A scholarship program for academically gifted Year 12 students

HEADSTART

2019

adelaide.edu.au
The University of Adelaide’s Headstart scholarship program gives high achieving students the opportunity to study at university while still in Year 12, and have these university studies count towards their SACE and their university aggregate/ATAR.

While studying at the University part-time Headstart students not only have the opportunity to find out what university life is like before they finish school, but also contribute to and benefit from, the diverse cultural and intellectual life of the University of Adelaide.

Enquiries

Further information about the program is available by contacting:
Telephone: +61 8 8313 0165
Email: start@adelaide.edu.au
Advanced Bachelors Degrees

At the University of Adelaide, the search for new knowledge is an endeavour in which students participate.

The Advanced Bachelor degrees are designed for high achieving students who are inspired by the opportunity to contribute to the world’s important discoveries and research advancements. They provide a unique experience to learn at close quarters with Adelaide academics of international distinction.

The Advanced Bachelors are ideal for students who demonstrate readiness for independent work. With the benefit of a strong research focus from the first year of the degree, students enjoy specialised small group discovery work, personal mentors and courses that are not available through other degrees. At completion, the Advanced Bachelors provide a strong pathway to further research and careers.

The Advanced Bachelor degrees on offer:

- Arts
- Computer Science
- Economics
- Health and Medical Sciences
- Mathematical Sciences
- Music
- Psychology (Honours)
- Science

For more information visit: adelaide.edu.au/degree-finder
Headstart provides gifted and highly motivated students with a challenge beyond the Year 12 curriculum and the chance to grow as individuals as they combine secondary school and university studies.

Headstart students can choose to replace or supplement their Year 12 subjects with university courses (subjects). University courses are recognised by the SACE Board, allowing students to use them towards their SACE Stage 2 completion and therefore their university aggregate and ATAR calculation.

Headstart students may also receive credit towards their degree if they enrol in a University of Adelaide program after high school.

The scholarship
Successful Headstart applicants are exempt from tuition fees and the Student Services and Amenities Fees while in the program. Headstart participants can enrol in a maximum of two courses of first-year university study.*

* Students choosing to study Physics are able to study four courses, to meet the Mathematics co-requisite requirements.

Who can apply
The Headstart program is open to Australian citizens and permanent residents that will be in Year 12 in 2019 and that are either accelerated or high-achieving in their studies;

1. Accelerated students who have completed a Stage 2 subject in an earlier school year and are completing their SACE or IB at less than a full year’s workload. Eligibility is based on grades from completed Year 12 subjects.

2. High-achieving students who are not accelerated. Eligibility is based on grades from completed Year 11 subjects. Exceptionally gifted students in lower grades may also be considered, but a special case will need to be made by schools on behalf of students who are not yet in Year 12. Please note: Students who have already had an ATAR issued (e.g. students attempting Year 13) are not eligible to apply.

Academic eligibility criteria
Applicants must meet the below SACE or IB requirements;

SACE students
Accelerated students: A minimum grade of B or better for all Stage 2 subjects already taken is required, plus a minimum of A- for any SACE Stage 2 subject that is a prerequisite for the University course to be studied.

High-achieving students: A minimum grade of B or better across all Year 11 subjects is required. Additional criteria may apply to individual course selections such as Mathematics, Physics and Languages.

IB students
Accelerated students: A minimum score of 6 or higher at the Standard Level, or 5 or higher at the Higher Level for all Year 12 subjects already taken is required, plus at least 6-7 for any subject that is a prerequisite for the University course to be studied.

High-achieving students: A minimum score of 6 or higher at the Standard Level, or 5 or higher at the Higher Level is required. Additional criteria may apply to individual course selections such as Mathematics, Physics and Languages.

Personal eligibility criteria
In addition to the academic entry requirements, the below personal eligibility criteria will be required/assessed:

• Support of parents or guardians
• Recommendation from the school and nomination of a School Mentor
• Personal statement (max 250 words): This should include why the student is wanting to pursue the Headstart program, what are the motivating factors, how they found out about the Headstart program, plans for 2020 beyond, etc.
• Timetabling and attendance: The student’s ability to manage the school and University timetables and availability to attend courses on-campus.
Online applications for Headstart will open in October 2018 with the following closing dates:

**2019 application closing dates:**
Semester 1: Monday 28 January 2019
Semester 2: Monday 1 July 2019

Further details on how to apply, including the information and documentation required, can be found on page 25.

Late applications will not be considered due to the time required for student enrolment and orientation.

Any queries about applications should be directed to (08) 8313 0165 or start@adelaide.edu.au

**Midyear entry**
Students may be considered for entry beginning in Semester 2 if there are spaces available in the program. Midyear entry is only available into courses that do not have a Semester 1 university course prerequisite or assumed knowledge (refer to the course descriptions beginning page 7 for further information). Students applying for Headstart at the beginning of the year will apply for both semesters in the initial application (they do not need to complete a second application for Semester 2 courses). Students applying only for Semester 2 are encouraged to submit an application at the start of the year.

Further Academic Year Dates can be found here: adelaide.edu.au/student/dates/academic/2019

**Costs**
Successful applicants receive a full scholarship from the University of Adelaide, which waives both the tuition fees and the Student Services and Amenities Fee for any courses studied as part of the Headstart program. Each student is responsible for costs associated with textbooks, materials, equipment, field trips and travel to and from campus.
Courses are offered on the North Terrace Campus only and Headstart students are expected to attend all classes to gain maximum benefit from their university studies. Classes are usually delivered between Monday – Friday, 8am – 6pm. Classes are not offered online, at nights or on weekends. The number of contact hours will vary between courses and may be between 3-6 hours per week, spread across various classes (e.g. lectures, tutorials, workshops and practicals) and days of the week. Students will also need to undertake self-directed study outside of these hours to complete preparation, readings and assignments. Note that some courses will not have a large variety of class times to choose from, so it is important to take this into consideration.

Students must refer to the university timetable for courses they are applying for and the school timetable must clearly indicate any subjects which will be dropped or lessons that can be missed in order to attend university classes should the application be accepted.

2019 timetable information will be available from 1 December at: access.adelaide.edu.au/courses/

Information about the Academic Year dates, including semester dates, breaks and exam periods can be found here: adelaide.edu.au/student/dates/academic/2019. Headstart participants are responsible for ensuring that they are available for the full duration of teaching and assessment.

Headstart students are not enrolled in a degree but are considered as Non-Award students. Upon enrolment they will receive a student card that provides access to the full range of student services offered on campus and full borrowing rights at the University Libraries.

Mentoring
Each Headstart student must nominate a staff member from their school as a mentor. The mentor’s role will be to monitor student progress and act as a contact person linking the University to the student within the school. They will not be required to provide academic support.

The University of Adelaide will provide an ongoing role of coordination and support.

This will include:
- liaison between the University and Headstart students, their parents/guardians, principals and mentor
- tracking students’ progress through their university studies
- organising academic and peer support for students.

Learning environment
The University offers a fully adult learning environment and, while there are many support services and normal duty of care applies, the University does not take on the same responsibilities of care that schools assume under the Teachers’ Registration and Standards Act and other legislation.

The student, school and parents/guardians need to make a judgment as to whether the student will adapt to involvement in university life. It is important for them to understand that this can be significantly different from the secondary school environment.

University assessment, grades and credit
Headstart students attend classes, submit assignments and sit examinations the same as other university students. More information on the current grade scheme (M10) can be found at: adelaide.edu.au/student/exams/results-and-grades

Grades are recorded on the students University of Adelaide academic record and any student who passes a Headstart course can receive credit into related University of Adelaide degrees. This enables students to fast-track their academic program or study additional courses. Headstart participants will receive a hardcopy of their Academic Transcript at the conclusion of their participation in the program.

Withdrawal
Headstart students must carefully consider the consequences of withdrawal from the program to ensure it will not affect their completion of the SACE. The University only accepts withdrawal in close consultation with the student’s school mentor.

If a Headstart student withdraws from, or fails, a course at any stage of the year, this will not affect their chances of university selection (unless it prevents them from completing the SACE). No record of failure or withdrawal will be registered by the University of Adelaide.
Headstart and the SACE

The SACE Board recognises and grants SACE credits for appropriate qualifications, subjects, courses, or learning experiences, which includes university studies. Recognition can be granted for up to 20 credits of the SACE at Stage 2.

Recognition towards the SACE is reported on the Record of Achievement as a number of SACE credits ‘granted’, and is not accompanied by a result (e.g. a grade or score). Satisfactory achievement in any university subject will be reported as ‘University Studies’. This entry will receive the designation ‘granted’ and the relevant number of credits. More information is available at sace.sa.edu.au/coordinating/admin/information-sheets/21

Each Headstart course is equivalent to 10 credits.

Recognition of university studies is by application to the SACE Board using the Recognition Application (Stage 1 and Stage 2) equivalent studies form on the SACE website—visit: sace.sa.edu.au/studying/recognised-learning/other

The recognition application form must be completed by the student and their school in two steps;

• Step 1: When the student is accepted into the Headstart program, to have the subject and course combination approved, and
• Step 2: On completion of the Headstart course(s), once the students academic transcript has been provided by the University of Adelaide.

Recognition of a Headstart course cannot be completed until the academic transcript is available, which will follow grades release of the students final Headstart semester.

Headstart and the university aggregate

The university aggregate is calculated from a student’s best scaled scores from three 20 credit TAS plus the best outcome from the flexible option (30 credits). The flexible option may include recognised learning that has been approved by the SACE Board.

Headstart results will count towards the students’ university aggregate as follows:

<table>
<thead>
<tr>
<th>Aggregate Level</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Distinction</td>
<td>10.0</td>
</tr>
<tr>
<td>Distinction</td>
<td>9.9</td>
</tr>
<tr>
<td>Credit</td>
<td>9.0</td>
</tr>
<tr>
<td>Pass</td>
<td>7.9</td>
</tr>
</tbody>
</table>

The university aggregate is then converted to an ATAR. More information on this process can be found in the SATAC Tertiary Entrance Booklet.

Due to the timing of Step 2 of the recognition application, the university aggregate and ATAR may need to be recalculated and the SACE certificate reissued, however, this will not impact university offers.

Please note: Students who have already had an ATAR issued are unable to count recognised learning in subsequent attempts, therefore applications will not be accepted from Year 13 students.

Headstart and eligibility for competitions and university entry

Participation in university level studies may impact eligibility for some competitions and for certain university degrees. Applicants are responsible for seeking further information prior to participation if required.

Participation in a university level maths program (e.g. Mathematics IA/IB) may disqualify students from participation in the Australian Mathematics Olympiad. Any student participating needs to contact the Australian Mathematical Trust’s Executive Director.

Most university applications will require information about any tertiary (university) studies that applicants have previously completed. If undertaking tertiary studies may impact application or eligibility (e.g. for Medicine programs) students are advised to seek further advice from the relevant University or application centre. At the time of publication, participating in the Headstart program does not impact student’s eligibility for the Bachelor of Medicine and Bachelor of Surgery (MBBS) at the University of Adelaide.

Headstart 2019

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“The Headstart program has provided me with the opportunity to kick start my University studies! I have always wanted to attend university, however was unsure of what degree to study and career pathway to take. That is where the Headstart program comes in.

This program has enabled me to try different subjects, all while still attending high school. Essentially giving me the opportunity to try out a variety of different subjects that will help me narrow down a degree to undertake in the following year.

Additionally, this program supplies insight into the university’s expectations, workload and lifestyle all of which allow me to gain a deeper understanding into the world of university, most of which is learnt in first year by most school students.

I chose to undertake the subjects of Introduction to Marketing and Introduction to Management because I would like to pursue a degree in the field of commerce. So by having completed two subjects it has enabled me to get an insight into the University lifestyle, workload and having the added bonus of already having completed 6 units. I’m still undecided as to what I want to do, however a pathway connected to business would be ideal.”

Jack Kotek
Headstart courses: Marketing and Management
Choosing courses

There are a number of ways that students choose which courses to take in the Headstart program;

• an area of interest, which may not be offered through the high school
• an area of high achievement, to be able to provide a further challenge; or
• courses that are relevant to a future degree – find the degree on Degree Finder (adelaide.edu.au/degree-finder/) and check if the courses are listed in ‘Degree Structure’ or ‘Study Plan’

Students will also need to consider the timetabling for the course and whether it fits in with high school and other commitments.

Course information

The courses offered through the Headstart program are briefly outlined on the following pages. Detailed information about courses can be found on Course Outlines; adelaide.edu.au/course-outlines/
ARGUMENT AND CRITICAL THINKING
PHIL 1101
3 units in Semester 1
Study commitment: Up to three hours per week
Assumed knowledge: English as a Second Language (ESL) students are advised to consult Course Coordinator prior to enrolment in the course
Assessment: 500-word essay plus 1000-word essay (50%) and two-hour open book exam (50%)
About the course: Argument is an activity we all engage in, with varying results, in every walk of life. Over the last two millennia philosophers have developed powerful methods for classifying arguments, and identifying common errors in reasoning. Argument and Critical Thinking teaches these methods and applies them to real-life arguments, both written and spoken. It is thus an introduction to communication and applied logic. Among the topics we cover are the theory of legal argument, and the science-pseudoscience debate, which gives us a chance to discuss UFOs, parapsychology, Bigfoot, the Bermuda Triangle and alien abductions!

CHINESE IA
CHIN 1001
3 units in Semester 1
Study commitment: Up to five hours per week
Assumed knowledge: No previous knowledge of Chinese required
Assessment: Continuous assignments and tests, oral tests, mid-term test and final exams
About the course: Chinese IA is a course for beginners in the language. Native speakers or heritage speakers of Mandarin Chinese are not eligible for this course. Chinese IA teaches the fundamental grammar and vocabulary of modern standard Chinese (formerly known as Mandarin). This is the educated speech of North China which is now the official national language. Simplified characters are taught. The vocabulary reflects usage in contemporary China. It is expected that at the end of the course students should be able to master the Chinese phonetic system (Hanyu Pinyin), and should have an active vocabulary of around 200 Chinese characters and associated compounds related to contemporary China.

CHINESE IIA
CHIN 2201
3 units in Semester 1
Study commitment: Up to four hours per week
Prerequisites: SACE Stage 2 Continuers Chinese with a scaled grade of A- or higher
Assumed knowledge: At least 400 Chinese characters and basic Chinese grammar patterns
Assessment: Weekly dictation quiz, translation exercises, oral and written tests, class participation, final written exam
About the course: This course consists of tuition in speaking, listening to, writing and reading modern standard Chinese. This course extends students’ knowledge of basic grammar, vocabulary and structures found in the spoken and written forms of contemporary Chinese. The main emphasis is on building up vocabulary and reading experience as a basis for studying contemporary Chinese society and culture. It is anticipated that by the end of the course students will know around 900 Chinese characters and most commonly used Chinese grammar patterns.

CHINESE IIB
CHIN 2202
3 units in Semester 2
Study commitment: Up to four hours per week
Prerequisites: CHIN 2201
Assumed knowledge: At least 650 Chinese characters and basic Chinese grammar patterns
Assessment: Weekly dictation quiz, translation exercises, oral and written tests, class participation, final written exam
About the course: This course is a continuation of Chinese IIA. It consists of tuition in speaking, listening to, writing and reading modern standard Chinese. This course further extends students’ knowledge of basic grammar, vocabulary and structures found in the spoken and written forms of contemporary Chinese. The main emphasis is on building up vocabulary and reading experience as a basis for studying contemporary Chinese society and culture. It is anticipated that by the end of the course students will know around 900 Chinese characters and most commonly used Chinese grammar patterns.
EMPIRES IN WORLD HISTORY

HIST 1108

3 units in Semester 1

Study commitment: Three contact hours per week

Assessment: Using Primary Sources 1 (20%), Using Primary Sources 2 (20%), Primary Sources for Empire (30%), Historical Knowledge and Understanding (30%)

About the course: From the beginning of recorded history to the twentieth century, the world has been shaped by the rise and fall of empires. The purpose of this course is to explore how and why empires were constructed, how they were kept together, how rulers and ruled interacted, and how and why empires disintegrated. Focusing on a series of studies, we shall draw wider conclusions about the nature of empires in world history. The scope of the course is global because we shall look at representative examples of European empires, Asian empires, and empires of the western hemisphere (such as Aztec). Not only will the course explore the political history of the empires, it will also deal with issues such as the role of women, and the impact of empire on language, art, culture, religion, the economy, the environment.

The course has three main objectives. Firstly, it provides an introduction to the study of history at university level. Students will receive training in the practice of history, for example, how to use primary and secondary sources and how to frame an historical argument. Secondly, the course furnishes students with an overview of the big picture of world history across the last 1,500 years. Students will acquire essential contextual knowledge which will enrich their understanding of almost any subsequent course they take in history or the humanities. Thirdly, the course introduces students to civilisations that are quite different and in some ways alien to our own, and yet which in many ways are similar. In our interconnected world, an understanding of the historical roots of different cultures is a prerequisite for global citizenship.
**FRENCH IIA: LANGUAGE**

**FREN 2201**
3 units in Semester 1

**Study commitment:** Up to four hours per week

**Prerequisites:** SACE Stage 2 Continuers French with a scaled grade of A- or higher

**Assessment:** Regular tests, assignments, language exam

**About the course:** This course builds on and consolidates language skills acquired at SACE Stage 2 Continuers’ French. It involves the development of written language skills - composition, comprehension, translation, grammar - and spoken language skills - speaking, pronunciation, listening.

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**FRENCH IIB: CULTURE**

**FREN 2202**
3 units in Semester 2

**Study commitment:** Up to three hours per week

**Prerequisites:** FREN 2201

**Assessment:** Class presentation, class exercises tests, scene analysis, essay

**About the course:** The aim of this course is to develop a deeper understanding and a critical appreciation of France’s rich cultural heritage through the study of texts and other cultural artefacts. The course is also designed to develop linguistic skills, taking into account the problems associated with the apprenticeship of reading and analysis in French. Students completing this course will therefore benefit from enhanced reading skills, vocabulary acquisition and writing skills. This year, the topic for study is ‘Du texte a l’ecran’ (the study of stories and their screen adaptations). See French Department handbook for more details.

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**GERMAN IIA: BEGINNERS’ GERMAN**

**GERM 1002**
3 units in Semester 1

**Study commitment:** Up to four hours per week

**Assumed knowledge:** No previous knowledge of German required

**Assessment:** regular assessments, tests, end of semester test and oral exam

**About the course:** This course introduces students to the language and culture of contemporary Germany. It provides intensive language training in the four basic skills - listening, speaking, reading and writing - and introduces students to relevant aspects of German culture and society.

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**GERMAN IIB: LANGUAGE**

**GERM 2203**
3 units in Semester 2

**Study commitment:** Up to four hours per week

**Prerequisites:** SACE Stage 2 Continuers’ German with a scaled grade of A- or higher

**Assessment:** regular assessments, tests, end-of semester test, conversation tutorial (participation, performance, oral exam or equivalent)

**About the course:** This course aims to further develop students’ proficiency in the four language skills - listening, speaking, reading and writing - through a combination of readings and reproductive and creative exercises. It also aims to enhance students’ intercultural understanding through the use of authentic texts that focus on aspects of contemporary German culture and society.

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**GERMAN IIB: BEGINNERS’ GERMAN**

**GERM 1003**
3 units in Semester 2

**Study commitment:** Up to four hours per week

**Prerequisites:** GERM 1002

**Assessment:** regular assessments, tests, end of semester test and oral exam

**About the course:** This course is a sequel to German IA: Beginners’ German. It continues the intensive language training undertaken in German IA. Aspects of German culture will again form an integral part of language instruction throughout the semester.

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**GERMAN IIB: LANGUAGE**

**GERM 2204**
3 units in Semester 2

**Study commitment:** Up to three hours per week

**Prerequisites:** GERM 2203

**Assessment:** Regular assessments, tests, end-of semester test, conversation tutorial (participation, performance, oral exam or equivalent)

**About the course:** This course is a continuation of German IIA. It further develops students’ proficiency in the four language skills - listening, speaking, reading and writing and provide students with a greater understanding of various aspects of German society and culture.

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**INDIGENOUS PEOPLE, COUNTRY AND PROTOCOLS**

**ABORIG 1001**
3 units in Semester 1

**Study commitment:** Up to three hours per week

**Assessment:**
- 2000 word essay (40%)
- 1000 word group presentation (35%)
- 300 word review (25%)

**About the course:** This course provides a practical base for introducing students to the variety of Australian Aboriginal peoples, country and protocols. The focus will be on South Australia with the intent that what students learn in this environment will equip them with a protocols foundation for working with Indigenous peoples from elsewhere in Australia. An important learning outcome for students will be gaining knowledge on the intrinsic importance of country/land, the environment kin and identity for Indigenous people. Students may visit a key site on Kaurna country such as the cultural trail along the River Torrens. Students will also visit sites such as the South Australian Museum, the Art Gallery of South Australia, the Mortlock Library or Tandanya Cultural Institute in order to assess, analyse and explore the differences and juxtaposition on how Indigenous Knowledges, relationships, cultures and people are represented by State institutions or Indigenous organisations. Indigenous elders, storytellers, performance and academics will teach students by providing knowledge of the Indigenous relationships and responsibilities that are intrinsic to successful communication and activities with Aboriginal people. Obtaining these skills will enhance their future employment in Indigenous sectors.
### INTRODUCTION TO AUSTRALIAN POLITICS

**POLIS 1106**

3 units in Semester 1

**Study commitment:** Up to three hours per week

**Assessment:** Tutorial work (25%), weekly online quizzes (10%), major essay (40%), key concepts test (25%)

**About the course:** Politics affect you every day - the conditions you live and work under, your identity, your security, the values and fears you possess, and ultimately your expectations as a citizen and your place in the world. This course will provide an introduction to the Australian political system in its social and economic context. Students will also be introduced to relevant theoretical debates in a range of areas. Topics covered include: power, national identity, political parties, interest groups, environmental issues, the media, class, gender, race, ethnicity, technology, the impact of economic globalisation, political institutions, democracy and elections. The course will address the major forces that are influencing and shaping the Australian political environment. There is a particular emphasis on the applied and practical aspects of how and why government policies are brought into being as well as the social, political and economic factors that enable or constrain their introduction.

### INTRODUCTION TO GEOGRAPHY, ENVIRONMENT & POPULATION

**GEOG 1104**

3 units in Semester 1

**Study commitment:** Up to three hours per week

**Assessment:** Tutorial paper (15%), tutorial participation (10%), essay (35%), exam (40%)

**About the course:** The study of geography, population and environment tend to be treated quite separately, but there are strong and important relationships between them. This course focuses on these interactions and explores their implications for Australia’s and the planet’s future. Key geographical concepts such as space, place and the relationship between people and place are introduced. The contemporary dynamics of population growth, composition and spatial distribution are examined and analysed and the role environmental factors have had in shaping them is explored. Equally too, the impact of population on geographical environments is examined. The constraints that environmental factors, especially water, have placed on the development of the Australian population are investigated, along with the likely influence of future climate change. A particular focus is the changing spatial distribution of the population with issues like urbanisation, ‘sea change’ and rural depopulation and their inter-relationship with the environment being explored. An important focus is on internal and international migration’s influence in changing the population size, structure and distribution and how it affects, and is affected by, the environment. Indigenous Australians and their special relationship with the environment is discussed separately. The course will give students a solid introductory grounding in the key concepts and relationships between geography, environment and population.

### INTRODUCTION TO GLOBAL POLITICS

**POLIS 1102**

3 units in Semester 2

**Study commitment:** Up to three hours per week

**Assessment:** Tutorial work (20%), test 1 (15%), test 2 (25%), research essay (40%)

**About the course:** This course provides a comprehensive introduction to global politics, focusing in particular on its origins and historical evolution, its key concepts, major theoretical frameworks, main actors and institutions, the global architecture of power, and its dynamic nature in the process of globalisation. More specifically, the course introduces concepts of power, statecraft, diplomacy, foreign policy, political economy and international security, and examines the evolution of international relations in the 20th and 21st centuries.

The course combines the study of concepts and theories with a range of questions about global politics, including: Why bother with theory? Have we reached the end of history? Why is the world divided in nation-states? What factors influence the foreign policy of states? Is the sovereign state in decline? What is the new world (dis)order? Are we experiencing a clash of civilisations? Why do wars occur? Is there such a thing as a just war? What are the causes of terrorism? How is the world organised economically? Do transnational corporations rule the world? Is free trade the solution to global poverty? What are the main global threats of the 21st century?

These and other questions will be explored through the examination of a wide range of contemporary issues and case studies, including: the rise of China; the resurgence of Russia; the nuclear threat posed by North Korea; the tensions in the South China Sea; the role of the United Nations; the future of the European Union, particularly after Brexit; the increasing power of transnational corporations, such as Wal-Mart, Google and Facebook; the terrorist threat posed by Al-Qaeda and Islamic State; the humanitarian crisis in Myanmar; and, last but not least, the role of the United States in global politics, particularly since the election of Donald Trump.
INTRODUCTION TO MEDIA
MDLA 1002
3 units in Semester 1
Study commitment: Up to three hours per week
Assessment: Online test (10%), digital media analysis (30%), major essay (50%), participation (10%)
About the course: This course explores why digital media is being seen as creatively, socially, and politically transformative. What is ‘collective intelligence’ and how is it empowered by digital tools? How are ‘amateur’ media makers impacting on mainstream media practices? This course explores the important questions being asked about new digital technologies and encourages critical, reflexive thinking about social media sites. It addresses the links between earlier communication forms and media institutions, through to contemporary digital and mobile technologies. Functioning as an introduction to the Bachelor of Media degree and the Media Major in the Bachelor of Arts, this core course orients students to the key ideas they will develop through their studies. For students outside the media programs, this course introduces students to forms of media interactivity and methods of media analysis, as well as selected theories and debates about media’s historical role in shaping social, cultural, economic, and political relations.

JAPANESE IA
JAPN 1001
3 units in Semester 1
Study commitment: Up to four hours per week
Prerequisites: No previous knowledge of Japanese required
Assessment: Continuous assessment and exam(s)
About the course: Japanese IA is designed for beginners with little or no previous knowledge of Japanese. This course is also ideal for those who wish to consolidate their basic knowledge of Kanji, vocabulary and grammar. The course offers instruction and practice in the four skills of reading, writing, listening and speaking, while introducing the basic grammar and vocabulary of modern Japanese as well as the basic writing system, hiragana, katakana and beginners kanji. In classes, emphasis will be placed on developing students’ basic communication skills in both spoken and written Japanese to build a solid foundation at the beginner level. The aims of the course are:
   i) to enhance and consolidate the introductory grammar;
   ii) to expand knowledge and use of vocabulary in both conversational and written contexts;
   iii) to develop communication skills/strategies;
   iv) to become familiar with hiragana, katakana and basic kanji;
   v) to become efficient and independent language learners.

JAPANESE IB
JAPN 1002
3 units in Semester 2
Study commitment: Up to four hours per week
Prerequisites: JAPN 1001
Assessment: Continuous assessment, exam(s)
About the course: Japanese IB is a continuation of Japanese IA. It continues instruction and practice in the four skills of reading, writing, listening and speaking, whilst enabling students to broaden and consolidate their basic knowledge of the Japanese language. In order to provide a solid foundation at the beginner level in both written and spoken Japanese, literacy skills will be emphasised to further develop towards the elementary level, and communication skills will be reinforced through aural-oral practice in classes. The basic aims of Japanese IB are:
   i) to enhance and consolidate the introductory grammar;
   ii) to expand knowledge and use of vocabulary in both conversational and written contexts;
   iii) to develop communication skills/strategies;
   iv) to become familiar with new kanji;
   v) to become efficient and independent language learners.
**JAPANESE IIA**

**JAPN 2201**

3 units in Semester 1

**Study commitment:** Up to four hours per week

**Prerequisites:** SACE Stage 2 Continuers’ Japanese with a scaled grade of A- or higher

**Assessment:** Test 1 (20%), listening test 1 (5%), test 2 (20%), listening test 2 (5%), oral exam (10%), final exam (40%)

**About the course:** Japanese IIA is designed to develop knowledge of the grammar, vocabulary and kanji introduced at the lower elementary level, whilst offering instruction and practice in the four skills of reading, writing, listening and speaking. Throughout the course, emphasis is placed on developing students’ communication skills in both spoken and written Japanese to consolidate a solid foundation at the lower elementary level. The aims of the course are:

i) to develop and consolidate the lower elementary grammar;

ii) to expand knowledge and use of vocabulary in both conversational and written contexts;

iii) to develop communication skills/strategies;

iv) to become familiar with new kanji characters and their combinations;

v) to become efficient and independent language learners.

**JAPANESE IIB**

**JAPN 2202**

3 units in Semester 2

**Study commitment:** Up to four hours per week

**Prerequisites:** JAPN 2201

**Assessment:** Continuous assessment (50%), exam(s) (50%)

**About the course:** Japanese IIB course continues instruction and practice in the four skills of reading, writing, listening and speaking, while further enhancing the knowledge of grammar, vocabulary and kanji at the lower elementary level. To complete the lower elementary grammar, vocabulary and kanji in this course, increased emphasis is placed on developing students’ communication skills in both spoken and written Japanese to further consolidate a solid foundation at the lower elementary level. The aims of the course are:

i) to enhance and complete the lower elementary grammar;

ii) to expand knowledge and use of vocabulary in both conversational and written contexts;

iii) to develop communication skills/strategies;

iv) to become familiar with new kanji characters and their combinations;

v) to become efficient and independent language learners.

**MORALITY, SOCIETY AND THE INDIVIDUAL**

**PHIL 1103**

3 units in Semester 2

**Study commitment:** Up to three hours per week

**Assessment:** Reading summary - 600 words (10%), 1500 word essay 1 (35%), 1500 word essay 2 + online quizzes (35%), online quizzes (10%), tutorial attendance (10%)

**About the course:** Morality plays a part in everyone’s life. But what exactly is it, and why is it important? Are there any objective, universal moral truths, or are moral rightness and wrongness in some way relative to societies, or to individuals? Can morality be grounded in religion, or in facts about human nature? This course will ask what constraints a society is morally entitled to impose on its individual members, and what kinds of freedom from interference individuals are entitled to claim from their society. It will also ask how it is possible that anything really matters, if the universe does not itself have a purpose. The course will introduce you to some of the most influential answers that philosophers have given to these questions, and to the arguments they have used to defend their views. But its main aim is to help you to answer them clearly for yourself.
MUSIC TECHNOLOGY FOUNDATIONS
MUSONIC 1000
3 units in Semester 1 or 2
Study commitment: Up to four hours per week
Assumed knowledge: Familiarity with basic computer functionality including word processing, email and web usage
Assessment: Assignments, exam, project
About this course: The field of music technology involves the artistic and technical application of technology in the creation and performance of music. This course will develop a theoretical and practical understanding of music technology fundamentals including sound, audio, and MIDI. This will be achieved by theoretically and practically exploring the field of music technology through lectures, tutorials and workshops. In particular, students will: examine a range of areas such as basic sound recording, audio and MIDI editing, sequencing, processing and production, synthesis and sampling, effects and mixing, and graphical programming; complete readings and listening; and perform practical exercises that promote investigative learning and research. The course has the following learning objectives: develop practical skills using a range of core music and sound software and hardware; provide a comprehensive understanding of the theory behind a range of music technologies; develop and expand creative and technical practice in music and sound via technology with a view to develop life-long learning.

REVOLUTIONS THAT CHANGED THE WORLD
HIST 1109
3 units in Semester 2
Study commitment: Three contact hours per week
Assessment: Using secondary sources 1 (20%), using secondary sources 2 (20%), group activity (30%), historical knowledge and understanding (30%)
About the course: This course will look at some of the great ‘turning points’ of history that have shaped the world in which we live. This might include the Renaissance and Reformation of the fifteenth and sixteenth centuries, the ‘Scientific Revolution’ of the seventeenth and eighteenth centuries, the Industrial Revolution of the nineteenth century, the ‘Sexual Revolution’ of the twentieth century, as well as great political revolutions such as the American, French, Russian and Chinese. Students will actively engage with the central question of why human history in the last 500 years has witnessed periods of profound transformation. Were they driven primarily by technological and economic developments, or were new ideas and philosophies the most important agents of rapid historical change? What role was played in these transformations by individuals and by governments? What exactly do we mean by the term ‘revolution’, and how legitimately can the word be applied to the events that we cover in this course? This course has three main objectives. Firstly, it will ask students to engage with some of most important debates about the factors that led to rapid historical change. Secondly, the course furnishes students with an overview of the ‘big picture’ of world history across the last 500 years. Students will acquire essential contextual knowledge which will enrich their understanding of almost any subsequent course they take in history or the humanities. Thirdly, the course will facilitate students’ understanding of the world in which they live by exploring some of the key developments that have shaped our common history. The course allows for insights into our own rapidly changing era by exploring other revolutionary episodes in our past.

UNDERSTANDING CRIMINOLOGY
CRIM 1001
3 units in Semester 1
Study commitment: Up to three hours per week
Assessment: Online test (20%), essay (40%), take-home exam (40%)
About the course: This course offers an introduction to the field of criminology by examining the nature of crime as well as exploring the main social theories that seek to explain why people commit crime. While the first part of the course briefly introduces the concept of crime, its social construction and various representations, the second component covers an array of broadly sociological arguments concerning possible explanations as to why crimes are committed, and how certain deviant acts become problematised. Topics covered in this latter section include criminological arguments drawing on Classicism, Biological and Psychological Positivism, Sociological Positivism, The Chicago School and Subcultural Theories, Interactionism and Labelling, Social Control Theories, Radical and Critical Perspectives, Realist Approaches, Contemporary Classicism and Feminism. Ultimately the question is posed whether the insights offered into the varied motivations to commit crime are practically useful in its prevention or reduction.
COMMERCIAL LAW

COMMLAW 1004
3 units in Semester 1 or 2

Study commitment: Three contact hours, plus nine hours self-directed study per week

Assessment: Exam, assignment, tests and tutorial work as prescribed at first lecture

About the course: This course provides an introduction to the legal system including the roles of the Constitution, parliaments and courts. It also introduces students to the basic rules of commercial law including breach of contract, the tort of negligence, liability for unsafe products, misleading conduct and unconscionable conduct.

INTRODUCTORY ACCOUNTING

ACCTING 1002
3 units in Semester 1 or 2

Study commitment: Three and a half contact hours, plus eight and a half hours self-directed study per week

Assessment: Exam, assignment, tests and tutorial work as prescribed at first lecture

About the course: The objective of the course is to provide an introductory knowledge of accounting to first-year students from a wide range of disciplines. While a general overview of accounting principles relating to the preparation of financial and managerial reports will be presented, the primary focus is to illuminate how accounting information is utilised by a variety of stakeholders in planning, controlling and investing decisions.

Topics include:
- accounting information in its decision making context
- record of accounting transactions; external financial reports
- financial statement analysis
- cost behaviour, determination of product costs, cost-volume-profit analysis
- performance management
- budgeting

INTRODUCTION TO MARKETING

MARKETING 1001
3 units in Semester 1 or 2

Study commitment: Up to three hours per week

Assessment: Exam, assignments, tests and tutorial work as prescribed at first lecture

About the course: This course is designed to provide students with an understanding of the principles of Marketing. There will be a focus on the management of the marketing activities and how marketing relates to overall organisational functioning, including the management of exchange processes between business units and consumers and between firms. It will include topics such as environmental analysis, industry and competitor analysis, objective setting, marketing strategies, market mix components, and finally implementation and control mechanisms. Additionally, the course will provide opportunities for the practical implementation of the concepts covered and the development of problem solving skills by means of face-to-face seminars and tutorials, online learning and a marketing practice simulation.

MANAGING ORGANISATIONS AND PEOPLE

COMMGMT 1001
3 units in Semester 1 or 2

Study commitment: Up to three hours per week

Assessment: Exam, assignments, tests and tutorial work as prescribed at first lecture

About the course: This course introduces students to the roles and functions of managers. The content includes an introduction to organisations and the need for and nature of management. It examines the evolution of management theory, organisational environments, and corporate social responsibility and ethics. The course also includes a detailed investigation of the four functions of management: planning and decision making, organising, leading and motivating, and controlling.
COMPUTER SCIENCE

PROGRAMMING (MATLAB AND C)
ENG 1002
3 units in Semester 1 or 2
Study commitment: Up to six hours per week
Assumed knowledge: None
*SACE Stage 2 Mathematical Methods is a prerequisite for entry to the Bachelor of Computer Science and may be studied concurrently.
Assessment: Assessments, project, exam
About the course: All modern engineering projects use programming for data analysis and problem solving. This course introduces the fundamental concepts of procedural programming using the MATLAB programming environment. Programming topics include: MATLAB syntax and semantics; data types, control structures, and functions; working with files and data; and the mechanics of running, testing, and debugging code. Problem-solving topics include: the role of algorithms in the problem-solving process; implementation strategies for algorithms; and the concept and properties of algorithms. This course continues with a C module, which introduces low-level programming concepts including memory and pointers, used for microprocessor programming in later years.

OBJECT ORIENTED PROGRAMMING
COMP SCI 1102
3 units in Semester 1* or 2
Study commitment: Up to six hours per week
Assumed knowledge: SACE Stage 1 Mathematics or equivalent
*SACE Stage 2 Mathematical Methods is a prerequisite for entry to the Bachelor of Computer Science and may be studied concurrently.
Prerequisites: ENG 1002
Assessment: Written exam and assignments
About the course: This course introduces the concepts of object-oriented programming to students with a background in the procedural paradigm. It is designed as an entry-level programming course for students who have prior programming experience, gained in ENG 1002.

The course begins with a brief review of control structures and data types with emphasis on structured data types and array processing. It then moves on to introduce the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Topics include an overview of programming language principles, simple analysis of algorithms, basic searching and sorting techniques, and an introduction to software engineering issues.

*Only students with prior programming experience who are confident in their programming ability would be considered for Semester 1 entry, without completing ENG 1002.
**DATA ANALYTICS**  
*ECON 1008*  
3 units in Semester 1 or 2  
**Study commitment:** Up to four hours per week  
**Assessment:** Typically tutorial participation and/or exercises, assignments, tests and final exam  
**About the course:** Business and Economics Statistics I introduces the essential concepts, tools and methods of statistics for students in business, economics and similar disciplines, while also having relevant applications in other areas of study. It aims to help students develop the understanding they will need to make informed decisions from analysing data, and to communicate the results effectively. The course covers two main branches of statistics: descriptive statistics and inferential statistics. Descriptive statistics includes collecting data and summarising and interpreting them through numerical and graphical techniques. Inferential statistics includes selecting and applying the correct statistical technique in order to make estimates or test claims about a population based on a sample. The course focuses on concepts, reasoning, interpretation and understanding rather than computation, formulae and theory. Coursework will require students to write effectively and communicate their ideas with clarity.  
Topics covered may include descriptive statistics, correlation and simple regression, probability, point and interval estimation, hypothesis testing, multiple regression, time series analysis and index numbers. By the end of this course, students should understand and know how to use statistics. Students will also develop some understanding of the limitations of statistical inference and of the ethics of data analysis and statistics. Students will work in small groups in this course; this will develop the skills required to work effectively and inclusively in groups, as in a real work environment. Typically, one component of the assessment requires students to work in teams and collect and analyse data in order to answer a real-world problem of their own choosing.

**INTERNATIONAL FINANCIAL INSTITUTIONS AND MARKETS**  
*ECON 1009*  
3 units in Semester 1 or 2  
**Study commitment:** Two lectures and one tutorial per week  
**Assessment:** Typically tutorial participation, written assignments, mid-semester exam, optional group assignment and final exam  
**About the course:** This course provides an introduction to the institutions, markets and securities that form the basis of modern financial and monetary systems. Australian and international economics, and their financial systems, will be considered with reference to current financial news and affairs. This course also introduces some of the main theories and quantitative concepts and methods used in finance and provides a sound basis for students progressing to the study of finance at higher levels within the University. At the same time, it is a valuable, self-contained and up-to-date overview of international financial markets and institutions for non-specialists.

**INTRODUCTION TO MATHEMATICAL ECONOMICS (BASIC)**  
*ECON 1005*  
3 units in Semester 1  
**Study commitment:** Up to five hours per week  
**Assessment:** Typically tutorial work, mid-semester test and final exam  
**About the course:** This course is intended for students without sufficient SACE Stage 2 Maths who wish to obtain knowledge of mathematical techniques suitable for economic analysis. It assumes very little prerequisite knowledge. The approach is informal and aims to show students how to do and apply the mathematics they require for a successful study of economics. Economic applications are considered although this course aims to teach the mathematics not the economics.  
Topics include:  
- basic algebra  
- simple finance  
- calculus  
- matrix algebra.

**PRINCIPLES OF ECONOMICS**  
*ECON 1012*  
3 units in Semester 1 or 2  
**Study commitment:** Two lectures and one tutorial per week  
**Assessment:** Typically, tutorial assignments, online learning activity and final exam  
**About the course:** This course provides an introduction to a broad range of economic concepts, theories and analytical techniques. It considers both microeconomics – the analysis of choices made by individual decision making units (household and firms) – and macroeconomics – the analysis of the economy as a whole. The use of the market, supply and demand, model will be the fundamental model in which trade-offs and choices will be considered through comparison of costs and benefits of actions. Production and market structure will be analysed at the firm level. Macroeconomic issues regarding the interaction of goods and services markets, labour and money at an aggregate level will be modelled. The role of government policy to address microeconomic market failures and macroeconomic objectives will be examined.
HEALTH AND MEDICAL SCIENCES AND PSYCHOLOGY

ESSENTIALS IN NEUROSCIENCE
HLTH SC 1001
3 units in Semester 2
Study commitment: Up to 4 hours per week (3 hours lecture), 1 hour weekly tutorial
Assessment: Quizzes, group tutorial exercises, literature review, end of semester exam
About the course: This course is designed to introduce students to essential concepts in the field of neuroscience. The course will begin with a basic introduction to the brain and history of neuroscience. Later modules will explore the cellular composition of the nervous system, the process of neuronal communication, basic gross neuroanatomy, the neural basis of sensation and perception and the relationship between the brain and human behaviour.

HUMAN BIOLOGY IA
ANAT SC 1102
3 units in Semester 1 or Semester 2
Study commitment: Three one-hour lectures and one tutorial per week, plus a one-hour practical per fortnight
Assessment: Research-based assessment tasks, online quizzes, MCQ tests, and an end of semester examination
About the course: Are you preparing for a health-related career, or simply keen to learn more about how our amazing bodies function in both health and disease? Human Biology provides students with an introduction to the anatomical structures and physiological functions of the human body. Students will investigate the relationships between normal structure and function in human cells, tissues and organs.

HUMAN BIOLOGY IB
ANAT SC 1103
3 units in Semester 2
Study commitment: Three one-hour lectures and one tutorial per week, plus a one-hour practical per fortnight
Prerequisites: None, but ANAT SC 1102 Human Biology IA is assumed knowledge
Assessment: Research-based assessment tasks, online quizzes, MCQ tests and an end of semester examination
About the course: Human Biology provides students with an introduction to the anatomical structures and physiological functions of the human body. Students will investigate the relationships between normal structure and function in human cells, tissues and organs. In Human Biology IB coverage of organ systems builds on content presented in Human Biology IA.

INTRODUCTION TO FORENSIC SCIENCES
HLTH SC 1000
3 units in Semester 1 or 2
Study commitment: Up to 2 hours per week
Assessment: Online tests and examination
About the course: The aim of this course is to provide students with an overview of a variety of topics within the area of Forensic Sciences including Crime scene Investigation, Forensic photography, Digital Forensics, Ballistics, Fingerprinting, Court and police organisational structures and Forensic DNA analysis. Topics to be covered also include identification of the deceased and disaster victim identification structures.

HEALTH AND ILLNESS IN POPULATIONS
PUB HLTH 1001
3 units in Semester 1
Study commitment: Two on-hour lectures, one practical and one tutorial per week
Assessment: Written assignments, online quizzes, participation, and an end-of-semester exam
About the course: Health and Illness in Populations aims to introduce students interested in health sciences careers such as public health practice, health-related research, or clinical practice, to a population view of health. It draws on a range of disciplines that contribute to a focus on the health of populations, including epidemiology, health promotion and disease prevention, history, politics, and ethics. The course invites students to develop a critical view about what constitutes public health issues, how they are measured, and potential responses to improve population health.

PRINCIPLES OF HUMAN HEALTH AND DISEASE
HLTH SC 1005
3 units in Semester 2
Study commitment: Up to 3 hours per week
Assessment: In-class examinations; online quizzes; Active engagement at two special lectures; Referenced essay
About the course: Foundation concepts in anatomy, physiology, pharmacology and pathology will be presented via lectures clustered into six themes. Each theme (selected from topics such as hypertension, cardiovascular disease; neurodegenerative disease; metabolic syndrome, cancer and reproductive disorders) will begin with a case-study description of human clinical symptoms, followed by a guided exploration of the case to gain greater understanding of the basic concepts that explain human health and disease.
HEALTH AND MEDICAL SCIENCES AND PSYCHOLOGY (CONTINUED)

PSYCHOLOGY IA
PSYCHOL 1000
3 units in Semesters 1

Study commitment: One workshop per week, lectures available online

Assessment: Module assessment exercises, research evaluation assignment, research participation, online study exercises, multiple choice exam

About the course: This course, together with PSYCHOL 1001, provides an introduction to the basic concepts and core topics within contemporary psychology. The two courses may be taken individually or in combination. Core topics covered over the year include:

• the development of the individual over the lifespan
• the study of the person in a social context
• differences between people with respect to their intelligence and personality
• issues related to individual adjustment and maladjustment
• the biological bases of behaviour
• the interpretation by the brain of sensory signals from the external environment
• the mechanisms underlying learning
• the encoding, storage and retrieval of information
• the nature of motivation and emotion
• culture and cross-cultural psychology.

The course will also provide an introduction to the methodological approaches employed by psychologists to study these topics. Major findings to emerge from psychological research will be presented, and the practical significance of such work will be discussed. Practical work will address the conventions of psychological report writing and the ethical principals underlying psychological research and practice.

PSYCHOLOGY IB
PSYCHOL 1001
3 units in Semester 2

Study commitment: One workshop per week and online lectures

Assessment: Module assessment exercises, research evaluation assignment, research participation, online study exercises, multiple choice exam

About the course: This course, together with PSYCHOL 1000, provides an introduction to the basic concepts and core topics within contemporary psychology. The two courses may be taken individually or in combination. Core topics covered over the year are noted in PSYCHOL 1000.

RESEARCH METHODS IN PSYCHOLOGY
PSYCHOL 1004
3 units in Semester 1

Study commitment: Up to two hours per week

Assessment: Short answer major assignment, multiple choice exam

About the course: This course introduces students to the basic principles of research methods in Psychology. The focus of the course is on students learning how to do research in psychology, with an emphasis on student-centred activities and problem solving. Students will learn about such key concepts as:

• the scientific method
• operationalising constructs
• independent and dependent variables
• data types and ways of measurement
• confounding variables
• experimental and non-experimental design
• questionnaire construction
• developing and testing hypotheses
• descriptive statistics and describing data graphically
• the ethics of research.

HEALTH AND MEDICAL SCIENCES PEER MENTORING PROGRAM

The Faculty of Health and Medical Sciences Peer Mentoring Program supports first-year students settle into their studies and the University of Adelaide community.

Offered in Semester 1 and Semester 2, the program is an informal way to meet other students, learn about campus life, engage in activities and events, have your questions answered, and receive ongoing peer support.

The peer mentors who are involved with this program know from personal experience what it’s like to be a new student. They are high-performing students, eager to share information to guide you through your first semester and help you feel confident in taking the right steps towards study success.

You will:

• receive timely information and handy hints
• develop a network of supportive peers
• be invited to social events and group study sessions
• increase your awareness of student support services
• improve your teamwork skills
• gain a sense of belonging at university.

Headstart students are eligible to join the program as mentees; find our how to sign up at health.adelaide.edu.au/study-with-us/student-support/peer-mentoring
MATHEMATICS IA

MATHS 1011

3 units in Semester 1 or 2

Study commitment: Up to five and a half hours per week

Prerequisites: A grade of at least A in both SACE Stage 2 Mathematical Methods and Specialist Mathematics

Assessment: Ongoing assessment 30% and exam 70%

About the courses: This course, together with MATHS 1012 Mathematics IB, provides an introduction to the basic concepts and techniques of calculus and linear algebra, emphasising their interrelationships and applications to engineering, the sciences and financial areas, introduces students to the use of computers in mathematics, and develops problem solving skills with both theoretical and practical problems. Mathematics IA topics include:

• Calculus: Functions of one variable, differentiation and its applications, the definite integral, techniques of integration.
• Algebra: Systems of linear equations, subspaces, matrices, optimisation, determinants, applications of linear algebra.

MATHEMATICS IB

MATHS 1012

3 units in Semester 2

Study commitment: Up to five and a half hours per week

Prerequisites: MATHS 1011

Assessment: Ongoing assessment 30% and exam 70%

About the courses: This course, together with MATHS 1011 Mathematics IA, provides an introduction to the basic concepts and techniques of calculus and linear algebra, emphasising their interrelationships and applications to engineering, the sciences and financial areas, introduces students to the use of computers in mathematics, and develops problem solving skills with both theoretical and practical problems. Mathematics IB topics include:

• Calculus: Differential equations, sequences and series, power series, calculus in two variables.
• Algebra: Subspaces, rank theorem, linear transformations, orthogonality, eigenvalues and eigenvectors, singular value decomposition, applications.
**BIOLOGY I: MOLECULES, GENES AND CELLS**

**BIOLOGY 1101**

*3 units in Semester 1*

**Study commitment:** Two one-hour lectures, one-hour workshop per week, plus three-hour practical per fortnight

**Assumed knowledge:** SACE Stage 1 Biology and/or Chemistry

**Assessment:** End of semester exam, MCQ and theory tests and practical assessment

**About the course:** The study of biology covers an incredibly wide range of themes; from simple molecules, cells, organelles and tissues to whole organisms and their interaction with the environment and their ability to evolve. The aim of this course is to introduce many of these concepts, thereby providing the foundation for further studies in Semester 2 courses and more specialist level II/III courses.

Topics to be covered include:

- the chemicals of life
- macromolecules
- the role of nucleic acids in genetic information transfer
- protein synthesis
- lipid membranes and the structure of cells
- storage and utilisation of energy
- meiosis and mitosis.

**BIOLOGY I: HUMAN PERSPECTIVES**

**BIOLOGY 1201**

*3 units in Semester 2*

**Study commitment:** Three-one hour lectures per week, and one-hour workshop per week and five three-hour practicals per semester

**Assumed knowledge:** BIOLOGY 1101

**Assessment:** End of semester exam, theory tests, practical assessment and group research project

**About the course:** This course builds on fundamentals of biology that have been developed in Molecules, Genes and Cells. The course takes molecular, cellular, whole body, population and evolutionary approaches to understanding biology as it pertains to human function and the interactions of the body with the environment. In many cases, our understanding of human function is best derived for studies of mammalian and non-mammalian organisms, and where appropriate, such models will be discussed.

The themes that will be covered include:

- the organisation of the body
- evolution
- inheritance
- regulation of gene expression
- communication and control systems in the body
- developmental biology
- defence systems.

Sessions, which provide opportunities to integrate the information and demonstrate how it provides an understanding of normal human function and of disease, will be a regular feature of the course.

**BIOLOGY I: ORGANISMS**

**BIOLOGY 1202**

*3 units in Semester 2*

**Study commitment:** Three one-hour lectures per week, one-hour workshop per week and three-hour practical per fortnight

**Assumed knowledge:** BIOLOGY 1101

**Assessment:** Exam, assignments and practical reports

**About the course:** This course focuses on the biology and diversity of multi-cellular organisms, with evolution as the central theme. It addresses key questions in biology: What are plants and animals? How do they evolve? How do they function? How do they interact with other organisms and the environment? These questions are answered by analysing the scientific evidence that supports current theory.

**CHEMISTRY IA**

**CHEM 1100**

*3 units in Semester 1*

**Study commitment:** Three one-hour lectures, a one-hour workshop per week and six three-hour practicals

**Prerequisites:** SACE Stage 2 Chemistry with an achievement grade of at least A-(or equivalent)

**Assessment:** Exam, practical work, online summative work and lecture tests

**About the course:** Topics include:

- atoms to molecules: structure of the atom and molecular bonding
- periodicity and the main group: chemistry of the main group metals and non-metals
- energy and equilibrium: the relevance of intermolecular forces, chemical equilibrium, energy considerations and chemical reactivity applied to aspects of chemistry and biochemistry
- transition metal chemistry: an introduction to bonding in transition (d-block) elements, coordination complexes, bioinorganic systems.
CHEMISTRY IB
CHEM 1200
3 units in Semester 2
Study commitment: Three one-hour lectures, a one-hour workshop per week and six three-hour practicals
Prerequisites: SACE Stage 2 Chemistry Subject with an achievement grade of at least A- (or equivalent)
Assumed knowledge: CHEM 1100
Assessment: Exam, practical work, online summative work and lecture tests
About the course: Topics include:
• acids, bases and electrochemistry; aspects of acid/base equilibria and electrochemical processes
• structure determination: the importance of molecular shape and how chemists determine the structure of compounds using spectroscopic techniques including ultraviolet, infrared and nuclear magnetic resonance spectroscopy
• synthetic and bio-organic chemistry: an introduction to chemical synthesis with particular reference to addition and substitution reactions. Strategies for synthesis and properties of biologically significant molecules will also be addressed.

EARTH’S INTERIOR I
GEOLOGY 1100
3 units in Semester 2
Study commitment: Three one-hour lectures and one three-hour practical per week plus one field trip
Assessment: Lecture tests and practical work
About the course: This course provides a global perspective of planet Earth and the dynamic processes that have modified it over its four billion year history. We explore Earth’s place in space and time and examine the operation of its internal chemical and physical processes. Fundamental concepts are developed, including:
• the formation and structure of the Earth
• the driving forces of plate tectonics and continental drift
• earthquakes and volcanoes, the formation and identification of geological materials, mountain building and rock deformation
• the development of the geologic timescale. Emphasis is given to the geological evolution of Australia.

EARTH SYSTEMS
GEOLOGY 1103
3 units in Semester 1
Study commitment: Three one-hour lectures and one three-hour practical per week plus one field trip
Assessment: Lecture tests and practical work
About the course: This course draws from all fields of geoscience to explore the evolution of Planet Earth. Topics include:
• the evolution of the solar system and the solid earth, the concept of deep time
• the plate tectonic theory, in which the Earth’s plates are colliding, generating earthquakes, volcanoes and mountain belts
• the evolution of Earth’s atmosphere and oceans
• the Earth’s climate, including the Earth in space, hydrologic cycle, the carbon cycle and the ‘greenhouse effect’
• the development and future of our unique Australian landscape and resources.

PHYSICS IA
PHYSICS 1100
3 units in Semester 1
Study commitment: Three one-hour lectures and a one-hour workshop per week, plus five three-hour practicals
Prerequisites: Minimum A- in SACE Stage 2 Physics and A in SACE Stage 2 Mathematical Methods and Specialist Maths
Co-requisite: Students undertaking Physics IA are required to enrol in MATHS 1011 Mathematics IA concurrently
Assessment: Written exam, practical work and in-seminar tests.
About the course: This calculus-based course is the foundation for a major in physics, and also provides a quantitative understanding of physics concepts applicable in biological and geological sciences, and in engineering. Topics include:
• measurement and uncertainties
• particle mechanics: Newton’s law of motion, gravitation, work, energy, conservative forces, momentum, collisions
• thermal physics: heat, temperature, internal energy, kinetic theory of gases, thermodynamic processes
• electricity and magnetism: charge and current, electric field, Ohm’s Law, DC circuits, Coulomb and Gauss’ laws, electrostatics, capacitance, magnetic field, Ampere and Faraday’s laws, inductance, LC circuits
• practical problem-solving.
PHYSICS IB

PHYSICS IB

3 units in Semester 2

Study commitment: three one-hour lectures and one-hour workshop per week, plus five three-hour practicals

Prerequisites: PHYSICS 1100

Co-requisites: Students undertaking Physics IB are required to enrol in MATHS 1012 Mathematics IB concurrently

Assumed knowledge: MATHS 1011 and PHYSICS 1100

Assessment: Written exam, practical work and in-semester tests.

About the course: This calculus-based course completes the Level I sequence for a major in physics, and also provides a quantitative understanding of physics concepts applicable in biological and geological sciences and in engineering.

Topics include:

- rigid body mechanics: centre of mass, rotational motion, torque, angular momentum, equilibrium, oscillations
- waves and optics: transverse and longitudinal waves, superposition, interference, standing waves, Fourier decomposition, Fermat’s principle, geometric optics, physical optics, interference, Michelson interferometers, thin film interference, diffraction, resolution of telescopes
- relativity and quantum physics: kinematics, time dilation, length contraction, Lorentz transformations, transformation of velocities, relativistic momentum and energy, X-rays as waves and photons, photoelectric and Compton effects, pair production, de Broglie waves, uncertainty principle, the quantum mechanical wave function
- practical problem-solving.
**HOW TO APPLY**

**HEADSTART SCHOLARSHIP PROGRAM 2019**

Places within the program are limited and entry is competitive, therefore, each application will be assessed on merit. Only online application forms will be accepted.

### 2019 APPLICATION CLOSING DATES:

- **Semester 1:** Monday 28 January 2019
- **Semester 2:** Monday 1 July 2019

1. Before applying to the Headstart scholarship program, thoroughly read this brochure and ensure you meet the eligibility criteria (see page 2).

2. Decide which courses you want to apply for (up to two courses, one each semester)
   - Read the course information which starts on page 7, ensuring you check any prerequisites or assumed knowledge and check Course Outlines (adelaide.edu.au/course-outlines/) for more information.
   - Check the 2019 course timetable (released 1 December) on Course Planner (https://access-cbs.adelaide.edu.au/courses/search.asp).

3. Gather the following information that will be required in the application:
   - Personal Details
   - School Details
   - Contact details of the applicants nominated mentor
     This can be a year level coordinator, SACE Coordinator or a relevant subject teacher who can act as a point of contact for the applicant and for the University

4. Gather the following documentation to upload (Word or PDF):
   - School Letter of Reference
     From a principal, deputy principal or year level coordinator
   - Personal Statement
     Max. 250 words
   - 2018 SACE Report Card
     Must include grades for all Year 11 and 12 subjects already completed
   - 2018 School Timetable
     Indicating which classes you would withdraw from, if successfully offered a place in the Headstart program (if any)
   - Preferred university class times
     Must include class numbers, which can be obtained via Course Planner from 1 December
   - International Student Declaration Form (if applicable)
     Required for all onshore international applicants

Note: You will not be able to submit your application without the above documents.

All applicants will be notified of the outcome by Friday 8 February (Semester 1) or Friday 12 July (Semester 2).

### Further Information

Any queries about applications should be directed to:
Telephone: (08) 8313 0165  Email: start@adelaide.edu.au