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| **Introduction to the Normal Distribution** |
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| **Setting:** | Seminar |
| **Preparation duration:** | 15 minutes |
| **Level:** | Level 4 |
| **Activity duration:** | 45 minutes |
| **Additional guidance:** | This seminar is available in worksheet (Introduction to the Normal Distribution.docx) and/or slide presentation (Introduction to the Normal Distribution.pptx) form.Students will be asked to complete simple mix-and-match activities after each new concept. This is best done in small groups.  |
| **Outcomes:** * Introduce students to the concept of Normal random variables.
* Demonstrate the effects of adjusting $μ$ and $σ$ for the Normal distribution.
* Illustrate the link between probabilities of Normal random variables and area under the bell curve.
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| **Pre-task preparation:** * If required, familiarise yourself with the content.
* Consider appending the first activity of the worksheet and slide presentation with Normally distributed variables from your field.
* If required, print out an appropriate number of worksheets for the seminar.
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**Steps to implement the activity:** 1. Ask students to share any prior knowledge of the Normal distribution.
2. Present the material to the students, referring to your own field if necessary.
3. At the end of each section, allow the students 10 minutes during the mix-and-match activity to work in small groups. All answers are available on the slide presentation.

**Extension activities:** * Ask students to write their own list of random variable which could be suitable modelled with a Normal distribution.
* Ask students to sketch all complement probabilities in the final activity.
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