

Exam check list

The following is a list of things I suggest that you check regarding your solution:

- **Quantify!** When possible, put numbers, errors, z-values, p-values, etc.
- Check that you have (tried to) answer all questions.
- Ensure that your errors are correct / “reasonable”, e.g. divided by \sqrt{N} .
- Check that you have calculated Chi² and p-value with comments, when possible.
- Make sure that you have described what you assume, use, and do.
 - Do you assume non-correlation? Equal errors? Gaussian errors?
 - Do you use error propagation formula, Central Limit Theorem?
 - What did you do? Show calculations, intermediate results, etc.
- Check that your PDF is (easily) readable to those correcting it.
- When fitting, write the fit parameters, and comment on them.
- Remember, that you can not prove a hypothesis... only reject it!
- When you don't have a solution, describe instead how you would get one.

Possible advice regarding work:

- Start out by reading the whole exam through in detail.
- Work out a quick-and-dirty solution, before longer solutions.
- Re-read the whole exam again Friday morning.

Based on our experience...

Based on our experience from the problem sets, please consider:

Put Chi2, Ndof and p-value in figures AND in the text with COMMENTS.
(Repeating myself here, but still...)

Write down functions you use/fit with, and put number of Degrees-of-Freedom.

Write down what type of fit you do: Chi2 or LLH (binned or unbinned).

Mention formulae used, and show larger calculations specifically (2nd eq. best):

$$P = \sum r^n (1 - r)^{N-n} \quad P = \sum_{i=1} P_{binomial}(r, N = 4, p_{succes} = 1/6)$$

State if p-values are significantly, i.e. choose a significance level, and compare.

Get significant digits right! Possibly show many digits and then shorten correctly.

When generating random numbers according to function, plot function on top.

Formats of exam solutions

Just to make it clear:

The solution has to be submitted in PDF format!

You are welcome to submit PDFs extracted from your Jupyter Notebooks, but
...it should be readable.

In order to do so, StackOverflow is a great source:

<https://stackoverflow.com/questions/34818723/export-notebook-to-pdf-without-code>

1) hav hidecode.tplx i samme mappe som filerne du vil konvertere. hidecode.tplx skal indeholde koden:

```
((*- extends 'article.tplx' -*))

((* block input_group *))
  ((*- if cell.metadata.get('nbconvert', {}).get('show_code', False) -*))
    (( super() ))
  ((*- endif -*))
((* endblock input_group *))
```

2) OBS: Hvis du har brugt ERDA Jupyter's File -> Export Notebook as -> PDF, har du en notebook.tex fil i mappen. Slet den, ellers vil koden ikke blive skjult i PDF'en med denne metode.

3) Åbn en terminal I ERDA Jupyter via File -> New -> Terminal

4) Skriv i terminalen:

```
jupyter nbconvert --to pdf --template hidecode Example.ipynb
```

Hvor Example er navnet på din notebook-fil

5) Åbn din PDF, og tjek at koden er gemt. Hvis ikke, slet notebook.tex i mappen og kørs igen.

Tak til Oliver for "manual"

Formats of exam solutions

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**It is YOUR responsibility,
that your solution is readable!**

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((*- endif -*))  
((* endblock input_group *))
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