### Semester 2, 2017 – Course Outline Year 12 Chemistry, CHM122A – Ms Toft

<table>
<thead>
<tr>
<th>Unit Name</th>
<th>Main Ideas</th>
<th>Duration</th>
<th>Assessment Item</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>10/. Forensic Chemistry</td>
<td>Different analysis techniques are examined and evaluated in an informative report, in the context of forensic chemistry and by investigating the role of these in providing circumstantial evidence. Specialised techniques such as atomic emission and absorption spectroscopy, colorimetry and chromatography are studied. Chapters 13 and 14 in the Heinemann textbook are useful references.</td>
<td>3 weeks</td>
<td>Assignment Extended Response Task</td>
<td>Term 3 Week 5 Wednesday 9th August</td>
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<td>11/. Industrial Chemistry</td>
<td>Rates of reaction, reaction mechanisms, and the reversibility of many reactions involved in industry are examined. The importance of being able to affect both the rate of an industrial reaction, and the position of equilibrium, are studied through the use of Le Chatelier’s principle. There is a supervised assessment (exam) to test the knowledge and understanding, and application of these concepts. Chapters 15 and 17 in the Heinemann textbook are useful references.</td>
<td>7 weeks</td>
<td>Exam 2hrs Supervised Assessment Task</td>
<td>Term 3 Week 9 Wednesday 6th September</td>
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<td>12/. Food production</td>
<td>Students study further applications of reversible reactions, including acid-base reactions, solubility and organic chemistry in the context of food production and use by humans. The cycling of matter and polymerization resulting in proteins, carbohydrates and lipids are also studied in this final unit of the Chemistry course. There is a supervised assessment (exam) to test the knowledge and understanding, and application of these concepts. Chapters 8, 15,16 and 17 in the Heinemann textbook are useful references.</td>
<td>7 weeks</td>
<td>Exam 2hrs Supervised Assessment Task</td>
<td>Week 6/7 TBA during year 12 exam block</td>
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**Literacy Components**
- Speaking and Listening: students will collaborate throughout the lessons
- Reading & Viewing: Students will engage with a variety of text types.
- Writing & Designing: The genres of informative, evaluative writing, and short/long responses will be used.

**Numeracy Components**
- Number: students will work extensively with scientific notation, and use a range of strategies to solve chemical problems
- Algebra: Students will use chemical equations to solve problems
- Measurement: students will use a variety of measuring techniques and units in practical classes. The units involved in various forensic analysis techniques will be studied.
- Space:
- Chance & Data: students will interpret various graphing and plotting techniques

**ICT/Technology Components**
- Select and use ICTs in the processes of inquiry and research: throughout the course, students will access electronic sources of information, and use data-loggers / pH meters
- Select and use ICTs to create a range of responses to suit the purpose and audience: producing an evaluative forensic analysis report
- Select and use ICTs to collaborate and enhance communication for an identified purpose and audience: producing an evaluative forensic analysis report
- Develop and apply ethical, safe and responsible practices when working with ICTs:
- Use a range of advanced ICT functions and applications: