

Skills developed
The IGCSE ESL course develops ability in the following specific areas:
• understanding and conveying information
• understanding, ordering and presenting facts, ideas and opinions
• evaluating and selecting relevant information
• understanding and employing a wide range of vocabulary
• exercising control of grammatical structures
• demonstrating awareness of register in both formal and informal situations
• communicating effectively and appropriately

The broader course develops literary and linguistic analysis skills, as well as confidence and the capacity for independent inquiry and collaborative learning. Students learn the importance of editing, revising and proofreading in the planning and drafting process.

Assessment

Subject to their course performance in Grades 9 and 10, students are entered for either:
• the extended paper (which awards the grades of A* to E), or
• the core paper (which awards grades C to G)

External assessment – 100%
• reading/writing paper
  (2 hours for extended; 90 minutes for core) – 70%
• listening paper
  (45 minutes for extended; 30–40 minutes for core) – 15%
• oral exam
  (10–15 minutes per individual) – 15%

Chinese Language

There are four types of Chinese courses available:
1. First Language Chinese for native or near native speakers
2. Chinese—Foreign Language Advanced for students learning Chinese as a second language, in order to continue language development
3. Chinese—Foreign Language Intermediate for students learning Chinese as a foreign language, in order to continue language development
4. Chinese—Foreign Language Beginner for students who are new to Chinese language

1. First Language Chinese

Course content
The course consists of two major components:
1. themes
2. literature

The theme based course covers various literary and non-literary texts which aim to develop ability and effectiveness in speaking, reading, writing and text analysing.

Skills developed
• sensitivity and effectiveness of speaking and listening
• reading and writing skills and students’ awareness in analytical, critical and original thinking
• appreciation of culture, especially in the context of literature works
• reflective outlook on the relationship between the individual and society
• preparation for the IBDP Chinese A course
• a lifelong interest in literature and language

Assessment
External assessment – 100%
• paper 1 (reading) – 60%
• paper 2 (writing) – 40%
2. **Chinese—Foreign Language Advanced**

The theme-based course consists of four major areas: Young people and education, Society, The world, and Cultural diversity.

**Skills developed**

- develop the ability to use Chinese effectively for the purpose of practical communication
- form a sound base for the skills required for further study using Chinese as the medium
- develop an awareness of the nature of language and language-learning skills, along with skills of a more general application
- promote students’ personal development, particularly an awareness and appreciation of Chinese culture, history and society
- preparation for IBDP Mandarin B course

**Assessment**

External assessment – 70%
- paper 1 (reading and writing)
Internal assessment/externally moderated – 30%
- paper 2 (speaking)

3. **Chinese—Foreign Language Intermediate**

The topic-based course has a communicative approach. Students learn the language and culture in integrated ways, based on topics including everyday activities, personal and social life, and the world around us.

**Skills developed**

- effective use of the language for practical communication
- sound base of skills, language, and attitudes required for further study, work and leisure
- encouragement to better integrate into the local community
- skills of memorising, basic researching and inference
- preparation for IBDP Mandarin B course

**Assessment**

External assessment – 75%
- paper 1 (listening) – 25%
- paper 2 (reading) – 25%
- paper 4 (writing) – 25%
Internal assessment/externally moderated – 25%
- paper 3 (speaking)

4. **Chinese—Foreign Language Beginner**

Students will be introduced to the language through topic-based units. The course aims to prepare students for the IBDP Language B options.

**Skills developed**

- effective use of the language for practical communication in a selected range of topic areas
- improved fluency in the four language skills areas in order to perform the required tasks at beginner level after two years of study
- use of a register that is generally appropriate to the situation
- awareness of some elements of the cultures related to the language studied

**Assessment**

Writing, reading, listening and speaking components are assessed equally. There is no coursework in foreign European Languages. Students sit three examinations at the end of the course (listening, reading and writing, oral). All papers are externally assessed.

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**European Languages—Spanish and French as a Foreign Language**

Courses in French and Spanish develop the ability to use the language effectively for the purpose of practical communication. The language taught is of real use to students outside the classroom. Emphasis is placed on communication, and by the end of Grade 10, students are able to communicate effectively on familiar topics.

**Course content**

A topic-based course, over the two years students study the following areas relevant to everyday use of the language:
- at home and abroad/everyday activities
- education and employment/personal and social lives
- house, home and daily routine/the world around us
- the modern world and the environment/the world of work
- social activities, fitness and health/the international world

Knowledge of language structures and grammar is acquired through studying these topics.

Previous study (at least two years) of the language as a foreign language is a requirement. These courses are not suitable for beginners. Native/fluent users should contact heads of department to discuss alternatives.

**Skills developed**

- listening
- speaking
- reading
- writing

These skills are simultaneously developed over the two years through the use of a variety of materials.

**Assessment**

Writing, reading, listening and speaking components are assessed equally. There is no coursework in foreign European Languages. Students sit three examinations at the end of the course (listening, reading and writing, oral). All papers are externally assessed.
School Supported
Self-Taught Languages

Course content
This course is intended for students whose most fluent language is neither English nor Chinese, but who and can demonstrate proficiency in another language in all four language skills (speaking, listening, reading and writing).

The aims of the course are to:
- maintain and develop the students’ most fluent and accurate language
- develop additive bilingualism (the ability to express oneself clearly and accurately in speaking and writing in two languages)
- give students a sound foundation for taking a Group 1 Literature course (possibly on a school supported, or “self-taught” basis) in the IB Diploma programme if they also choose English A as one of their IB subjects

Emphasis is placed on reading and writing, as well as analysis of the elements, cultural content and language of literary works (drama, prose and poetry) from the culture of the language concerned.

Skills developed
In the first year of the course (G9), the curriculum focuses on:
- reading three literary works and viewing a film
- responding to texts (fiction and non-fiction): summarising, comparing and contrasting, synthesising, literary devices and their effects in texts
- writing narrative and descriptive texts
- historical and cultural context of texts
- developing language and skills

The second year of the course (G10/FIB) focuses on:
- reading four works and viewing a film
- responding to film and texts creatively and critically
- historical and cultural context of texts
- writing argumentative essays
- developing language and analytical skills

Assessment
The following areas are assessed throughout the course:
- language and style
- descriptive technique
- narrative technique
- argumentative technique
- responding to literature and film critically
- responding to literature creatively
- presenting information orally

There are no external examinations for the School Supported languages courses offered at UWCSEA East. At the end of G10, students sit two written papers: a response to literature and an opinion essay. Both papers are internally assessed.

Prerequisites
This course is intended for students who are literate in the target language and have been educated in this language before entering the course as the main focus of the course is literature and culture, not language acquisition. Students willing to enter the course will be tested by the Admissions department. The test will consist in writing an essay for an hour. The students will also need to fill in a questionnaire about their background, motivation and previous learning experience in the language they would like to study.

Languages available
In previous years, UWCSEA East students have studied the following First Language Literature courses in Grades 10–12: Albanian, Croatian, Dutch, Hungarian, Indonesian, Italian, Norwegian, Filipino, Portuguese, Russian, Siswati, Shona, Thai, Turkish, Finnish, German, Spanish, French, Urdu, Korean, Japanese, Hindi, Russian, Khmer and Zulu.

Other languages are available upon request. However, students should be aware that the IB reserves the right to decide, on an annual basis, if some languages are available in Diploma Programme exams. Moreover, UWCSEA East requires parents to hire a qualified tutor of the language concerned. If a tutor cannot be identified, then the course will not be authorised by the school.

Course content and assessment
The course develops confidence and competence in language skills that prepares the students well for the “School Supported Language A” option in the IB Diploma Programme. It aims at developing analytical skills and focuses on the study of seven literary works and two films. The main focus of the course is to develop advanced language skills through the study of literature, not to acquire new language skills.

Most students attend one lesson of 80 minutes with a School Supported Languages teacher every week. The teacher in charge of the course will discuss curriculum, techniques, progress and tasks with students and address any practical difficulties arising from the course. The UWCSEA teacher will also coordinate the work set by tutors and make sure that students are actively working on their assignments in their various languages during class time. In addition, students receive instruction from a qualified language tutor every week, during one of the blocks scheduled for the subject. Lessons in the first language take place at UWCSEA, in a classroom next to the classroom occupied by the UWCSEA teacher in charge of the course. The UWCSEA teacher will take attendance at the beginning of every lesson allocated to the subject and be available to supervise students if a tutor cannot be available on a particular day.

Language tutors
The College requires parents to hire a qualified Literature tutor so that the students can benefit from specialist feedback in the areas of language skills, academic writing and cultural content. Tutors also play a vital role in providing accurate feedback about students’ abilities in the subject. Tutors are supported and trained by the Head of School Supported Languages and the teacher in charge of the course. They apply the UWCSEA course structure and assessment criteria. Literature lessons are privately funded by parents, and the school does not interfere in financial arrangements between parents and tutors.
The Head of School Supported Languages may be able to recommend an experienced tutor to parents. However, parents are ultimately responsible for identifying a suitable Literature tutor. After parents have identified a tutor, the Head of Department will contact him/her. If the Head of Department vets the tutor recommended by parents (on the basis of his/her qualifications and teaching experience), then the tutor will start working with the student under the guidance of the Head of Department. The Head of Department will provide the tutor with course documentation, deadlines, resources and advice. The tutor will provide the UWCSEA teacher in charge of the course with information regarding the student’s effort, progress and performance. The UWCSEA teacher will report the tutor’s comments to parents, and parents may also be directly in touch with the tutor.

Tutoring Time
The school recommends 80 minutes of tutoring in first language per week, depending on the ability level of the student. If the student has not had any mother tongue tuition for an extended period of time, then more tuition time may be necessary. If both the tutor and the student(s) are available during the school day, then the school will provide a classroom for them to meet in person or online (e.g., via Skype), if the teacher is not able to come to UWCSEA East. Students and tutors will use one of the two slots timetabled with the UWCSEA teacher in order to work on the first language skills expected in the course. It should be noted that self-taught students will need to demonstrate a great deal of autonomy and responsibility throughout the course, through completing work independently and maintaining a constructive relationship with their tutor.

Hindi, Japanese and Korean
These languages may be studied for two sessions of 80 minutes per week, depending on tutor’s availability and parental resources. Hindi, Japanese and Korean courses are provided by UWCSEA in Grade 11–12 as student numbers for these languages are usually high enough in order to offer a course. Therefore, parents need to be aware that there will probably be no additional costs involved if their son or daughter continues with the study of these language at DP level. Hindi, Japanese and Korean lessons in Grades 9–10 take place during the lesson slots allocated to other languages. The lessons are privately funded by parents, and the tutors are supported by the Head of Languages. Attendance is taken by the UWCSEA teacher in charge of school supported languages at the beginning of every lesson.

Economics
Economics is important in all aspects of modern society and this course aims to prepare students to play an active role in that society. Students learn about the basic tools, ideas and concepts that underpin economics, and a primary emphasis is placed upon students applying basic economic principles to the world around them, and to current economic events. They will learn to interpret, organise and analyse various forms of data in order to arrive at balanced conclusions about a variety of economic phenomena. The study of economics gives students grounding in a subject that is useful for the rest of their adult lives.

Course content
The course takes a truly global perspective and has the following main topics:
• the basic economic problem (choice and the allocation of resources)
• how markets work (demand, supply and price determination)
• the individual as producer, consumer and borrower (specialisation, money, financial institutions in the economy, labour markets)
• the private firm in the economy (types of business organisation, costs, revenue and profit maximisation)
• the role of government in an economy
• the main economic indicators (economic growth, employment, inflation)
• international trade
• development economics

Skills developed
Economics is suited to students with an interest in current affairs. There is no need for great mathematical skills at this level. Students finish the course with a deeper understanding of the economic world in which they live, and of their part within it. They develop skills of numeracy, literacy, enquiry and critical thinking, and how to select, interpret and employ relevant sources of information to construct convincing arguments in this subject.

Assessment
External assessment – 100%
• paper 1 (30 multiple choice questions) 45 minutes – 30%
• paper 2 (one compulsory data question followed by 6 structured questions of which students choose 3) 2 hours and 15 minutes – 70%
Enterprise

IGCSE Enterprise encourages students to develop their understanding and the practical skills associated with the world of work and the running of a small business or enterprise. The course provides the knowledge associated with running a small enterprise, and an opportunity for students to apply this knowledge in a practical and engaging way when running their own enterprise project or activity. They will gain business skills and knowledge through applying theory to case studies and the running of their own project individually or in small groups.

Course content

The course is made up of the following units:

- Topic 1: Introduction to enterprise
- Topic 2: Setting up a new enterprise
- Topic 3: The skills and personal attributes needed to run an enterprise
- Topic 4: Business opportunities, responsibilities and risk
- Topic 5: Negotiation
- Topic 6: Understanding finance
- Topic 7: Business planning
- Topic 8: Markets and customers
- Topic 9: Help and support for enterprise
- Topic 10: Communicating with other people

Skills developed

Students study enterprise in a local as well as a global context, while enhancing their skills of investigation, analysis, interpretation, evaluation and practical problem-solving. They will learn business theories and concepts which will be applied to real life scenarios. The skills students develop on the course are very closely aligned with the skills of the UWCSEA learner profile. Students must think critically about business issues in case studies and when encountering problems whilst undertaking their project. They will be creative in formulating ideas for enterprise projects and conducting marketing plans and promotional techniques. Students must be effective self-managers when meeting deadlines, organising work load and prioritising tasks. They will work collaboratively on most aspects of the course and will enhance their communication skills through interaction with a variety of stakeholders in a range of situations, tailoring their communication styles to suit the audience.

Assessment

External assessment 50% (100 marks)

- paper 1 – 1.5 hours
  This paper is based upon a pre-seen case study. Candidates are required to apply their knowledge of enterprise and entrepreneurship to comment on enterprise issues, and to solve enterprise problems in the context of the case study, organisations they have studied and their own enterprise.
  The paper will consist of two sections:
  - section A – short-answer questions and structured-response questions
  - section B – longer, more open-ended questions

Internal assessment 50% (60 marks)

Coursework – Centre-based assessment

Candidates will run their own enterprise activity or project, and produce a portfolio of evidence using a variety of communication methods.

Geography

Our Earth is an amazing place with diverse landscapes, cultures and communities. Through Geography, students will gain a broad understanding of how our world works: why landscapes look like they do, and how people interact with different environments in different ways. A dynamic and broad subject, Geography not only provides students with a sense of place but also an awareness of the opportunities and constraints posed by different environments. Students will look at major global issues such as deforestation, overpopulation, natural hazards, climate change, and sustainable development, and will study places as diverse as coral reefs, the Arctic, hot deserts and the Himalaya.

Course content

The curriculum covers a broad range of contemporary topics and students will address questions such as:

- Are there too many people in the world?
- How can governments control population size and should they?
- What should cities of the future be like?
- Why do people choose to live near active volcanoes despite the risk?
- Why do some earthquakes cause more damage than others?
- How are rocks shaped to form landscapes?
- To what extent can we predict floods?
- What are the costs and benefits of living by the sea?
- How is our climate changing and what can we do about it?
- Will we be able to meet our energy needs in the future?
- Are we able to feed all 7 billion people on the planet?
- Is industrialisation the best way for a country to develop?
- How can tourism be made sustainable?
- How big is your ecological footprint?
- Where does your waste go?

Skills developed

Geography combines skills from both science and humanities, so students will develop skills in observation, collection (including fieldwork within Singapore), analysis and interpretation of data. Geography students will regularly be using maps, diagrams, graphs and images to explore and understand patterns and concepts. Students will also learn how to develop an argument and how to be confident in debating controversial issues. Problem solving and decision-making skills will also be developed as students learn about contemporary problems and develop and evaluate solutions. Students will learn to make connections between knowledge learned in class, and what they have learned from the different places they have visited on their own travels.

Assessment

External assessment – 72.5%

- paper 1 (structured questions) – 45%
- paper 2 (skills-based paper) – 27.5%

Internal assessment – 27.5%

One assignment up to 2,000 words based on fieldwork conducted in Singapore.
History

Our History programme takes students on a journey through the 19th and 20th Centuries. We begin in Europe during the Revolutions of 1848 where the idea of liberty, enshrined political freedoms and social equality dominated debate and discussion. From there we’ll explore the birth of the modern nation state. Through studying Italy and Germany we’ll examine the successes, failures, problems and innovations of two countries that stood as the model for the rest of the world, only for them both to descend into fascism within a generation. We then cross the Atlantic to the Americas. As Europe was constructing the modern nation state, the US was on the verge of civil war. We’ll look at the clash between industry and agriculture, city and country, north and south, freedom and slavery that caused a house to divide against itself. Far from the zenith of the age of reason the late 19th Century saw the most technologically advanced and educated societies slip into an ideological madness: imperialism. We’ll study the scramble for prestige amongst the European Great Powers and the terror they inflicted upon the peoples they subjugated. When a forest grows too wild a fire becomes inevitable. As such, we’ll complete our Core Content by examining the origins of WWI. This brings us into the 20th Century where we’ll fix upon South Africa for our extended Depth Study. There is arguably no single historical period more fitting for students at UWCSEA East to study than Apartheid South Africa: an epoch that compels ask us to pose questions about the fundamental nature of humankind. It is essential that students understand the depths to which we can sink, the resilience of which we are capable and the triumphs we can achieve together.

Course content

Part one: core content
• Were the Revolutions of 1848 important?
• How was Italy unified?
• How was Germany unified?
• Why was there a civil war in the United States and what were its results?
• Why, and with what effects, did Europeans expand their overseas empires in the 19th century?
• What caused the First World War?

Part two: depth study
• South Africa 1940-1994

Skills developed
• critical thinking
• emotional intelligence
• storytelling
• collaboration
• ability to recall, select, organise and deploy knowledge
• ability to construct historical explanations using an understanding of:
  – cause and consequence, change and continuity, similarity and difference
  – the motives, emotions, intentions and beliefs of people in the past
• ability to understand, interpret, evaluate and use a range of sources as evidence, in their historical context

Assessment

Component 1 – 40%
Two hour written paper:
• students answer two questions from Section A (Core Content) and one question from Section B (Depth Study)
• all questions are in the form of structured essays/short response answers and are split into three parts: (a), (b) and (c)
• the paper is marked out of 60. It is externally marked and weighted 40% of the final grade

Component 2 – 33%
Two hour written paper:
• students answer six questions on one prescribed topic taken from the Core Content. There is a range of source material relating to each topic
• all questions related to sources and require students to demonstrate document analysis skills
• the paper is marked out of 50. It is externally marked and weighted 33% of the final grade

Component 3 – 27%
Coursework:
• students produce one piece of extended writing based on the Depth Study topic from the syllabus
• the coursework is in the form of an essay no longer than 2000 words complete with citations and bibliography
• the coursework is marked out of 40. It is internally marked/externally moderated and weighted 27% of the final grade
Physical Education

To assist students in developing and maintaining a healthy and active lifestyle, all students in Grades 9 and 10 receive two 80 minutes lessons per week. Two Physical Education options are available for students entering Grade 9, they must select one of the following, either Physical Education (non-examination) or GCSE Physical Education (examination).

Physical Education (non-examination subject)

The Physical Education programme in Grades 9 and 10 has three major objectives:

• to continue to encourage a positive disposition towards physical activities so that they may be pursued voluntarily in later life
• to begin to encourage depth of skill, knowledge and experience by introducing specialisation in certain physical domains
• to continue to encourage important aspects of personal and social development
• to build and develop UWC Skills and Qualities within a physical education environment

Course content

Grade 9

A typical programme would include activities taken from five physical domains including, invasion court, invasion field, fitness, over the net, striking, adventure and aquatics. Students focus on one domain for four weeks.

Typical overview of sports covered in the Grade 9 core curriculum:

<table>
<thead>
<tr>
<th>Physical domain</th>
<th>Sport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Striking</td>
<td>Softball</td>
</tr>
<tr>
<td>Invasion court</td>
<td>Handball and Floorball</td>
</tr>
<tr>
<td>Invasion field</td>
<td>Ultimate frisbee and Gaelic Football</td>
</tr>
<tr>
<td>Over the net</td>
<td>Table Tennis</td>
</tr>
<tr>
<td>Fitness</td>
<td>BodyPump, Suspension Training and CrossFit</td>
</tr>
</tbody>
</table>

Grade 10

Grade 10 students follow a curriculum built around four main themes: fitness, leadership, leisure and sport. At the beginning of the year, students select from a variety of options under each theme. Each of the four categories empower students with ownership in their learning. Every four weeks their activity theme changes along with the member of staff delivering the unit. This enables exposure to a variety of environments and specialist teaching styles for these areas.

Typical overview of sports covered in the Grade 10 core curriculum:

<table>
<thead>
<tr>
<th>Fitness</th>
<th>Leadership</th>
<th>Leisure</th>
<th>Sport</th>
</tr>
</thead>
<tbody>
<tr>
<td>CrossFit</td>
<td>Scuba diving</td>
<td>Golf</td>
<td>Floorball</td>
</tr>
<tr>
<td>Suspension training</td>
<td>Personal training</td>
<td>Tennis</td>
<td>Volleyball</td>
</tr>
<tr>
<td>BodyPump</td>
<td>Junior Sports Leader Award</td>
<td>Mountain biking</td>
<td>Tournament Block</td>
</tr>
</tbody>
</table>

Skills developed

Students establish a good appreciation of sport from a range of unfamiliar perspectives. The implications for an elite athlete, the teacher/coach role and the role of administrators in sport are all examples of this. Students develop skills of independent learning, effective communication, planning, teamwork and time management, in conjunction with a wide range of gross and fine motor skills.

Assessment

External assessment (theory component) – 40%

One written paper containing multiple choice, and shorter and longer answer questions on topics of:

• healthy active lifestyles and how they could benefit you (what constitutes and influences healthy active lifestyle, exercise and fitness, diet)
• physical activity and your healthy mind and body (cardiovascular, respiratory, muscular, skeletal systems)

Internal assessment (practical component) – 60%

Assessment in four sports plus a personal exercise programme and an analysis of performance in a sport of your choice. Sports covered during the lessons vary depending on the students in the class. Students can also be assessed in other sports that they play on a regular basis either within the College or for an outside club, for example horse riding and wake boarding.

• practical performance – 48%
• personal exercise programme and analysis of performance – 12%
Art and Design: Fine Art

The personal response encouraged by the syllabus stimulates students’ imagination, sensitivity, conceptual thinking, powers of observation and analytical ability. Students develop confidence and enthusiasm in the process of art and design as they gain the technical skills to form, compose and communicate in two and three dimensions.

The study of Fine Art at IGCSE leads to a wider awareness of the role visual arts plays in society and in history. It broadens students’ cultural horizons, enriches individual experience and is a major opportunity for students to develop critical thinking and creative problem-solving skills.

The subject is a sound foundation for IBDP Visual Arts.

Course content

Within a studio environment, students learn how to structure a successful investigation from initial concept to final outcome. They are encouraged to take responsibility for their learning and an emphasis on independence is supported through appropriate teacher-led activities and structured resources.

Students study a variety of procedural techniques covering the disciplines of drawing, painting, printmaking and sculpture. They may also study processes such as collage, textiles, photography and mixed media.

Contextual understanding of artwork is an integral component of each project and the analysis of appropriate work informs students’ own practice.

Skills developed

Students develop strengths and skills in the following areas:

• independent learning, time management, confidence in decision making, problem solving and research
• creative and imaginative expression through the fine motor skills necessary for communicating ideas
• investigative, analytical, experimental and interpretive capabilities
• aesthetic understanding
• understanding of codes and conventions of art and design and awareness of the contexts in which they operate
• knowledge and understanding of art, craft and design in contemporary society and in other times and cultures

Special requirements

Students must be prepared to work outside lesson time to develop their work further. This includes using the studio facilities, by arrangement, with arts staff at anytime convenient to the student’s programme. Students will attend trips to gather visual information for at least one of their projects during the two years and are expected to exhibit their work when the opportunity arises.

Assessment

Externally set assignment – 100%

At the end of the course, students take an examination worth 100% of their grade. The exam is 10 hours long and is taken over two days in April. In February, students receive an examination paper containing a specific theme suggesting several different starting points. Students then have six taught weeks prior to their examination to plan and prepare their ideas with guidance from their teacher.

During this time, students are fully supported and are able to tailor their investigation towards their preferred medium. Fine artists may choose to work with painting, printmaking or sculpture, or combine any of these areas and also include photographic processes in their outcome. In the examination, students resolve their ideas in the form of a highly personalised and contextualised final outcome.

Art and Design: Graphic Design

Graphic design is the communication of information and ideas by visual means. The critical elements for a graphic designer are the successful communication of a message through the organisation of words and images. Simply put, graphic design is a creative process that combines art and technology to communicate ideas.

The study of Graphic Design at IGCSE leads to a wider awareness of the role graphic design plays in society and history. It broadens students understanding of how graphic design is used to persuade, amuse, sell and communicate through the manipulation of text, colour and image. It is a major opportunity for students to develop their critical thinking, ideation and problem-solving skills.

This subject is a sound foundation for IBDP Visual Arts.

Course Content

The Graphic Design course allows students to work in at least one of the following disciplines: advertising, illustration, packaging, typography and/or printmaking. They are encouraged to realise their ideas through a variety of traditional media using the design process to record, analyse, develop and refine their design work. In producing graphic solutions to defined problems, students must be able to balance aesthetic and commercial considerations.

All the work produced in the different disciplines can be produced in digital forms and students are encouraged to explore the potential of creative art and professional design software packages such as Photoshop, Illustrator, InDesign, AfterEffects, Painter and Clip Studio EX.

Skills developed

Students develop strengths and skills in the following areas:

• independent learning, time management, confidence in decision making, problem solving and research skills
• creative and imaginative expression through fine motor skills necessary for communicating ideas
• investigating specific areas of a problem, determining relevant sources of information using these to research and further define the problem
• use of appropriate design methodology and a comprehensive understanding of the design process
• application and mastery of a range of materials, equipment, processes and techniques in two and/or three dimensions, using appropriate digital and traditional media
• presenting their ideas and design work to clients and peers
• knowledge and understanding of a range of work, from contemporary practice, past practice and different cultures, demonstrating an understanding of continuity and change in graphic design
Special requirements
Students must be prepared to work outside lesson time to develop their work further. This includes using the digital media facilities, by arrangement with arts staff at anytime convenient to the student’s programme of study. Students will attend trips to gather visual information, identify problems in the creation of design briefs during the course and will be expected to exhibit their design work when the opportunity arises.

Assessment
Externally set assignment – 100%
At the end of the course, students take an examination worth 100% of their grade. The exam is 10 hours long and is taken over two days in April. In February, students receive an examination paper containing a specific theme suggesting several different starting points. Students then have six taught weeks prior to their examination to plan and prepare their ideas with guidance from their teacher.

During this time, students are fully supported to develop their design brief in the area of study of their choosing. Graphic Design students may choose to develop work through typography, advertising, illustration, packaging and printmaking. Most students will combine any of these areas in the resolution of their design outcome. In the examination, students resolve their ideas in the form of a highly personalised and contextualised final outcome.

Students are assessed on both their preparation work and the final outcome produced in the examination. Following the examination, the teacher will guide students towards selecting and presenting up to three sheets of preparatory work that is representative of their best ability.

Drama
Course content
The key areas are response to stimuli, development of ideas and evaluation of performance. The course explores various ideas and different means of presenting them effectively. By adopting roles and improvising situations, students gain a new and original understanding of the topics under exploration, and develop skills of initiative and teamwork in their search for expression. Students explore significant play scripts and create their own performances.

They also complete documentary evidence that records and evaluates their work as well as reviewing the work of others in performance. In addition, there is an emphasis on the techniques and practice of theatre and many students begin to engage with technical and design aspects of theatre.

Skills developed
The Edexcel GCSE in Drama encourages students to:
- develop a personal interest in why drama matters and be inspired, moved and changed by studying a broad, coherent, satisfying and worthwhile course of study
- work imaginatively and creatively in collaborative contexts, generating, developing and communicating ideas
- consider and explore the impact of social, historical and cultural influences on drama texts and activities
- reflect on and evaluate their own work and the work of others
- develop and demonstrate competence in a range of practical, creative and performance skills
- develop a basis for their future role as active citizens in employment and society in general, as well as for the possible further study of drama
- actively engage in the process of dramatic study in order to develop as effective and independent learners and as critical and reflective thinkers with enquiring minds

Assessment
Unit 1: Drama exploration (30%)
- practical exploration of themes and ideas through drama
- documentary response

Unit 2: Exploring play texts (30%)
- practical exploration of a play text
- documentary response to practical exploration
- documentary response to live theatre

Unit 3: Drama performance (40%)
- demonstrate knowledge and understanding of practical drama skills through their application in a live performance to an audience

Music
The Music course is relevant for all different kinds of musicians. Whoever you are, it is a subject that helps you develop your creative abilities. Some students take Music as the basis of a future leisure interest; others may be looking at a career where it will be useful to have experience of studying music or where performance or composition skills are needed.

Students enjoy this course if they have a passion for all kinds of music, enjoy experimenting with sounds, like playing music themselves and with others, and would like the opportunity to develop their learning of Music IT and recording.

Course content
The course develops students’ musical interests and expands their perspectives of music in cultural, social and historical contexts. Students develop compositional techniques and then compose two substantial pieces for assessment. Students develop rehearsal and performing skills and are assessed as a soloist and as a group player. Students also learn about music of different styles, times and cultures and are assessed in an exam on their understanding and knowledge.

Grade 9 course content
Ingredients and fundamentals of music, composition techniques, assessed composition #1, solo performance, group performance, the traditional music of West Africa, South America, North India, Japan and China, and the gamelan music of Indonesia, Western 20th century styles, Baroque music, development of exam technique.

Grade 10 course content
Further composition techniques, assessed composition #2, solo performance, group performance, Classical and Romantic music, a set work, a deeper examination of a traditional music from a specific location, exam technique and practice.
Skills developed

Through independent study and the support of their instrumental teacher, students develop their specific instrumental or vocal skills to a new level of musical expression. They also develop their compositional skills through experimentation and by investigating various techniques and tools.

Students also develop skills in communication and information technology as well as extending their ability to work with others, as part of an ensemble, through rehearsals, recordings and live performances.

Special requirements

Students are expected to take part in public performances, recordings and College concerts. Students must be involved in a Music department ensemble and/or activity and take tuition in their main instrument or voice, either through the College’s Instrumental Teaching Programme (ITP) or with a reputable teacher outside UWCSEA. Students often choose to be involved in a Music-based service.

Development of instrumental skills demands a high level of dedication to individual practice. The most important qualities needed for success are therefore commitment, enthusiasm and active participation in music making.

Assessment

External assessment – 40%
• one listening examination

Internal assessment – 60%
• solo performance – 15%
• ensemble performance – 15%
• composing – 30%

All coursework must be recorded.

Design and Technology: Food and Nutrition

Food and Nutrition helps students develop their creativity with making of food products, a vital feature of their IGCSE experience. Students develop knowledge and understanding of nutrition principles to make healthy food choices and consider the range of influences on these choices. They explore the range of influences on these choices and build skills to access and assess nutritional information that can support healthy choices.

This IGCSE course introduces both the theoretical and practical aspects of buying and preparing food. Dealing with diet and health in everyday life, students study the nutritional value of basic foods and develop the skills required to produce a balanced family meal.

Consumer awareness is regularly discussed, as are high standards of personal and kitchen hygiene, especially when students put their knowledge into practice in order to produce creative and enjoyable dishes.

Course content

Students will acquire knowledge of the complex nature of food as a material, its various properties, the effects of processing and the appropriate selection of equipment. The course also involves the teaching of a range of skills and processes, which are related to industrial practice wherever possible. Students will consider the effect of the designer on society and the impact of commercial foods and processes. They will also consider the wide range of consumer needs when designing and making, and in particular, social and moral issues, including environmental concerns and multiculturalism. Health and safety issues are paramount and relate to all aspects of the design process.

The IGCSE Food and Nutrition course is a starting point for many career options and is a good foundation for further education courses concerned with nutrition and diet, food safety, quality control, product development, food science and catering.

Skills developed

• understanding of nutrition and health problems associated with diet
• understanding of eating patterns and dietary needs both for people of different ages and for differing groups within society
• interest in the creative side and enjoyment of food and the skills necessary for food preparation and food preservation
• understanding and awareness of how socio-economic factors affect diet
• aesthetic and social sensitivity to dietary patterns
• food-related knowledge and skills so that they can organise and manage family resources effectively according to the needs and lifestyles of family members
• ability to make informed judgements and choices about the use of food available to the family unit in everyday life
• the application of appropriate screening and checking procedures in the food production system in order to provide feedback, monitor performance and ensure quality control
• nutrition labelling, information, legislation and codes of practice
• the beneficial and detrimental effect of microorganisms and enzymes on food
• preparation and preservation methods that affect quality and storage of food

Assessment

External assessment (written) – 50%
Internal assessment (practical) – 50%

Design and Technology: Resistant Materials

Creativity is a fundamental part of Resistant Materials. Many designers believe the quality of the initial idea and thought-provoking, innovative design, are cornerstones of every successful product. The creative design-and-make activities within Resistant Materials seek to develop creativity and confidence in students’ abilities to think, question, explore, create and communicate their ideas. Students will develop their designing skills and practical experiences so that they can get a broad understanding of the physical and working properties of a range of materials and their processing rather than an in-depth knowledge of any particular material, technology or process. Combining knowledge and understanding of materials and industrial processes with practical skills, the course provides breadth in creative learning and depth in the application of practical and transferable skills. Students are given the opportunity to design and manufacture a fully-functioning full-size product as part of their Grade 10 Major Project from a range of resistant materials, considering both batch or commercially produced components as a solution to a real need.

This IGCSE course is suited for students interested in engineering, architecture, manufacturing and industrial design that supports topics leading to the IB Diploma course in Design Technology at both Higher and Standard Levels.
Course content

Students undertake a variety of tasks that develop their skills in designing, researching, manufacturing and evaluating using a range of resistant materials (wood, metals, plastics and composites). Students also analyse and evaluate existing products and produce practical solutions to needs, wants and opportunities, recognising their impact on quality of life.

In Grade 10, students explore ways in which aesthetic, technical, economic, environmental, ethical and social dimensions interact with design and manufacture. Students apply traditional drawing and communication techniques, computer-aided design/computer-aided manufacturing (CAD/CAM) and digital media design to plan the production and manufacture of a fully functioning product of their choice, from a range of contexts supplied by the examination board. The student’s self-made product will be tested and evaluated with regard to its effectiveness, and possibilities for commercially producing it on a mass-production line are explored.

Skills developed

• practical experiences including the general physical and working properties of common construction materials (plastics, woods and metals) in relation to specific designing and making tasks
• simple comparative testing leading to the reasoned selection of materials and processes for specific design and making tasks.
• creative thinking through aspects of the design cycle of investigation, research, planning, designing, making, testing and evaluating
• working with traditional hand-drawing techniques, engineering drawings, CAD/CAM and digital media
• use of a range of materials, processes and tools including CNC, Laser Cutting and 3D printing
• solve practical and technological problems operating through processes of analysis, synthesis and realisation
• develop a range of communication skills which are central to design-making and evaluation and the development of a range of making skills
• understand the use of a wide range of materials in practical scenarios to develop curiosity, enquiry, initiative, ingenuity, resourcefulness and discrimination with their use
• encourage technological awareness, foster attitudes of cooperation and social responsibility

Special requirements

Students must be prepared to work outside lesson time to develop their work further. This includes using the design workshop facilities, by arrangement with D&T staff at a time convenient to the student’s programme of study. Students will be expected to exhibit their design work when the opportunity arises.

Assessment

External assessment – 50%
• paper 1: design thinking
• paper 2: resistant materials knowledge and understanding

Internal assessment – 50%
• major design and make project for an intended user group

IGCSE Design and Technology: Systems and Control

The creative design-and-make activities within Systems and Control seek to develop creativity and confidence in students’ abilities to think, question, explore, create and communicate. The focus of Systems and Control is to develop the skills and knowledge used by designers within the context of a group of related technological resource areas in structures, mechanisms and electronics. This course is suited for students who want practical experience so that they can get a thorough understanding of the three resource areas. By identifying how these areas interrelate, students can appreciate and exploit their role in designing and making mechanised and automated control systems through a range of programming applications.

This IGCSE course is suited for students interested in electronic, mechanical and structural engineering, programming and systems that supports topics leading to the IBDP course in Design Technology at both Higher and Standard Levels. Hardware used for the electronic aspect includes Arduino, Raspberry Pi, PICAXE and CMOS.

Course content

The emphasis of Systems and Control is on the application of knowledge and students will have the opportunity to learn through practical activities by producing multiple solutions to problems. Students undertake a variety of tasks that cover the theory and concepts of electronic, mechanical and structural engineering to develop skills in the design process, communication and manufacturing. Students are guided through a range of minor design projects focusing on electronics, product design, structures, mechanical design, systems and programming to develop their skills, creativity and critical analysis.

Study in Systems and Control will also introduce students to the broader perspectives of the design world. It will expand knowledge and understanding of the basic elements of design, and how these can be effectively applied within the area of systems and control technology. It will encourage the application of personal judgement, testing and the application of appropriate criteria in the appraisal of products and systems, while at the same time influencing students in their approach to designing and making quality outcomes that meet the specific needs of the identified users. Students gain an understanding of industrial and commercial practices within the area of design and market influences.

In Grade 10, students explore ways in which aesthetic, technical, economic, environmental, ethical and social dimensions interact with design and manufacture. Students apply traditional drawing and communication techniques, computer-aided design/computer-aided manufacturing (CAD/CAM) and digital media design to plan the production and manufacture of a fully functioning product of their choice from a range of contexts supplied by the examination board. The student’s self-made product will be tested and evaluated with regard to its effectiveness, and possibilities for commercially producing it on a mass-production line explored.

Skills developed

• knowledge of electronic, mechanical and structural engineering, programming and systems
• creative thinking through aspects of the design cycle of investigation, research, planning, designing, making, testing and evaluating
• working with traditional hand-drawing techniques, engineering drawings, CAD/CAM and digital media
• use of a range of materials, processes and tools including CNC, Laser Cutting and 3D printing
• solve practical and technological problems operating through processes of analysis, synthesis and realisation
• develop a range of communication skills which are central to design-making and evaluation and the development of a range of making skills
• understand the use of a wide range of materials in practical scenarios to develop curiosity, enquiry, initiative, ingenuity, resourcefulness and discrimination with their use
• encourage technological awareness, foster attitudes of cooperation and social responsibility

Special requirements
Students must be prepared to work outside lesson time to develop their work further. This includes using the design workshop facilities, by arrangement with D&T staff at anytime convenient to the student’s programme of study. Students will be expected to exhibit their design work when the opportunity arises.

Assessment

External assessment – 50%
• paper 1: design thinking
• paper 2: systems and control knowledge and understanding

Internal assessment – 50%
• major design and make project for an intended user group

Study Skills

The Study Skills programme offers the opportunity for academic skill development alongside a student’s IGCSE subjects. The programme is delivered by specialist learning support teachers, is tailored to individual needs and focuses on both skill development and consolidation of subject content. As the two year period progresses, students are encouraged to take responsibility for their own learning by critically reflecting on the skills they have learned and considering how they could be effectively applied to their studies.

For students taking the Study Skills route it replaces one IGCSE subject, usually Languages or Humanities. Decisions regarding joining Study Skills are made in consultation with parents, Heads of Grade and Learning Support specialists.

Skills developed
The specific skills covered are based on individual need and can include the following:
• close reading techniques
• methods of note-taking
• planning extended writing tasks
• drafting and editing
• revision strategies

Assessment
Students in this course are assessed for their effort, but attainment is not formally assessed.

Homework

The purposes of homework are:

Review—to consolidate, rehearse or practice work done in class.

Examples include:
• reading
• keyword lists
• highlighting keywords in text
• summary table/questions
• memory/mind maps
• categorising information
• prioritising information

Independent, creative or research tasks—to provide students with the opportunity to be more creative, reflective and evaluative; this should be set with two nights completion time so that students can structure their homework time around their activity/rehearsal schedules.

Examples include:
• notes/record of independently researched information
• learning/memorising vocabulary, facts, script
• reading and comprehension
• essay
• laboratory report
• art creation
• creative writing
• research homework

Weekly homework allocation guidelines

In both Grades 9 and Grade 10, we expect homework to take a maximum of around one hour per subject each week. This should include time allocated for review, and comes to a total of around eight hours per week.

Coursework, holidays and revision

Assessed coursework and revision replaces homework rather than being set in addition to it.

Homework set during the last week of term for submission after a holiday should not be more than the normal weekly amount.

Timing and deadlines

• students/parents should let teachers know if their children have spent an appropriate time on a homework activity but have been unable to complete it; this particularly applies to ESL and Study Skills students
• the teacher should indicate the maximum time expected to be spent on a task
• all students are expected to abide by the specified deadlines, unless there are genuine extenuating circumstances
• teachers are sensitive to the many demands on the students in the whole College environment and are receptive to student negotiation in advance of a deadline with regard to the amount of homework set and deadlines for completion; students involved in performances or concerts can negotiate extensions but must do so before they miss a deadline
• medical certificates must be provided if a student misses the deadline of a major assessment or is absent due to illness
Homework assessment and feedback

• all significant homework tasks should receive feedback in order to motivate and guide students
• students should have been made aware of the assessment criteria which will be applied to the assignment
• assessed work with feedback should be returned within a reasonable timeframe to have allowed assessment of the work of the whole class; this is normally within one week

Reports and assessments

The IGCSE programme consists of two-year courses culminating in external examinations. Some courses are wholly internally assessed. Three way conferences are held twice a year, and students receive two assessments over the course of each year.

Assessments are broken into two components: holistic attainment and effort indicators. The holistic attainment grades are reflective of academic progress made by the students, while the effort indicators reflect the level of student engagement and effort.

Attainment indicators
7: Excellent attainment
6: Very good attainment
5: Good attainment
4: Satisfactory attainment
3: Attainment needs to improve
2: Low attainment, performance is a serious cause for concern
1: No measurable attainment, urgent action is needed
RJ: The student has only recently joined this class and it is too early to give an assessment

Effort indicators
Students are assessed on four criteria:
1. Participation
2. Attitude
3. Organisation
4. Approach to work
Student effort is assessed as:
• Maximum effort—exceptional
• Very good effort—above expected
• Good effort—expected
• Inconsistent effort—below expected
• Poor effort—serious cause for concern

Academic structure (for 2014/2015)
**Academic structure**

High School Principal  
Nick Alchin  
nal@uwcsea.edu.sg  

Vice Principal (Grade 9–10)  
Cathy Jones  
cjo@uwcsea.edu.sg  

Head of Grade 9  
Steven Scott  
ssc@uwcsea.edu.sg  

Head of Grade 10/FIB  
Diana Yacou  
dya@uwcsea.edu.sg  

**Grade 9 and 10 subject groups – who to contact for information**

<table>
<thead>
<tr>
<th>Group</th>
<th>Subject</th>
<th>Head of Department</th>
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<tr>
<td>The Arts</td>
<td>Art and Design</td>
<td>Steve Hickey</td>
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<td></td>
<td>Drama</td>
<td>Bronwyn Bye</td>
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<td></td>
<td>Music</td>
<td>Mark Bradshaw</td>
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<tr>
<td>English</td>
<td>English Language and Literature</td>
<td>Kate Levy</td>
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<td></td>
<td>English as a Second Language (ESL)</td>
<td>Kate Levy</td>
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<tr>
<td>Humanities</td>
<td>Economics</td>
<td>Jackie Price</td>
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<tr>
<td></td>
<td>Enterprise</td>
<td>Adam Steele</td>
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<tr>
<td></td>
<td>Geography</td>
<td>Ellie Alchin</td>
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<td></td>
<td>History</td>
<td>Alex McGregor</td>
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<td></td>
<td>UWCSEA Global Perspectives</td>
<td>Louisa Radford</td>
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<tr>
<td>Languages</td>
<td>Chinese</td>
<td>Joanne Li</td>
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<td></td>
<td>French</td>
<td>Alex Prodhomme</td>
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<td></td>
<td>Spanish</td>
<td>Oscar Gallego</td>
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<td></td>
<td>School Supported Self-Taught</td>
<td>Laurie Kraaijeveld</td>
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<tr>
<td>Mathematics</td>
<td>Mathematics</td>
<td>Ken Stirrat</td>
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<tr>
<td>Physical Education</td>
<td>GCSE Physical Education</td>
<td>Matt Taylor</td>
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<tr>
<td>Science</td>
<td>Coordinated Science</td>
<td>Diego Madurga Diez</td>
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<tr>
<td>Technology</td>
<td>Design and Technology</td>
<td>John Zobrist</td>
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<td></td>
<td>Digital Perspectives</td>
<td>Martin Spreckley</td>
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<tr>
<td>(!)GCSE Examination Officer</td>
<td></td>
<td>Vani Sithambaram</td>
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<tr>
<td>Learning Support</td>
<td></td>
<td>Joanne Cuthbert</td>
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Contact information for staff can be found in the Staff Directory on the College website.