

## 11<sup>th</sup> Grade IB Biology, Higher Level & Standard Level

### Knowledge Content

Students will cover the following topics:

- Appreciation of core aspects of Biology, including cell theory, chemistry of life, human physiology, ecology and evolution
- Appreciation of additional extended and applied aspects of biochemistry, human physiology and ecology
- Understanding of the biological concepts of structure and function, universality versus diversity, equilibrium within systems and evolution
- Appreciation of the environmental, social and ethical implications of science
- Development of laboratory skills with an appreciation of the benefits and limitations of scientific methodology.

### Skills Content

In relation to the topics listed above, students will develop skills that enable them to:

- Develop skills of scientific investigation while planning laboratory work
- Develop skills of collecting, analysing, evaluating and synthesising data
- Develop manipulative skills (make measurements, handle information and model ideas) and personal skills related to practical laboratory work
- Develop collaborative skills and an understanding of interdisciplinary cooperation while undertaking the Group 4 Project
- Develop information and communication technology skills in order to process and communicate information effectively
- Broaden understanding and use of scientific terminology and concepts
- Develop understanding of knowledge, methods and techniques which characterise science
- Develop skills of independent study and research.

### Assessment

- Criterion based assessment of laboratory work and written reports. This will form 24% of the final grade
- Quizzes and short tests
- End of topic tests
- Tutorials relating to topics discussed in class
- Essays in which students are required to analyse and discuss the topics studied in class
- Oral and written presentations based on individual research.

### Examinations

Internal end of semester exams

External International Baccalaureate Biology exam at the end of 12<sup>th</sup> Grade.

### Resources

**IB Biology text books include:**

- Weem, Talbot and Mayrhofer, *Biology 3<sup>rd</sup> Edn.*
- Allott and Mindorff, *Oxford IB Biology Course Companion*
- Campbell and Reece, *Biology, 6*
- Allott, *Oxford IB Biology Study Guide*
- Biozone, *Senior Biology 1 and 2 (student resource and activity book).*

**Biology reference books and scientific journals are located in the High School Library**  
**Extensive laboratory, audio visual and IT resources.**

### Prerequisites

Successful completion of 9<sup>th</sup> and 10<sup>th</sup> Grade Integrated Science course.

### Credits

**Full year course forming part of a two year externally assessed programme: One Credit.**