# Semester 2, 2017 – Course Outline for Year 12 Mathematics A
## MAA122A – Ms Allery

<table>
<thead>
<tr>
<th>Unit Name</th>
<th>Main Ideas</th>
<th>Duration (weeks)</th>
<th>Assessment Item</th>
<th>Due Date</th>
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</table>
| Maps & Compasses – Navigation      | • Methods of fixing position which may include bearing fix, dead reckoning, running for GPS  
• Calculate speed and distances: - with reference to latitude  
- using nautical miles and knots  
• Plot courses and determine location by:  
- using maps, charts, compasses, dividers and parallel rulers or their equivalent.  
- a variety of methods of fixing position which may include bearing fix, dead reckoning, running fix, GPS | 5                | EMT (Navigation)                             | Fri 11/08/17 |
| Managing Money                     | • Simple interest, and compound interest for various compounding periods; effective and nominal rates  
• Consumer credit including personal loans, credit cards, debit cards, housing loans (including fees and charges)  
• Investments such as savings accounts, term deposits, real estate and stock market  
• Simple algebraic manipulation of financial formulae | 5                | Supervised KAPs & MAPs Exam (Managing Money & Navigation) | Tues and Fri 5/09/17 & 8/09/17 |
| Operations Research – Networks & Queuing | • Identify and reflect upon the effect of critical steps in project networks  
• Identify and reflect upon the impact of slack time in a project network  
• Investigate single and multiple-server queue situations with constant arrival and service times using a variety of representations  
• Investigate the effects on a queuing system of random arrival and service times | 4                | Supervised KAPs & MAPs Exam (Networks & Queuing, Exploring & Understanding Data) | EXAM BLOCK |
| Exploring & Understanding Data     | • Interpretation in context of row and column percentages for a contingency table (two-way table of frequencies)  
• Misuse of probabilities, including misinterpretation of row and column percentages in contingency tables | 2                |                                             |            |

### Literacy Components
- **Speaking and Listening**: Instruction, vocabulary
- **Reading & Viewing**: translate information between different forms of language, text, strategies, metacognition
- **Writing & Designing**: support an argument using mathematics; use mathematical conventions and everyday language to provide solutions to routine and non-routine problems

### Numeracy Components
- **Number**: Basic operations and BIMDAS will be applied, currency
- **Algebra**: Substitution into formula, transposing formulas
- **Measurement**: knot, nautical mile, use of parallel rulers & protractors
- **Space**: navigation, fixing position, transit & running fixes
- **Chance & Data**:

### ICT/Technology Components
- Select and use ICTs in the processes of inquiry and research: use of a scientific calculator
- Select and use ICTs to create a range of responses to suit the purpose and audience:
- Select and use ICTs to collaborate and enhance communication for an identified purpose and audience:
- Develop and apply ethical, safe and responsible practices when working with ICTs:
- Use a range of advanced ICT functions and applications: