2019 SENIOR COURSE INFORMATION

Subject **Chemistry**

Head of Department Angela Kelly

	Year 12	Year 13
	Chemistry is a science that investigates matter in both living and non-living systems. Today we can fingerprint and identify millions of organic and inorganic compounds. There are probably no aspects of our lives in which chemical principles are not apparent. A background of Chemistry is required or preferred in a wide variety of careers, for example Agricultural Science, Biochemistry, Medical and Allied Health fields, Forensic Science, Veterinary Science, Winemaking, and Zoology. The Rathkeale College Chemistry program caters for everyone from those who will need a background in the subject, to the very able and serious science students. By relating chemical principles and the development of skills to the context in which they are used, both in and outside the classroom, the students' learning will be relevant and meaningful.	
Course Content	Chemistry (2.1) This standard involves carrying out an acid-base volumetric analysis using a given titration procedure. In addition, the standard involves solving simple quantitative chemical problems using the relationships n=m/M and c=n/V. Chemistry (2.2) This standard involves carrying out procedures and using knowledge of precipitation reactions to determine ions present in solution. Chemistry (2.4) This standard involves describing the bonding in simple molecules, the nature of various types of solids and thermo-chemical principles. Chemistry (2.5) This standard involves describing the structural formulae and reactions of compounds containing selected organic functional groups. Chemistry (2.6) This standard involves the understanding of principles of chemical reactivity by describing and using equilibrium information.	Chemistry (3.2) This standard involves the understanding of the function and how to interpret the data of three spectroscopic techniques. Chemistry (3.7) This standard involves the understanding of oxidation and reduction chemical reactions. Chemistry (3.4) This achievement standard involves describing properties of atoms, molecules, and ions, and thermo-chemical principles. Chemistry (3.5) This achievement standard involves describing the structure, physical properties, and reactions of organic compounds. Chemistry (3.6) This achievement standard involves describing properties of aqueous systems using equilibrium principles.
Pre Requisites	A minimum of 14 credits from the Year 11 Science programme, including an external Chemistry standard.	A minimum of 14 credits, 7 of which must be from externally assessed standards, from Year 12 Chemistry. Also, all three external papers at level two **must be attempted**.
Assessment	**Internal (7 credits)** 91162 Carry out procedures to identify ions present in solution (3) 91167 Carry out Quantitative analysis (4) **External (13 credits)** 91164 Describe the nature of structure, bonding and energy changes in different substances (5) 91165 Describe the structural formulae and reactions of compounds containing selected organic functional groups (4) 91166 Describe chemical reactivity and equilibrium principles (4)	**Internal (6 Credits)** 91388 Demonstrate understanding of spectroscopic data in chemistry (3) 91393 Demonstrate understanding of oxidation-reduction processes. (3) **External (15 credits)** 91390 Describe properties of particles and thermo-chemical principles (5) 91391 Describe principles of organic chemistry (5) 91392 Describe properties of aqueous systems (5)
Costs (approximate)	**SciPad workbook $30.00** **Course notes printing cost $15**	**SciPad workbook externals and internals $45.00** **Course notes printing cost (optional)$15.00**