Exam Preparation Advice
(for ANLP and in general)

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(based on slides by Sharon Goldwater)

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Why now?

- We're about halfway through the semester, but *more* than halfway through examinable material.
- Exam may be as early as 9 December
  - Announced on Uni website during week of 28 Oct.
- Studying in small doses over a long period is much more effective than large doses at once.

See more here: `https://www.ed.ac.uk/ timetabling-examinations/exams/exam-diets`

Goals of this lecture

- Help you understand the kinds of questions to expect (and how we think about them).
- Help you study effectively.
- Help you avoid wasting time on the wrong things, or losing marks for silly mistakes, during the exam.

Many of these tips will help in **all** your courses, not just ANLP.

Format of the exam

- **Warning!** The rubric is different from past exam papers!
  - **All questions are compulsory.**
  - As in past years, the total number of marks is 50.
  - But different questions may be worth different amounts.
- The exam lasts two hours.
- You write your answers in a blank exam book.

Topics we may cover

- Please see the course revision guide.
  Learn → Assessment and Exams → Exam information
- This guide is **not yet complete**, we'll continue to update it.
- Some topics discussed in lectures will not be on the list
  - E.g., material (often at the end of lectures) about current practices and trends which are not covered in the textbook.

What kinds of questions?

- A relatively small number of marks based on **bookwork**: things you can simply memorize and regurgitate.
  - Doing so doesn't mean you understand. And not that important outside exam: you can just look things up.
- Most questions will involve **application**, **analysis**, or **synthesis** of methods and concepts.

Examples of **application**

- Give an analysis (e.g., tags, parse, semantics, discourse) for some text, perhaps using a provided grammar or specific algorithm.
- Give the formula for X (bookwork) and compute its value based on a small example dataset (application)
  - Normally you will only need to plug in the correct numbers and not reduce everything to a single value. No calculators needed.
- Give an example of linguistic phenomenon Y, or identify where it occurs in some example we provide.

Examples of **analysis**

- Discuss the pros and cons of method M for task T and/or give examples illustrating the pros/cons.
- Explain the similarities/differences between methods P and Q.
- Explain why some linguistic phenomenon is challenging for NLP, perhaps with examples.

Examples of **synthesis**

- Given some new task related to one we have discussed in class (or some new aspect of a task we have discussed), discuss the problems you might expect in tackling this task and/or how you could apply methods we have seen to try to address these problems.

All questions are compulsory

- Expect a range of topics and questions, including some more computational and some more linguistic.
- Most questions will include several parts with a range of difficulty.
- There is no way we can cover everything in the course.
- The number of marks typically does **not** reflect the difficulty of the question, but may reflect (to some extent) the amount of time needed to answer and/or the extent to which partial credit is possible.

During the exam

- Read (or at least skim) all questions first to help you decide how to allocate your time. (Plan on taking 5-10 minutes to do this.)
- You do not need to answer the sub-parts in order, but you **must** be clear which part you are answering when.
- Read the question carefully.
  - Make sure you answer the question that is being asked, and that you have fully answered it. Tick off each part as you go.
  - Don't spend lots of time writing everything you know about X if the question only asks about a specific aspect of X.

What if I'm not sure of the answer?

- Ideally, write **something** for every question sub-part.
  - even if you are not sure it's right or complete.
  - But: don't waste time writing everything you know about X just in case you happen to stumble on the right answer. It is usually obvious you don't know what you're talking about (and see correct+incorrect below).
- You can make notes on scrap paper or in the exam book, **but**:
  - clearly cross out any work in the exam book that you do not want to count towards your mark.
  - If both correct and incorrect answers are there (and not crossed out), you may not get credit for the correct answer.

Use your time wisely (1)

- Typically, if there are multiple related sub-parts to a question, earlier parts are easier/more straightforward than later parts.
  - E.g., may start with bookwork, then some application/analysis. Synthesis usually requires longer answers so often comes at the end.
- But what's easier for most may not be easier for you. If you get stuck, skip it and come back later. (Or write the part you know, and come back for the rest.)

Use your time wisely (2)

Things that don't matter to your mark:
- Full sentences, if a word or phrase clearly **answers the question**.
- Minor spelling/grammar problems, provided the **meaning is clear**.
- Neatness or crossed-out parts, provided your answer is **readable**.

So, do not waste time writing "drafts" to copy into the exam book. (For longer answers you may want to jot a few key points on scrap paper to organize your thoughts.)

So, how to prepare?

Most important points:
- Start now.
- Study actively.
- Practice the way you'll be tested.

Start now

- Human memory works better if you revisit things perdiodically over a longer time.
- Start going back to material from the first couple of weeks now! Read through lab/tutorial solutions, they sometimes contain more info than discussed in class.
- You may find you're better able to understand it now than earlier, now that we've gone further. Revisiting it will also help make connections to upcoming material.

Study actively

Simply reading is not a good way to remember or understand. You need to practice **recalling**, **applying**, and **synthesising** information.

- ▶ Recall: Make flashcards for important definitions and equations.
- ▶ Apply: Work through example problems.
  - ▶ Do the labs and tutorials (again)!
  - ▶ Construct examples for yourself (and your friends) to work through.
  - ▶ Many lectures have additional questions at the end.
  - ▶ Use Piazza: to ask questions, and to answer them.
  - ▶ Try to answer the questions mentioned in the revision guide.

Study actively

Simply reading is not a good way to remember or understand. You need to practice **recalling**, **applying**, and **synthesising** information.

- ▶ Synthesize: Reorganize the information to make connections and consider what's important.
  - ▶ Try to categorize your knowledge in different ways.
  - ▶ Create 1 sheet of paper that lists the most important things you need to know. (Try doing it from memory: to practice recall and writing: see below.)

Practice the way you'll be tested

- ▶ The exam requires you to **write** answers by hand. So,
  - ▶ Practice writing the answers to flashcards by hand.
  - ▶ Work through practice problems and write solutions.
  - ▶ Answer revision guide questions in writing.
- ▶ Doing this forces you to organize your thoughts the same way you will need to in the exam, and will give you a better idea how long it takes.

Asking and answering questions on Piazza is also a great way to practice writing clearly about course topics. Use it!

Use a held-out dataset (2017-18 exam)

- ▶ Past exam papers are available (linked from Revision guide). Look over a few to get an idea of questions (but remember the rubric is different, and topics have shifted over the years)
- ▶ **Save** one of them (I suggest 2017-18) to use as a practice exam.
  - ▶ **Don't** look at it in advance, but **note** that the 2017-18 rubric was: answer Q1 and EITHER Q2 OR Q3.
  - ▶ After you've done most of your revision, set aside two hours and sit the exam as you would a real one. (After a break, try the remaining question.)
  - ▶ May reveal issues with timing or weak areas in your knowledge.
  - ▶ We will try to schedule a session to go over answers to that exam (date TBD once exam date is set).