Information for the (AiM) Online Final Assessment

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1 General advice regarding the assessment

Most of the questions in the assessment, called **Assessed Online Assignment**, are randomised so that different students are likely to see different versions of the same question. Due to the nature of the software involved, it is not possible to grant an extension of the time limit once the assessment is closed. While we will do our best to keep the server running continuously (i.e. including weekends and overnight) and minimise downtime, you should make allowances for out-of-hours downtime and slow server response in peak periods. Thus, you are strongly advised to:

- save (i.e. use Mark or Validate - see below) frequently while completing te assessment;
- start early, take advantage of being able to do a little at a time; and
- above all, don't leave it to the last minute, since server response can be expected to be slower just before the assessment closes, since it is more likely to have a high workload!

  It's a good idea to aim to have the assessment substantially complete a good 24 hours before it's due. That way you won't be susceptible to last minute panics, and if you have any queries regarding questions you don't run the risk of their not being answered before the assessment closes.

The due date for the assessment (i.e. 5:00pm Friday 27th November) is identified on the subject home page you see after logging in to the assessment. The first quiz you should do is the **Tutorial** quiz; this quiz is designed to help you gain familiarity with the system. It is not assessed. Please use it to explore. Deliberately put in wrong answers and see what AiM does. Observe that your answers are numerically simplified, and check out what that will mean.
Except for the **Tutorial** quiz, the **Assessed Online Assignment** questions are based on material presented during Lectures 5-12. While with good preparation, it may be possible to complete the assessment in around 4 hours, that does not mean you are safe to start the assessment four hours before it's due. Some students print out the quiz early in the week when it is released, and return a short time before it's due to enter the answers. The problem with leaving it so late to do/enter answers into the assessment, is that, if one makes any mistakes there is too little time left to do anything about it, and the pressure of an imminent deadline only makes things worse. So take the excellent advice above, and allow yourself more time for those concepts that take longer to grasp.
Generally, there is feedback if you get a question wrong, to help you get the question right on a subsequent attempt. (The value of a question usually drops by 0.1 each additional attempt you need to get a question right; the exceptions are multiple choice/response questions where the penalties are set higher to discourage guessing!) The **Assessed Online Assignment** contributes 50% towards your final mark of the unit.
At times, one may discover some subversive method for getting an answer to a question; this may get the very small mark for that question, without having learned the material, but the material that you are being assessed on will be needed in your future units. In short, cheat the system, and you inevitably cheat yourself.

Some students seem to do assessment long enough to get 50% of the score available, and then stop, thinking presumably "That's a pass. That will do." However, one really needs a score > 75% to show good mastery of the material. Couple that with the fact that AiM allows you to correct your mistakes, and you should see that actually, as a minimum, you should be trying to get 80% for the assessment. And remember, if you've given a question a good go, and can't see how the feedback helps you please send me an email i.loosen@curtin.edu.au

2 Where is the online assessment?

You can access the **Assessed Online Assignment** via the unit **Linear Algebra and Statistics for Engineers** on **Blackboard**. Once you are in **Blackboard**, click on the Online Final Assessment link in the **Course Menu**, this will take you to the assessment content page containing a link to the server with the Assessed Online Assignment. Alternatively, if **Blackboard** is down, you may access the assessment directly with the URL http://aim03.curtin.edu.au.
While many of you have access to the internet from home, temporary lack of connectivity from home, while inconvenient, is not an excuse for missing the assessment. If you can't get access at home, then you must use the university-provided facilities.

3 How do I login to the final assessment?

Once you are at the AiM login page, you only have access to the area (**MATH1019**) related to your unit:
Perth students: choose **MATH1019** on server http://aim03.curtin.edu.au
Miri students: choose **MATH1019 (Miri)** on server http://aim03.curtin.edu.au

If this is the first time you have had a unit with AiM assessments you will first need to collect your password. There may already be an email with subject *AiM Online quizzes password* sent to your `student.curtin.edu.au` email address accessed via OASIS. If not, and you *are registered* then you can cause AiM to tell you your password via Send password reminder; the procedure is the same as the login procedure below, except that you leave the password box blank and click Send password reminder instead of Login and then collect your password from your `student.curtin.edu.au` email account. If you have had AiM quizzes before, your password is the same as last time you can still use Send password reminder to check. Most students will have an 8-letter "sort-of-pronouncable" password; (very few students will still have a password that is their birthdate in DDMMYYYY format).

To login, ensure you are on the right server for your locale, indicated above,

- click on the circle beside **MATH1019** if you are a Perth student, or **MATH1019 (Miri)** if you are a Miri student
- then enter your student ID number in the **Your student ID** box,
- enter your password in the **Your password** box, and
- press Login.

If you have trouble with the login, check *that you did click in a circle* and that you have entered the correct student ID and password. *Note that, in general, your AiM password is **not** the same as your Blackboard/OASIS password, and does not change when your Blackboard/OASIS password is changed.*
If you are sure you are enrolled in the unit, have done *all* the steps above and you still can't log in, send the AiM Quiz Administrator an email on maths-aim@lists.curtin.edu.au *Don't assume that if you leave it a little while, it will sort itself out.*
Once you've logged in, there will be the option of accessing the two quizzes (i.e. the **Tutorial** quiz and the **Assessed Online Assignment**. Click on the respective quiz to enter it.

4 How do I enter my answers?

Once you have logged in, you will find there is an Tutorial quiz, the purpose of which is to introduce you to the syntax you will need to use when answering questions in the final assessment. Note that there is always

help available: there is a **HELP** link from the main index page and a Help link next to each question in every quiz! All answers are to be typed in using the syntax for algebraic statements used in Maple or a programming language like C or Basic. The **Tutorial** will help you to learn this syntax before you attempt the actual final assessment questions. The following is merely a brief introduction:

- x^2 must be entered as `x^2` or `x*x`.
- $3x$ must be entered as `3*x`
- It is often suggested that *"when in doubt, use brackets"*. This is not necessarily a good strategy. It is far better to gain familiarity with the BIMDAS (Brackets first, then Indices, then Multiplication and Division, and finally Addition and Subtraction) Rules. *Note that AiM/Maple does not simply re-display what you type when it "echoes" your answer to the screen. In particular, any extra brackets not needed according to the BIMDAS Rules will be simplified away. So you better understand those rules!!* So be sensible when using brackets, and when you use a large number of them, always check with Validate that you have input what you intended.
- Be careful with some of the "mathematical writing conventions" that are designed to reduce the clutter of expressions. We have mentioned two of these already above. In mathematical writing, when we write two symbols side-by-side we can mean two different things, e.g.
    - $3x$ (as mentioned above) means *3 times x*, i.e. multiplication is implied. As implied above the multiplication symbol in AiM/Maple is `*`.
    - ln *x* means *the function* ln *of x*. ***All*** functions in AiM/Maple ***must*** be input with the arguments *in brackets*, i.e. ln *x must* be entered as `ln(x)` and when that is displayed on the screen by AiM/Maple the brackets *will not* disappear. It is not possible to make AiM/Maple display ln *x* in the way we write it. Resorting to entering `ln*x` in an attempt to achieve it, is just plain ***wrong! wrong! wrong!*** ... so don't do it!!

  The lesson in the above is that you simply have to know what the mathematical context is.
  For multiplication you need `*` *always,* and for functions you need `()` *always.*

  The other "mathematical writing convention" that AiM/Maple never uses in displaying expressions is the powering of trigonometric functions and this again is to avoid possible ambiguity, e.g.

    - $\sin^2 x$ should be entered as `(sin(x))^2` or what AiM/Maple will simplify it to `sin(x)^2`.

      You can be forgiven for not knowing why those two expressions are the same ... *functions* are at the same precedence as indices, and when you have two operations of the same precedence work from *left to right*, so take the sin of *x* first and *then* square.

    - $\sin^{-1} x$ *does not* mean a *power* at all; the −1 here indicates *inverse function*. AiM/Maple forces you to use the other (*much nicer!!!*) notation for $\sin^{-1}$ namely arcsin. Thus you must enter here `arcsin(x)` here.
- In many questions you will be asked *not to use decimal notation*. In fact, unless stated in the question you must *not* use decimal notation. For example √2 should be entered as `sqrt(2)` (or you can use a fractional power) and *not* 1.414. The latter is merely an approximation for √2, which of course has no *exact decimal representation*. In fact, whenever you enter a decimal when an exact answer is expected you will get a diagnostic telling you that AiM's convention is to assume that decimals are approximate representations of numbers. So, if you mean *exactly a half,* you must enter `1/2` and *not* `0.5`. (You can enter `5/10` if you like, but AiM/Maple will cancel it down to its most reduced form `1/2` before displaying it.)

  A bad strategy, doomed to failure, is to work out something intended to be done by hand on one's calculator, getting a decimal answer and then hitting the button that gives the display in rational form. Since the decimal was only an approximation, the rational will only be a rational approximation, and if an exact answer is expected, AiM will mark it wrong, unless you happen to fluke it (which can't happen if the answer is irrational)!

There are also occasions where the question itself specifies how it wants you to enter the solution. Note that you can use the Help button available on each question for further assistance with notation. Some questions are *multiple choice* with *circles* beside each possible answer. For these multiple choice questions, there is only one correct answer. Other questions may require *multiple responses* (in other words, there is likely to be more than one correct choice) and you need to pick all the correct ones to obtain full marks. A *multiple response* question is distinguished by having *squares* rather than circles next to the possible answers. Faced with n choices, there are 2^n possibilities, so don't bother guessing. The penalties for additional attempts at *multiple choice* and *multiple response* questions are set higher than the usual 0.1 to further discourage guessing.

5 How do I submit my answers?

At any time during the assessment session, you can hit Validate or Mark button on the page and your work is effectively saved (and, so you can safely quit, and return later and pick up where you left off). The purpose of Validate is to check that your answer is correctly entered, i.e. has the right syntax or mathematical type. When you press it, you will be alerted to any formatting errors and you have the opportunity to fix these up before the actual marking stage. When you press Mark, your answers are first validated and then marked. If your answer can't be validated, you will get a response similar to what a press of Validate would have returned. In that case, you get another go at the question *without penalty*. Note that it can sometimes happen that some apparent syntax errors are not picked up, because they validate as ok. Fortunately, these are fairly rare, but there are a few *traps* to look out for that are identified in the **Tutorial** quiz.

Now, if you get a question wrong, but can't think of how to obtain the correct answer for the moment and would rather come back to it later, *just leave it as it is! ...* ***don't blank it out!*** When you press any Mark button, AiM marks *all* the questions, and in doing so it compares the *current answer* of a question with your *previous answer* as *strings;* if those strings are the same it does *not* re-mark, and if an answer is blank it doesn't mark it. What students often do (and *shouldn't*) is blank out a wrong answer, go on to another question, and then come back later and put in the same wrong answer *again*. Since successive answers have differed they end up getting pinged twice for the same wrong answer. So don't blank out your wrong answers ... if nothing else, your wrong answer will serve to remind you what you entered previously, and so you will avoid entering it twice! Another thing students often do when told they are wrong is to enter the same answer in a different way, apparently convinced they are right and the "flaming computer" is too dumb to see it. It's quite rare for this to be the case, and you will almost certainly get pinged again for a wrong answer. So *really* go back and look at your working.

Each time you press Mark, a summary of your performance is displayed at the bottom of the assessment. For any answers marked wrong (or partially wrong), you can go back to that question for another attempt and then re-mark it. While an incorrect attempt will reduce the available marks for that question by 10% (i.e. by 0.1 of a mark), you still have the opportunity to score the remaining fraction of a mark. Clearly, you should take up and not waste this opportunity to correct any wrong answers and thereby maximise your marks!

Most questions give some feedback (hints) when you get an answer wrong, which will hopefully help you get the right answer. If you still can't see what you are doing wrong, post an email to i.loosen@curtin.edu.au but when doing so, please ensure the subject line is something like **LASE MATH1019 *(locale)* Qn 2**

The string *(locale)* can be blank for Perth students, and should be at least **mi** for Miri students. The unit name may be abbreviated to **LASE**. I will endeavour to respond to your queries in a timely manner.

Once the due date for the assessment has passed, your answers will be frozen to whatever you had entered before the last time you pressed Mark and then, on entering the assessment the solutions will become visible. Most questions have fully worked solutions. Note, that because the solutions become visible, it is *not* possible to ask for an extension once the assessment has closed (so please don't ask!) The due date will be moved if there is extenuating circumstances, e.g. power outages. If it happens that **AiM** is unavailable, and **Blackboard** is available, announcements will be posted on **Blackboard**. Do be aware, however, that the **AiM** server is *far* more reliable than **Blackboard**. (Most years, the **AiM** servers *never* go down, and usually if they do they are running again within half a day. The due date will *not* be extended if

only **Blackboard** is down.) So, if **Blackboard** is down, *don't* assume that **AiM** is down too. Thus write down the URL http://aim03.curtin.edu.au and keep it in a safe place then enter it directly when you need to.

6 How does the grading work?

Most questions are worth 1 mark. A completely incorrect answer scores 0, although partially correct answers may score up to 0.8. Hints are often given as to where you went wrong. Questions you get wrong or only partially correct may be re-attempted, although each time you make a new attempt, the maximum obtainable mark for that question reduces by 0.1, except for multiple choice/response questions where the penalty for additional attempts is increased to discourage guessing.

7 How do I log out?

When you are finished with the assessment or you want to leave it for some time, it is safest to log out by killing the browser window you are using. Leaving the browser open may allow someone else to enter your personal version of the assessment, although the likelihood of this is small. However, note that unless you have pressed the Mark or Validate option before pointing the browser elsewhere or killing it, any answers you have entered will *not* be stored! You have been warned!

8 Do I have to do a whole assessment in one session?

No, it is possible to do any number of questions in a particular session with the software, log out and return to complete the rest of the questions later (anytime until the due date). In fact, it is recommended that students complete the Assessed Online Assignment in several visits, with the aim of substantially completing the assessment well before the due date.
Many students login soon after the release of the assessment, print out the assessment questions, work out the questions steadily through the weeks, and then return to the assessment shortly before the assessment is due to enter their answers. Such a strategy is strongly discouraged, since if you get some of the answers wrong or enter some of the answers incorrectly, you are liable to find that you can't make sensible use of AiM's feedback in the time that you have left and are under increasing stress as your time to complete the assessment rapidly diminishes. So please, when you have a few answers worked out, return to the assessment and enter them. Then you have a better chance of reacting in a relaxed and more philosophical manner, if you get some answers wrong or enter them wrongly. Moreover, you can expect a timely response if you send a query to i.loosen@curtin.edu.au when you can't figure out why you are wrong. Also, you really should be aiming to get every question right, even if each question takes you several attempts; this way, you allow yourself to learn from your mistakes. The learning process in mathematics requires persistence and patience. Always allow yourself time to understand those concepts that don't come easily.
Finally (as has been said many times now), make sure that you have pressed Mark or Validate before logging out; otherwise your work won't be saved!

9 How do I save the work I've done?

Clicking Mark or Validate in *any* question of the assessment effectively saves the current state of the assessment, so that you can then safely log out if you wish. It's recommended that you don't go too long before pressing one of these buttons, just in case there's a power failure or some other calamity.