Assignments are considered as part of the teaching and learning medium and are a major part of your learning experience. Perfection is not expected - do your best and hand in your attempts to ALL assignment questions.

It is a personal conviction that assignments are an important part of the LEARNING process and should not be a substantial contribution to the final assessment. At this level of study, it takes time for the mind to absorb mathematical concepts, understand them, retain them and work with them. Full progressive assessment does not, in my opinion, satisfactorily assess one's ability and understanding. It does however assess one's ability to absorb information quickly and to output it just as fast! This is not what learning and understanding mathematics is about.

Use assignment work as a testing medium to obtain feedback about your ability to understand and correct the work you have submitted. You should prepare yourself by doing preliminary reading of the text, tutorial examples etc.

Your knowledge is something that will grow, so no student should expect perfect knowledge at the first attempt at each assignment question. The objective is to test yourself to find your level of understanding. This level can be improved by your analysis of comments made on your assignment and a thorough reading of the solutions once the assignment has been returned to you. DO NOT neglect this exercise, for example do not check the solutions received the day before the examination. This means that you may have carried through the term errors in your understanding and these errors may have affected resultant work on later assignments.

The exercise of completing assignment work will, if done properly:
- Reinforce your understanding of mathematical concepts,
- Test your problem solving ability,
- Prepare you for the final examination.

UNDERSTANDING: The key to success.
The key to successful learning is UNDERSTANDING. Lack of understanding invariably results in lack of confidence in one's own ability. So it is imperative to develop greater understanding of the subject material. How can this be achieved?

Clearly reading your notes the week before the examination is a dangerous move. It usually results in having a mental blank in the examination, reciting to yourself, "Yes, I remember reading that last night but I can not remember the details." This exercise puts too much strain on what is called the short term memory (STM). The mind becomes confused and you quickly forget what you have read. There has been no reinforcement of subject material in what is called long term memory (LTM).
Since many courses here at the University require the knowledge of prerequisite material, you cannot learn course material for a term and forget it thereafter.

We must therefore be efficient in our ways of absorbing knowledge, retaining it, and retrieving it when it is needed. In almost every exercise, if you understand what you are doing, the mind absorbs more quickly, knowledge of information is more easily retained and more easily retrieved.

**UNDERSTANDING:** *Where is it obtained?*
Understanding may be obtained from many sources:

- from formal lecture classes,
- summarising or reading the text,
- solving tutorial exercises,
- checking solutions to worked assignment problems,
- discussions with the lecturer and friends, etc.

**UNDERSTANDING:** *From lectures.*
We need to first go back to the initial point of introduction of the course material. For internal students, this is in a formal class contact lecture. How many go into the class having read no preliminary lecture material (eg. previous lecture), or with the attitude of just keeping up with the lecturer's writing on the board, or go just because they are required to, or think "maybe I'll pick up something today"? Do you come out understanding little and tend to blame the lecturer because the material is not taught simply enough for you, or because the lecture delivery was too fast for you?

Usually the lecturer is a responsible intelligent person with responsibility to summarise the course material in lecture form. The problem usually lies with the student for a variety of reasons relating to:

- lack of BACKGROUND KNOWLEDGE, and
- lack of familiarity with a NOTE-TAKING PROCESS in formal lectures.

**Keeping a study program up to date makes it easier for you to understand and grasp mathematics more quickly.** So if you come out of a lecture knowing little, a lot of extra work is needed to catch up to the required level. To be more efficient, it is necessary to raise your level of understanding in lectures, thus requiring less to do by yourself. It is easier to learn from someone else than to learn independently from a text.

For this lecture hour, the external student must perform the task of the lecturer, and summarise the mathematics presented in the text. This is definitely a good exercise we
should all endeavour to do as it forces each of us to come to grips with the lecture content.

You should spend around a further hour going over this lecture material to check your understanding, reinforcing the knowledge of new ideas, and asking yourself why examples were done to illustrate certain aspects of theory. The conscientious study of solutions and proofs will give insight into mathematical logic and the application of developed mathematical theory.

Thus for the two hours set lecture time, you should spend a further two hours going over this material checking it with the text or other reference material.

UNDERSTANDING: From problem solving.
Understanding will be reinforced by problem solving. However, do not expect to improve your understanding by JUST solving problems. This thinking is seen in the end to be artificial.

Your text has a thorough set of problems at the end of every chapter. You should practice solving problems from these sections before commencing work on the assignments. Attempt a sufficient number to give you confidence in handling such problems in the examination. Always check the lecture/text and reference material to obtain clues before commencing. Also avoid doing a problem by just working through its solution, if it is available. This is not an approach that really makes you exercise the mind in its own thought processes.

Make full use of the tutorial hour if it is available to you. Prepare for it and use it to ask questions on theory and application that you do not understand and problems that you cannot complete.