



A warm welcome from the Cambridge University Malaysia Society (CUMaS) family.

In the past 4 years, the CUMaS outreach programme has been nothing short of a success story. We are thrilled to announce that we are extending our reach to Kedah and Pahang this year, while continuing our efforts in Selangor, Penang, Johor, and Sarawak. This series of interactive sessions act as a platform where fellow Malaysians convene to share their remarkable stories and experiences. They will be led by Cantabrigians studying different subjects so there will definitely be a likeminded someone to talk to!

My personal journey began when I was still in primary school—the thought of going to one of the best universities in the world was a thought I'd entertain from time to time. However, all of this was just a dream, something that always seemed out of reach. In fact, I had never heard of anyone being accepted into Cambridge! It wasn't until late in high school where I was guided by a few alumni through the application process that I realised there was actually a chance for my dreams to come to fruition. Nonetheless, this is not privilege that is afforded to everyone. That's where CUMaS comes in - we want to let students of all backgrounds realise that their dreams are attainable and be the beacon of light that guides them through the process.. We're also here to enlighten people on what it's like to live in Cambridge while encouraging students to apply.

My first year of studying in Cambridge has been an incredible journey full of ups and downs. It wasn't all smooth sailing, but I am fairly certain that it is a unique experience that no student from Cambridge would ever trade away for anything else. You will be immersing yourself in a sea of knowledge, with peers who share the same interests and enthusiasm for your subject, allowing you to fully pursue your interests and hobbies. After all, you are in the world's best institution, surrounded by top intellectual minds and have the opportunity to study in an environment where the pursuit of knowledge is held with high regard.

The atmosphere and traditions of the various colleges is also another aspect of Cambridge University which is impossible to duplicate and experience anywhere else. Indulge yourself in bizarre Cambridge traditions, like throwing pennies into wine glasses, making huge boats out of cardboard and going to *May* Balls in... June? None of this makes sense until you step foot in Cambridge – where people come up with the most outlandish ideas. You will hear jargon like *Tripos, Mathmo, Plodge* and *Gyps* thrown around, it's almost like we're speaking a different language!

With Cambridge University's illustrious history of nurturing the world's greatest minds, you may very well be sitting on the same patch of grass as the first person to propose the theory of evolution, breathing in the same air as the person who laid the foundations of classical mechanics with Principia Mathematica, and walking on the same pavement as the person who formulated the theory of electromagnetic radiation. With ninety-six Nobel Prize laureates in its rich 800-year history and countless other influential characters ranging from physicists to poets and literary geniuses to comedians – who knows, you or your peers might even be one of them!

Ultimately, a Cambridge degree can be the foundation where you can build all your future successes upon. A Cambridge degree after all, is much sought after and opens many doors. At first sight, the whole application process may appear intimidating but we're here to walk you through it. We'll provide you with sufficient information to aid in your application and give you personal insights into our lives as Malaysian students at Cambridge, both in the cultural and academic aspects. We wish you all the best in your university applications and all your future endeavours.

Sincerely,

Ng Tze Donn President

Cambridge University Malaysia Society president@cumas.org

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## WHAT IS CUMaS?



The Cambridge University Malaysia Society (CUMaS) is a non-profit organisation founded in 1994. It is dedicated to the support of Malaysian undergraduates and post-graduates at the University of Cambridge. CUMaS provides a social platform for members to interact and participate in various activities and events, which are tailored for the welfare of its members, and to promote Malaysian culture in general. It also serves as a platform to unite Malaysians who are scattered over the many colleges in the university. CUMaS provides a place where members are free to express themselves in a familiar setting whilst in a foreign country.

Ourflagshipevents include the Malaysian Food Fest (MFF), which occurs once a year, where members can savour an array of Malaysianfoodpreparedbytheirfellow CUMaS members. Another event is the CUMaS Garden Party held at the end of each academic year, where members come together in a garden setting one more time before flying home, and where graduates are given farewell gifts on behalf on CUMaS. The annual Malaysian Night (MNight) is also something to look forward to as members of CUMaS put up a performance, usually a play and dance. We also organise various formals and Chinese New Year) dinners (e.g. throughout the year for members to come together over a meal, thereby living up to what we Malaysians do best – "makan"



"CUMaS connects you with fellow Malaysians in Cambridge whom you will cherish for life."

Wong Sher Lin, Alumni Officer 2014/2015



Fill in the **UCAS** undergraduate application form at <a href="http://www.ucas.com/apply">http://www.ucas.com/apply</a>, selecting *University of Cambridge* as one of your university choices. The institution code is *CAM C05*.



Write up a **PERSONAL STATEMENT** to be attached to your UCAS application, for which useful guidelines can be found at <a href="http://www.studential.com/guide/write">http://www.studential.com/guide/write</a> personal statement.htm.



Fill up the Cambridge Online Preliminary Application (COPA), information of which can be found at <a href="http://www.study.cam.ac.uk/undergraduate/apply/copa.html">http://www.study.cam.ac.uk/undergraduate/apply/copa.html</a>.

(Not applicable to students who study their pre-U courses in the United Kingdom)



Complete the online **Supplementary Answer Questionnaire** (SAQ), information of which can be found at <a href="http://www.study.cam.ac.uk/undergraduate/apply/saq.html">http://www.study.cam.ac.uk/undergraduate/apply/saq.html</a>.



Prepare for and take an **INTERVIEW** (either in Malaysia or Cambridge)



Sit for any additional **CAMBRIDGE ASSESSMENTS** (e.g. Cambridge Law Test, BMAT, TSA, etc.)



WAIT and pray hard for admission results to be released!

(Note: Don't feel inferior if you are pooled, it just means you are given a second chance to be selected by Cambridge!)

## **UCAS APPLICATION**

## When to apply

The Cambridge Online Preliminary Application (COPA) and the UCAS form must reach the University of Cambridge by:

- <u>20th September</u> for those wishing to be interviewed in Malaysia
- <u>15<sup>th</sup> October</u> for those wishing to be interviewed in Cambridge

For those applying for Medicine, Dentistry, Veterinary Science, the UCAS form must be submitted by 15<sup>th</sup> October.

### How to apply

Fill in the UCAS form, which requires personal details, personal statement, reference and other supporting documents. Yes, it seems tedious but don't worry! You can look for:

- Step by step guide in UCAS website
   http://www.ucas.com/how-it-all-works/undergraduate/filling-your-application
- MABECS where they will guide you through your application
   http://www.mabecs.com/contact. htm



## **CHOOSE ACOLLEGE**

University of Cambridge has a collegiate system where the university is an association comprising 31 different colleges.

## **Key Function**

Below is the key function of the University (through its faculties and departments) and Colleges:

University	College
Determine course contents	Admit undergraduate studies
Organise lectures, seminars, practicals and projects	Organise small- group teaching (Supervision)
Set and mark examinations	Are responsible for academic and pastoral care
Award degree	Provide accommodation, places to eat and recreational facilities

## What are your options

When it comes to selecting a College, you have 2 options – you can either choose a particular College to receive your application, or you can make an 'open application' and accept the allocation made by a computer programme. In both cases, your UCAS application will be sent to a College, and that College will assess it

## How to choose a college

When considering the Colleges, these are the aspects that you should, or what most applicants tend to consider: (see below)

Course	Some Colleges do not offer certain subjects so check the availability for the course you are interested in.
Age	<b>Four</b> colleges (St Edmund's, Lucy Cavendish, Wolfson and Hughes Hall) are exclusively for <b>mature students</b> (aged 21 or over).
	(Note: There are cases where applicants are pooled and accepted by a mature college, and hence is forced to defer his/her entry. It is up to you if you want to attend another university or enjoy a bonus year of respite!)
Facilities	Gym, music room, chapel, badminton courts, squash courts, swimming pool, punts, library, river Cam, etc.

Gender	Three colleges consider applications from female students only. (Murray Edwards, Newnham and Lucy Cavendish).  But this doesn't mean that you only hang out with girls!
Location	Distance from the city centre and faculty (Girton College may be far from town but it is huge and pretty!)
Subject Ranking	Tompkins Table  (Don't take this too seriously! It is much more about your personal endeavour and hard work. College rank is never representative of your results!)
Application Statistics	Application statistics all the way back to 2008 can be found at <a href="https://www.undergraduate.study.cam.ac.uk/apply/statistics">https://www.undergraduate.study.cam.ac.uk/apply/statistics</a> for each college and each course.  (Note: Use this information wisely as the college with the highest acceptance rate the year before might not have the highest acceptance rate in your year!)
Welfare	Good food bad food, big rooms small rooms. By the way, rich colleges tend to give you more grants!
Funding	Some Colleges have their own college scholarships (see: each college's website).

## Making an open application

If, having looked at the different colleges, you find that you don't mind which college to attend, then you don't have to choose – you can make an open application.

- After the closing date (15<sup>th</sup> October 2017), a computer programme allocates each open application to a college.
- The basis of the allocation is to even out the distribution of applicants across the colleges applicants from the UK/EU are allocated to colleges which happen, in that year, to have received fewer applications per place in that subject than the average number across all colleges; applicants from outside the EU are evenly distributed across colleges in each subject.
- Once allocated to a college your application will be treated in exactly the same way as any other application.
- For equally well-qualified applicants, making an open application or applying directly to a specific college makes no difference to your chances of being made an offer.

### What to do in UCAS?

In your UCAS application, as well listing Cambridge (institution code CAM C05) as one of your options in the 'Choices' section, you'll need to enter:

- A college (campus) code.
- '9' as the campus code if you decide to make an open application.

## A walk through...

## ... Christ's College

Christ's College is located in the heart of the Cambridge town, but at a safe distance from the touristy King's Parade, giving convenient access to restaurants (Japanese eatery Wasabi is literally at our doorstep), supermarkets (Sainsbury's is 3-minute walk away) and banks (there are at least 5 banks within 1-minute walk) and yet providing a quiet study environment free of public crowds. Christ's accepts applications from all genders as well as ages and for all undergraduate courses, except Veterinary Medicine.

Christ's provides college accommodation to all undergraduates for their first three years, and to majority of the fourth-year undergraduates. About half the rooms are ensuite and summer storage is provided free of charge to all international students. Around half of the second-year undergraduates will be accommodated in college-owned houses 5-minute walk from the college.

Christ's serves breakfast, lunch and dinner in its cafeteria (known as the "Upper Hall") every day during term, where food is sold near cost-price and payment is made using the University Card. Free-flow salads and sides have been included in the costs of the meals. Three-course meals are served in the Formal Hall five days a week.

The college library is well stocked and the librarians can acquire any missing book for you within 24 hours (I can testify this!). The library is opened 24/7 for use by college members. A music room is available for booking and use by any college member. Besides, a squash court and a gym are also available for some physical activities. In addition, Christ's is one of the few Cambridge and Oxford colleges with an outdoor swimming pool!

The Christ's community is considered medium-sized among Cambridge colleges, with around 130 undergraduates each year. The staff members are generally friendly and helpful, especially the Admissions and Tutorial Offices which are responsible for most of the administration work. There are usually a considerable number of Malaysian and Singaporean undergraduates at Christ's so fret not when you want to talk to some familiar faces from home (or near home) using familiar accents. Being at a central location also means it is trouble-free for you to meet up with friends from other colleges.

I have never regretted my decision of applying to Christ's College, for the above reasons. I am definitely enjoying my life in Cambridge and I hope that you will too! Feel free to drop me a message if you wish to know more about Christ's College or the Cambridge life in general:)

Lim Chia Wei



### ... Emmanuel College

Located in the heart of Cambridge, Emmanuel College (Emma) has produced a number of notable alumni, including the prominent founder of Harvard University, John Harvard and scientist, Thomas Young. A pearl undiscovered in the city centre, Emma is not frequent by tourists, albeit having a beautiful front court. This translates into a peaceful and conducive revision environment for Emma students. Strolling past the courts, the paddock lays gracefully within its compound where you can enjoy the scenic view of the duck ponds and the most-pampered college ducks. Conveniently, you can easily find banks, post office, grocery shop and bus stations around Emma. Rooms in Emma are generally well taken care of and each has a FRIDGE in it! College hall serves relatively cheap and decent food. If you do not fancy hall food, you can always opt to cook by yourself. Speaking of academic performance, Emma has been consistently ranked within the top 5 on the Tompkins Table. Its outstanding achievement can be attributed to the welfare and dedication of the academic staff in college. Most importantly, the best thing about living in Emma, aside from its comfortable and friendly atmosphere, is its free laundry service. It can truly serve as a saviour during examination term where it saves you plenty of revision time. If you ever need help, the porters are always there to lend you a hand.

Tan Ze Kai



## ... Fitzwilliam College

Every college has its stereotype. A trait or characteristic that highlights the identity of the college and, by association, the students.

"Trinity is the smart one"

"John's is the rich one"

"King's is the pretty one"

As for Fitz, it is largely known to be the 'best' college. Hey, I don't make the rules but it is what it is.

First things first, in the interest of honesty I have to clarify that it's not the most central of colleges. It also isn't prettiest nor is it the richest. There I said it.

However, what Fitz lacks in those superficial qualities, it compensates with the sense of community it provides.

Though I don't claim that this practice is exclusive to Fitz, most first years will live in a corridor made up of 10 people with a shared toilet and kitchen. You'll have a shower and a sink in the room so I guess that can be a toilet if you try hard enough. The beauty of this arrangement is that it gives off a great sense of community as it forces you to interact with people from your corridor. If you are a socially awkward turtle like yours truly, this really helps you to foster good relationships which is super important once the academic pressure of the Bridge kicks in.

And if that's not enough to convince you, we're very near to ALDI. Nuff said.

On the real though, you'll probably learn to love whichever college you end up in so don't sweat it too much.

(Unless of course, you go to John's)

#### Danial Imran



## PERSONAL STATEMENT

# What is a personal statement

Personal statements allow students to tell the admission tutor about their subject interest and the process of writing a personal statement can often help a student better understand their academic interests and intellectual motivations. This in itself is an important element in the preparation for any interview.

# What a personal statement should contain

Students are advised to follow the UCAS advice about what to include in their personal statement. At Cambridge, all admissions decisions are based solely on academic criteria (ability, commitment and potential). Therefore, in their personal statement, Cambridge is looking for an applicant to:

- Demonstrate their enthusiasm and commitment for their chosen course
- Express any particular interests within the field
- Outline how they have pursued their interest in the subject in their own time

Such information is often used as a basis for discussion at interview.

### How important are extracurricular activities

As the admissions decisions are based on academic criteria, a student's participation (or not) in specific extra-curricular activities is not taken into account (unless it is relevant to the course applied for) and does not affect their chances of being made an offer of a place at Cambridge.

Instead, Cambridge looks at how extra- curricular activities demonstrate other characteristics that will aid students' transition to life at university, such as how they balance their academic and personal commitments, and have developed particular skills or qualities (such as perseverance, independence, leadership or team-working).

However, students should be advised to consider the importance that their other university choices may place on extra- curricular activities when composing their personal statement.

### **Further Pointers**

- Make a list of all the information you might like the admissions committee to have about you including such things as (a) your personal qualities, (b) your reasons for wanting to pursue the course you have chosen and (c) how you have prepared yourself for the University of Cambridge
- Organise your ideas
- Demonstrate your good qualities and skills through the experience you have had. Use concrete examples and avoid being vague.

- Admissions officers must read countless applications and essays in a fairly short time, so be succinct and concise (but not too brief)
- Use key words and action verbs throughout your statement
- Grammar and spelling check

For more information about personal statements:

- http://www.thestudentroom. co.uk/wiki/Category:Cambridge\_ Personal Statements
- <a href="http://www.studential.com/guide/">http://www.studential.com/guide/</a> write personal statement.htm



eCambridgeadmissionprocessmay seemdaunting, but fear not, CUMaS is there to de you. Don't ever doubt yourself! Aim high, strive for it and don't be afraid to fail!"

# **COPA** (Cambridge Online Preliminary Application)

### Who needs COPA

For applicants who wish to be interviewed in Malaysia.

### What is COPA

The COPA form is divided into nine

#### sections:

- 1. Application Type
- 2. Personal Details
- 3. Application Details
- 4. Education
- 5. Qualifications
- 6. Choral/Organ (only if you are applying for an Organ Scholarship)
- 7. Fees & Funding
- 8. Additional Information
- 9. Pay & Submit

# Example of additional information in COPA

- A1.1 Please enter your personal statement in English as prepared for your UCAS application (max 4000 characters including spaces)
- A2.1 Optional additional personal statement (max 1200 characters including spaces)
- A2.2 Do you have any specific career plan? (Max 300 characters including

- A3.1 How have you kept up your interest in the subject you have applied for? (Max 300 characters including spaces)
- A3.2 Are you interested in applying for a Choral award?
- A3.3 Are you interested in applying for an Instrumental Award for Chamber Music?
- A3.4 Is there anything else you would like us to know? (Max 600 characters

including spaces)

A4.1 Please provide details of your UCAS referee

\*Punts near the Magdalene Bridge\*



# OUTREACH COPA 15

#### Take Note

- Before you sit down to write, think about what kind of information the application requests and decide what information about yourself you want the admissions committee to be aware of that is NOT fully described elsewhere in the application.
- SAQ is similar to COPA.

## REFERENCE

### What is a reference

Your reference is a full written recommendation from a teacher or tutor who knows you. You won't have access to this as your teacher will write your reference and send your application to UCAS for you.

## What can you do

 Provide them your CV, which contains information such as your extra-curricular activities, community service projects, academic achievements etc.

- It is important for your referee to know your involvement beyond the classroom walls in order to gain an in-depth understanding about you.
- You also want to make sure that there is **no overlap of information** in your personal statement and your reference letter i.e. citing a particular activity to demonstrate your qualities.
- Remember to keep in touch with your referee about how it is going – that way you will know when they have sent it on to UCAS.



## **INTERVIEW**

### General View

- The interview is a process which the University of Cambridge uses to select the applicants it gives an offer to. It is arguably the most important factor determining the success of one's application.
- Generally viewed as a daunting but unique experience; most students only go through the interview process once and learn a lot from it.
- The interview can be done in Malaysia or in Cambridge. Normally, there is only 1 interview if the interview is done in Malaysia (or more than 1 if it is done in Cambridge).

## **Questions Asked**

- Personal Statement(PS)
- Pre-University courses' material
- General Questions (to gauge the thought process of applicants)

## My perspective/ experience/advice<sup>1</sup>

 Prepare to be asked questions on your PS. Anything that you write in your PS can be questioned and thus thorough research should be done before the interview.

- Revise Pre-U material especially the topics written down in the COPA form (questions will usually be asked from topics stated there).
- Voice out your thoughts during the interview; this will help show the interviewer how you think to solve a problem or debate a point.
- Speak confidently and clearly during the interview so that what you say can be well-understood! If you don't understand the question, don't hesitate to ask the interviewer to repeat it.
- Dress smart and don't panic! Many applicants tend to panic in the interview either because they are nervous due to the occasion or get intimidated by the questions. Some mock interviews should help overcome this problem.
- In a way, the interview can be seen as a mock supervision. The questions will not be straightforward and thus not panicking and giving up goes a long way in showing one's willingness to learn and ability to understand a new material.
- Try to make the interview an enjoyable experience for both you and the interviewer by smiling, being polite and happy. Being as stiff as wood with a sullen expression doesn't help one's chances, at least this is what I think.

<sup>&</sup>lt;sup>1</sup>The views expressed are our own and do not necessarily reflect the views of University of Cambridge. We thank Ramaraj Sundraraj (former Engineer from Churchill College) for his input.

# 18 OUTREACH Admission Test

Please note that most of the admission tests included in this section are completely new, and we are unable to share with you our experience as we have not taken the tests before. We suggest you look up the relevant websites which will be included later.

Most applicants are required to take a subject-specific written admission assessment, either pre-interview or at interview. In addition, some Colleges ask applicants for some courses to submit examples of their <u>written work</u> – one or two school/college essays – which may then be discussed at interview.

The table below details if a course has a pre-interview or at-interview written assessment for 2018 entry.

#### Courses

#### **Pre-interview assessment**

- Anglo-Saxon, Norse, and Celtic
- Asian and Middle Eastern Studies
- Economics
- Engineering (including Chemical Engineering via Engineering)
- English
- Geography
- History
- History and Modern Languages
- History and Politics
- Human, Social, and Political Sciences
- Medicine
- Natural Sciences (including Chemical Engineering via Natural Sciences)
- Psychological and Behavioural Sciences
- Veterinary Medicine

#### At-interview assessment

- Archaeology
- Architecture
- Classics (3-year)
- Classics (4-year)
- Computer Science<sup>1</sup>
- Education
- History and Modern Languages
- History of Art
- Land Economy
- Law
- Linguistics
- Modern and Medieval Languages
- Philosophy
- Theology, Religion, and Philosophy of Religion

# Pre-Interview Assessments

The link below includes a table that summarises the pre-interview written assessment required for each course for 2018 entry.

https://www.undergraduate.study.cam.ac.uk/applying/admissions-assessments/pre-interview

# At-Interview Assessments

The table below summarises the At-interview written assessment required for each course for 2018 entry.

https://www.undergraduate.study.cam.ac.uk/applying/admissions-assessments/at-interview

# **BMAT** (BioMedical Assessment Test)

### Introduction

The BMAT is an admissions test used by the top universities in the UK. Since we are talking about the University of Cambridge in this booklet, here are the courses which require the BMAT for the University of Cambridge:

- A100 Medicine
- D100 Veterinary Medicine

This section will aim to give an insight into what it entails and also general preparation advice. More details can be found on the BMAT website (www.BMAT.org.uk).

## Components of the BMAT

The BMAT is a 2-hour test, divided into three sections (each on a separate booklet).

### Section 1 (Aptitude and Skills)

- 35 questions, MCQ or Short Answer questions
- 60 minutes
- Similar to the TSA
- Involves understanding arguments, problem solving, and data analysis

# Section 2 (Scientific Knowledge and Applications)

• 27 questions, MCQ or Short Answer

- questions
- 30 minutes
- Is a science and math paper of SPMstandard
- Involves Biology, Chemistry and Physics

### Section 3 (Writing Task)

- An essay question
- 30 minutes
- Involves constructing arguments and developing ideas
- Also similar to the Essay component of the TSA

### FAQ on BMAT

The examination results are only accepted by the university during the year of application. You cannot use the 2017's result if you are applying in 2018.

#### When?

Usually in early November (2<sup>nd</sup> November 2017)

#### Where?

It is held in a few specific locations, but most colleges host the examinations.

#### How much?

If you take the test in Malaysia:  $78 \text{ GBP} \approx 433 \text{ MYR}$  as of 14/7/2017.

If you take the test in the UK/EU:  $46 \text{ GBP} \approx 255 \text{ MYR}$  as of 14/7/2017.

### How do I sign up?

It's best to be in touch with the centre you will be taking the examination in, usually your own college. Signing up begins on the 1<sup>st</sup> of September and ends on the 1<sup>st</sup> of October

#### When are the results released?

Around the 25<sup>th</sup> of November. Your university will also receive the results on this date independently, you don't have to tell them your scores.

## Preparation advice

(a.k.a. how and when to panic)

It's the same with any assessment; you need to practice and practice and practice. Make sure you know what you're doing then try some practice questions. Think, rinse, repeat.

### Paper 1

Since this section is similar to the TSA, you would benefit from reading and learning from those books. They give a clear structure on what to look out for in an argument and how to think about the questions, for example. Try out the past year questions for the TSA as well.

### Paper 2

This is *just* SPM-level science. It would help if you refreshed your knowledge

by skimming through simple concepts which you have noted down before. Start revisiting it up to at least 2 months before and all the way to the exam. This gives you time to recall and practice.

#### Paper 3

Practice planning your essays. There are many resources which you can use for this, both online and offline. Some of the essays run in a similar vein, so you can mix and match your points. It's good to plan to organize your ideas so you know what to think and write about during the time constraint of the examination. Also, collaborate with your peers to discuss essay topics and see what you can come up with after brainstorming. Timed practice essays will help manage your time, too!

### Resources

# Get into Medical School. 400 BMAT Practice Ouestions.

Publisher: ISCMedical

Authors: Lydia Campbell, Olivier Picard

# How to Master the BMAT: Unbeatable Preparation for Success in the BMAT

Publisher: Kogan Page

Authors: Chris John Tyreman

# Preparing for the BMAT: The Official Guide to the BMAT

Publisher: Heinemann

### **Thinking Skills**

Publisher: Cambridge University Press

Author: John Butterworth

The views expressed are our own and do not necessarily reflect the views of University of Cambridge. We thank Justin Koh - 5<sup>th</sup> year medic (Queens'), Marcus Sim - 5<sup>th</sup> year medic (Churchill), Christine Wong - 5<sup>th</sup> year medic (Gonville and Cauis), Magdalene Ting - 5<sup>th</sup> year medic (Trinity Hall) and David Wong - 4<sup>UI</sup> year medic (Trinity).

# **STEP** (Sixth Term Examination Papers)

### Introduction

STEP is part of the entry requirements for the Mathematics course in Cambridge, Imperial and Warwick. It consists of 3 papers (Papers I, II and III) but you will only have to do one or two papers.

### **Format**

Each paper has 13 long questions, 8 of which are Pure and the remaining 5 shared between Mechanics and Statistics. Each question is worth 20 marks. The time limit for each paper is 3 hours, and they will mark a maximum of only 6 questions (so maximum total mark is 120).

For each paper you will be given a grade: (from lowest to highest) U, 3, 2, 1 or S. Very roughly, the grade boundaries in the past few years have been around 90 for an S, 70 for a grade 1 and 55 for a grade 2, but they change significantly every year.

More info here: <a href="http://www.admissionstestingservice.org/for-test-takers/step/scoring-and-results/">http://www.admissionstestingservice.org/for-test-takers/step/scoring-and-results/</a>

Papers I and II are based on the A-levels Mathematics course, and paper III on the A-Levels Further Mathematics course. Although you won't need to learn new material to tackle the course, you will very likely find the papers to be extremely difficult at the start. This is **normal**.

The questions are designed to really challenge how well you understand (not memorize!) your syllabus, and how fast you can adapt to new mathematical techniques. Very often, one actually learns a new piece of mathematical trick after coming out from the exam. The examiners are more interested in seeing how you think rather than catching you out with knowledge beyond your ken.

It's hard to describe, but try a few Paper I questions at <a href="http://www.admissionstestingservice.org/for-test-takers/step/preparing-for-step/">http://www.admissionstestingservice.org/for-test-takers/step/preparing-for-step/</a>

Generally, if you are trying to enter Cambridge, they will ask for an A\*AA in A-Levels (Maths and Further Maths required of course), and usually, grade 1 in both STEP Paper II and III (not Paper I).

## Tips & advice

## One complete answer is valued more than two half-answers.

For example, a rough guide would be that answering ½ the question would probably give only ⅓ of the 20 marks, while answering ¾ of the question would get about ¾ of the marks. STEP rewards deep understanding of mathematics rather than a broad but shallow one.

Looking at the marks, you only need to fully answer 4 questions from a choice of 13 questions to more or less secure—a grade 1 in any paper, and you have 3 hours. This might sound easy, but it really isn't. The only way to prepare for STEP is to practice lots of questions. The STEP website is very good for this: their booklets of questions "Advanced Problems in...", and the past papers (all of which can be found in the previous link) are enough to prepare you for the exam.

For the keen beans among us, here is a good repository that stretches back till 1987: <a href="http://www.mathshelper.co.uk/">http://www.mathshelper.co.uk/</a> oxb.htm

Solutions for the older papers are available at: <a href="http://www.thestudentroom.co.uk/wiki/Step\_solutions">http://www.thestudentroom.co.uk/wiki/Step\_solutions</a>

Again, at the start, you will find a lot of questions to be nearly impossible. This is NORMAL. Do not be discouraged and remember that almost everyone doing STEP feels like this in the beginning. Even by the day before the exam, you will find that you struggle with many questions on the paper. But this is a good preparation and taster for university mathematics: unlike A-Levels, you will find that you can't be good at everything. Remember this and do not despair. If you don't like this feeling, then you may want to reconsider doing mathematics.

#### Start EARLY.

The STEP exam is held in June. I would say start doing some questions in January (if not earlier!) and see how you do. The best way to prepare for STEP is to do as many questions as possible, which means working through the booklets till you feel comfortable with the type of questions, and then the past papers. Give yourself two hours per question at the start (that is not a joke, you'll get faster once you're used to it).

Alternatively, you might want to start by doing some STEP I papers, and then only moving on to the other two. Also, based on the shared experience of many who have taken the exam, it is generally best to focus on the Pure questions as they tend to be more accessible in terms of required knowledge. The Mechanics, and especially the Statistics, questions tend to be harder and more advanced.

# 24 OUTREACH Admission Test

But of course, different people have different background knowledge and different strengths, so this advice should be carefully considered.

## Closing remarks

STEP is frustrating and difficult, but hopefully, you will find a certain satisfaction every time you finish a question. You would probably learn more about mathematics practising the papers than you would in your Pre-U Maths course. And perhaps you'll start to enjoy being stuck on difficult problems, and suddenly, after a few hours, seeing the solution in your head. That's Mathematics

Everything you need to know about STEP is at their official website: <a href="http://www.admissionstestingservice.org/for-test-takers/step/about-step/">http://www.admissionstestingservice.org/for-test-takers/step/about-step/</a>

Talk to your university exams officer (or teacher) to see if they canoffer STEP exam for you. Otherwise the British Councilin KL, Penang, Sabah and Kuching offers STEP.

The signup deadlines, prices, etc for 2017 have not yet been announced, so keep checking.

## **MATHS WRITTENTEST**

# Who's Required to Take It and What of It?

For those who wish to be interviewed in Malaysia for Mathematics, there will be a compulsory maths written test a day or two after the interview instead of the TSA abovementioned. This test will be held parallel to the TSA in the same hall. Along with the interview, the maths written test will be taken into account by the admissions tutor

### **Format**

- Two-hour paper
- Two sections:
  - \*Section I has 10 questions and you can answer all
  - \*Section II has 6 questions, but choose only 2
- Marks for Section I is higher than that of Section II

Section I questions are shorter than those of Section II. There will be one mechanics question and one statistics question in each of the sections. Knowledge of Further Maths is not required in this test.

### How to prepare?

Practise on some recreational maths questions (eg: prove that an integer is divisible by three if and only if the sum of its digits is a multiple of three). Working through the STEP workbook "Advanced Problems in..." will also help. Details of this workbook are available in the STEP section earlier in this booklet.

#### Disclaimer

# **CAMBRIDGE LAW TEST**

### Introduction

Unlike most universities, Cambridge does not require applicants to sit for the LNAT. Instead, applicants will have to sit for a test unique to Cambridge. The Cambridge Law Test is designed to test the applicants' ability to understand the given passage, to identify and engage with the issues raised; and to express themselves in a clear and logical way.

Although the test will inevitably involve law-related matters, that does not mean that you are expected to have knowledge of the law, nor is Cambridge expecting you to. All of the law-related information necessary to answer the question is provided in the given statement of law. Applicants who have studied or are studying law (e.g. at A-levels) will therefore not be at an advantage over others. All of the law-related information necessary to answer the question is provided.

### **New Format**

The Cambridge Law Test used to require applicants to answer one of a choice of three questions in an hour: a comprehension question, a problem question, and an essay question. If you take the test in Malaysia, you are expected to complete two questions in 2 hours. Starting from 2016, the Cambridge Law Test has been revised and applicants are required to answer a two-part question within an hour. It is, however, not

clear whether the same will apply to those taking the test in Malaysia. We believe you shall be notified with more information about the test when you receive the invitation email to sit for the test. The updated content specification, two sample questions, and the marking criteria of the Cambridge Law Test can be found via the link below:

http://www. undergraduate.study.
cam. ac.uk/files/publications/laa\_
specification.pdf

## **Essay Questions**

Essay questions typically ask candidates to consider a statement of opinion and to discuss it, giving reasons for their answer. This may be done by asking for discussion of a quotation or asking a direct question. Each question is intended to solicit applicants' views rather than to invite the provision of factual information. In particular, essay questions are designed to test applicants' ability to identify and engage with the issues raised by the question; to write clearly; and to construct a coherent, well-structured and balanced argument.

### **Problem Questions**

In a problem question, applicants are given a statement of law - for example, a particular chapter in tort/criminal law, an excerpt from a statute or a passage from a judgment of a judge given in a court - and are asked to explain how it

would apply in certain factual situations. Problem questions are designed to test applicants' ability to understand the given statement of law; to apply it accurately to the given factual situations, drawing relevant distinctions; and to explain their reasoning in a clear and logical way.

## Comprehension Questions

In a comprehension question, applicants are presented with a passage of text - for example, an excerpt from a judgment or article - and are asked to summarise it and to answer specific questions about it. Comprehension questions are designed to test applicants' ability to understand the text; to write clearly; and to develop balanced, well-reasoned arguments. For specimen questions, please refer to <a href="http://ba.law.cam.ac.uk/assets/misc/Cambridge Law Test Specimen">http://ba.law.cam.ac.uk/assets/misc/Cambridge Law Test Specimen</a> Questions.pdf

## Tips & Advice

### Don't over-prepare

As for all tests, the temptation is tostudy really hard, and even to memorize model essays. Please DO NOT do either. This test, like an actual law exam, is designed to assess the candidate's comprehension and argumentative skills. It is more important to have a full grasp of what each question is asking than to produce an excellently written essay which fails to address the key issues presented. The better way to prepare is to read widely. I

am not referring to books on specific law subjects, but rather law-related books, e.g. the issue of the death penalty, human rights, etc, so that you are exposed to pertinent issues and the style of writing that these authors employ to convey their arguments.

#### Recommended books:

- Justice: What's the right thing to do? (2010) Michael Sandel
- The Rule of Law (2011) Tom Bingham

### **Understanding is key!**

In law, it is not who knows the most that wins, but who understands the best. Whenever you read any form of literature, be it a book or an article in the newspaper, make a conscious effort to absorb and understand what you are reading. A key indicator of understanding is your ability to explain what you read in your own words. As you listen to the news, or follow up on legal issues happening around the world, e.g. the legal implications of Brexit, think about the rationale behind the laws involved and the reasons why they were applied as they were. These will equip you with the skills necessary to help you extract what each question/passage is trying to ask of you without getting drowned in the multitude of words and legal jargon.

<sup>&</sup>lt;sup>1</sup> The views expressed are our own and do not necessarily reflect the views of University of Cambridge. We thank Victor Chang (former Lawyer from Christ's College), Wong Sher Lin (3<sup>rd</sup> year Lawyer from Queens' College) and Ng Chun Hau (1<sup>st</sup>year lawyer from Girton College) for their input.

## **KEY DEADLINES**

## Application submissions

**20**<sup>th</sup> **September 2017** – Applications (both UCAS and COPA) from students wishing to be interviewed in Malaysia to be submitted

**15**<sup>th</sup> **October 2017** – Applications (both UCAS and COPA) from students wishing to be interviewed in Cambridge to be submitted

22<sup>nd</sup> October 2017 – SAQ to be submitted

(Deadlines may vary depending on college but you will be kept informed)

### Interviews

**End of October 2017** – For applicants who are interviewed in Malaysia

First three weeks of December 2017 – For applicants who are interviewed in Cambridge

# Medicine and veterinary students

1<sup>st</sup> October 2017 – Deadline for registration to take the BMAT

 $2^{nd}$  November 2017 – BMAT to be taken by applicants

# **SPONSORSHIP INFORMATION**

## Undergraduate (Updated June 2016)

Name of Scholarship	Awarding Body	Bond	Deadline (Based on 2016)	Course	Other Details
Khazanah- Cambridge Scholarship Programme	Yayasan Khazanah	Yes	March	Almost any course	Cambridge only
Shell Overseas Scholarship	Shell Malaysia	No	February	Engineering (Not limited)	Various courses accepted
Petronas Education Sponsorship Programme	Petronas	Yes	June	Engineering (Not limited)	Various courses accepted
Bank Negara Malaysia Scholarship Programme	Central Bank of Malaysia	Yes	March	Economics or law	Application period of 7 days only
Maybank Foundation Scholarship Award	Maybank Foundation	Yes	March	Social sciences and technology	Various courses accepted
CIMB ASEAN Scholarship	CIMB Group	Yes	June	Relevant to banking and financial industry	Only for citizens of certain ASEAN countries
Sime Darby Foundation Education Scholarship Programme	Yayasan Sime Darby	Yes	N/A	Almost any course	Usuall pre- university sponsored first

Name of Scholarship	Awarding Body	Bond	Deadline (Based on 2016)	Course	Other Details
Education Sponsorship Programme (ESP)	Malaysia Airports	Yes	July	Social sciences and technology	Various courses accepted
Maxis Undergraduate Scholarship	Maxis Berhad	Yes	May	Social sciences and technology	For Maxis customers
Astro Scholarship Award	Astro Malaysia Holdings Berhad	Yes	April	Not specified	For Astro customers
Jardine Scholarship	Jardine Foundation	No	October (year before offer)	Any course	Downing, Magdelene, Peterhouse or Trinity College students
DayaDiri Cambridge Scholarship	Yayasan DayaDiri	No	November	Any course	Bumiputera only
Malaysia Chevening Cambridge Scholarship	The British High Commission and The Foreign and Commonwealth	No	January	Science and technology (Not limited)	Post- graduate Masters only
UEM Scholarship	UEM Group Berhad	Yes	April	Economics or engineering	Application from pre- university only
Tenaga Nasional Berhad Scholarship	Yayasan Tenaga Nasional	Yes	March	Engineering	Civil, electrical or mechanical only
Securities Commission	Securities Commission Malaysia	Yes	April	Economics or law	Various courses accepted
Bank Pembagunan Scholarship	Bank Pembangunan Malaysia Berhad	Yes	July	Social sciences and technology	Various courses accepted

Name of Scholarship	Awarding Body	Bond	Deadline (Based on 2016)	Course	Other Details
MyBrainSc Scholarship	Ministry of Education Malaysia	Yes	January	Science or mathematics	Degree, Masters or PhD
Jeffrey Cheah Foundation- Sunway Group Scholarship	JCF & Sunway Group	Yes	N/A	Social Sciences & Technology	Various Courses accepted
Gamuda Scholarship Award	Gamuda Berhad	Yes	April	Engineering	Civil, Mechanical, Electrical only
The Cambridge Commonwealth Trust	Trustees of the Malaysian Commonwealth Studies Centre and of the Cambridge Commonwealth Trust	No	N/A	Any Course	Partial Scholarship
College Trust Funds*	Cambridge College	No	-	N/A	Subject to Cambridge college

Note that all the information above may be subject to changes and it is important to look for updated information from the various official websites.

For more scholarship opportunities, please refer to  $\underline{\text{http://www.malaysiascholarships.my/}}$ 

<sup>\*</sup>Each college normally has a bursary set aside to assist students who experience any form of a financial shortfall. For more details, please check the website of the respective college or contact the college directly.

## LIFE IN CAMBRIDGE AS...

## ... an Engineer

What's unique about the Engineering course at Cambridge is that the first 2 years cover the main fields of Engineering and you only specialise in 3rd year. This is perfect if you're still not sure which branch of engineering you would be interested in or if you have decided, give you the chance to explore the other branches. However, the breadth of the course does not mean what you learn in each field is diluted, in fact it is arguably more indepth than courses which have you specialise right from the start. Lectures cover mechanics, structures, materials, fluid dynamics, thermodynamics, electrical engineering, electronics, information and mathematics.

It's not all books though, lab sessions and projects allow you the chance to see theory being put into action. In first year, you can look forward to messing around with Lego Mindstorms, building your own radio, making a structure and testing it to destruction. Computing and programming is also part of the course, and at the end of it you're expected to write a program to solve a real-life problem.

Workload wise, you are given 3-4 example papers a week, which are exercise questions on a topic you have recently learned. You are expected to complete or at least attempt all questions and discuss them in supervisions. The questions can be easy, but most likely will be difficult. The supervisors are there to help you gain a deeper understanding about the subject and plug up any holes in your knowledge.

Lai Dee Loon
Engineer
Homerton College
(Matriculated in 2016)



Of course, the Engineering Department is home to a number of societies, namely Eco Racing, 3D Printing Society and other activities to keep you involved in the more practical side of engineering. The Engineering Society also hosts lunch talks (free food!) with people in the engineering industry. Free language courses are also provided to Engineering students, with 2-hour classes for 12 weeks.

There are 4 papers and 8 subjects in the first year:

Mechanics, Thermofluid Dynamics, Structures, Materials, Electrical Eng, Digital & Information Eng, Mathematics and Computing.

There are no options, no exemptions and no escape! Muahahaha! Actually, life's pretty grand as an

Engineering student. You usually get about 2 hours of lectures per day, followed by 2-4 hour lab or drawing sessions.

Lai Dee Loon

## ... a Chemical Engineer

The Chemical Engineering Tripos<sup>1</sup> (CET) will occupy the second, third and fourth years (CET Parts I, IIA and IIB respectively) of your undergraduate life at Cambridge. In your first year, you will do either the Engineering Tripos or the Natural Sciences Tripos and what you study will be no different from an Engineer or Natural Scientist. The choice of route really depends on your interest and aptitude and will not affect your chance of making a successful application. It is possible to graduate after three years with a BA degree<sup>2</sup> but this threeyear course is *not* accredited by the Institution of Chemical Engineering (IChemE). Only the four-year course leading to BA and MEng degrees is accredited by IChemE.

In second year (CET Part I), you will take four 3-hour written papers at the end of the academic year in June, whose content is covered by lectures and supervisions throughout the year:

- Paper 1: Fluid Mechanics; Heat and Mass Transfer;
- Paper 2: Engineering Mathematics; Process Calculations (a.k.a. Thermodynamics);
- Paper 3: Separations; Biotechnology; Homogeneous Reactors;
- Paper 4: Stress Analysis and Pressure Vessels; Introduction to Chemical Engineering (consisting of Overview of the Chemical Industry, Dimensionless Analysis, Process Economics and Safety); Chemistry (for ex-Engineers) / Engineering (for ex-Natural Scientists);

In addition, there will be 6 Computing classes on Excel, MatLab and UniSim as well as Physical Chemistry Laboratory (for ex-Engineers) or CAD Drawing (for ex-Natural Scientists). There will also be fortnightly Chemical Engineering Laboratory which requires submissions of full reports (8 in total). Throughout the year, there will also be 5 Exercises, which are long Chemical Engineering problems requiring literature research, extended calculations and report writing done over 3 weeks, to be completed.

In third year (CET Part IIA), you will similarly take four 3-hour written papers, which cover mainly topics studied in second year but in

## Chemical Engineer Christ's College (Matriculated in 2015)



greater depth and breadth. There will be 6 Exercises to be completed. There will also be a Design Project to be done over the final 5 weeks of the academic year. This project will be done in teams of 5 or 6 and involve the design of a chemical plant, with each team member working on a section of it.

In fourth year (CET Part IIB), you will take a number of modules covering a diverse range of topics, both compulsory and optional ones. These will be assessed by written papers or coursework, or a mixture of both. There will also be a Research Project, including the submission of a research paper, to be completed either individually or in pairs under the supervision of an academic of the Department.

A typical week of a Chemical Engineer consists of about 10 hours of lectures, 2 to 3 hours of supervisions, in addition to time spent on coursework. Quite a significant proportion of your free time will be spent on working on examples sheets (the Cambridge version of "tutorials") and trying to tackle past year papers. Although the course structure may sound intimidating, as long as you put in consistent efforts and resolve any issues encountered with your coursemates, lecturers or supervisors, you will surely do well!

Personally, I find the course extremely fulfilling, as it allows me to consolidate my knowledge in almost all sciences (Physics, Chemistry, Biology and Mathematics) and apply it in real-world context. I am certain you will find the course interesting as well! Another plus point of studying Chemical Engineering at Cambridge is that we just moved into our new home in October 2016, with brand new facilities, free tea and even piano and guitar for relaxation! Feel free to drop me a message if you wish to know more about the course and the life at Cambridge:)

Lim Chia Wei

<sup>&</sup>lt;sup>1</sup> In Cambridge, a major is known as a "Tripos".

<sup>&</sup>lt;sup>2</sup> In Cambridge, all Bachelor's Degrees awarded will be Bachelor of Arts (BA), even if you study a Science course such as Chemical Engineering.

### ... a Lawyer

You may get the impression that you have a lot of free time when you first receive your timetable. First year lawyers will have roughly 10 hours of lectures per week, which will cover 4 compulsory subjects: Civil Law I (Roman Law), Constitutional Law, Criminal Law, and Law of Torts. On top of that, you will have an hour of supervision for each subject fortnightly. This means that you will attend 2 supervisions every week on average. Other than that, you will have all the time to yourself.

However, the reality will soon strike that you have a formidable amount of reading to be done outside lectures and supervisions. The reading list will be given before each supervision and you will have an essay to write every week on average. You may find it difficult to adapt to the workload at first, but you will get used to it soon. Effective time management is the key, which you will inevitably get to hone it in Cambridge! You will usually find lawyers working in the Squire Law Library, which offers an abundance of natural light and all types of law-related books that you can ask for. College library will usually offer a respectable number of legal collections as well

Lectures are not compulsory, but I will strongly encourage you to attend them. They provide a good overview on the topics that you need to cover and you will know how far you should delve into these topics without going out of

Ng Chun Hau Lawyer Girton College (Matriculated in 2015)



syllabus. Supervision is the key feature that distinguishes Cambridge from other universities. Imagine that you will sit with another 2 students, discussing with a leading academic, who might be the one writing your textbooks, on the topic that you are learning. This is the perfect opportunity to clear up any issues that you have and get a real in-depth understanding of that topic.

Outside the academic work, Cambridge has so much to offer than you can possibly imagine. Cambridge University Law Society has so many events going on including drinking receptions, mooting competitions, talks by renowned scholars, workshops by city law firms, etc., let alone the events organised by the law society of your college. There are lots extra-curricular other activities available if you wish to stay away from law in your free time. Whether you want to join the orchestra playing Chinese traditional musical instruments or simply to enjoy different types of chocolate in the chocolate society, you will always be able to find the student organisations that you are interested in.

To sum it up, life in Cambridge as a lawyer is hectic but meaningful and enjoyable!

Ng Chun Hau

### ... a Medic

Welcome to the life of a 1st year Medic in Cambridge.

In 1st year, there will be 3 core topics which Medics will cover; HOM (Physiology), MIMS (Biochemistry) and FAB (Anatomy). It should be noted that you do share the same lectures with vets for both HOM and MIMS as they are also sitting the same Tripos Paper (MVST1A). Each week will consist of roughly 14 hours of contact hours (lectures, practicals and dissection). On top of that, your own college will organise supervisions, usually an extra 3 hours per week. (Beware, some colleges may have more.)

Furthermore, Medicine in Cambridge is rather intriguing. Not only do you get a class grade from Tripos Exams, but you also have to pass the 2nd MB exams to carry on to the next year. The key difference between 2nd MB exams and Tripos is that Tripos will include your essays marks whilst 2nd MB does not. The 2nd MB exams also include 3 smaller and easier components of the course, which you must pass to carry on to 2nd year. These are Pfp A, SCHI and ISBM.

Preparing for patients (Pfp A) is a course set up by Cambridge where you will visit a GP clinic once in michaelmas and a patient's house once in lent term. A short write up on your learning experiences from these 2 visits is required for you to pass. SCHI (Sociology) and ISBM (Statistics) lectures are given once a

Lim Jiang An
Medic
Corpus Christi College
(Matriculated in 2016)



week each and you will sit an exam at the end of Lent term

The differentiating factor of studying Medicine in Cambridge is having Supervisions. They are normally in groups of 3-4 lasting an hour each. You will have the chance to ask your supervisors questions about lectures as well as going through essays set the previous week. The style of the supervision is mainly dependent on the type of supervisors you have. Some are willing to summarise and teach you the important content you learn that week, whilst others may prefer to test your understanding of the topic by asking your group questions on the spot. You should always prepare for these supervisions by looking over your lecture notes, as you will definitely get more out of it if you actively participate.

On the whole, life as a 1st year medic in Cambridge is an experience which you would never have experienced before. It can be stressful and hard at times (especially Michaelmas), but at the end of the day it has been an enriching experience where you will make lifelong friends along the way.

Lim Jiang An

### ... a Mathematician

If you are a hopeful Mathematics student looking forward to starting your academic life as a mathmo at Cambridge, then you are standing in the shadow of some of the greatest minds who have ever graced the planet. Some notable alumni include Sir Isaac Newton who first predicted the motion of heavenly bodies in space and James Clerk Maxwell who discovered the fundamental laws of electromagnetism. However, fear not, as this article will convince you that there is so much more to studying Mathematics than striving to be on par with your predecessors.

In your first year, you will study eight courses, four each in Michaelmas and Lent. Lectures are six days a week, and typically run from 10am to 12pm. Some of the courses such as Differential Equations, Probability and Vectors & Matrices might sound familiar to you. Indeed, they consolidate what you have learnt in A-Levels before exploring richer parts of Mathematics in-depth, whereas courses like Groups and Number & Sets introduce new concepts which are not generally taught in high school. You may find Analysis intriguing as you will learn to rigorously prove many fundamental facts about functions that you have taken for granted. There are also the more "applied" courses like Vector Calculus and Dynamics & Relativity which expose you to many mathematical methods.

As a matter of fact, each of the eight courses is well established in its own right. That being said, you will almost surely not enjoy certain courses (because you are a human), but even so it is vitally important to attend all the lectures. You should try your best to absorb the material during lectures, notwithstanding the fact that sometimes more than half the people in the lecture theatre (even the lecturer) have absolutely no idea about what is going on. Perseverance is a virtue in these situations. Even if you fail to comprehend something straightaway, yet by concentrating during lectures, your mind is at least receptive to new mathematical ideas and you will have an easier time trying to decipher them afterwards, having allowed your subconscious mind time to piece together bits of scattered mathematical jigsaw. As one lecturer aptly puts, at least you have "turned unknown unknowns into known unknowns".

To the uninitiated, twelve hours of lectures a week might seem few, but in reality, while not lamenting the existence of Saturday lectures, most mathmos spend their time poring over example sheets. The typical workload for a first year student is two example sheets per week, each of which generally consists of twelve to fifteen problems. You are expected to work on the example sheets to the best of your ability. Your work will be marked by a supervisor, and you will go through difficult parts of problems during a supervision with your supervision partner. Some of the problems on an example sheet might be extremely difficult to the extent that no student in your college has solved it in years. Solving such difficult, or as some lecturers affectionately term "starred" questions might

Lin Zi Khang Mathmo Homerton College (Matriculated in 2016)



Khong Yi Kye Mathmo Queens' College (Matriculated in 2016)



earn you fifteen minutes of fame, but you should not be too discouraged if you can't make any significant progress. Bear in mind that solving 75% of the example sheet is quite a respectable achievement, and being able to actually solve the entire example sheet is something you can boast about to your grandkids in the future.

It goes without saying that you should take every supervision seriously and submit your best work, but more importantly, if there is anything you do not understand about the lectures at all, supervisions would be your best opportunity to clarify all your doubts, however tiny. Do take note that each supervision lasts for only about an hour so every minute counts. The study off Mathematics builds on previous foundation; it is difficult to do well later if you struggle to understand the initial concepts which form the bread and butter for more advanced mathematical study in your second and third years.

Apart from attending lectures and working on example sheets, some mathmos join the Archimedeans for more intellectual stimulation. It is a university-wide Mathematics society that hosts fortnightly talks on various mathematical topics, ranging from application of Mathematics in finance and economics to abstruse topics in logic. There is also the Trinity Mathematical Society whose membership is open to all students. We strongly recommend you to sign up, as by merely paying £2.50, you are entitled to a whole year of free port and snacks!

Studying Mathematics at Cambridge is a journey of meeting different people, some of whom are idiosyncratic in their own ways. Some lecturers go through entire lectures without referring to a single sheet of material, yet are still able to write lengthy proofs of convoluted theorems, while some others, when lecturing about a new theorem, like to include interesting anecdotes of its discoverer. Meanwhile, you might come across students who like to correct every single mistake that lecturers have made during lectures, even if it is just a trivial typo. You might also have friends who never attend any lectures, yet are still able to ace the exams. Well, perhaps we have our own eccentricity too, but one thing is for sure, we all love Mathematics:)

### ... an Economist

Economics, a blessing to learn but a pain to study. Moments of confusion are frequent, but the eventual enlightenment after understanding it is indulgingly satisfying.

In your first year, you take 5 compulsory subjects. In Micro, you will spend your days grappling with endless optimisation and Pareto efficiency. In Macro, you acquaint yourselves with Mr Keynes and his economic model friends. Maths and stats make you question the probability of finishing your work and whether your grades are correlated to the hours you put in. In Politics, you will muse on British politics and development economics. In History, you will find yourselves wrestle with Britain's prime and Britain's decline from the 1800s to the Interwaryears.

The breadth and depth of the course are unparalleled elsewhere. The course is intellectually challenging demanding, and you will often get mindblowing moments. Micro and Maths require extensive mathematical skills, politics and history demand good reasoning and writing, while Macro is a balanced combination of both. You will hone both quantitative and qualitative skills here. The inclusion of History is one of its kind, and you will not find another place that makes economic history compulsory. You will spend many hours reading academic papers consolidating all the differing views to write a 45-minute essay. The same goes for politics, and the reading listis

Lim Jay Yen
Economist
Robinson College
(Matriculated in 2015)



not short. However, do not be put off by this, as it does widen your perspective and broaden your mind. It helped me understand how research are scrutinized, how ideas are debated and how theories are established or invalidated.

You may find a that the Economics Tripos does not have some subjects that other universities offer, such as World Economy. This does not mean this subject is completely excluded, but rather, you will find discussion of it in Macro and Politics. The course is comprehensive in its own respect and the choices in your second and third year is fairly broad. If you are keen to pursue a career in banking and finance, you can take up Maths in second year and Banking and Finance in your third. If you are more of a philosopher, you can learn History and Philosophy of Economics in your second year and Economic Theory and Analysis in your third. If public policy is more of your thing, then International Trade & Development in your second year and Public Economics in your third will make a fine combination. You will also have options from the faculty of HSPS for you to choose from, allowing you to explore subjects beyond the scope of economics. Lectures are held only on weekdays, usually 2-3 hours a day and ends by 12pm (1pm at the latest). This give you the rest of the day to yourselves, and you will mostly use it to prepare for supervisions. You will have on average 2-3 supervisions a week, each lasting 1-1.5 hours. You may

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find yourselves having too much free time on some days while frantically trying to complete your work on others. This calls for much discipline and skills in time management.

Outside academic, Cambridge offers plenty to economists. Most students join the Marshall Society (The economists' society) while those inclined towards investment and finance join the CU Finance and Investments Society. Both societies hold various talks and corporate networking sessions. If you are keen on having a go at applying your economics

### ... a Natural Scientist

Hey guys, I am Sue Hern, a Bio NatSci from Peterhouse. Basically if two or more of your subjects (excluding mathematics) are biological subjects then you are considered a Biological NatSci; if two or more of your subjects are physical subjects then you are considered a Physical NatSci.

In my first year I did Biology of Cells, Physiology of Organisms, Mathematical Biology and Chemistry. For Cells, a good book to buy would be Molecular Biology of the Cell, by Alberts et. al.For Physiology, Eckert Animal Physiology by Randall would be useful. All these books will be found in your college libraries so you don't actually have to buy these books! (:

Unfortunately, NatScis have Saturday lectures. :( You will have three lectures per week for each of your four subjects.

knowledge in real life policy making, then The Wilberforce Society gives you an opportunity to write actual policy papers. The opportunity here is endless and the experience is one of its kind.

Thejourneyisharder, butitisdistinctively edifying. Is it worthwhile? Yes, it is. The journey is never too hard because the big CUMaS family will always be there to watch your back. Do not be intimidated by the hard work, but embrace the challenge.

Lim Jay Yen

Haw Sue Hern
Nat Sci
Peterhouse College
(Matriculated in 2010)



Each lecture is an hour long. The practical is probably longer than what you are used to – Cells practical is from 11am to 4pm for instance! And for those taking Chemistry, it is stated that practical is from 11am to 5pm but don't be alarmed, our practical usually ends at 3pm or even earlier.

Supervisions will be in groups of two or three and every week there will be one supervision per subject so in total it is four supervisions per week.

Haw Sue Hern

# 39 OUTREACH Life in Cambridge

Phys NatScis have to do 3 science subjects, with the options: Physics, Chemistry, Materials Science, Earth Sciences, Computer Sciences and even one of the few biology modules. Most people come into the course thinking to be a Physicist, only to discover their passion in Materials or Earth Sciences, and decide to pursue those subjects in the next year. We also have to do 1 maths option: Maths A is at a more relaxed pace, while Maths B has slightly more topics (and thus giving you more options in exams, which are sometimes surprisingly easier to do) but go at a faster pace. Both maths modules take the same exam, so at the end of the day it doesn't make a lot of difference!

Labs vary per subject. For Earth Sciences, the labs are more relaxed (it's an hour long, 3 times a week), and Computer Sciences instead have "ticks" which is basically a set of tasks to complete for the week. The rest, however, tend to take a few hours, especially Chemistry (though it's said to be 11am-5pm, we do get to finish before 3pm if we're lucky and fast), which is more than what most people are used to. It does get a bit exhausting, but it's a great opportunity to learn outside of lectures and supervisions. Some questions in the labs (especially materials) often come out in the written papers, and Earth Sciences have their own practical exams, so don't miss out on any!

(For maths, you have MATLAB instead of labs, which is basically scientific programming. This will be a source of grief during Michaelmas term, but it is a great skill to learn!)

Supervisions are generally held by your

Chun Hao Zhe Nat Sci Emmanuel College (Matriculated in 2016)



college once a week per subject, totalling 4 supervisions a week (which sounds like a lot, but really isn't). Your supervisor (generally an academic or a PhD student) will decide the pace of your supervisions, whether to give you past tripos questions (that's exam questions) (really, Cambridge has such weird lingo...) on top of some parts of your Question Sheet, or to merely do the whole of the Question Sheet and cover some extra material later.

For those who are huge nerds hoping to meet some really cool people, there 'are talks organised by multiple societies given by extremely famous people (unfortunately I don't think Stephen Hawking has given one yet....or at least I've yet to find one) on really cool subjects, which are great fun to attend even if you don't understand much since you'll at the very least get to know how the brains of famous people work (and you get to meet famous people, which is a huge plus!)

Despite the never-ending torture of waking up early on Saturdays for a 9am lecture, I really enjoyed my first year. I found joy in waking up every day, realising that today I will learn something new and potentially exciting, all in one of the best universities on Earth. I hope you will feel the same when you too come to Cambridge!

Chun Hao Zhe

# **GRADUATES' SECTION**

### Why Cambridge?

The postgraduate community of any university is comprised of those who have chosen to pursue their subjects of interest further and they form an integral part of the academic community. The University of Cambridge prides itself as one of the world's leading research institutions with expertise in almost every subject imaginable. Coupling that with an abundance of resources and academic diversity, the Cambridge postgraduate experience is truly unique and highly sought after.

### The Community

The Malaysian postgraduate community here consists of students who have just finished their undergraduate degrees as well as students who have spent time working in their respective fields. Consequently, this community brings together people of varying degrees of breadth and depth of experience, making conversations almost always disciplinary and enlightening. Having community the said that. (undergraduate and postgraduate) is very friendly, supportive and always enjoys hanging out. Fun Fact: CUMaS is sometimes affectionately known as Cambridge University Makan Society as social activities usually involve food and endless chatting. (Restaurants us...)

Lee Wen Yao MRes + PhD in Gas Turbine Aerodynamics Wolfson College (Matriculated in 2014)



to that for undergraduate courses. Firstly, places are given by the course/department to which you are applying to, not the college. Therefore, questions and enquiries should be directed to the graduate office of the department. Once you've been given an offer, a college will offer you a place. You will be asked to pick 2 preferred colleges in your application form but do note that the college that offers you a place may not be one of your preferred colleges as places are subject to availability.

### **Funding**

There are various bursaries, scholarships andfundingschemeandtheseareavailable at both Masters and PhD level (please refer to the Cambridge Trust website). Malaysian postgraduates are typically self-funded or funded by a Cambridge Trust Scholarship, scholarships from the Malaysian government or Industrial / Research Centre funding schemes. Funded positions naturally are competitive but there are many people here who will be willing to share their experience and provide assistance.

# 41 OUTREACH Graduates' Section

### **College Life**

Postgraduate students spend a lot more time at their departments/labs/research offices comparedtoanundergraduate and as a result, they are usually less connected to the college community. However, that is by no means a "death sentence" on college life. College societies, formals dinners, various sporting clubs are all available and involvement is always encouraged. There are a number of mature student and graduate colleges but

the postgraduates still do come from a good mix of colleges.

If you need further information in any of these areas or if you have any general questions, please feel free to contact me on: cumasgrads@gmail.com or wyl36@cam.ac.uk.

Lee Wen Yao

## MPhil in Innovation, Strategy & Organisation (ISO)

If you say "business school", most people would think "MBA". In reality, business schools like the Cambridge Judge Business School (CJBS) would have a variety ranging from research to practice, depending on your inclination. I'm going to talk about the MPhil ISO program, but Protip #1, if you're thinking advanced business degree, don't just limit yourself to MBAs. The course description is quite comprehensive; I'm going to focus on things I wish someone told me before coming here (the good and the bad)

MPhil ISO is an excellent, research-oriented program for anyone looking to progress into a PhD in management studies. Conversely, it is *not* an alternative to an MBA, it has a very different focus. ISO (and the CJBS generally) tends to focus on a social lens to business and management research (think less numbers and more how people think and behave). I personally came in with quite a bit of work experience, picking this program specifically because I plan to do a PhD in Management at CJBS.

If you plan to do a PhD (for whichever reason), ISO is fantastic prep as it tosses you into the deep-end of academic thinking, writing and presentation – by the end of it you basically gave a general overview the leading academic research, theories and journals in the field, in fact you for the CJBS PhD this is one of the pathways to get in, unless you already have a strong research background. You can choose to focus on qualitative or quantitative, which determines your elective choices, culminating in either (a) your own research dissertation, or a (b) smaller research project. Both routes are viable, although if you do plan to apply for a CJBS PhD, (a) full dissertation is a better idea.

That said, why not to do it: if you recently graduated, or if you have work experience or an MBA and are looking for an advanced, more specialized management degree focusing on latest case studies aimed at industry practitioners, you may want to look at other programs such as an MBA (I have much to say about that but that's a different topic). A lot of the skills you learn are extensible to working life: critical thinking, rigour, teamwork etc, and you do benefit from the Cambridge and CJBS brand, but there may be better options.

CJBS is an amazing business school, currently ranked #5 globally. I find particularly interesting its focus on entrepreneurship, with its own accelerator helping locally-grown startups, many of with focusing on deep tech. On top of that, I think CJBS wins hands down the most quirky looking building, internally and externally.

Finally, things I wished someone told me in the beginning to make the most of the year (actually, I was told some of these things but didn't quite "get it" until later!):

Samsurin Welch MPhil in ISO Judge Business School Queens' College (Matriculated in 2017)



- 1. Don't try to learn everything! You will get an overview of most of the main theories and research topics in the field of innovation, strategy and organizational behavior, so expect a firehose of information, but you are NOT expected to be an expert in everything! Try as quickly as possible to figure out a couple of focus areas for your research interests and zoom into those, it really saves a lot of time and effort. Follwing on that ....
- 2. ... Try to kill as many birds with one stone as you can. If you focus your interests and topic, you will be able to reuse a lot of your coursework research for your dissertation (and other coursework). The bulk of my literature review for my dissertation drew on essays from earlier coursework, saved me tons of time and pain
- 3. Your Michealmas Term will be very hectic, aside from coursework, you need to think about finding a supervisor (for MPhil and also for PhD if you are applying), figuring out your MPhil Dissertation/Project proposal, AND on top of all that, applying for PhD programs. Don't underestimate it!
- Lent Term does not let up, aside from coursework, keep thinking about your dissertation (see 2 above), you may not have time to work on it but play your cards right
- 5. Finally, before you apply, have a look at top tier journals such as Academic of Management Review/Journal, Strategic Management Journal, Org Science, MIS Quarterly, etc (not so much Harvard Business Review), to get a feel of what you're getting into. If you like that stuff, great! If you don't, maybe think of doing something else.

Pro-tip #1: Look out for interesting talks and seminars. There's always something happening, some are closed session, but many are open to everyone, although not always publicized well, look out for posters at the school

Pro-tip #2: Space has been a premium at the quirky CJBS building, but a new expansion, which is being constructed now should open soon with (hopefully) much more space

Samsurin Welch

## **USEFUL LINKS**

# Cambridge Online Prospectus 2018

A complete guide to all you need to know about Cambridge as an undergraduate applicant for entry in 2018, including:

- · Application process
- Entrance requirements
- Teaching, learning, and living
- Support and financialissues
- Future careers after graduation
- Subject & Course information
- Colleges
- Link: <a href="http://www.undergraduate.study.cam.ac.uk/files/publications/cambridge\_undergraduate\_prospectus\_2018\_entry\_full\_version.pdf">http://www.undergraduate.study.cam.ac.uk/files/publications/cambridge\_undergraduate\_prospectus\_2018\_entry\_full\_version.pdf</a>

## Undergraduate Studies

An interactive website for further information that is not covered by the Online Prospectus, including application statistics, country- specific entrance requirements, updated deadlines and admission tests

**Link:** <a href="http://www.study.cam.ac.uk/">http://www.study.cam.ac.uk/</a> undergraduate/

### **Graduate Studies**

Step-by-step guide to help you with your Cambridge application, including:

• Courses that Cambridge offers

- How to apply for postgraduate study
- How an application is processed
- Immigration information

**Link:** <a href="https://www.admin.cam.ac.uk/students/gradadmissions/prospec/">https://www.admin.cam.ac.uk/students/gradadmissions/prospec/</a>

## Parents' Guide

All parents will have a myriad of concerns as their child ventures overseas to study. As such, this guide is written to assuage their worries. This contains information about fees and accommodation, an explanation of the system of teaching in Cambridge, as well as the sources of funding available.

#### Link:

http://www.study.cam.ac.uk/ undergraduate/publications/doc s/ parentsguide.pdf

# Information for international students

As an international student, deadlines will differ and additional requirements may be needed to be fulfilled before you can begin your studies in the UK and in Cambridge. These are essential to note and this link will ensure that you are well-informed with regard to your application and well-prepared as you come to the UK to study.

Links: <a href="http://www.study.cam.ac.uk/undergraduate/publications/docs/international.pdf">http://www.study.cam.ac.uk/undergraduate/publications/docs/international.pdf</a>
and

http://www.internationalstudents.cam.

# **CONTACT INFORMATION**

### Websites

Cambridge University Malaysia Society (CUMaS): <a href="http://www.cumas.org">http://www.cumas.org</a>

### Follow CUMaS at:



https://www.facebook.com/cumasociety/?fref=ts

### **Contact Personnel**

### Ng Tze Donn

President president@cumas.org

### **Matthew Tang**

Secretary <u>acumas.org</u>

### Lim Yi Heng

Outreach/External Officer external.cumas@gmail.com

### Khong Yin Jou and Samsurin Welch

Graduate Representatives cumasgrads@gmail.com





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