

Additional Readings & Helpful References

Here is the formula sheet which summarises all the equations on the course.



maths4ml-mvc-Formulae.pdf

PDF File

Below you find a selection of additional material for you that may be helpful to keep alongside the course.

Please note that this material is optional and not intended as integral part of the course.

Books

In the UK, we tend to write our courses from scratch based on what we think is important to include and introduce things in the order we think presents the material in the most elegant and illuminating way - we don't just go through a particular set textbook. So there isn't an exact 'model text' that we are following in this course. But, our way of thinking about things is informed by the textbooks we use, the teachers who taught us, how we use things in research and by interactions with our own students - so of course all sorts of textbooks are useful.

- In Imperial Engineering, our primary maths textbook is probably the ever-popular and accessible *Mathematical Methods in the Physical Sciences* by Mary L Boas, John Wiley and Sons, 3rd Ed, 2006.

Web Resources

There are, of course, a whole bunch of useful web resources on multivariate calculus - many of which were helpful to us in preparing this course! These might also be handy to you - typically they go a bit slower or have a different emphasis or way of explaining things, but it can be handy to see how someone else explains something.

1. Khan Academy is a great resource right up to 1st or 2nd year undergraduate material. For this course, there's a handy group of videos at <https://www.khanacademy.org/math/differential-calculus>
2. Grant Sanderson has a great series of videos developing mathematical intuition on YouTube, which you can reach through his site <http://www.3blue1brown.com>