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Information Analysis

Teaching mathematics to Business and ICT students in a module based around excel

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Background

- Service teaching module
- Business and ICT first year students
- 80-100 students each year

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Assessment

Reflection and feedback

- "*I found the feedback forms **very useful** as I could reflect on [them]".*
- *"**I applied** the feedback into the next assignments, **reducing the amount of problems** in my work*"
- "*[**helped] me to improve** on the next [assignment]".*
- "*I intend to use feedback more productively, which will **help me to achieve the best of my ability***"
- "*I intend to use feedback effectively in the future also because it is evident that it has **benefited my work progression** in this module*".

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Content

Real contexts and relevant subjects

- Basic numeracy
- Probability (including distributions)
- Statistics
- Financial mathematics
- Mathematical modelling

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Excel skills

Employability

- *"Being able to use excel can be an **advantage** for me compared to someone who has less knowledge around it"*
- *"Could put me at an **advantage against other applicants**"*
- *"I feel that I have been able to take a lot from [the module] which could **really benefit me in the future when applying for jobs** or when actually working in my **placement** with data"*

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Excel skills

- Calculations
- Built in functions
- Solver

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Excel skills

You invest £500 in a savings account with a compound interest rate of 3% pa. Given that the interest rate is fixed, how long will it take for the amount in the bank account to double?

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Presentation

Contents page
Hyperlinks
Clear presentation
Consistent presentation
Good use of excel
Efficient calculations
Good use of graphs
Explanations
Appropriate number of sheets
1 excel file for portfolio
Good use of colour

- "*I liked how presentation was a large part of the module*"
- "*Not many courses/ modules emphasise this*"

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Formulae and excel

You start a job earning £20,000 per year with a guaranteed 2% pay rise each year. How much will you be earning in 6 years time?

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Different audiences

- Savings account research task
- Explanation of models
- Commodities research task

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Time management

- "…*taught me* ***valuable skills*** *that no doubt will have an impact in later life such as time management*"
- "*The main skills that learnt from working on the Information Analysis assignments this year [were]* ***time keeping and working towards a deadline***".

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Teaching methods

- Lectures
  - Socrative "*a good way of learning and improved my understanding*"
- Computer tutorials
- Support outside teaching sessions
- Video tutorials

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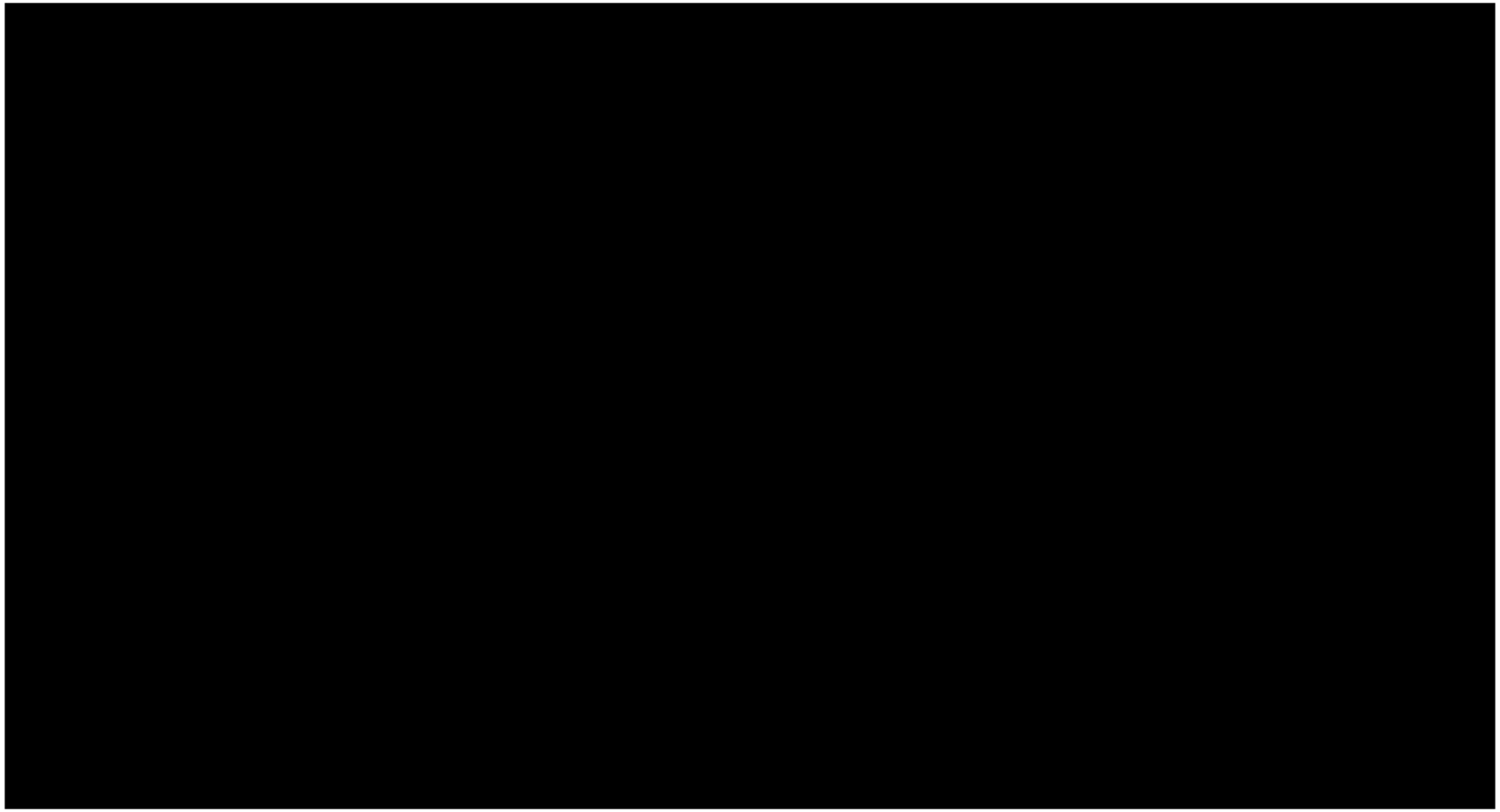
Video tutorials



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Video tutorials

- "*a very useful device in **aiding learning***"
- "*really helped*"
- "*a great aid in my studies throughout the year*"
- "*incredibly beneficial in helping me to complete my assignments.*"
- "*the videos were a **great help***"
- *"If there was anything I failed to understand in the lectures I would work with the videos on blackboard at **my own pace** and understand the content and apply it to the assignment*"
- "*allowed me to **revisit my work whenever***"
- "*watching the videos **refreshed my memory** of what was taught earlier in the week*"
- "***helped me to understand** some of the topics that I was struggling with*".

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Mixed ability

- Assessment
- Start from basics
- Plenty of support

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Maths anxiety

Had a negative attitude towards the module because there was maths involved

- *"really worried and nervous"*
- thought that the module would be a "*massive drawback*"

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Maths anxiety

- Receiving their **first assignment mark** was "*incredibly overwhelming and confidence/ motivation boosting*"
- "***Feedback*** *was one of the things that help me personally grow in confidence in [the] module*".
- "My opinion of the module *changed as I soon learned that the* ***resources*** *I had available were of great benefit allowing me to be able to go on and get the [work] completed at the correct pace".*

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At the end of the module

Ideally students have the following:

- Mathematical skills
- Other skills
- Good working habits
- Desire to carry on with financial maths
- Portfolio of excel work to show employers