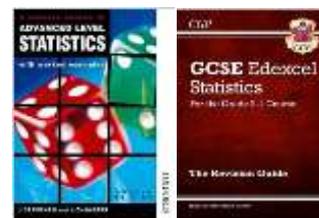


# Welcome to A Level Statistics

- **What you can read:**

'A Concise Course in Advanced Level Statistics: With Worked Examples by Crawshaw, J., Chambers, J. (2001)' - link to preview: [A Concise Course in A Level Statistics](#)



'New GCSE Statistics Edexcel Revision Guide – for the Grade 9-1 Course'

'Pearson (Edexcel) A Level Statistics Specification' – link: [A level Statistics Specification](#)

- **What you can watch:**

Below are some of the skills/topics that you will be learning when you join us at Burnley College. Here are some videos for you to watch to get you started on those topics and/or skills:

- Calculating mean, mode and median - [measures of location](#)
- Calculating mean and median (grouped data) - [measures of location continued](#)
- Calculating variance and standard deviation- [measures of spread](#)
- Calculating quartiles and percentiles - [measures of spread continued](#)

- **What are some of the topics and skills that you will cover:**

Below are some of the topics and skills that we will cover in September and October.

Topics	Breakdown
Statistical Enquiry Cycle (SEC)	The Statistical Enquiry Cycle helps you to appreciate the real-world context of statistics. You will be required to: <ul style="list-style-type: none"> <li>• analyse statistical information and form your own opinions.</li> <li>• discuss how you would collect data in order to eliminate bias;</li> <li>• how you would use the data to draw conclusions;</li> <li>• how you would present the data using statistical diagrams</li> <li>• Reflect on what you would do differently to improve the results.</li> </ul>
Numerical measures	Calculate, interpret and compare measures of central tendency and spread such as: <ul style="list-style-type: none"> <li>• mean,</li> <li>• median,</li> <li>• mode,</li> <li>• range,</li> <li>• interquartile range,</li> <li>• percentiles,</li> <li>• variance,</li> <li>• standard deviation.</li> </ul>

Graphs and diagrams	<p>Misrepresentation of data</p> <ul style="list-style-type: none"> <li>• Appreciate that data can be misrepresented when used out of context or through misleading visualisation.</li> </ul> <p>Interpret and compare data in statistical diagrams such as:</p> <ul style="list-style-type: none"> <li>• bar charts,</li> <li>• stem and leaf diagrams,</li> <li>• box and whisker plots,</li> <li>• cumulative frequency diagrams,</li> <li>• histograms</li> </ul>
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- **Tasks that you can do to prepare you:**

<b>Task</b>	<b>Link to the course/specification</b>
<p><b>Task 1:</b> <u>Identify misrepresentation of data</u> - Find 3 examples of 'misleading statistics' in the media (online articles, newspapers, social media etc). Identify what is wrong, describe how they could be misleading to the reader and provide a recommendation for how they could be improved.</p> <p>Bonus points if you find one on COVID-19!</p>	<p>1.8 Misrepresentation of data</p> <p>The Statistical Enquiry Cycle underpins the entire A level course, so it is important to develop your competency in analysing data.</p>
<p><b>Task 2:</b> <u>Learn terminology</u> - Research the differences between the following pairs of terms and create revision cards to keep for the duration of the course.</p> <ol style="list-style-type: none"> <li>1. Qualitative and quantitative data</li> <li>2. Discrete and continuous data</li> <li>3. Primary and secondary data</li> <li>4. Population and sample</li> <li>5. Parameter and statistic</li> </ol>	<p>3 Population and samples</p> <p>Learning statistical terminology and notation will help to identify the relevant topic in the question. We will develop on this task in your first lesson.</p>
<p><b>Task 3:</b> <u>Attempt questions</u> - Watch the videos on 'calculating mean and median (grouped data)' and 'calculating variance and standard deviation'. Pause the video when prompted to do so and try the examples before re-playing the video and checking your answers.</p>	<p>1.5 Calculate measures</p> <p>This topic builds directly from GCSE maths. It expands your knowledge of calculating numerical measures to include grouped frequency tables.</p>

- **Contact information**

If you have questions regarding this or any other A Level course at Burnley College, please contact [alevels@burnley.ac.uk](mailto:alevels@burnley.ac.uk) or call 01282733373

We look forward to seeing you in September.