UCC
UPPER CANADA COLLEGE
Think Ahead.

Advice About Course Selection

2015

ADVICE ABOUT COURSE SELECTION

This guide is intended to assist boys and their parents in the academic planning process from Year 1 to Foundation Year, with a particular focus on course selection for the following grade level, which occurs during the Winter Term. However, no summary of key elements can provide all of the information that is required for this very important aspect of each boy's Upper School career. It is therefore essential that families consult other sources, which include:

• The detailed descriptions of course content that are found in the Academic Program Guide on the UCC website under **Upper 8-12>Academics>Upper School Academic Program Guide**.

• Boys' past and current grades by subject. It is crucial to consider choices for subsequent years within the context of each student's academic record to date.

• Students' current teachers, especially those in subjects that are cumulative in nature (a second language, mathematics) and/or where natural aptitude and a boy's level of interest play an important role in determining success.

• Form and House Advisers. These are the faculty members who monitor students' overall progress through the Upper School and are therefore especially aware of each boy's academic strengths and challenges.

• The Academic Dean and the University Counsellors. When questions arise concerning the fulfillment of IB Diploma requirements or planning for postsecondary education, these are the best sources of information and advice. Appointments with Dr. Julia Kinnear may be made through Amy Hewson at extension 2222. Depending on a boy's House, Katherine Ridout, Michelle Carvalho, Jane Audet, or Andrew Turner will be pleased to discuss course selections with reference to university admission. Contact Leigh Berndsen at extension 2262 to arrange a time.

In order to ensure maximum flexibility of student choice, the Upper School rebuilds its timetable each year based on the selections that boys make. For this reason, course selections are due by **Friday, February 27.** While it is possible for students to make changes during the balance of the school year, as time passes there is an increased risk that courses of interest may have already reached their maximum enrolment.

Occasionally, a boy may decide to alter his original choices in the first few weeks of the next school year. While this is permitted by the College and usually possible based on enrolment patterns, in some cases, there may be an irresolvable timetable conflict and in other instances, a student may have to move from one section to another in other courses where he feels well placed. A student who changes courses after the beginning of the school year will also be responsible for making up any missed content. It is far better to take the time to engage in thorough research and consultation before the original submission date in order to ensure that those choices are the best ones possible.

STUDENTS ENTERING THE IB YEARS

• The choice of six subjects to be studied in order to qualify for the IB Diploma is largely determined by the following factors:

1. The mandated structure of the program means that each candidate must complete three subjects at Higher Level and another three at Standard Level.

2. Five of the six IB subjects are in stipulated disciplines, called Groups. The sixth Group consists of four arts electives. As an alternative, this elective may be a second course chosen from Group 2, 3, or 4.

3. Almost all IB subjects have specified prerequisites at lower grade levels, either within the core or from among available electives. These are described on the IB course selection sheet. Exceptions are *ab initio* Spanish (Group 2), Economics (Group 3), Philosophy (Group 3), Environmental Systems & Societies (Groups 3 and 4), Sports, Exercise & Health Science (Group 4) and Film (Group 6). Students who are not taking Physical Geography in the Foundation Year may select HL Geography, but only with the permission of the department.

• In choosing their IB subjects, students must also consider which subjects are prerequisites for the university degree programs to which they wish to apply. Sometimes the level at which a subject is taken may also be significant. This aspect of course selection is treated in depth in the Guide to Choosing Foundation Year & IB Courses, which is provided to boys as part of their course selection package and also available in the Academic Program Guide.

• IB English is available as two courses: Literature and Language & Literature. Both are taught at Higher Level and Standard Level. Any of these four choices will satisfy university admission requirements in English. However, the courses themselves are quite different in content and focus, so students need to give careful consideration as to which course and which level best suits their interests and plans for post-secondary education. Referring to the detailed course descriptions in the Academic Program Guide is essential in this process. As well, members of the English Department are pleased to provide individual advice. Standard Level Language & Literature is strongly recommended for students who do not have English as their first (or best) language.

• Environmental Systems & Societies is what the International Baccalaureate Organization calls an interdisciplinary subject. Because of the special nature of this course, it may be used to satisfy the IB Diploma requirements in both Group 3 (Individuals & Societies) and Group 4 (Experimental Sciences). However, students choosing it may still take another subject in either of these two groups if they wish (Economics and Systems, for example, or Systems and Chemistry). The opportunity to use Systems to fulfil two of the IB's distribution requirements at the same time is especially attractive to boys with a strong interest and proficiency in the arts, since it means that (with the required Year 2 and Foundation Year background) they are able to take two of the four Group 6 subjects: Film, Dramatic Arts, Music, and Visual Art. It should be

noted that Environmental Systems & Societies is not acceptable as a prerequisite for admission to university degree programs in science or engineering. Students with these interests are required to take two Group 4 subjects, typically Chemistry in combination with either Biology or Physics, depending on their particular interests. Because of its interdisciplinary nature, Environmental Systems & Societies is not considered a laboratory science. Boys considering applying to American universities should be aware that they often have an expectation that applicants will have four years of science on their transcripts.

• A newer Group 4 option is Sports, Exercise & Health Science (SEHS). The course incorporates the disciplines of anatomy, physiology, biomechanics, psychology, and nutrition, all of which are studied within the context of human performance and health. Emphasis will be placed on relating these topics to global issues as well as to daily life, and on developing skills in the areas of experimentation, research, critical thinking, and analysis. Ethical and political issues within the world of sport are also explored. Students should be aware that SEHS would not be acceptable as a prerequisite for some university science programs and may not be considered a laboratory science by some US colleges.

• Often the challenge faced by those assembling an IB program relates not to which subjects to take, but rather whether they should be taken at Higher or Standard Level. The best indicator with regard to this decision is a student's current level of achievement in that subject. In our experience, a Foundation Year January report mark below 5 suggests that the Higher Level course (if available) would not be a wise choice.

• Foundation Year teachers are an excellent source of recommendations about appropriate IB choices for their students, especially in Language B, Science, and Mathematics.

IB1 AND IB2 SUMMARY

A) The course load for both IB1 and IB2 is:

Higher Level subjects 3
Standard Level subjects 3
Theory of Knowledge 1
Total: 7

B) Each of the six IB courses that a student chooses involves a two-year commitment.

It is important to keep in mind that it is seldom possible to change course selections between IB1 and IB2. An exception is the switch from SL Math to SL Math Studies, a move that some boys have made successfully.

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Guide to Choosing FY & IB Courses

2015

A GUIDE TO CHOOSING FOUNDATION YEAR AND IB COURSES

The purpose of this guide is to assist students at UCC in making the best possible choice of courses in terms of admission requirements for post-secondary study. Although of obvious importance at a school where 100% of graduates proceed to further education, this is just one of the criteria to be used in the selection process. Other factors that must be given significant weight are as follows:

• The academic requirements for earning the International Baccalaureate Diploma (one subject in each of six groups: three at the Higher Level and three at the Standard Level)

• A student's own intellectual interests (keeping in mind that each IB subject requires a two-year commitment)

• A student's past and present level of achievement in various subject areas (especially areas of clear strength or weakness).

In the lists on the following pages, the focus is on the type and level of academic preparation that universities expect to see from successful applicants. Even so, all of the six IB subject groups have been included for each degree program.

The six subject groups that are listed in the various sections of this guide correspond to UCC's IB course offerings (and their prerequisites) as follows:

Group 1 :
Language A (English or French)
An International Language (with approval)

Group 2 :
Language B (French, Latin, Mandarin, Spanish)
ab initio (Spanish)
An International Language (with approval)

Group 3 :
Individuals and Societies (Economics, Geography, History, Philosophy, Environmental Systems & Societies)

Group 4 :
Experimental Sciences (Biology, Chemistry, Physics, Environmental Systems & Societies, Sports, Exercise & Health Science)

Group 5 :
Mathematics (Higher Level, Standard Level, Math Studies)

Group 6 :
The Arts (Film, Music, Theatre Arts, Visual Art)
OR an Elective (an additional subject from Groups 2, 3 or 4).

In a group for which no particular course has been specified, a boy should feel free to choose according to his own preference.

The codes (HL) and (SL) appearing after an IB subject indicate that it should be taken at the Higher Level or the Standard Level, where such an option exists. When both codes appear, either level will provide appropriate background. It should be kept in mind that most universities will award advanced standing and/or degree credit to IB Diploma holders only in the Higher Level subjects in which they have done well (typically a grade of 5, 6, or 7). As a general rule, students should select the Higher Level (if available) in a subject they know they will want to study in depth at university.

In many instances, an alternative route toward a degree program is available, in which case it is described beneath the usual choices. Students who choose these routes should be aware that universities prefer to admit applicants who are completing all prerequisites within their IB program. This bias could affect the chances for admission of a student who was in a borderline position because of his overall IB point total.

For some degree programs, entrance requirements vary considerably from one university to another. The combinations of IB subjects illustrated here are based on the most stringent requirements and will therefore provide boys with the broadest possible choice for post-secondary study in a given area. In cases where additional information is required, it appears at the bottom of the relevant section.

For many students, choosing an appropriate IB course in Mathematics poses a considerable challenge. Boys and their parents should be aware that Group 5 is the area in which UCC students are most likely to overreach themselves, which can have serious consequences in terms of IB achievement and opportunities for university admission. Members of our Mathematics Department are very experienced and helpful in advising students to make the best choice from among the three courses available.

English A is available as two courses: Literature and Language & Literature. Both are taught at Higher Level and Standard Level. Any of these four choices will satisfy university admission requirements in English. However, the courses themselves are quite different in content and focus, so students need to give careful consideration as to which course and which level best suits their interests and plans for post-secondary education. Referring to the detailed course descriptions in the Academic Program Guide is essential in this process. As well, members of the English Department are pleased to provide individual advice. Standard Level Language & Literature is strongly recommended for students who do not have English as their first (or best) language.

This guide includes a sampling of degree programs to which UCC students most often apply, but it does not attempt to cover the full range of post-secondary studies. One popular career destination not included is law. The reason is that North American faculties of law require at least two years of undergraduate study — and more often than not completion of a bachelor's degree — for admission. Apart from this general entrance requirement, law schools have no specific prerequisites at either the senior high school or university levels of study. The best advice to students considering a career in law is to choose those courses (both IB and undergraduate) in which they are likely to achieve the highest academic standing while developing essential skills in research, academic writing, and oral presentation. Universities in the United Kingdom do allow admission directly to law from secondary school. For students interested in this option, Higher Level English (Literature or Language & Literature) and any one or two Higher Level subjects in Group 3 are recommended, although not required.

It is hoped that using this guide will assist in the selection process. However, boys and their parents are also urged to consult House Advisers, Heads of Department, individual subject teachers, the Academic Dean, and their University Counsellor before considering choices final.

ARCHITECTURE

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	SPH3U →	PHYSICS (HL OR SL)
GROUP 5	MCR3UH OR M →	MATHEMATICS (HL OR SL)
GROUP 6	*AVI3M →	VISUAL ARTS (HL OR SL)

NOTES:

The School of Architecture at McGill University requires one year of Engineering prior to entry. For this reason, students who wish to be eligible for this program must take Chemistry as well as Physics.

While IB Visual Arts is not a prerequisite for Architecture, it is strongly recommended, since it provides the instruction and resources required to produce the strongest possible portfolio, which is a key factor in the admission process.

BUSINESS ADMINISTRATION OR COMMERCE

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	-	
GROUP 5	MCR3UH OR M →	MATHEMATICS (HL OR SL)
GROUP 6	-	

NOTES:

Some Business Administration programs will consider applicants with Advanced Functions (MHF4U) and Data Management (MDM4U). This combination of Ontario credits may be earned by satisfactorily completing the first year of SL Math and then switching to Math Studies for IB2. A small number of programs require only one of the three Grade 12 Math credits (MDM4U, MHF4U, or MCV4U). In these cases, two years of Math Studies (MDM4U) will satisfy the prerequisite.

While IB Economics is not a prerequisite for Business or Commerce programs in university, many students find it provides helpful background. Useful skills and context can be gained, however, by taking any other Group 3 subject.

COMPUTER SCIENCE

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	-	
GROUP 5	MCR3UH OR M →	MATHEMATICS (HL OR SL)
GROUP 6	*ICS4U →	

NOTES:

Grade 12 Computer Science: ICS4U is not a prerequisite for admission to a degree program in the same discipline. However, it is strongly recommended that prospective applicants for this program take both ICS3U in Year 2 and ICS4U in Foundation Year.

Students who are interested in both Computer Science and Computer Engineering should take IB Chemistry and Physics in order to have the prerequisites for both degree programs. At some universities, Computer Science is located within the Faculty of Science and therefore applicants are required to have taken one or two IB (Grade 12) science courses as prerequisites. At the University of British Columbia, students in the Faculty of Science are generally required to have taken FY (Grade 11) Chemistry and Physics.

ENGINEERING

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	SCH3U →	CHEMISTRY (HL OR SL)
GROUP 5	MCR3UH OR M →	MATHEMATICS (HL OR SL)
GROUP 6	SPH3U →	PHYSICS (HL OR SL)

NOTES:

Those considering any branch of Engineering will benefit from taking the Computer Science elective in both Year 2 and Foundation Year (ICS3U followed by ICS4U).

ENVIRONMENTAL SCIENCE

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	SBI3U →	BIOLOGY (HL OR SL)
GROUP 5	MCR3UH OR M →	MATHEMATICS (HL OR SL)
GROUP 6	SCH3U →	CHEMISTRY (HL OR SL)

NOTES:

While a second science course is not a prerequisite for all degree programs in Environmental Science, students who take both Biology and Chemistry will have the broadest choice of universities.

ENVIRONMENTAL STUDIES

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	-	
GROUP 5	MCR3UM OR S →	MATHEMATICS (SL OR STUDIES)
GROUP 6	-	

NOTES:

While most environmental studies programs have no specific prerequisites other than English, students who are drawn to such majors often include Environmental Systems & Societies and/or Geography among their IB course choices.

FINE & PERFORMING ARTS

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	-	
GROUP 5	-	
GROUP 6	*AVI3M OR → *ADA3M →	VISUAL ARTS (HL OR SL) OR DRAMATIC ARTS (HL) OR FILM (HL OR SL)

NOTES:

While IB courses in Visual Arts, Dramatic Arts, and Film are not prerequisites for entry to university programs in these disciplines, they are invaluable in assisting applicants to prepare for the portfolio evaluation or audition, which is a key factor in the admission process.

HUMANITIES

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	-	
GROUP 5	MCR3UM OR S →	MATHEMATICS (SL OR STUDIES)
GROUP 6	-	

NOTES:

Students who intend to specialize in the Humanities (Literature, Languages, History, Philosophy, etc.) are strongly encouraged to select Higher Level English (either Literature or Language & Literature) and courses from Group 3 such as History or Philosophy in order to acquire the strongest possible background. If students plan to major in English Literature (especially at UK universities), they are advised to include HL English Literature in their IB program.

Math Studies provides acceptable background for those planning to specialize in the Humanities at university. However, Standard Level Mathematics will give these students a wider range of choices for undergraduate study.

KINESIOLOGY/PHYSICAL EDUCATION

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	SBI3U →	BIOLOGY (HL OR SL)
GROUP 5	MCR3UH OR M →	MATHEMATICS (HL OR SL)
GROUP 6	SCH3U →	CHEMISTRY (HL OR SL)

NOTES:

Kinesiology/Physical Education has the widest range of prerequisites of any undergraduate degree program. The choices shown here will give a candidate the greatest number of opportunities for receiving offers of admission; however, in certain cases it is possible to omit either Biology or Chemistry or to offer Physics or Sports, Exercise & Health Science instead.

Simon Fraser University in British Columbia requires FY (Grade 11) Physics as well. See the note under Life Sciences for advice about taking all three sciences in Foundation Year.

LANGUAGES

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	FSF3A →	FRENCH (HL OR SL)
GROUP 3	-	
GROUP 4	-	
GROUP 5	-	
GROUP 6	*LVLBU OR → LKECU OR → *LWSCU →	LATIN (SL) MANDARIN (HL or SL) SPANISH (SL) OR SPANISH *AB INITIO*

NOTES:

While no specific courses are required for students planning to major in language study at the post-secondary level, typically most students interested in such a path will be taking two languages in addition to English in their IB program.

LIFE SCIENCES

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	SCH3U →	CHEMISTRY (HL OR SL)
GROUP 5	MCR3UH OR M →	MATHEMATICS (HL OR SL)
GROUP 6	SBI3U →	BIOLOGY (HL OR SL)

NOTES:

Universities expect students who are preparing for undergraduate study in the Life Sciences to acquire a strong background in both Chemistry and Biology.

For students who are undecided about whether to pursue studies in the Physical or Biological sciences at university, it is possible to complete credits in Biology, Chemistry, and Physics during Foundation Year. However, the College generally recommends against this combination of subjects because it results in an excessive workload. For this reason, a student who selects all three sciences will have his proposed program reviewed by his University Counsellor. It is also possible to take the third science at UCC's Summer Academy or by attending any other summer program accredited by the Ontario Ministry of Education.

There is no degree program that requires applicants to present three IB sciences for admission, and in fact it is not possible to take more than two within the structure of the Diploma Program. The University of British Columbia and Simon Fraser University, however, require students majoring in Science to take both FY (Grade 11) Physics and Chemistry. The Physics course could be completed at summer school if necessary.

Those who intend to apply for direct entry medical studies programs at universities in the United Kingdom must offer Higher Level Biology and Higher Level Chemistry. Both Oxford and Cambridge require FY (Grade 11) Physics as well. The majority of UK medical schools expect applicants to write a standardized test (either the BMAT or the UKCAT) as part of the admission process. Students who have taken FY Physics will find themselves much better prepared for these tests.

Increasingly, medical school admission committees are identifying breadth of academic background as a criterion for selection. Over-specialization in any one IB subject group will work against the attainment of a truly liberal education.

MATHEMATICS

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	SPH3U →	PHYSICS (HL OR SL)
GROUP 5	MCR3UH OR M →	MATHEMATICS (HL)
GROUP 6	*ICS4U	

NOTES:

While HL Mathematics is not technically a prerequisite for most Mathematics programs at North American universities, it is clearly superior preparation for study at the post-secondary level. The University of Waterloo strongly recommends that applicants to its Faculty of Mathematics offer a senior level (4U) course in Computer Science.

MUSIC

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	-	
GROUP 5	-	
GROUP 6	*AMU3M →	MUSIC (HL OR SL)

NOTES:

While IB Music is not a prerequisite for entry to a Bachelor of Music program, it is invaluable in assisting applicants to prepare for the audition, which is a key factor in the admission process.

PHYSICAL SCIENCES

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	SCH3U →	CHEMISTRY (HL OR SL)
GROUP 5	MCR3UH OR M →	MATHEMATICS (HL OR SL)
GROUP 6	SPH3U →	PHYSICS (HL OR SL)

Notes:

Some background in computer science would be helpful for students planning to major in the physical sciences.

SOCIAL SCIENCES

GROUPS	FOUNDATION YEAR	IB1 AND IB2
GROUP 1	ENG3U →	ENGLISH A (HL OR SL)
GROUP 2	-	
GROUP 3	-	
GROUP 4	-	
GROUP 5	MCR3UH OR M →	MATHEMATICS (HL OR SL)
GROUP 6	-	

NOTES:

While Math Studies may be technically acceptable as a prerequisite for some Social Science programs, Standard Level Mathematics will provide students with superior preparation for programs such as Political Science, Psychology, Sociology, Anthropology, Geography, and Economics. Students interested in studying Economics at a university in the United Kingdom should be aware that some (most notably The London School of Economics & Political Science) require Higher Level Mathematics. In the case of LSE, a grade of 7 in HL Math is required for consideration.