

Statistics for Engineers

ChE 4C3 and 6C3



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<http://learnche.mcmaster.ca/4C3>

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We appreciate:

- ▶ if you let us know about **any errors** in the slides
- ▶ **any suggestions to improve the notes**

All of the above can be done by writing to

`kevin.dunn@mcmaster.ca`

or anonymous messages can be sent to Kevin Dunn at

<http://learnche.mcmaster.ca/feedback-questions>

If reporting errors/updates, please quote the current revision number: 154

Please note that all material is provided “as-is” and no liability will be accepted for your usage of the material.

Final exam

- ▶ Tuesday, 22 April, 14:00, IWC-2 (please confirm)
- ▶ 3 hours
- ▶ Covers all topics taught throughout the term
- ▶ Counts 45% of the course grade

Final exam: how to do well

- ▶ This is a course that gives you a set of tools
- ▶ Think about the question's objective; choose the most appropriate tool
- ▶ Think about the results: what do they mean?
 - ▶ Do not just plug in values into equations
- ▶ Check if they are reasonable.

Final exam: some strategies

- ▶ Do the hardest and highest weighted questions first
- ▶ Short quick questions at the end
- ▶ **Don't repeat the question back to me**
- ▶ **Use bullet points**, where appropriate
- ▶ Answer length should be appropriate to number of marks

Final exam: more strategies

- ▶ Read the questions carefully: “[2] Calculate and interpret..”
- ▶ Treat the exam like a closed-book exam, referring to your notes when necessary
- ▶ Copies of previous exam questions are on the course site
 - ▶ Questions prior to 2010 are not mine
 - ▶ 2010, 2011, 2012 and 2013 final exams available on website
 - ▶ Solutions to most questions are in PID textbook, or in the assignments
- ▶ Bring a copy of DOE table to exam
- ▶ Bring a copy of statistical tables to exam

Final exam: content

All sections appear in the exam:

1. Visualizing data
2. Univariate statistics
3. Least squares modelling
4. Design and analysis of experiments (DOE)
5. Process monitoring

usually in combined form

Finally ...

- ▶ If you have any corrections to the notes (grammar, spelling, etc) - please don't hesitate to email me
- ▶ Any suggestions to improve the notes gratefully accepted
- ▶ The course website will be permanently available

<http://learnche.mcmaster.ca/4C3>

- ▶ Course notes will eventually become an online book

Process Improvement using Data

<http://learnche.mcmaster.ca/pid>

Finally ...

- ▶ I'd like to hear about your successes with these methods
- ▶ Also any issues and problems in using these tools
- ▶ Feel free to email me
- ▶ Stay in touch
 - ▶ <http://ca.linkedin.com/in/kgdunn>
- ▶ Thanks for your interest, your questions, your DoE projects and enthusiasm