 January 2012

Course outline

Environmental science FFY471, 7,5 hp. Chalmers
Environmental physics FYP350, 7,5 hp, Gothenburg University

January – March 2012

Course responsible/
examiner Bertil Dynefors
Instructors: Bertil Dynefors, physics
Thomas Bachaus, plant physiology

Background and objectives

Environmental considerations are more and more becoming regulating factors in the political, business and private life. An overriding objective is then to endeavour toward a sustainable society on global, regional and local scales. The teaching can, with regard to that, contribute in many different ways.
This course has the goal to provide you with a more profound understanding of some environmental phenomena and problems. There is also a goal to promote you to act, and to be able to sort out the unimportant issues from the important ones.

Course design/Examination

The course content is divided into a "reading part" and a project work part. The reading part means studying for yourself in a textbook and do a short final written exam as a knowledge control.
There will be four project works=problem packages in the course.
All problems packages have to be done individually.

The problem packages for university students will in general be different from the ones given to the Chalmers students.

Grading information:
Two problem packages A and B are graded fail(=F) and passed (P). Three problem packages, B, C, and D as well as the written examination are graded F,3,4,5
Both problem packages and "dugga" must be separately passed.

Final grade for problem packages ***(for Chalmers students).***
If the two first packages passed, the following three packages will give a grade according to:

(3,3,3) = 3	*(3,3,4) = 3*	*(3,3,5) = 3*
(3,4,4)= 4	*(3,4,5)= 4*	*(3,5,5)= 4*
(4,4,4)= 4	*(4,4,5)= 4*	*(4,5,5)=5*
(5,5,5)= 5		

These problem packages grades will be combined with the result from the written examination to a final grade on the course. The rules for the exact final grade will be published later on the course homepage.

Problem package grades*: **(for university students)***

3 above is G
(3,4,4), (3,4,5), (4,4,4,) is G (pass)
(3,5,5), (4,5,5), (5,5,5) is VG(pass with distinction)

Reexamination: There will be several opportunities to have examinations on the course between March 15 and April 30 this year.
All students are highly encouraged to finish the course before April 30, because this is the last time the course is running.
There will be possible to do examinations later, but it will cause complications.

Literature Textbook for the" reading part" of the course: *Living in the environment*. 17th edition. G. Tyler Miller and Scott E.Spoolman. Brooks/Cole.

There are many other books with similar content, as
- Cunningham and Cunningham, "Environmental science" (McGraw Hill)
- Nebel and Wright, "Environmental science" (Prentice Hall)
- Withgott, Brennan, "Environment" (Pearson)

The mentioned books are usually available in libraries. Look at classifications "td" (Miljöteknik) and "qe"(Geovetenskap) in the Chalmers main library.

Course content from the textbook by Tyler Miller and Spoolman book, ed 16
Chapter 3: Ecosystems. What are they and how do they work?
Chapter 4: Biodiversity and evolution.
Chapter 5: Biodiversity, Species interactions, and Population control.
Chapter 12: Food, Soil, and Pest management.
Chapter 13: Water resources
Chapter 20: Water pollution
Chapter 15: Nonrenewable energy
Chapter 16: Energy efficiency and renewable energy

The short written examination on March 1 will comprise the chapters mentioned above and the material from the lectures on ecotoxicology.

Homepage http://fy.chalmers.se/~funbd/MV/MVMF-12.htm

Course evaluation according to the principles for master courses in physics at Chalmers.

Bertil Dynefors
tfn 772 3233
email: bertil.dynefors@chalmers.se,
office F8109, level 8, the physics research building