Supporting your progression to University



This document will provide you with some tips for getting started and for making the most out of the time you have now before the start of the year. This first page has some general tips and advice, and then you will find more subject-specific content later on.

Some general tips

- Use this time to read, research, listen to and watch lots of different things relating to your subject you have an opportunity to explore the areas of your subject that interest you most.
- Take a look online at what the first year of your proposed course covers and put together a basic database as background.
- All of this should give you a bit of a head start on your studies and probably also give you some ideas of which modules or subject areas you may want to specialise in at a later date.
- You will get out of practice at writing quickly, so particularly if you are undertaking an essay-based subject make sure you keep writing..
- We recommend that you focus on taking effective notes whenever you are reading or accessing content online – play around with different styles of notetaking and find out what works best for you.
- There are some templates you may want to use available with this pack.

There are two very good MOOCs (Massive Open Online Courses) that are well worth you looking at to help you prepare for university. Click on the links below to access them.

- Critical thinking at University
- Preparing to learn online at University

You can find suggested content for the following subjects overleaf:

- Engineering
- English
- Geography
- History
- Maths

- Medical Sciences (including medicine, dentistry, veterinary and biomedical)
- Law

- Politics, Philosophy & Economics
- Sciences

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For Engineering

Things to watch

Ted.com has lots of brilliant talks that you can watch on a whole range of different topics relating to engineering. A couple to get you started are:

- Epic engineering: building the Brooklyn **Bridge** by Alex Gendler
- When bad engineering makes a natural disaster worse by Peter Haase
- Engineering a better life for all by Cat Laine You will find many more!

Keep a look out for documentaries that you can watch on TV or online. For example, there is a 30minute Panorama documentary on BBC iPlayer called 'Boeing's Killer Planes' which may be of interest to potential aeronautical engineers!

Websites to explore



- Royal Academy of **Engineers**
- I want to study engineering
- Webopedia

You may also want to look at the websites for the professional bodies of each brand of engineering, as they will all have some free content for you to access:

- The Institute of Civil Engineers
- The Institute of Mechanical Engineers
- The Institute of Structural Engineers
- The Institute of Electrical and Electronics **Engineers**

Maths

Don't forget to keep your maths skills sharpened – focus on practical maths rather than pure maths.

Statistics is often overlooked when people prepare for engineering degrees, so familiarise yourself with this subject if you have not studied it formally at school.

Consider researching some online courses to help keep your skills sharp.

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you.

- An Introduction to Energy Systems Integration
- Building a Future with Robots
- MedTech: AI and Medical Robots

















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For English

Things to watch

Globe Player has free content of plays performed at the Globe Theatre in London.



Marquee TV gives you a free 30-day trial to watch a lot of theatre productions (but remember to cancel, if you don't want to subscribe).

The British Library (www.bl.uk) has a free 'Discovering 20th Literature' site with articles and introductions to all sorts of 20th century literature and plays.

The recent TV adaptation of Malorie Blackman's **Noughts + Crosses** is well worth a watch and it is available on BBC iPlayer.

For language scholars, consider browsing the *Walter Presents* collection on <u>Channel 4</u> which has lots of foreign language dramas.

Listen to

BBC iPlayer will lead you to BBC
Sounds and here you can find a huge
archive of programmes on various authors and their
work.

In Our Time has discussion programmes on all aspects of literature e.g. <u>Mary Shelley's Frankenstein</u> or the poet W.H. Auden.

Narrated books are also available such as <u>Dostoevsky's *The Idiot.*</u>

Or try the dark and dystopian <u>Darkness at Noon</u> by Arthur Koestler.

For language scholars, Duolingo has a podcast that may be of interest.

Read!

The key advice is to read, read and read!



Tutors regularly complain that students don't seem to have had much exposure to poetry, so that's something you can put right.

Try John Donne and Andrew Marvell from the earlier period, the Romantic and Lake poets from later on; Ted Hughes, Sylvia Plath, Wilfred Owen, Auden, T.S. Elliot, D.H.Lawrence, Dylan Thomas from the 20th century, and contemporaries such as Andrew Motion, Carol Ann Duffy, Simon Armitage and Benjamin Zepheniah.

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you.

- English for Academic Study Coventry University
- Jane Austen: Myth, Reality and Global Celebrity – University of Southampton
- Introduction to Applied Linguistics and TESOL (Teaching English to Speakers of Other Languages) – University of Leicester

Supporting your progression to University



For History

Things to watch

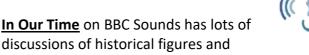
TED talks are a great tool to enable you to dip into different periods of history and different cultures (e.g. Incas, Ottomans, Moguls).

Here are some talks to get you started:

- <u>Fascinating History</u> will allow you to 'be transported through the centuries with these talks for your inner (and outer) history buff.'
- Unheard and Forgotten Stories:
 Five 'fascinating, little-known stories about some of the biggest happenings in history.'
- This playlist titled <u>Little-known big</u>
 <u>history</u> includes 15 talks from Rosa Parks
 to gay rights, space travel to whistle
 blowers.

Listen to

events e.g:



- Lawrence of Arabia
- Napoleon's retreat from Moscow
- Otto von Bismarck

If you want to combine History with literature, Hilary Mantel's last part of her history of Thomas Cromwell, The Mirror and the Light, is narrated in 10 episodes.

The <u>Stuff you missed in History class</u> podcast is also a good place to look for lots of varied historical content, from the Anglo-Zanzibar War to the invention of SPAM, from Ned Kelly's last stand to the discovery of helium.

<u>Dan Snow's History Hit</u> podcasts also have a wide range of historical subjects and are well worth listening to.

Read!

We would recommend that you look at the university website as the History Faculty will often publish a suggested reading list for you relating to the modules you will be studying – these modules vary greatly from university to university. Please don't think you have to read everything, just dip in and out of the chapters that interest you!

If this is too overwhelming, then a good place to start is the <u>Reviews in History</u> website that covers books and digital resources across all fields of history.

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you.

- Empire: the Controversies of British Imperialism (University of Exeter)
- <u>The Tudors</u> (University of Roehampton)
- A History of Public Health in Post-War Britain (London School of Hygiene and Tropical Medicine)



Supporting your progression to University



For Geography

Things to watch

As well as TED talks, we encourage you to watch lectures specifically designed for A level students.



Lectures currently on offer:

Volcanoes
Antibiotic Resistance
Nano-Materials
Childhood Malnutrition
Pollution and Inequality
Sustainable Development Goals
Environmental Controversies
Climate Change

Read and Research

Mongabay has free material on environmental geography.

Free-books.net allows you to borrow up to five free books per month.

Two suggested books to get you started are:

<u>This Dynamic Earth: the story of plate tectonics</u>
and

Dimensions of Biodiversity.

The Royal Geographical Society charges for junior membership but has a big library of resources.

Listen to

This episode of Business Daily looks at Geography and Poverty and explores why most of the world's poverty is now concentrated in middle-income countries like China – and why that will change soon.

One of the earliest systematic works of geography is explored in this Radio 4 broadcast: <u>Strabo's</u> <u>Geographica.</u>

Isn't That Spatial is a podcast dedicated to casual geography and the spatial component of whatever. Topics cover urban planning, the geography of dive bars, urban oddities, and other good stuff.

You may also want to explore <u>A Very Spatial Podcast:</u> <u>Geography and Geospatial Technologies.</u>

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you.

- Come rain or shine: understanding the weather
 University of Reading and the Royal
 Meteorological Society
- The challenge of global water security Cardiff University
- <u>Climate Change: Solutions</u> University of Exeter



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For Maths

Lectures to watch

Gresham College has provided free lectures within the City of London for over 400 years. The lectures below are specifically designed for A level students:

What Have Mathematicians Done For Us?

Mathematics Goes to the Movies

Maths Goes Into Space

How Maths Can Save Your Life

The Mathematics of Climate Change

500 Years of Mathematics: Are We Living in a New Golden Age?

How Will We Learn Maths in the Future?

Maths and Sport series

Great Mathematicians series

Listen to or watch

radio shows

Some recommended radio shows include:

- Maths and Magic with magician Jolyon Jenkins
- A brief history of mathematics (10 episodes)
- The mathematics of elections (4 episodes each 12-16 minutes)

<u>PlayerFM</u> and similar websites allow you to search for additional popular maths podcasts – you may want to look at *Breaking Math* or *Numberphile*.

Keep Learning

NRich is a great website, giving you new maths problems every month to take you from whichever level you are currently on to the next and all the way up to... Cambridge STEP level 3 – really scary stuff!

Look at examples of *Cambridge STEP* papers online.

STEP 1 shouldn't be too daunting; STEP 2 gets challenging; STEP 3... best of luck! Cambridge STEP

The <u>Institute of Mathematics UK</u> has some free content and has an e-newsletter.

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you.

- Advanced Precalculus: Geometry, <u>Trigonometry and Exponentials</u> – University of Padova
- Maths Puzzles: Cryptarithms, Symbologies and Secret Codes – Weizmann Insititute of Science
- Precalculus: The Mathematics of Numbers,
 Functions and Equations University of Padova

Supporting your progression to University



For Science

Lectures to watch

Gresham College has provided free lectures within the City of London for over 400 years. The lectures below are specifically designed for A level students: Energy and Matter at the Origin of Life

150 Years of the Periodic Table

Exploring Earth From Space

Exploring the Hidden Face of our Deep Dark
Ocean Planet

Bug World: Sex, Violence, and a Cast of Billions

Is Human Evolution Over?

Cosmic Concepts

Why Society Needs Astronomy and Cosmology

The Nature of Reality

+ many more!

Reading and research

Journals such as <u>Nature</u>, <u>New</u>
<u>Scientist</u>, <u>Scientific American</u>,
<u>Chemistry World</u> and <u>Education in Chemistry</u>
all have free content.

<u>Free E-Books</u> has a free textbook on Organic Chemistry <u>available here</u>.

Useful websites to visit are:

Naked Scientists

ARKive

Zooniverse – Galaxy Zoo

Also, check out your university's subject reading list. (**TIP**: you don't have to read them all!)

Listen to or watch

This BBC Radio programme has a profile of the physicist Paul Dirac.

(You might like to also research Richard Feynman and Carl Sagan.)

Science in Action

This is a BBC weekly programme. The one below explores <u>The science of social distancing</u>.

BBC World Service: The Future of Space may also be of interest.

(4 YouTube videos)

The podcast <u>Stuff to blow your mind</u> covers a brilliant array of scientific topics including the science of déjà vu, Occam's Razor, facial recognition technology and dangerous foods.

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you.

Some ideas to get you started are:

- <u>Causes of Human Disease: Nutrition and</u>
 <u>Environment University of Leeds</u>
- <u>Understanding Biological Energy</u> Royal Holloway, University of London
- <u>Biochemistry: the molecules of life</u> –
 University of East Anglia and the
 Biochemical Society
- Atmospheric Chemistry: Planets and life beyond earth – University of Leeds

For Philosophy, Politics, Economics

Supporting your progression to University



For politics, economics and philosophy

Things to watch



From TED:

- Plato's best (and worst) ideas
- <u>Talks to restore your faith in politics</u> (a playlist of 9 talks)
- <u>Understanding world economics</u> (a playlist of 9 talks)
- Plus many more for you to browse try searching for specific items you're interested in.

For up-to-date politics, consider regularly tuning in to political talk shows such as *Question Time* (BBC).

There are always plenty of documentaries and series that relate to PPE on television and ondemand services – e.g. *Dirty Money* or *American Factory* on Netflix.

Reading and research

For political philosophy, John
Stuart Mill's *On Liberty* can be accessed online and is the basis for a lot of 20th century political thought and practice. It is straightforward and readable, unlike many philosophical texts.

Economists should look up the ideas of **Paul Krugman, Joseph Stiglitz** and **Thomas Picketty.**

Websites are key for up-to-date information. Look especially into researching the UK's political parties – there's no shortage of ideas and opinions there!

For general Politics use www.politicsinspires.com.

Listen to



The following BBC radio programmes may be of interest:

- A discussion of Socrates
- <u>Philosophy and Understanding</u> (4 episodes)

You could also consider subscribing to these podcasts:

- Westminster hour: a weekly podcast
- The Economist podcast
- Freakonomics Radio
- The Panpsycast Philosophy Podcast
- Philosophize This!

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you.

- Introduction to Business Management
 King's College London
- Understanding money: the history of finance, speculation and the stock market – University of Southampton
- Entrepreneurship in Nonprofits University of Basel

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For Medicine, Dentistry, Veterinary Science and Biomedical Science

Lectures to watch

Gresham College has provided free lectures within the City of London for over 400 years. The lectures below are specifically designed for A level students:

<u>12 lectures about the history of Epidemics</u> – playlist includes Chief Medical Officer Chris Whitty and Richard Evans

Does a Good Bedside Manner Matter?

The Right Stuff: How do we Make Good Doctors?

<u>Cancer</u> series with Chris Whitty (Chief Medical Officer for England)

The Eradication of Infectious Diseases

Epidemics, Pandemics and How to Control Them

The Eye

Media Reporting of Medical Advances: Helpful or Misleading

+ many more!

Reading and research

The monthly **PiXL6 Medics Bulletin** is sent directly to your sixth form/college – make sure you are on the mailing list to receive this informative and up-to-date bulletin.

There is a plethora of medicine/ dentistry/ vet science/ biomedical science books available for free (five per month) on free-ebooks.net.

Websites to browse

British Dentist Association: https://bda.org/
British Medical Association: www.bma.org.uk/
British Veterinary Association: www.bva.co.uk/
Institute of Biomedical Science: www.ibms.org/

Listen to and things to watch

((**S**)))

TED Talks that you may want to look at are:

- The Quest for the Coronavirus Vaccine
- What veterinarians know that physicians don't
- The future of medicine (a playlist of 12 talks)

Don't forget that there are lots of medical and veterinary shows on television, for example *Embarrassing Bodies, 24 Hours in A&E* and *Super Vet* – all on Channel 4.

Spend some time exploring different **podcasts** and find some that particularly suit you:

- Veterinary Science podcasts
- Dentistry podcasts
- Medicine podcasts

BBC radio programme <u>Inside Health</u> is also a great place to look, with over 228 episodes available.

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you. Some ideas to get you started are:

- COVID-19: Tackling the novel coronavirus
 London School of Hygiene and Tropical
 Medicine
- <u>Exploring Cancer Medicines</u> University of Leeds
- Discover Dentistry University of Sheffield
- Antimicrobial Stewardship in Veterinary
 Practice British Society for Antimicrobial Chemotherapy

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For Law

Lectures to watch

Gresham College has provided free lectures within the City of London for over 400 years. The lectures below are specifically designed for A level students:

- An Insider's Guide to Working as a Barrister
- <u>Sex Death and Witchcraft: What Goes on in</u> The Family Court Room?
- Law and Lawyers: Not All Bad?
- Advocacy
- Cases I have Known
- 100 Years of Women in Law
- Sexual Harassment at the Bar
- <u>Diversity in the Legal Profession</u>
- Women Lawyers: Equals at the Bar?
- Wellbeing at the Bar: Is a Legal Aid Lawyer's Work All Stress and Distress?
- Three lectures about Justice Online
- The End of Slobodan Milosevic

Reading and research

Use websites such as <u>The Law</u>
<u>Commission</u> (for Law Commission
Reports) and <u>The Guardian</u>.



<u>Free E-books</u> allows you to borrow five books per month for free – click on the link below for books relating to Law.

You will also find free material on the sites of law campaign groups such as <u>Amnesty International</u> and <u>Liberty</u>.

Consider also visiting more informal blogs such as The Secret Barrister and View from LL2.

Listen to

BBC Sounds: <u>Law in Action</u> (132

episodes)

BBC Sounds: Unreliable Evidence (61 episodes)

BBC Sounds: A Law unto Themselves (4 episodes)

<u>PlayerFM</u> sorts the best and most popular law podcasts covering law in the UK and abroad.

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you. Some ideas to get you started are:

- <u>Logical and Critical Thinking</u> University of Aukland
- The Modern Judiciary: who they are, what they do and why it matters – King's College London and the Judiciary of England and Wales
- <u>Forensic Psychology: Witness</u>
 <u>Investigation</u> The Open University

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For Business, IT and Computing

Lectures to watch

Gresham College has provided free lectures within the City of London for over 400 years. The lectures below are specifically designed for A level students:

- Business Skills series
- Purposeful Business
- Does Finance Benefit Society?
- Executive Pay: What's Right, What's Wrong, and What Can Be Fixed
- Should We Trust Computers?
- It From Bit: The Science of Information
- What Really Happened in Y2K?
- Making Software Correct by Construction
- How Can Software Be So Hard+ many more!

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you. Some ideas to get you started are:

- <u>Understanding modern business and</u>
 <u>organisations</u> University of Strathclyde,
 Glasgow
- Uncovering your Entrepreneurial Potential
 Coventry University
- How computers work: demystifying computation – Raspberry Pi and Teach Computing
- Supply chain innovation: how technology can create a sustainable future – University of Twente

Reading and research

Free E-books allows you to borrow five books per month for free. Check out the Business and IT section.

Online journals are a great way to keep up-to-date with latest developments in Business and IT:

- The Business Journal
- Computer Journal

Listen to

Radio programmes to explore:



- Business Daily over 3,000 episodes!
- <u>Business Matters</u> nearly 2,000 episodes!
- Computing Britain 12 episodes

TED playlists to start with:

- Interview with a business mogul (10 Talks)
- Code: The next universal language (7 Talks)

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For Psychology

Lectures, talks and things to watch

Gresham College has provided free lectures within the City of London for over 400 years. These lectures are specifically designed for psychology students.

TED talks are a great way to hear from leading experts in the vast field of psychology: <u>click here</u> to start exploring.

Keep a look out in television guides, as there are a number of great documentaries and series out there about the field of psychology. Some to get you started are:

- <u>Louis Theroux's Mothers on the Edge</u> BBC iPlayer
- <u>Three Identical Strangers</u> Channel 4

Listen to

<u>PlayerFM</u> brings you the best and most popular psychology podcasts; browse through the many titles available and choose something that piques your interest.

Some radio programmes to explore include:

- The Psychology of Consumerism
- <u>Psychologically Speaking</u> (10 episodes)
- All in the mind

The podcast <u>Stuff to blow your mind</u> is a broad and varied science podcast that regularly features psychology episodes, including <u>Déjà vu, anxiety</u> and dreams, the psychology of architecture, the <u>science of gratitude</u> and <u>school dreams</u>.

Reading and research

<u>Free E-books</u> allows you to borrow five books per month for free – check out the Psychology section.



This article may prove a useful starting point: What is psychology? An introduction to the many different branches

TED has a variety of talks and also publishes short articles exploring the world of psychology: <u>click here</u> to begin exploring.

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you. Some ideas to get you started are:

- <u>Psychology and Mental Health: Beyond</u>
 <u>nature and nurture</u> University of
 <u>Liverpool</u>
- Introduction to Psychology: The History and Science of Psychology – Monash University
- <u>Forensic Psychology: Witness</u>
 <u>Investigation</u> The Open University

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For Sport

Things to watch

Gresham College has provided free lectures within the City of London for over 400 years. These lectures are specifically designed for sports students.

TED talks are a great way to hear from leading sports experts and sportspeople: <u>browse here</u>.

<u>This extreme sports</u> playlist includes amazing, inspiring feats of daring and determination that will take you everywhere from the high skies to the deep sea.

Keep your eyes peeled for documentaries on television and on-demand players (where you have a subscription) – for example *Icarus* and *The Game Changers*, both on Netflix, or the Shane William's documentary on BBC iPlayer: Rugby, concussion and me.

Listen

<u>PlayerFM</u> brings you the best and most popular sports podcasts, making it easy for your to find something of interest. The front page will direct you to your sport of choice or try searching for sport science.

Some podcasts and radio programmes:

<u>Sports Today</u>: a daily 15-minute programme
bringing you updates from the world of sport.

<u>The LGBT Sports Broadcast</u>: a weekly programme looking at LGBTQ+ issues in sport.

Tailenders: an alternative look at cricket.

<u>The Physio Matters Podcast</u>: hour-long episodes which delve into all sorts of physio-related issues including sports therapy, rehabilitation and medicine.

Reading and research

<u>Free E-books</u> allows you to borrow five books per month for free – check out the sports section.

Look at the website of the governing bodies of the sports that you are interested in. Explore the rules and regulations behind the sport:

Football: http://www.thefa.com/
Rugby: https://www.world.rugby/
Tennis: https://www.lta.org.uk/
Cricket: https://www.uka.org.uk/
Athletics: https://www.uka.org.uk/

Or research blogs such as The Sports Physio.

Online courses

Completing short courses is a great way to stay engaged with your subject at this time. Browse through websites such as MOOC.org and Futurelearn to find something that interests you. Some ideas to get you started are:

- <u>Football: more than just a game</u> The University of Edinburgh
- Mindfulness for well-being and performance – Monash University
- <u>Exercise Prescription for the prevention</u>
 <u>and treatment of disease</u> Trinity College
 Dublin

