Introduction to the Actuarial Science Online Hotseat

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http://AcSciHotseat.org

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1 Introduction

The Actuarial Science online hotseat is a community-driven platform for helping students in their studies of Actuarial Science. The idea is based on `math.stackexchange.com`, and the site provides students with a medium in which to discuss questions related to Actuarial Science. It is intended to be

an online version of the hotseats offered by many courses at UCT.

1.1 Accessing on the site

The Actuarial Science online hotseat can be found at the following URL:

`http://AcSciHotseat.org`

New users are required to register by providing a username and password. A student's username can be anything he/she desires. In addition, the student's full name, student number and email address are required; these will only be visible to site administrators.

It is recommended that you register with your UCT email address: that way we will know who you are if we ever expand to other universities. The site works best on Chrome and Firefox, as well as some mobile browsers.

2 Posting a question

This section includes information on how to ask a good question, what is meant by 'categories' and 'tags' – and what to do once your question has been answered.

2.1 Before posting

To avoid duplicate questions, one should search for questions that are similar in nature. This can be done by entering key terms into the search bar in the top right hand corner.

2.2   Title and body of the question

The title of a question is what captures the attention of fellow users. The following is a list of considerations to make when choosing the title of a question:

- Use your title to convey as much information about your question as possible. Since the category and tags already convey the general subject area of your question, the title should communicate the question itself as faithfully as possible

- Make the title your question if possible, for example:

  "Which type of insurance business is most affected by the underwriting cycle?"

- The title should be as universally understandable as possible. This ensures it is attractive to the widest possible audience, and is likely to attract more answers. For example:

  "How to find the expectation of gamma distribution" is a better title than "Help with question 5(i)."

  Of course, it is a good idea to indicate where the question comes from, but this should be in the body of the question post.

- The body of the question (following the title) should provide more details, and hopefully some attempt at interpreting or even answering the question. It should be understandable without the reader having to refer to the title. Any unusual notation should be defined.

2.3   Categories

A number of categories have been created by the editors. You should indicate on the question form which category your question belongs to. Most of these correspond with distinct UCT subjects, e.g.:

- Financial Economics

- Models

- Contingencies

- Financial Mathematics

- Time Series and Markov Chains

- Stochastic Processes

- Linear Models

- Generalised Linear Models

- Statistical Theory and Inference

- Introduction to Financial Risk

- Actuarial Risk Management

Other categories are more general:

- Calculus and Pure Mathematics

- Meta

- Careers

The 'meta' tag is for questions about how the site works, and may be used to discuss problems and potential improvements.

2.4 Tags

When a question is posted, a user can apply a tag to that question. Tags are more specific than categories; e.g. 'annuities' is a tag which could be applied to a question in the 'Financial Mathematics' or 'Introduction to Financial Risk' categories.

Tags will often be suggested automatically based on the content of the question. The tag enables other users to identify quickly which topic within the broader category the question relates to. Questions can have multiple tags, up to a maximum of five.

2.5 After posting

Only the original question poster (and occasionally, editors) can select a 'best answer' and are encouraged to do so because it rewards the person who provided it.

3 Posting answers

Anyone is allowed to answer a question, whether they are doing the course, tutoring the course, or have taken the course before. Good answers will be rewarded with points and rise to the top of the list. Not every question requires a fully worked solution: often a partial solution is valuable. In some situations, 'hints' might be more appropriate than complete solutions.

4   Posting comments

If you want to ask for clarification of something, or feel like you want to contribute something less than an 'answer' then you can comment on the question. Similarly, you can comment on answers to request clarification, but extended conversations should be avoided.

5   Typing mathematical expressions

`AcSciHotseat.org` supports a mathematical notation called MathJax (very similar to LaTeX) on all question pages, answer pages and comments. The following is a very basic introduction:

- A mathematical expression must be enclosed in double dollar signs if one wants the expression to be on a separate line, i.e. $$ expression $$, or between backslashes, i.e. \(expression \), if one wants the expression in the same line as the text.

- ˆ is used to create superscripts, e.g. xˆ2 = x^2.

- _ is used to create subscripts, e.g. x_2 = x_2.

- \frac{ }{ } is used to create fractions, e.g. \frac{x}{2} = $\frac{x}{2}$.

- \int_{ }ˆ{ } is used for integrals, e.g. \int_{0}ˆ{ 3} f(x) dx = $\int_0^3 f(x)dx$.

- \sum_{ }ˆ{ } is used for summations, e.g. \sum_{i=1}ˆ{ 5} x_i = $\sum_{i=1}^5 x_i$.

- Annuities are a bit more tricky and imperfect, but here's a start:

  a_\bar{n|} = $a_{\bar{n|}}$

$\ddot{a}\_\bar{n|} = \ddot{a}_{\bar{n|}}$

$\bar{a}\_\bar{n|} = \bar{a}_{\bar{n|}}$

- Greek letters are denoted by \alpha $= \alpha$, \gamma $= \gamma$, \Gamma $= \Gamma$, et cetera.

- Other commonly used symbols:

  \infty ∞, \le $\leq$, \ge $\geq$, \ne $\neq$, \sim $\sim$, \iff $\iff$, \rightarrow $\rightarrow$

- Here is another quick guide to MathJax, although there are some minor differences in syntax.

6   Voting on questions and answers

A question can be voted up/down if the user thinks the question is a 'good'/'bad' question. An high-quality question is usually one that is well-posed and un-ambiguous, and includes some attempt at the answer. It does not have to be 'deep' but should be well thought out and not simply reproduced from a homework assignment.

Similarly, an answer can be voted up/down if the user thinks the answer is a 'good' answer. A high-quality answer is usually one that is accurate, unambiguous, relates to the question, and is suitable for the level of the original poster.

7   The points system

If you would like to understand the points system better, follow this link.

8   Feedback

There is a special question in the meta category called "Can you think of any improvements".