

AMA2112: Mathematics II

1. Lecture: Monday 15:30–17:20 (TU201)

2. Instructor: Dr. ZHANG Zaikun

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3. Consultation Hours: Tuesday&Thursday 14:00–16:00

Consultation beyond the above mentioned hours is possible **by appointments, including weekends.**

4. Course Website: Blackboard eLearning System at <https://learn.polyu.edu.hk/>

Course ID: AMA2112_20161_A

Please check the course page regularly for course materials and announcements.

5. Textbook (BEM): C.K. Chan, C.W. Chan and K.F. Hung, *Basic Engineering Mathematics*, 4th Ed., McGraw-Hill, 2015 (available at the Pao Yue-kong Library)

6. Grading Scheme:

Continuous Assessment	Midterm	25%
	Three quizzes	9%
	Three assignments	6%
Final Exam		60%

Remarks:

6.1. You must pass BOTH the Continuous Assessment and the Final Exam to receive a passing grade for the whole course.

6.2. The Midterm examination will be held around the 9th week. Precise date to be announced.

6.3. The quizzes will take place during the tutorial sessions (by Mr. KW Lee) around the 4th, 8th, and 12th weeks. Precise dates to be announced.

6.4. The assignments are due by **17:00:00 (UTC+08:00) of Tuesday 27th September, Tuesday 8th November, and Tuesday 6th December** unless otherwise specified.

Overdue submissions within 24 hours of the due time will be given **at most** half of the marks, and submissions even later will not be marked. Assignments should be

submitted through the Assignment Box of AMA on the 8th Floor of Building T.

7. Material Covered:

7.1. Integration in Several Variables (7 weeks): Multiple integrals; change of variables; divergence and curl; line, surface and volume integrals; Green's, divergence and Stoke's theorems.

7.2. Series Expansion (2 weeks): Infinite series, Taylor's expansion, Fourier series expansion of a periodic function.

7.3. Partial Differential Equations (3 weeks): Heat, wave and Laplace equations; initial and boundary value problems; separation of variables; homogeneous boundary conditions; Sturm-Liouville theory; eigenfunction expansions.

8. Remarks

8.1. There will be no lecture on 10th October (the day following the Chung Yeung Festival). Hence we will have only 12 lectures. **Our time is really limited.**

8.2. My job is to make you succeed in this course, not to make you fail. We are a team, and we have to work together. **Attend the lectures and do your homework.**