Section 2 - Connect with your University



Reading List – Physics

If you are looking to do some reading/preparation ahead of starting University here are some suggested tasks which you might like to try:

From Science Daily

- Articles on Dark Matter
- Articles on Big Bang
- Articles on Cosmology
- Articles on <u>Astrophysics</u>
- Articles on Matter and Energy

From the Institute of Physics

- Journal on <u>Nuclear Fusion</u>
- Journal of <u>Applied Physics</u>
- Article on "Hubble's best shots: A cheeky gravitational grin"

Engineering

From Science Daily

- Articles on <u>Aerospace</u>
- Articles on <u>Engineering and Construction</u>
- Articles on **Energy and Resources**

From the Institute of Physics

- Journal on Fluid Dynamic Research
- Journal on Progress in Energy

- Journal on <u>Functional Composites and Structures</u>
- Journal on **Engineering Research**

Computer Science and Mathematics

From Science Daily

- Articles on Artificial Intelligence
- Articles on Computer Science
- Articles of <u>Quantum Computing</u>
- Articles on <u>Hacking</u>
- Articles on Mathematics

From the Institute of Physics

- Journal on <u>Quantum Science and Technology</u>
- Journal on Inverse Problems
- Journal on <u>Mathematics and Theoretical Physics</u>

Interesting and Strange Articles

From Science Daily

Long spaceflights affect astronaut brain volume

Engineers 3D print soft, rubbery brain implants

Why the solar wind is hotter than expected

<u>Puzzle of Compton scattering solved: New approach for testing theories in quantum mechanics</u>

New formation theory explains the mysterious interstellar object 'Oumuamua

New 'refrigerator' super-cools molecules to nanokelvin temperatures

Expert mathematicians stumped by simple subtractions

Mysterious release of radioactive material uncovered

Videos on YouTube

Physics

The Secrets of Light and Energy – BBC

Everything and Nothing – Reel Truth Science - Part 1

<u>Everything and Nothing – Reel Truth Science – Part 2</u>

Atom: The Illusion of Reality – Reel Truth Science

The True Nature of Time – Discovery Channel

Engineering

High-tech in the Air – Free Documentary

<u>The Making of a Wind Turbine – Free Documentary</u>

Mega Cranes – Free Documentary

How do Engineers Build Safe Bridges? – Spark

How to Make Sure Ships Don't Slink – Spark

Computing and Mathematics

Quantum Computing Pyramid – National Geography

Calculating Ada – The Countess of Computing - BBC

Magic Numbers - Mysterious World of Maths - BBC

<u>The Math Mystery Mathematics in Nature and Universe – Science Documentary – Nova</u>

The Story of Binary Number – Documentary Warehouse

Top 5 Books for Physics

- 1. Six easy pieces Book by Richard Feynman
- 2. Seven Brief Lessons on Physics Book by Carlo Rovelli
- 3. Physics of the Impossible: A Scientific Exploration into the World of Phasers, Force Fields, Teleportation, and Time Travel Book by Michio Kaku
- 4. A Short History of Nearly Everything Book by Bill Bryson
- 5. Why Does E=mc²? Book by Brian Cox and Jeff Forshaw