**International Baccalaureate Environmental Systems and Societies**

Semester A 2012-2013

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**Nature of the subject *(course description)***

The prime intent of this course is to provide students with a coherent perspective of the interrelationships between environmental systems and societies; one that enables them to adopt an informed personal response to the wide range of pressing environmental issues that they will inevitably come to face. Students’ attention can be constantly drawn to their own relationship with their environment and the significance of choices and decisions that they make in their own lives. It is intended that students develop a sound understanding of the interrelationships between environmental systems and societies, rather than a purely journalistic appreciation of environmental issues. The teaching approach therefore needs to be conducive to students evaluating the scientific, ethical and socio-political aspects of issues.

**The international dimension**

We all live on one planet Earth, yet use much more than one planet Earth’s worth of resources. This is obviously not sustainable and this course attempts to discuss the issues surrounding resource use at various scales—from that of the individual (for example, attitudes to recycling) to that of the global community (aims 1, 2, 6 and 8 in particular).

**Environmental systems and societies and theory of knowledge (TOK)**

This course offers some excellent opportunities for approaching issues of knowledge in immediate and practical contexts. The systems approach itself, which is employed throughout the syllabus, raises some interesting points of comparison and contrast with conventional models of the scientific method. It is essentially holistic rather than reductionist. While this approach is frequently quantitative in its representation of data, it also addresses the challenge of handling a wide range of qualitative data. There are many checks and guidelines to ensure objectivity in data handling and interpretation but the standards of objectivity may not always be so rigorously controlled as they are in the purely physical sciences. Furthermore, as a transdisciplinary subject, the material addressed frequently lies astride the interface of what are perceived as clear subject boundaries. In exploring and understanding an environmental issue, one must be able to integrate the hard, scientific, quantitative “facts” with the qualitative value judgments of politics, sociology and ethics. All this makes particularly fertile ground for discussions related to theory of knowledge (TOK).

**Environmental systems and societies aims**

The systems approach provides the core methodology of this course. It is amplified by other sources, such as economic, historical, cultural, socio-political and scientific, to provide a holistic perspective on environmental issues.

The aims of the **environmental systems and societies** course are to:

1. promote understanding of environmental processes at a variety of scales, from local to global
2. provide a body of knowledge, methodologies and skills that can be used in the analysis of environmental issues at local and global levels
3. enable students to apply the knowledge, methodologies and skills gained
4. promote critical awareness of a diversity of cultural perspectives
5. recognize the extent to which technology plays a role in both causing and solving environmental problems
6. appreciate the value of local as well as international collaboration in resolving environmental problems
7. appreciate that environmental issues may be controversial, and may provoke a variety of responses
8. appreciate that human society is both directly and indirectly linked to the environment at a number of levels and at a variety of scales.

**Assessment objectives *(enduring understandings)***

The objectives reflect those parts of the aims that will be assessed. It is the intention of the **environmental systems and societies** course that students should achieve the following objectives.

1. Demonstrate an understanding of information, terminology, concepts, methodologies and skills with regard to environmental issues.
2. Apply and use information, terminology, concepts, methodologies and skills with regard to environmental issues.
3. Synthesize, analyse and evaluate research questions, hypotheses, methods and scientific explanations with regard to environmental issues.
4. Using a holistic approach, make reasoned and balanced judgments using appropriate economic, historical, cultural, socio-political and scientific sources.
5. Articulate and justify a personal viewpoint on environmental issues with reasoned argument while appreciating alternative viewpoints, including the perceptions of different cultures.
6. Demonstrate the personal skills of cooperation and responsibility appropriate for effective investigation and problem solving.
7. Select and demonstrate the appropriate practical and research skills necessary to carry out investigations with due regard to precision.

**Assessment objectives in practice**

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| Assessment objective | Which component addresses this assessment objective? | How is this assessment objective addressed? |
| 1-3 | Paper 1 | Short-answer and data-based questions |
| 1-5 | Paper 2 | Section A: case study  Section B: two structured essay questions (from a choice of four) |
| 1-7 | Internal Assessment | Practical work with some activities selected and marked against the internal assessment criteria |

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| Assessment Component | Weighting |
| **External assessment (written papers, 3 hours)**  **Paper 1 – 1hour**  45 marks  **Paper 2 - 2 hours**  65 marks | **80%**  30%  50% |
| **Internal assessment – 30hours**  42 marks | **20%** |

**Class Policy**

You are responsible for following the student ethics code issued for Montgomery County Students, the rules of Bethesda-Chevy Chase High School and the science laboratory safety rules. Our classroom will be an environment in which all students will be comfortable, safe and able to learn. Participate, ask questions, and contribute to discussions and group exercises. I expect you to contribute to the “learning community” by doing the following:

1. **Cooperating with your teacher and classmates.**
2. **Respecting the rights and property of others.**
3. **Carrying out your student responsibilities.**

**Materials**

* Three-ring binder
* Loose-leaf paper
* Scientific calculator
* Textbook (to be assigned)

**Textbook**

Miller, Jr., G. T. and S. E. Spoolman. (2012). Living in the environment: principles, connection and solutions (17th ed.). Belmont, CA: Brooks Cole.

**Grading Policy**

The grades will be weighted. The make-up of the grade will be as follows:

* Summative Assessments: 50%
  + Exams, projects, formal lab reports, summative quizzes
* Formative Assessments: 40%
  + Formative quizzes, informal lab reports, current events
* Homework/Practice: 10%
  + These assignments must be turned in on time to receive any credit.

I will keep a record of your grades on the computer. You will be responsible for keeping track of your graded assignments throughout the term. If you would like to discuss the grade of any assignment, missing assignment or makeup assignment, you are welcome to make an appointment with me. **I will not discuss your grade during our class time**.

**Absences/Make-up**

* You are expected to attend ALL classes.
* If you have an excused absence, please see me to establish a schedule for making up assignments/lab. It is your responsibility to follow up on what you have missed.
* If you are absent from school when an assignment is due OR an exam is given, you are to submit the assignment on the first day of your return to class. An unexcused absence results in a zero for work due. The same policy holds for tests.
* You are expected to be in the classroom, SEATED and ready to begin the class when the bell rings, or else you will be marked tardy. Personal needs should be taken care of BEFORE class.

**Due date/Deadline date**

* Assignments are turned in on the due date.
* The due date is the date that the assignment is due, and also the time at which I collect the assignment during that class.
* If you do not turn in that assignment when I collect it in class, it will be classified as late.
* The deadline date for an assignment is the end of the day following the due date. When an assignment is turned in after I collect it in class, but prior to the deadline, the assignment will receive a 10% lower mark.
* An assignment not turned in by the deadline will receive a zero.

**Reteach/Reassessment**

* To reassess quizzes, re-teaching may be required.
* Reassessments will normally take place AT LUNCH two days following the quiz.

**Office Hours**

* I will be available in room B313 during lunch on Tuesdays and Wednesdays.
* I am most often available after school. Please be polite when asking for help after school by making sure it is a good time. If it is not, I will schedule another time with you.

**Academic Integrity**

I have ZERO tolerance for cheating, copying, or unapproved collaboration of any kind. Science is a collaborative world – discussion of subjects, labs, results and interpretations is acceptable. Yet, written description of results and discussions for labs should never be identical. **NO ASSIGNMENT SHOULD EVER BE IDENTICAL TO ANOTHER PERSON’S WORK.** Evidence of this will result in zeroes for all parties involved with immediate notification of parent/guardian and administration.

**Syllabus outline**

The following represents the topics to be covered over the course of the year. These will not necessary be followed in order.



