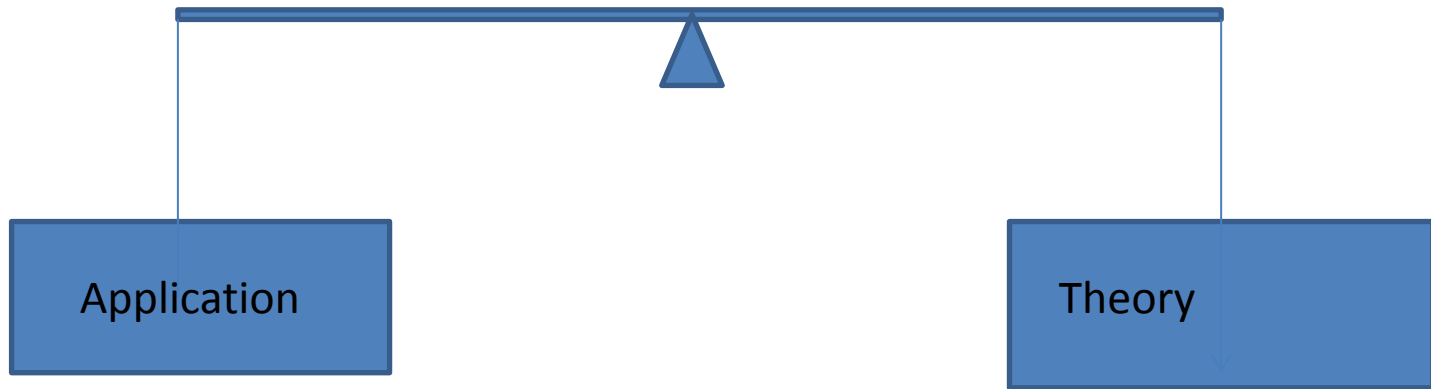


# Group 2.3

What is the desired balance between theory, application and computer software for teaching?

Group Leader: Ian McLeod  
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What should the balance between these two be?



# What should the balance between these two be?

- Should theory be taught first?
- Should applications be taught first?
- Most important factor is that students have knowledge and so companies don't need to spend resources on training.

# Theory taught first

- Applications can be understood quickly due to knowledge of theory
- But students might get bored with theory
- Some people may not understand theory

# Applications taught first

- Can motivate students to learn theory
- Application may not be understood fully with lack of theory
- Without knowledge of theory solutions may take a long time to be found, with many errors made in the process

# Where is the Balance?

- Group undecided on exact order of topics to be taught; however some factors also need to be considered:
- Someone with knowledge of theory and application might fail to find a solution as they may not be confident enough to trust their own solutions and results

# Hand calculations

- Should students be taught hand calculations?
- Nowadays software is taking over role of hand calculations
- However people need to be able to make decisions on correctness and accuracy of results

# Conclusion

- Software needs to be understood fully, so not just used as a „black box“
- Results need to be analysed using theory and knowledge of application.
- Understanding of software and equations used is of no use if the basics of the problem is not understood.