



ILHAM-EC

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Problem-Based Learning and e-Learning Approach for Teaching Soil Science Course

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Outline

- Introduction
- Objectives
- Problem – based learning
- e-Learning
- Course Delivery
- Course Design
- Use of Technology
- Restructuring Lectures
- The Course on Blackboard
- The Course on Moodle



Old Chinese Proverb

Tell me and **I will forget,**
show me and **I may remember,**
involve me and **I will understand!**



Different types of Learning Experiences – Dale's cone

THE LEARNING CONE (EDGAR DALE 1969)





Objectives

1. Increase student motivation and interest in subject areas
2. Increase student recall of knowledge and retention
3. Prepare students to think critically and analytically
4. Development of life-long learning skills



Problem-based learning (PBL) + E-learning

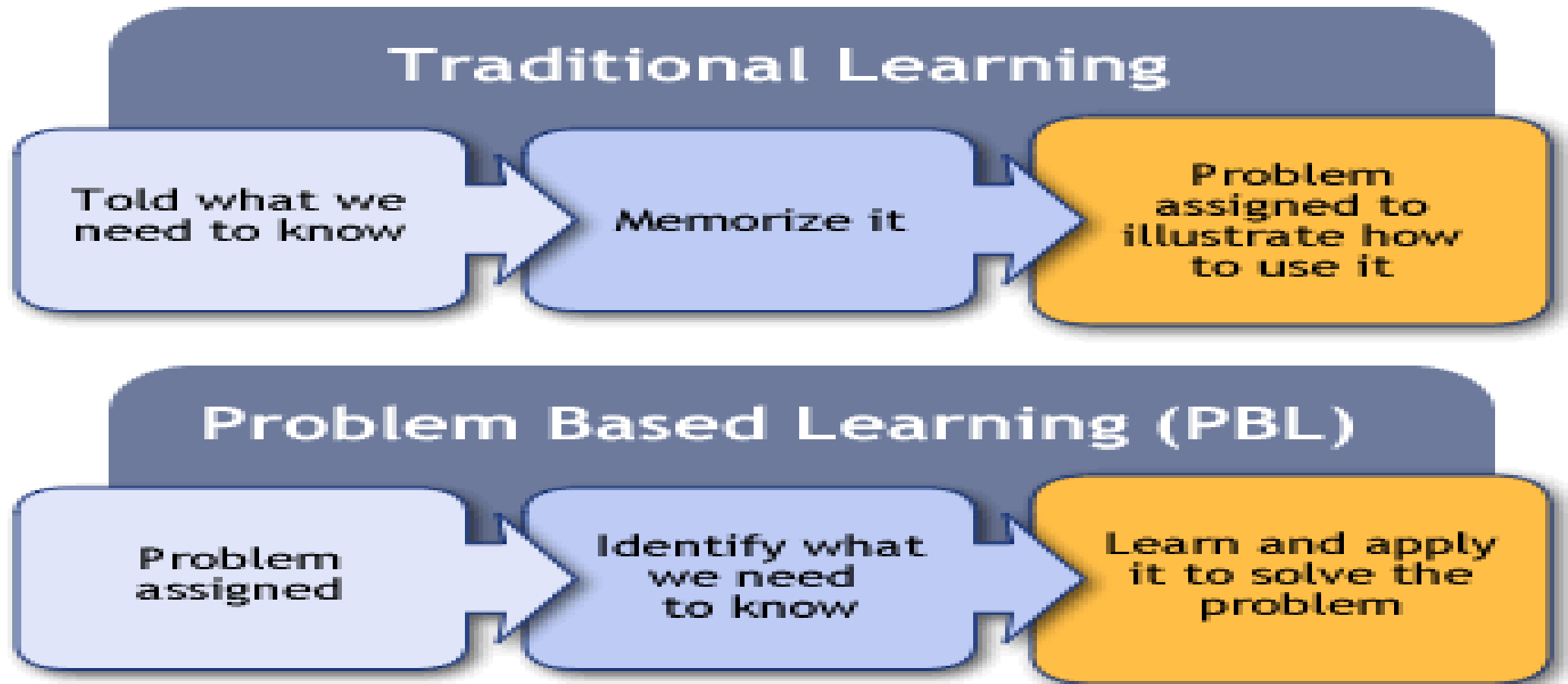


Problem-based learning (PBL)

Problem-based learning (PBL) is an teaching method that challenges students to "learn how to learn," working cooperatively in groups to seek solutions to a problem.



Problem-based learning (PBL)





PBL Process

1. students divided into groups.
2. problem is presented and discussed
3. students identify what is known, what information is needed, and what strategies or next steps to take
4. individuals research different issues, gather resources



PBL Process

5. resources evaluated in group
6. cycle repeats until students feel the problem has been framed adequately and all issues have been addressed
7. possible actions, recommendations, solutions, or hypotheses are generated
8. tutor groups conduct peer/self assessments



Advantages of PBL

1. greater recall of knowledge and retention
2. interdisciplinary, can require accessing and using information from a variety of subject domains; better integration of knowledge
3. development of life-long learning skills: how to research, how to communicate in groups, how to handle problems



Advantages of PBL

4. increased motivation, interest in subject areas
5. increased student-student interaction, and student-instructor interaction
6. PBL prepares students to think critically and analytically, and to find and use appropriate learning resources.



E-Learning

- **Electronic learning** or **E-Learning** is a term used to describe education that takes place using computers, the Internet and other technologies, such as CDs and DVDs.
- Students can experience E-Learning in courses they take on campus or in courses taken through correspondence or another form of distance delivery offering.
- E-Learning can either be synchronous (where students are online all at the same time) or asynchronous (where students are online at different times at their own convenience).



E-Learning

- The E-Learning based courses can illustrate problems effectively and support the communication and collaboration necessary for effective problem solving.



PBL + E-Learning

When we bring PBL and E-Learning together we have an excellent way to get our students using online global knowledge as well as developing the necessary flexible acquiring knowledge skills.



Course Delivery

- Principles of Soil and Water course was developed and delivered on-line employing the Problem-Based Learning as active learning methodology, supported by Blackboard and laptop computer technologies.
- Delivering the course using PBL shifts the focus to student-centred learning by assigning student teams to work and report on a number of current soil science themes.



Course Design

- The course was developed around four learning modules:
 - [Module 1: Soil Genesis](#)
 - [Module 2: Soil physics](#)
 - [Module 3: Soil Mineralogy, Chemistry and Fertility](#)
 - [Module 4: Soil Survey and Classification](#)
- Each learning module was four weeks' duration, except module 4 was two weeks.
- Each module was structured as a short project in which students work to understand, explore, and recommend contributions to soil science goals.



The Structure of Module 1 - Soil Genesis

Week-1	Week-2	Week-3	Week-4
<p><u>Meeting 1</u> Course Introduction</p> <ol style="list-style-type: none"> 1. Introductions 2. Distribute outlines 3. Demonstrate Blackboard Resources 4. Mini-lecture: Introducing Problem-Based Learning 5. Assign PBL readings 	<p><u>Meeting 3</u> Problem Exploration 1</p> <ol style="list-style-type: none"> 1. Team work and consultations <p>* Lab -2</p>	<p><u>Meeting 5</u> Problem Solving 1</p> <ol style="list-style-type: none"> 1. Team work and consultations <p>* Lab -3</p>	<p><u>Meeting 7</u> Outcomes & Solutions</p> <ol style="list-style-type: none"> 1. Team Meetings 2. Student Presentations & Report submission <p>* Lab -4</p>
<p><u>Meeting 2</u> Team formation and Problem Assignment</p> <ol style="list-style-type: none"> 1. Group formation 2. Problem Assignment 3. Team work session 4. Mini-Lecture: Introduction, Ecological Functions, Rocks and Minerals, Chapter 1, 2 and hand out <p>* Lab -1</p>	<p><u>Meeting 4</u> Problem Exploration 2</p> <ol style="list-style-type: none"> 1. Mini-Lecture: Soil Formation, Chapter 4 2. Team work and consultations 	<p><u>Meeting 6</u> Problem Solving 2</p> <ol style="list-style-type: none"> 1. Mini-Lecture: Soil Development, Chapter 4 2. Team work and consultations 	<p><u>Meeting 8</u> Module Test: Chapters 1, 2, 4</p>



Problem of Soil Genesis Module

Problem one: Soil Genesis Module

What are the **soil development consequences** when some area in **arid region** will be **changed from desert land to agricultural land** within the **next century**?



Problem of Soil Genesis Module

Introduction

Soil is a product of the environment. The study of soils in their present stage is of considerable importance to reveal processes and history of soil development. To understand soil development as processes of the past is a necessity in order to predict soil development in the future. Only when the processes are known can the consequences of the intensive use of agricultural land be understood. Detailed knowledge of soil processes is necessary if the consequences of extensive land use changes are to be predicted.

Objectives

Discover the factors and processes of soil formation. Find out why rock and mineral types are important in creating our productive soils. Why are there soil layers and how many are there in soil.



Problem of Soil Genesis Module

Recourses

1. Textbook: Pedosphere and Its Dynamics

Chapters 1, 2 and 4

2. Soil Formation-1

<http://library.thinkquest.org/J003195F/soil.htm>

3. Soil Formation-2

<http://www.harcourtschool.com/activity/dirt/>

4. Soil

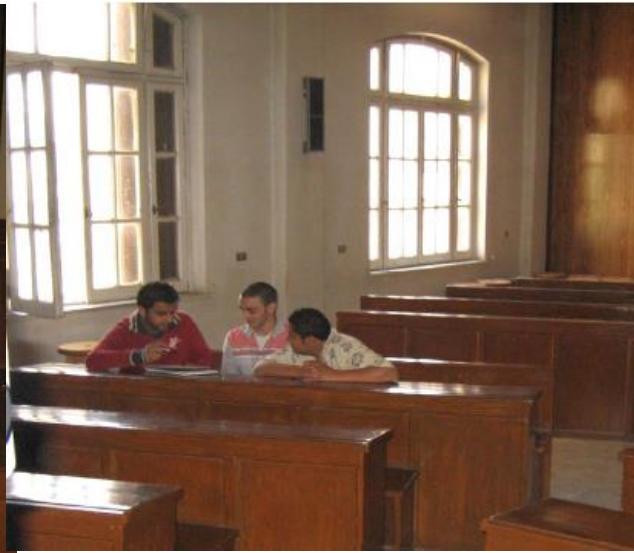
https://blackboard.uaeu.ac.ae/webapps/portal/frameset.jsp?tab=courses&url=/bin/common/course.p_l?course_id=19825

5. Factors Affecting Soil Development

http://www.uwsp.edu/geo/faculty/ritter/geog101/modules/soils/soil_development_soil_forming_factors.html



Problem Group Discussion





Use of Technology

- Blackboard and laptop computer technology have been employed in all class session.
- Many additional technology, activities and resources links have been added to provide depth for student exploration and use following graduation.





Use of Technology

- Additional technology, activities and links include:
 1. educational videos,
 2. internet sites & links and browse documents,
 3. communication/interaction between faculty/students & student/student (using e-mail, new groups, white board and broadcast),
 4. online laboratory skills virtual resources and hands-on experience during the laboratory time,
 5. Net.OP (class management software) for monitoring student activity in class,
 6. PowerPoint for basis of course and student presentations, and
 7. Chime Plug-In for 3-D silicates minerals visualization.



Restructuring Lectures

- The lecture time is 50 min twice a week.
- Based on the activities in each class, the distribution of class time is as follows:
 1. 20 min. mini-lecture or team work,
 2. 15 -20 min. consultation or watching educational videos or/and accessing web sites searching for specific information,
 3. 5-10 min. taking online quizzes,
 4. 5 min. homework/assignment,



Restructuring Lectures

- interacting with instructors or classmate, e-mail, new groups and browse documents, anytime, and
- doing Lab exercises (hands-on experience) during the laboratory time.

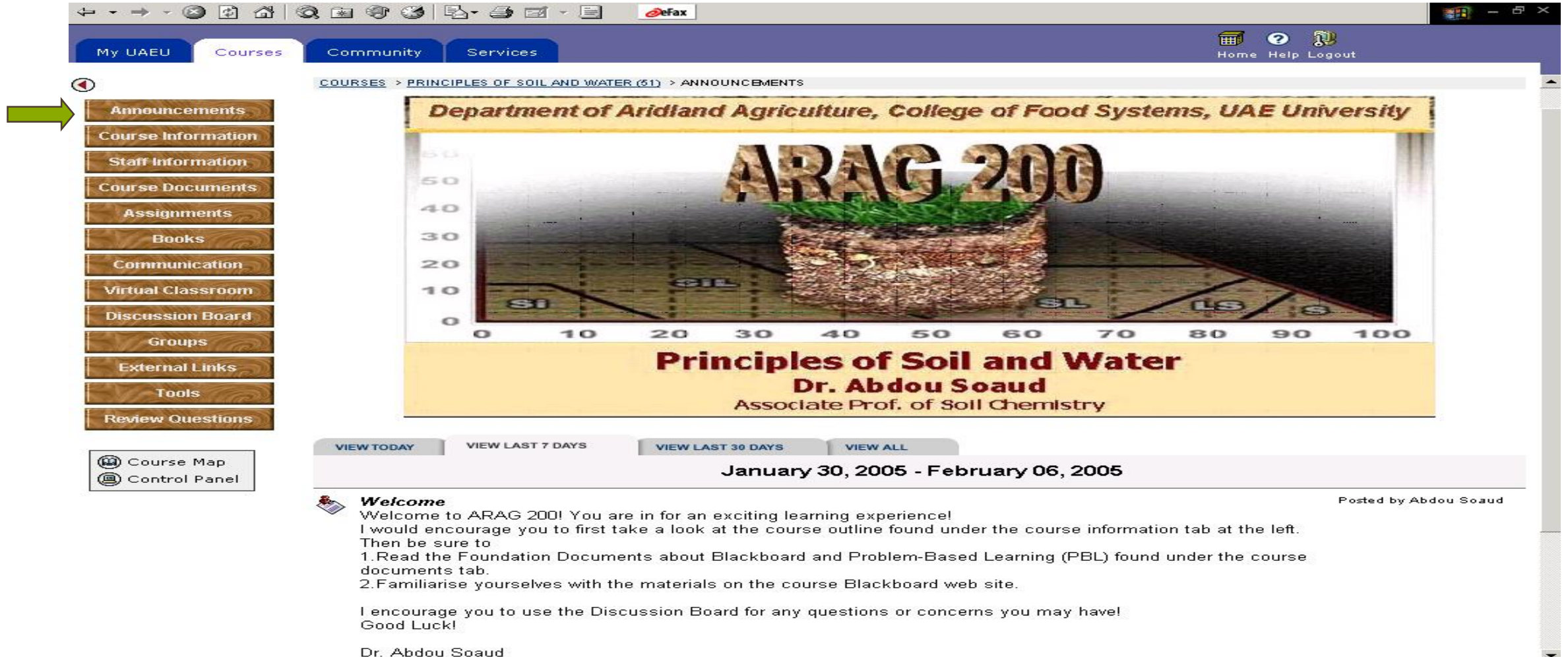


(Problem Solution Presentation)





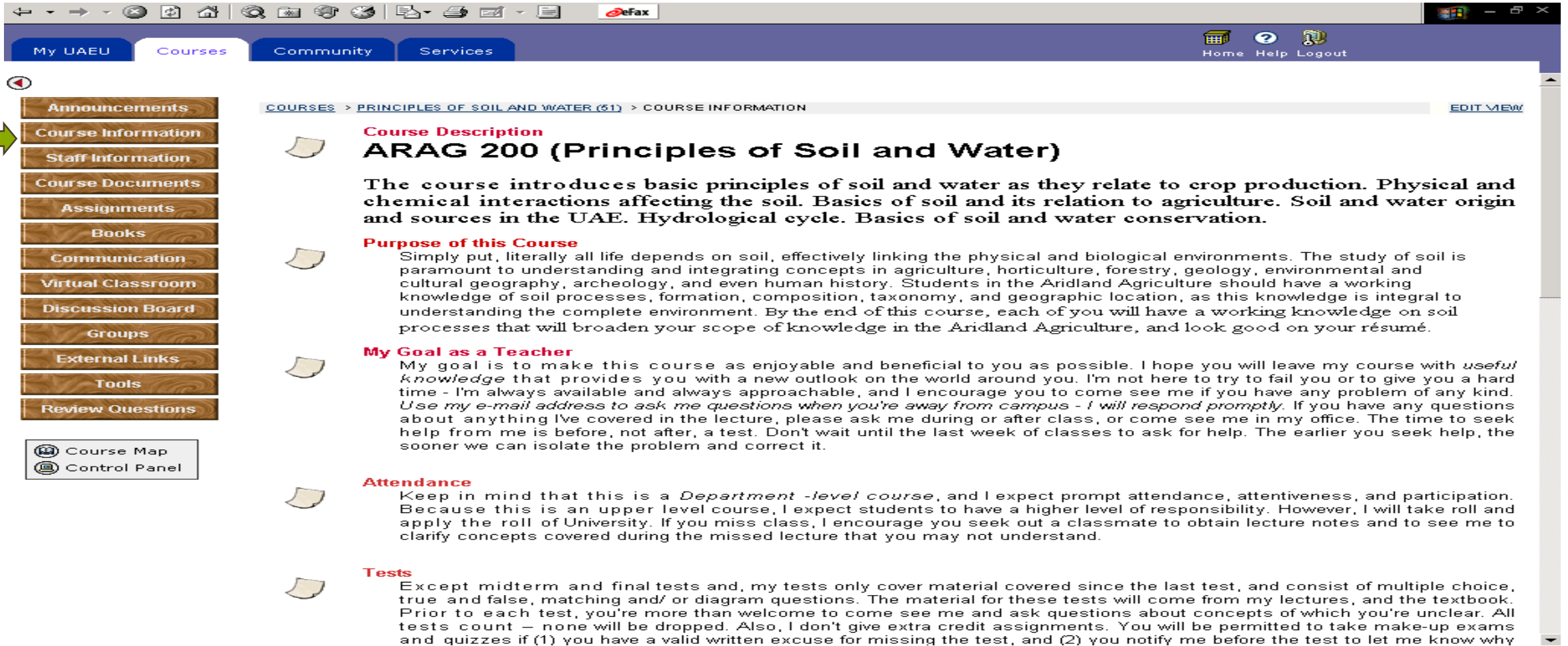
The Course on Blackboard



The screenshot shows a Blackboard course interface. At the top, there are navigation tabs: 'My UAEU', 'Courses', 'Community', and 'Services'. The 'Courses' tab is active. Below the tabs, there are icons for 'Home', 'Help', and 'Logout'. The main content area is titled 'COURSES > PRINCIPLES OF SOIL AND WATER (51) > ANNOUNCEMENTS'. On the left side, there is a vertical menu with the following items: 'Announcements', 'Course Information', 'Staff Information', 'Course Documents', 'Assignments', 'Books', 'Communication', 'Virtual Classroom', 'Discussion Board', 'Groups', 'External Links', 'Tools', and 'Review Questions'. A green arrow points to the 'Announcements' item. Below the menu, there are two icons: 'Course Map' and 'Control Panel'. The main content area features a banner for the 'Department of Aridland Agriculture, College of Food Systems, UAE University'. The banner includes a 3D graphic of a soil core with the text 'ARAG 200' and a line graph showing soil properties. Below the banner, the course title 'Principles of Soil and Water' and the instructor's name 'Dr. Abdou Soaud, Associate Prof. of Soil Chemistry' are displayed. There are four view options: 'VIEW TODAY', 'VIEW LAST 7 DAYS', 'VIEW LAST 30 DAYS', and 'VIEW ALL'. The date range 'January 30, 2005 - February 06, 2005' is shown. A 'Welcome' message from Dr. Abdou Soaud is posted, encouraging students to explore the course information and documents tabs, and to use the Discussion Board for questions. The message is signed 'Dr. Abdou Soaud' and 'Posted by Abdou Soaud'.



The Course on Blackboard



My UAEU Courses Community Services Home Help Logout

[COURSES](#) > [PRINCIPLES OF SOIL AND WATER \(61\)](#) > COURSE INFORMATION [EDIT](#) [VIEW](#)

Course Description
ARAG 200 (Principles of Soil and Water)

The course introduces basic principles of soil and water as they relate to crop production. Physical and chemical interactions affecting the soil. Basics of soil and its relation to agriculture. Soil and water origin and sources in the UAE. Hydrological cycle. Basics of soil and water conservation.

Purpose of this Course
Simply put, literally all life depends on soil, effectively linking the physical and biological environments. The study of soil is paramount to understanding and integrating concepts in agriculture, horticulture, forestry, geology, environmental and cultural geography, archeology, and even human history. Students in the Aridland Agriculture should have a working knowledge of soil processes, formation, composition, taxonomy, and geographic location, as this knowledge is integral to understanding the complete environment. By the end of this course, each of you will have a working knowledge on soil processes that will broaden your scope of knowledge in the Aridland Agriculture, and look good on your résumé.

My Goal as a Teacher
My goal is to make this course as enjoyable and beneficial to you as possible. I hope you will leave my course with *useful knowledge* that provides you with a new outlook on the world around you. I'm not here to try to fail you or to give you a hard time - I'm always available and always approachable, and I encourage you to come see me if you have any problem of any kind. *Use my e-mail address to ask me questions when you're away from campus - I will respond promptly.* If you have any questions about anything I've covered in the lecture, please ask me during or after class, or come see me in my office. The time to seek help from me is before, not after, a test. Don't wait until the last week of classes to ask for help. The earlier you seek help, the sooner we can isolate the problem and correct it.

Attendance
Keep in mind that this is a *Department -level course*, and I expect prompt attendance, attentiveness, and participation. Because this is an upper level course, I expect students to have a higher level of responsibility. However, I will take roll and apply the roll of University. If you miss class, I encourage you seek out a classmate to obtain lecture notes and to see me to clarify concepts covered during the missed lecture that you may not understand.

Tests
Except midterm and final tests and, my tests only cover material covered since the last test, and consist of multiple choice, true and false, matching and/ or diagram questions. The material for these tests will come from my lectures, and the textbook. Prior to each test, you're more than welcome to come see me and ask questions about concepts of which you're unclear. All tests count – none will be dropped. Also, I don't give extra credit assignments. You will be permitted to take make-up exams and quizzes if (1) you have a valid written excuse for missing the test, and (2) you notify me before the test to let me know why



The Course on Blackboard



My UAEU Courses Community Services Home Help Logout

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 The comprehensive midterm and final test will be given only on the test dates given in this syllabus.

Laboratory
 We'll have a soils laboratory every week. These labs will consist of a short introductory lecture to the topic, followed by a demonstration of the technique by Co-Instructor and application of the technique by you. **All lab assignments are due at the beginning of the next lab. If you do not turn in your assignment by 12 : 00 that day, a point is deducted for each day it is late.**

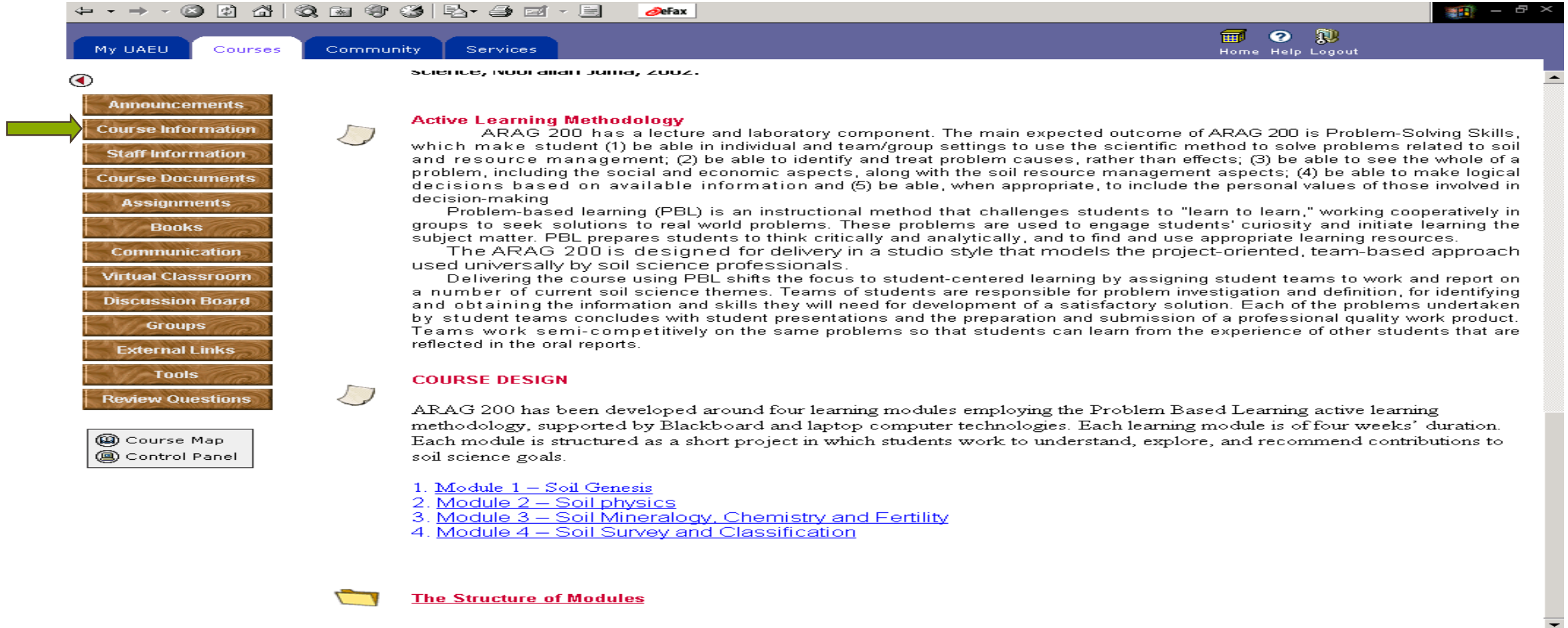
Course Content
 Course_Content.doc (146944 Bytes)
 Most material for my lectures will be taken directly from the textbook. The material for laboratory lecture and exercises will come from handouts. Try to read the material prior to the scheduled lecture, and you'll find that taking notes will be *much* easier. I encourage you to ask questions, to stop my lecture if you don't understand a concept, and to participate in any class discussions.

Text Book
The pedosphere and it's dynamics : Introduction to soil science and soil resources. A systems approach to soil science, Noorallah Juma, 2002.

Active Learning Methodology
 ARAG 200 has a lecture and laboratory component. The main expected outcome of ARAG 200 is Problem-Solving Skills, which make student (1) be able in individual and team/group settings to use the scientific method to solve problems related to soil and resource management; (2) be able to identify and treat problem causes, rather than effects; (3) be able to see the whole of a problem, including the social and economic aspects, along with the soil resource management aspects; (4) be able to make logical decisions based on available information and (5) be able, when appropriate, to include the personal values of those involved in decision-making
 Problem-based learning (PBL) is an instructional method that challenges students to "learn to learn," working cooperatively in



The Course on Blackboard



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Active Learning Methodology

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Problem-based learning (PBL) is an instructional method that challenges students to "learn to learn," working cooperatively in groups to seek solutions to real world problems. These problems are used to engage students' curiosity and initiate learning the subject matter. PBL prepares students to think critically and analytically, and to find and use appropriate learning resources.

The ARAG 200 is designed for delivery in a studio style that models the project-oriented, team-based approach used universally by soil science professionals.

Delivering the course using PBL shifts the focus to student-centered learning by assigning student teams to work and report on a number of current soil science themes. Teams of students are responsible for problem investigation and definition, for identifying and obtaining the information and skills they will need for development of a satisfactory solution. Each of the problems undertaken by student teams concludes with student presentations and the preparation and submission of a professional quality work product. Teams work semi-competitively on the same problems so that students can learn from the experience of other students that are reflected in the oral reports.

COURSE DESIGN

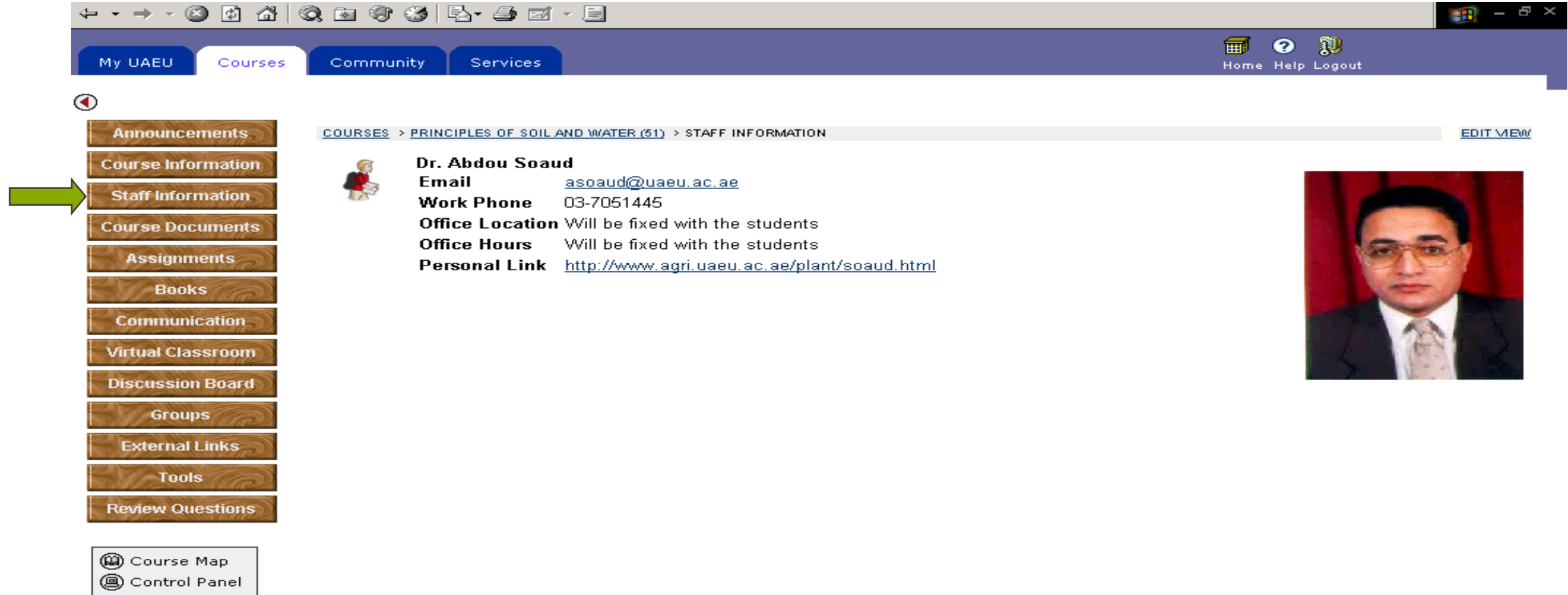
ARAG 200 has been developed around four learning modules employing the Problem Based Learning active learning methodology, supported by Blackboard and laptop computer technologies. Each learning module is of four weeks' duration. Each module is structured as a short project in which students work to understand, explore, and recommend contributions to soil science goals.

1. [Module 1 – Soil Genesis](#)
2. [Module 2 – Soil physics](#)
3. [Module 3 – Soil Mineralogy, Chemistry and Fertility](#)
4. [Module 4 – Soil Survey and Classification](#)

The Structure of Modules



The Course on Blackboard





My UAEU Courses Community Services Home Help Logout

Announcements
Course Information
Staff Information
Course Documents
Assignments
Books
Communication
Virtual Classroom
Discussion Board
Groups
External Links
Tools
Review Questions

Course Map
Control Panel

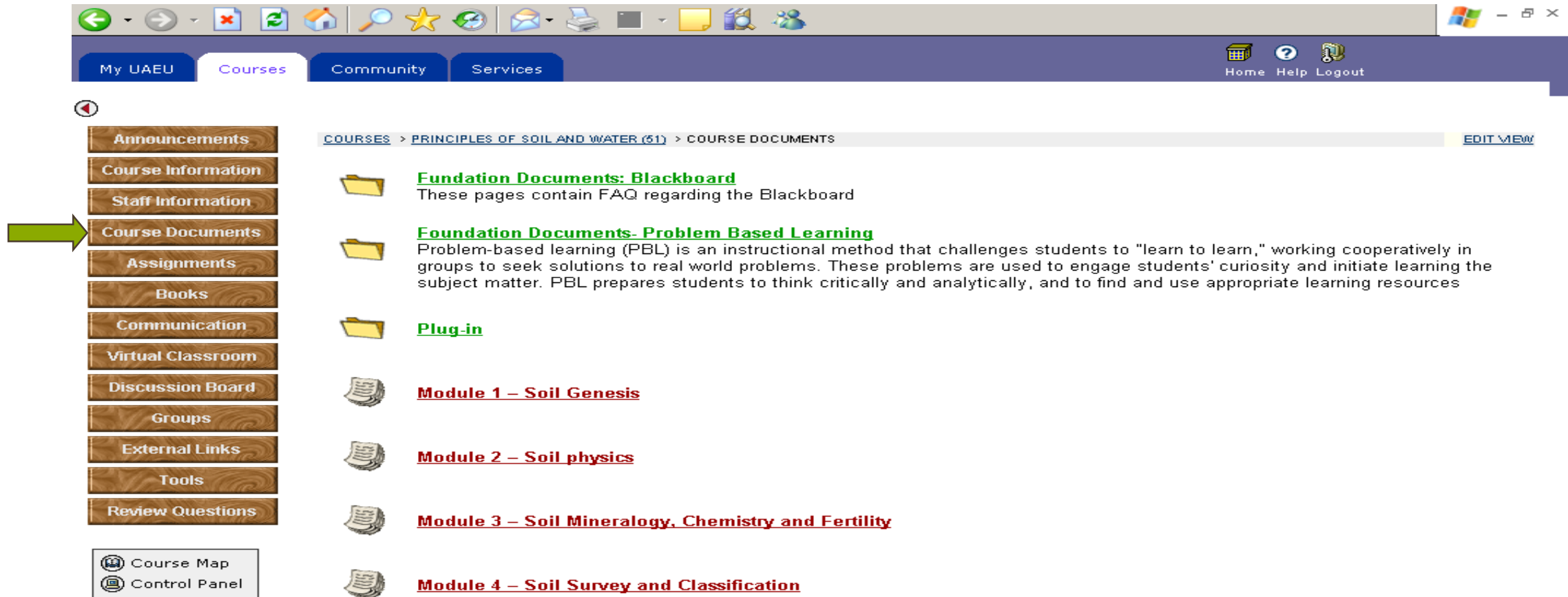
COURSES > PRINCIPLES OF SOIL AND WATER (51) > STAFF INFORMATION [EDIT VIEW](#)

 **Dr. Abdou Soaud**
Email asoaud@uaeu.ac.ae
Work Phone 03-7051445
Office Location Will be fixed with the students
Office Hours Will be fixed with the students
Personal Link <http://www.agri.uaeu.ac.ae/plant/soaud.html>





The Course on Blackboard



My UAEU Courses Community Services Home Help Logout

COURSES > PRINCIPLES OF SOIL AND WATER (51) > COURSE DOCUMENTS [EDIT VIEW](#)

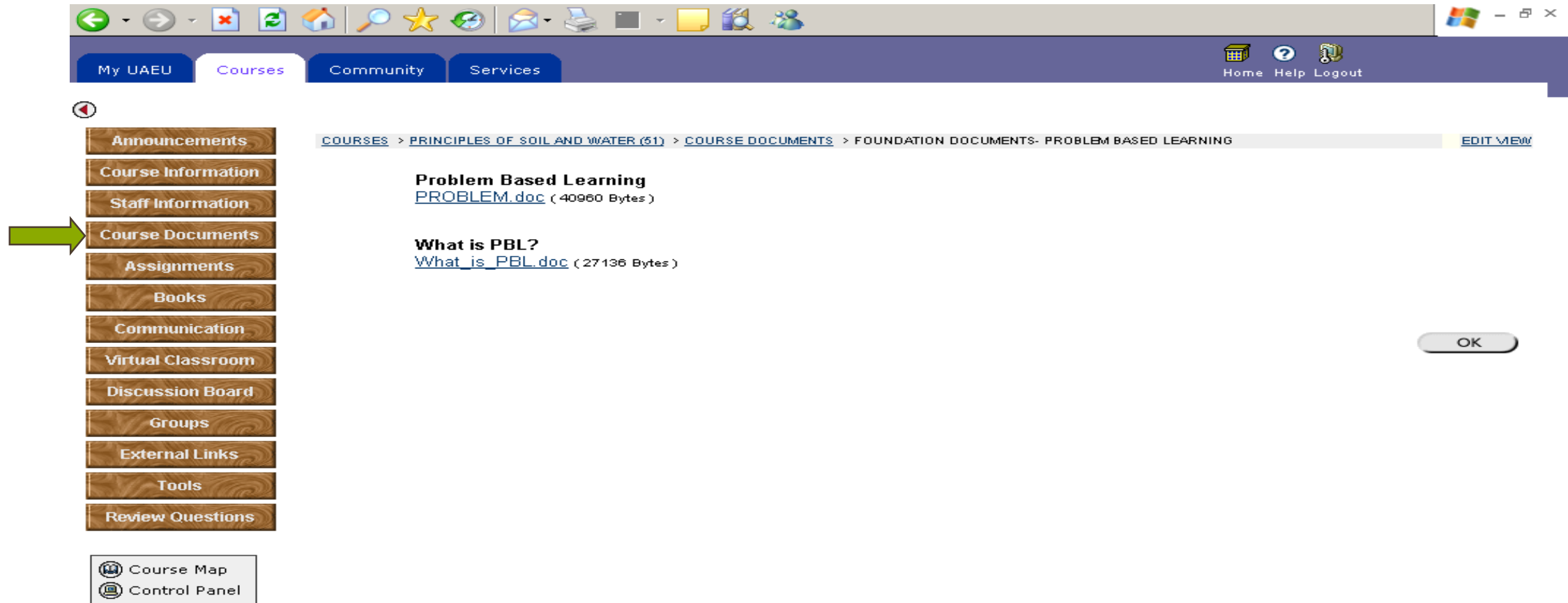
- Announcements**
- Course Information**
- Staff Information**
- Course Documents**
- Assignments**
- Books**
- Communication**
- Virtual Classroom**
- Discussion Board**
- Groups**
- External Links**
- Tools**
- Review Questions**

Course Map Control Panel

- Foundation Documents: Blackboard**
These pages contain FAQ regarding the Blackboard
- Foundation Documents- Problem Based Learning**
Problem-based learning (PBL) is an instructional method that challenges students to "learn to learn," working cooperatively in groups to seek solutions to real world problems. These problems are used to engage students' curiosity and initiate learning the subject matter. PBL prepares students to think critically and analytically, and to find and use appropriate learning resources
- Plug-in**
- Module 1 – Soil Genesis**
- Module 2 – Soil physics**
- Module 3 – Soil Mineralogy, Chemistry and Fertility**
- Module 4 – Soil Survey and Classification**



The Course on Blackboard



The screenshot shows a Blackboard course interface. At the top, there is a navigation bar with tabs for 'My UAEU', 'Courses', 'Community', and 'Services'. On the right side of this bar are links for 'Home', 'Help', and 'Logout'. Below the navigation bar is a breadcrumb trail: 'COURSES > PRINCIPLES OF SOIL AND WATER (51) > COURSE DOCUMENTS > FOUNDATION DOCUMENTS- PROBLEM BASED LEARNING'. An 'EDIT VIEW' link is visible at the end of the breadcrumb. The main content area displays two documents:

- Problem Based Learning**
[PROBLEM.doc](#) (40960 Bytes)
- What is PBL?**
[What_is_PBL.doc](#) (27136 Bytes)

On the left side, there is a vertical sidebar menu with the following items: Announcements, Course Information, Staff Information, **Course Documents** (highlighted with a green arrow), Assignments, Books, Communication, Virtual Classroom, Discussion Board, Groups, External Links, Tools, and Review Questions. Below the sidebar menu are two icons: 'Course Map' and 'Control Panel'. An 'OK' button is located in the bottom right corner of the main content area.



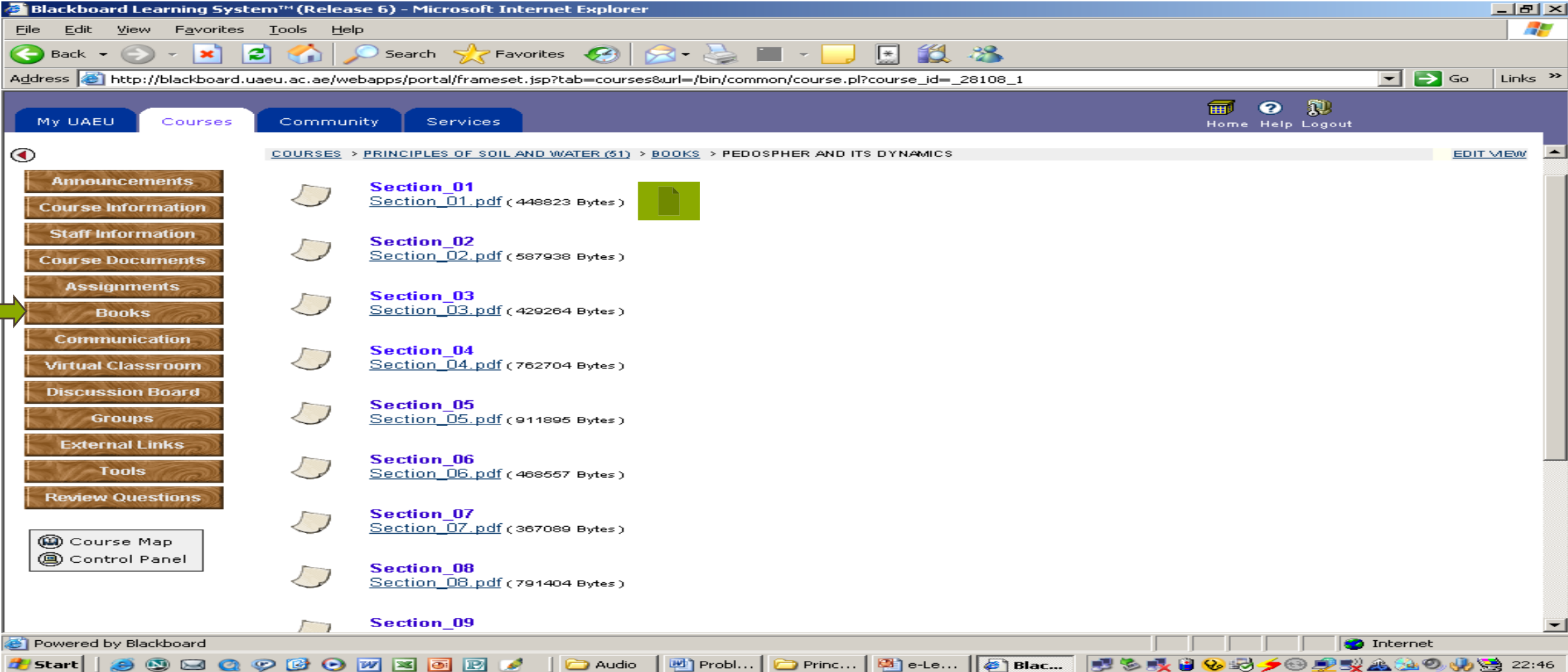
The Course on Blackboard



The screenshot shows a Blackboard course interface. At the top, there is a navigation bar with tabs for 'My UAEU', 'Courses', 'Community', and 'Services'. Below this is a breadcrumb trail: 'COURSES > PRINCIPLES OF SOIL AND WATER (51) > COURSE DOCUMENTS > MODULE 1 – SOIL GENESIS > CONTENTS'. A left-hand navigation menu contains several items: 'Announcements', 'Course Information', 'Staff Information', 'Course Documents' (highlighted with a green arrow), 'Assignments', 'Books', 'Communication', 'Virtual Classroom', 'Discussion Board', 'Groups', 'External Links', 'Tools', and 'Review Questions'. Below the menu are icons for 'Course Map' and 'Control Panel'. The main content area is titled 'CONTENTS' and lists eight items, each with a document icon: '1. Structure of Module-1', '2. Problem-1', '3. Lecture 1: What is soil' (with a green document icon), '4. Lecture 2: Rocks and Minerals', '5. Lecture 3: Soil Forming Process', '6. Lecture 4: Soil Forming Factors', '7. Lecture 5: Soil Development & Profile', and '8. Weathring and Soil'. A 'Return' button is visible at the bottom right.



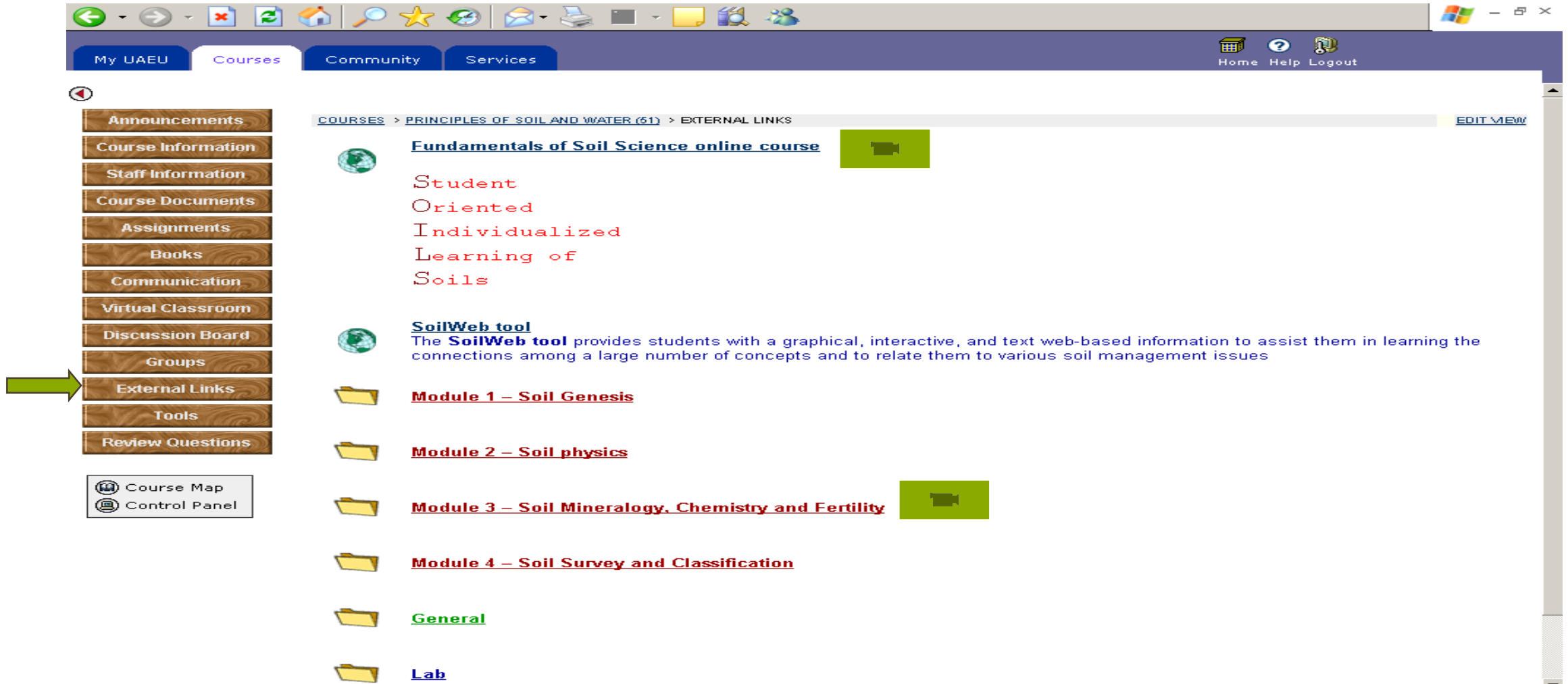
The Course on Blackboard



The screenshot displays the Blackboard Learning System interface within a Microsoft Internet Explorer browser window. The browser's address bar shows the URL: `http://blackboard.uaeu.ac.ae/webapps/portal/frameset.jsp?tab=courses&url=/bin/common/course.pl?course_id=_28108_1`. The page features a navigation menu on the left with items such as Announcements, Course Information, Staff Information, Course Documents, Assignments, Books, Communication, Virtual Classroom, Discussion Board, Groups, External Links, Tools, and Review Questions. A green arrow points to the 'Books' item in this menu. The main content area shows a breadcrumb trail: COURSES > PRINCIPLES OF SOIL AND WATER (61) > BOOKS > PEDOSPHER AND ITS DYNAMICS. Below this, a list of sections is displayed, each with a PDF icon and a file name: Section_01 (Section_01.pdf, 448823 Bytes), Section_02 (Section_02.pdf, 587938 Bytes), Section_03 (Section_03.pdf, 429264 Bytes), Section_04 (Section_04.pdf, 762704 Bytes), Section_05 (Section_05.pdf, 911895 Bytes), Section_06 (Section_06.pdf, 468557 Bytes), Section_07 (Section_07.pdf, 367089 Bytes), Section_08 (Section_08.pdf, 791404 Bytes), and Section_09. The bottom of the browser window shows the Windows taskbar with the Start button and various application icons, including Audio, Probl..., Princ..., e-Le..., and Blac... The system clock indicates the time is 22:46.



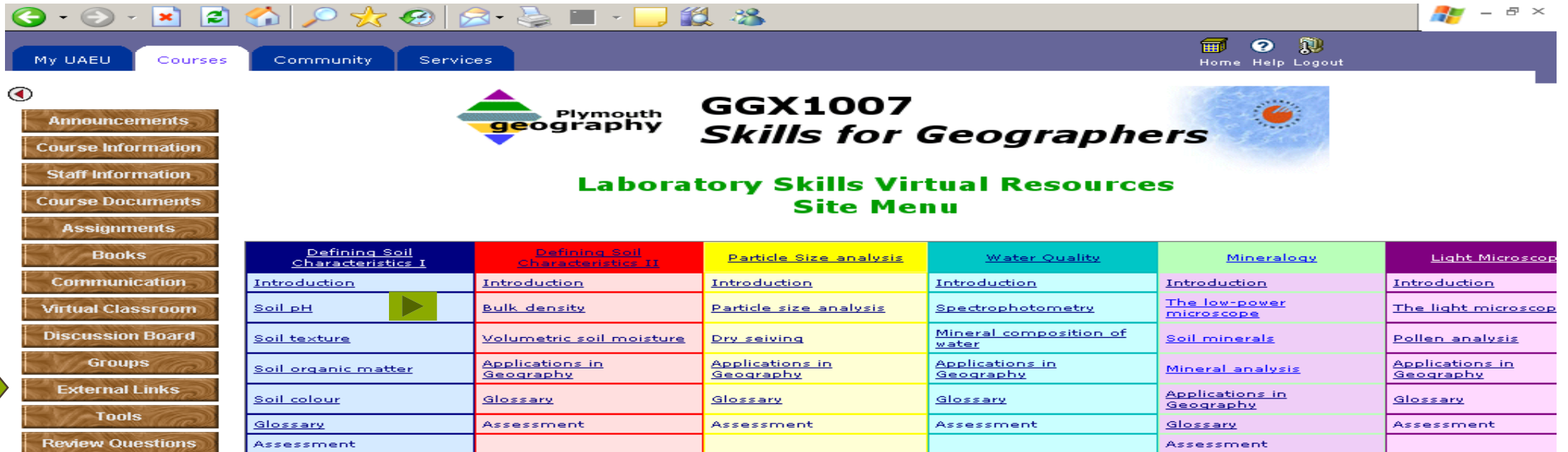
The Course on Blackboard



The screenshot shows a Blackboard course interface. The top navigation bar includes 'My UAEU', 'Courses', 'Community', and 'Services'. The main content area is titled 'COURSES > PRINCIPLES OF SOIL AND WATER (61) > EXTERNAL LINKS'. A green arrow points to the 'External Links' menu item in the left sidebar. The main content area lists several external links and modules:

- Fundamentals of Soil Science online course** (with a video icon)
- Student Oriented Individualized Learning of Soils**
- SoilWeb tool**: The **SoilWeb tool** provides students with a graphical, interactive, and text web-based information to assist them in learning the connections among a large number of concepts and to relate them to various soil management issues
- Module 1 – Soil Genesis**
- Module 2 – Soil physics**
- Module 3 – Soil Mineralogy, Chemistry and Fertility** (with a video icon)
- Module 4 – Soil Survey and Classification**
- General**
- Lab**

The Course on Blackboard



My UAEU Courses Community Services Home Help Logout

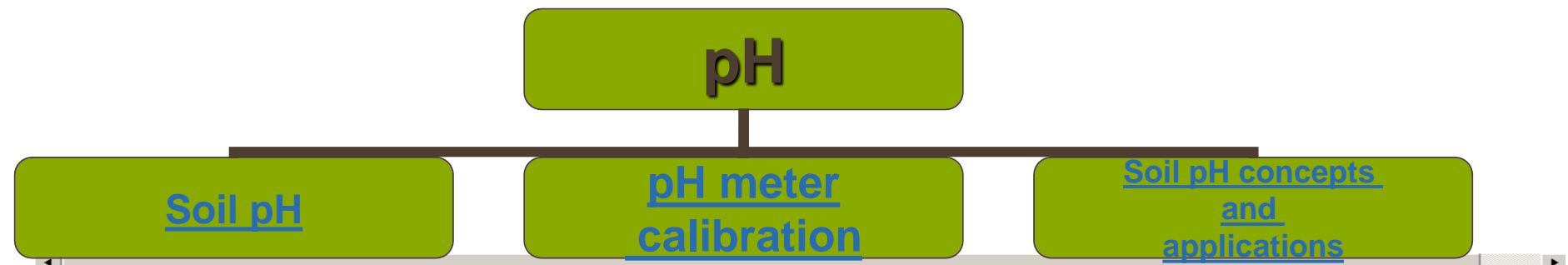
Plymouth geography **GGX1007 Skills for Geographers**

Laboratory Skills Virtual Resources Site Menu

Defining Soil Characteristics I	Defining Soil Characteristics II	Particle Size analysis	Water Quality	Mineralogy	Light Microscopy
Introduction	Introduction	Introduction	Introduction	Introduction	Introduction
Soil pH	Bulk density	Particle size analysis	Spectrophotometry	The low-power microscope	The light microscope
Soil texture	Volumetric soil moisture	Dry sieving	Mineral composition of water	Soil minerals	Pollen analysis
Soil organic matter	Applications in Geography	Applications in Geography	Applications in Geography	Mineral analysis	Applications in Geography
Soil colour	Glossary	Glossary	Glossary	Applications in Geography	Glossary
Glossary	Assessment	Assessment	Assessment	Glossary	Assessment
Assessment				Assessment	

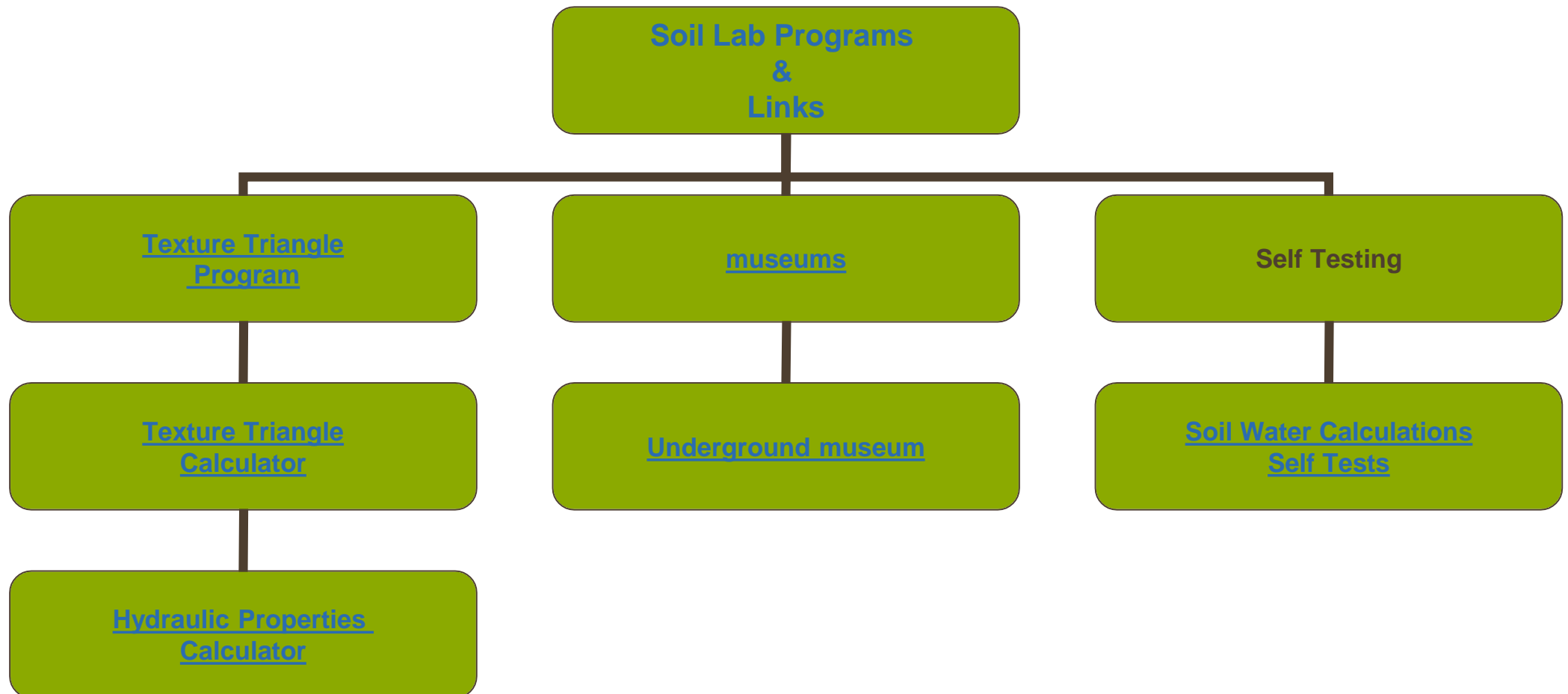


-  Course Map
-  Control Panel





The Course on Blackboard





The Course on Blackboard



SOIL FORMATION ACTIVITY I – SOIL COMPOSITION

LAYER NAME	AMOUNT OF HUMUS	DESCRIPTION
?	?	?
?	?	?
?	?	?
SOLID ROCK	SUBSOIL	VERY LITTLE HUMUS
MOST HUMUS	MEDIUM-SIZED GRAINS	NO HUMUS
RICHEST LAYER	TOPSOIL	BEDROCK

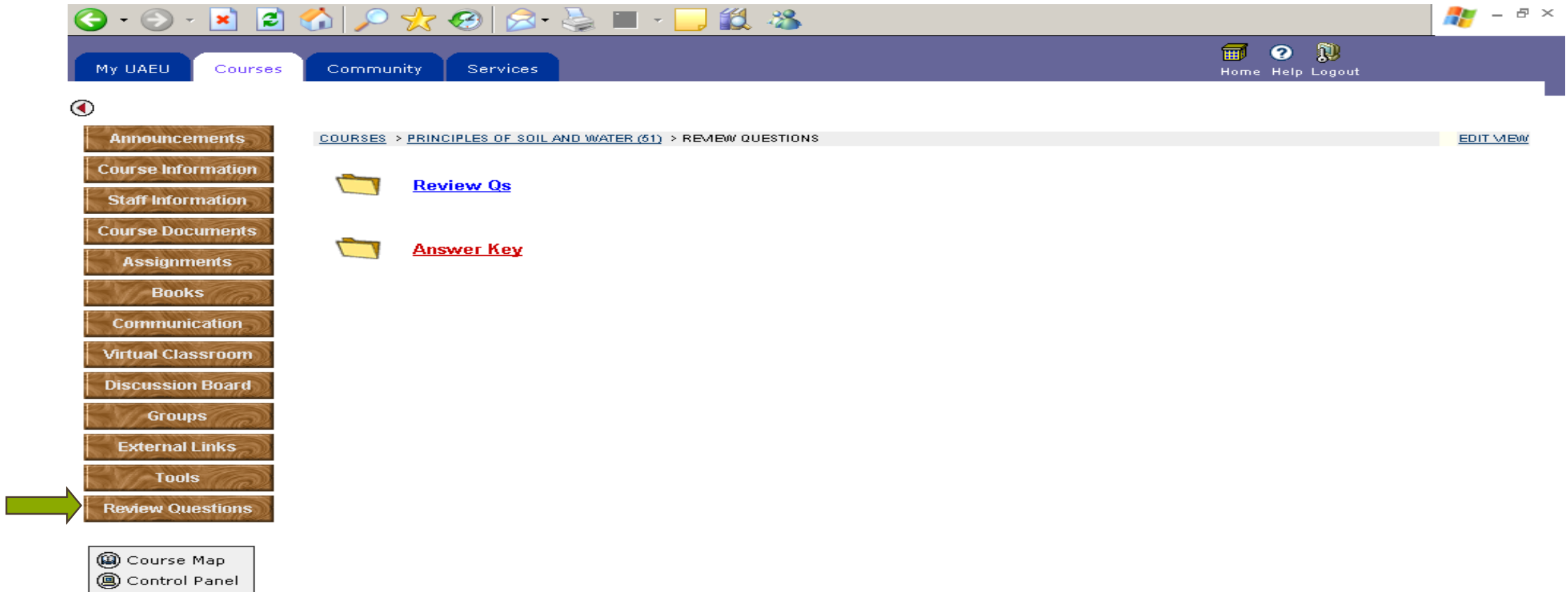
MENU LEARN MORE INSTRUCTIONS

SOIL FORMATION ACTIVITY II – SOIL FORMATION

?	?	?	MENU
?	?	?	
			LEARN MORE
			INSTRUCTIONS



The Course on Blackboard





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COURSES > PRINCIPLES OF SOIL AND WATER (61) > REVIEW QUESTIONS [EDIT VIEW](#)

 [Review Qs](#)

 [Answer Key](#)



The Course on Blackboard



The screenshot shows a Blackboard course interface. At the top, there are navigation tabs: "My UAEU", "Courses" (selected), "Community", and "Services". On the right, there are icons for "Home", "Help", and "Logout".

On the left side, there is a vertical menu with the following items: "Announcements", "Course Information", "Staff Information", "Course Documents", "Assignments", "Books", "Communication", "Virtual Classroom", "Discussion Board", "Groups", "External Links", "Tools", and "Review Questions". A green arrow points to the "Review Questions" item.

Below the menu, there are two options: "Course Map" and "Control Panel".

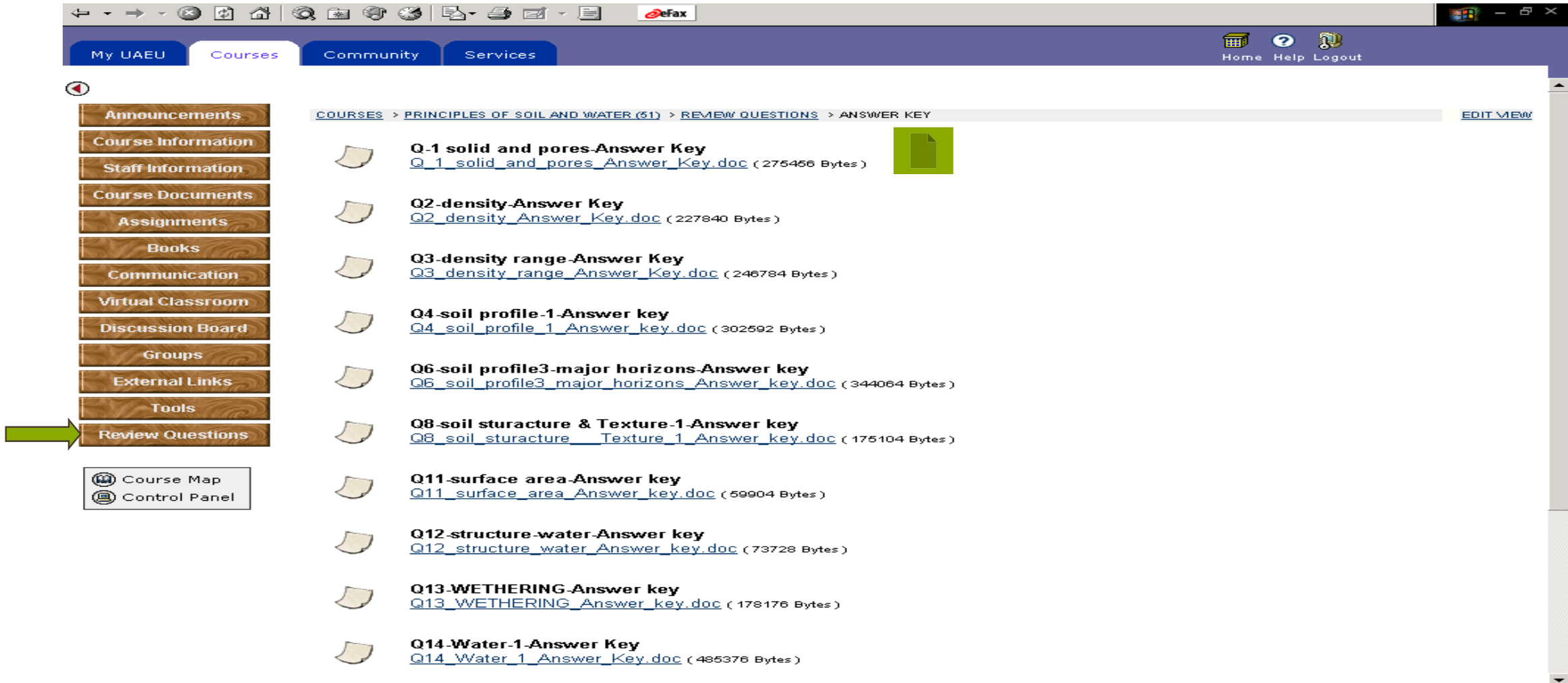
The main content area shows a breadcrumb trail: "COURSES > PRINCIPLES OF SOIL AND WATER (61) > REVIEW QUESTIONS > REVIEW QS". There is an "EDIT VIEW" link on the right.

The main content area displays a list of review questions, each with a document icon and a file name with its size in bytes:

- Q-1 solid and pores**
[Q_1_solid_and_pores.doc](#) (275466 Bytes)
- Q2-density**
[Q2_density.doc](#) (227840 Bytes)
- Q3-density range**
[Q3_density_range.doc](#) (161792 Bytes)
- Q4-soil profile-1**
[Q4_soil_profile_1.doc](#) (198144 Bytes)
- Q6-soil profile3-major horizons**
[Q6_soil_profile3_major_horizons.doc](#) (223232 Bytes)
- Q8-soil structure & Texture-1**
[Q8_soil_structure__Texture_1.doc](#) (116736 Bytes)
- Q11-surface area**
[Q11_surface_area.doc](#) (47616 Bytes)
- Q12-structure-water**
[Q12_structure_water.doc](#) (56832 Bytes)
- Q13-WETHERING**
[Q13_WETHERING.doc](#) (120832 Bytes)
- Q14-Water-1**
[Q14_Water_1.doc](#) (486912 Bytes)



The Course on Blackboard

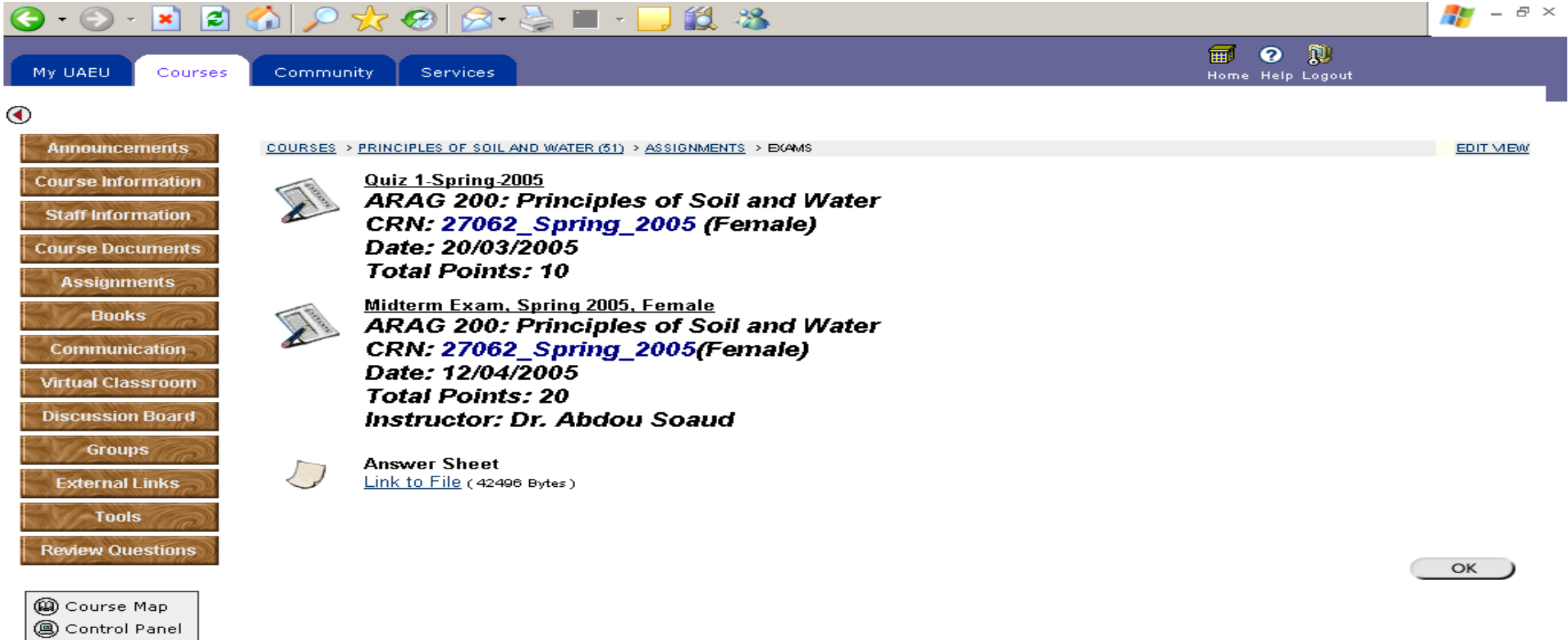


The screenshot shows a Blackboard course interface. At the top, there are navigation tabs: "My UAEU", "Courses" (selected), "Community", and "Services". On the right, there are links for "Home", "Help", and "Logout". A left-hand navigation menu contains several categories: "Announcements", "Course Information", "Staff Information", "Course Documents", "Assignments", "Books", "Communication", "Virtual Classroom", "Discussion Board", "Groups", "External Links", "Tools", and "Review Questions" (highlighted with a green arrow). Below the menu are "Course Map" and "Control Panel" options. The main content area displays a breadcrumb trail: "COURSES > PRINCIPLES OF SOIL AND WATER (51) > REVIEW QUESTIONS > ANSWER KEY". A list of answer keys is shown, each with a document icon, a title, a link to the document, and its size in bytes:

- Q-1 solid and pores-Answer Key**
[Q_1_solid_and_pores_Answer_Key.doc](#) (275456 Bytes)
- Q2-density-Answer Key**
[Q2_density_Answer_Key.doc](#) (227840 Bytes)
- Q3-density range-Answer Key**
[Q3_density_range_Answer_Key.doc](#) (246784 Bytes)
- Q4-soil profile-1-Answer key**
[Q4_soil_profile_1_Answer_key.doc](#) (302592 Bytes)
- Q6-soil profile3-major horizons-Answer key**
[Q6_soil_profile3_major_horizons_Answer_key.doc](#) (344064 Bytes)
- Q8-soil sturacture & Texture-1-Answer key**
[Q8_soil_sturacture_Texture_1_Answer_key.doc](#) (175104 Bytes)
- Q11-surface area-Answer key**
[Q11_surface_area_Answer_key.doc](#) (59904 Bytes)
- Q12-structure-water-Answer key**
[Q12_structure_water_Answer_key.doc](#) (73728 Bytes)
- Q13-WETHERING-Answer key**
[Q13_WETHERING_Answer_key.doc](#) (178176 Bytes)
- Q14-Water-1-Answer Key**
[Q14_Water_1_Answer_Key.doc](#) (485376 Bytes)



The Course on Blackboard



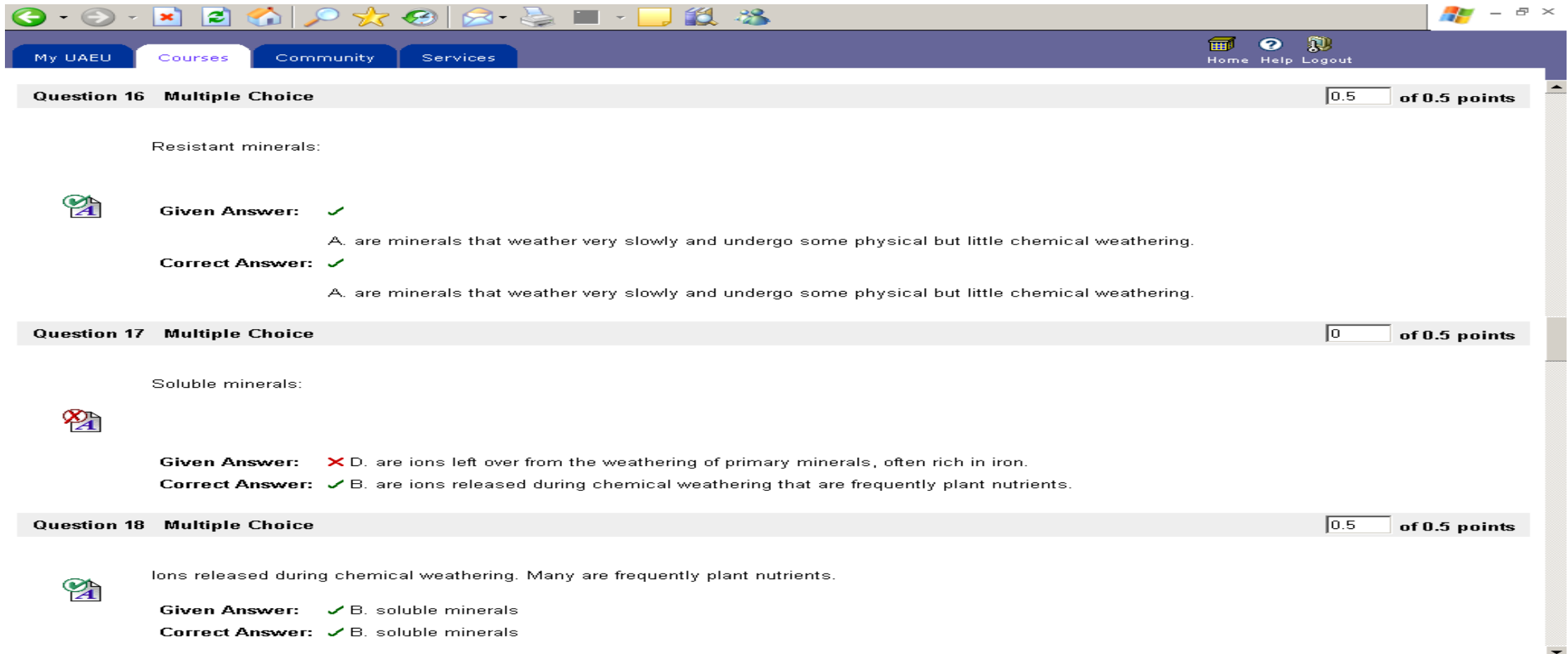
The screenshot shows a Blackboard course interface. At the top, there is a navigation bar with tabs for 'My UAEU', 'Courses', 'Community', and 'Services'. On the right of this bar are links for 'Home', 'Help', and 'Logout'. Below the navigation bar is a breadcrumb trail: 'COURSES > PRINCIPLES OF SOIL AND WATER (61) > ASSIGNMENTS > EXAMS'. A left-hand menu contains various course-related options: Announcements, Course Information, Staff Information, Course Documents, Assignments, Books, Communication, Virtual Classroom, Discussion Board, Groups, External Links, Tools, and Review Questions. At the bottom left of this menu are 'Course Map' and 'Control Panel' buttons. The main content area displays three items:

- Quiz 1-Spring-2005**
ARAG 200: Principles of Soil and Water
CRN: 27062_Spring_2005 (Female)
Date: 20/03/2005
Total Points: 10
- Midterm Exam, Spring 2005, Female**
ARAG 200: Principles of Soil and Water
CRN: 27062_Spring_2005(Female)
Date: 12/04/2005
Total Points: 20
Instructor: Dr. Abdou Soaud
- Answer Sheet**
[Link to File](#) (42496 Bytes)

An 'OK' button is located at the bottom right of the page.



The Course on Blackboard



The screenshot shows a Blackboard course interface with three multiple choice questions. The top navigation bar includes 'My UAEU', 'Courses', 'Community', and 'Services'. The right side has 'Home', 'Help', and 'Logout' links. The first question, 'Question 16', is worth 0.5 points and asks for 'Resistant minerals'. The 'Given Answer' and 'Correct Answer' are both 'A. are minerals that weather very slowly and undergo some physical but little chemical weathering.' The second question, 'Question 17', is worth 0 points and asks for 'Soluble minerals'. The 'Given Answer' is 'D. are ions left over from the weathering of primary minerals, often rich in iron.' and the 'Correct Answer' is 'B. are ions released during chemical weathering that are frequently plant nutrients.' The third question, 'Question 18', is worth 0.5 points and asks for 'Ions released during chemical weathering. Many are frequently plant nutrients.' The 'Given Answer' and 'Correct Answer' are both 'B. soluble minerals'.

Question 16 Multiple Choice 0.5 of 0.5 points

Resistant minerals:

Given Answer: ✓

Correct Answer: ✓

A. are minerals that weather very slowly and undergo some physical but little chemical weathering.

A. are minerals that weather very slowly and undergo some physical but little chemical weathering.

Question 17 Multiple Choice 0 of 0.5 points

Soluble minerals:

Given Answer: ✗ D. are ions left over from the weathering of primary minerals, often rich in iron.

Correct Answer: ✓ B. are ions released during chemical weathering that are frequently plant nutrients.

Question 18 Multiple Choice 0.5 of 0.5 points

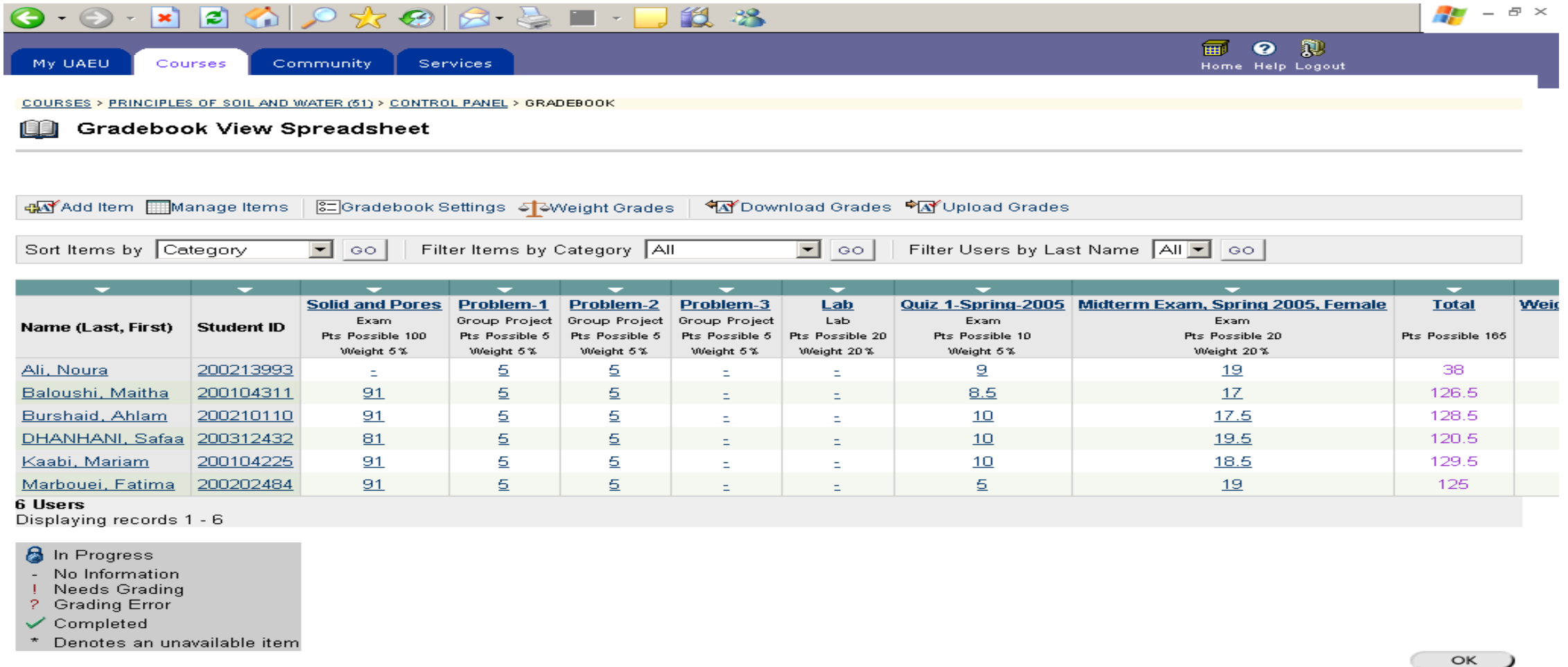
Ions released during chemical weathering. Many are frequently plant nutrients.

Given Answer: ✓ B. soluble minerals

Correct Answer: ✓ B. soluble minerals



The Course on Blackboard



My UAEU Courses Community Services Home Help Logout

COURSES > PRINCIPLES OF SOIL AND WATER (61) > CONTROL PANEL > GRADEBOOK

Gradebook View Spreadsheet

Add Item Manage Items Gradebook Settings Weight Grades Download Grades Upload Grades

Sort Items by GO Filter Items by Category GO Filter Users by Last Name GO

Name (Last, First)	Student ID	Solid and Pores Exam Pts Possible 100 Weight 5%	Problem-1 Group Project Pts Possible 5 Weight 5%	Problem-2 Group Project Pts Possible 5 Weight 5%	Problem-3 Group Project Pts Possible 5 Weight 5%	Lab Lab Pts Possible 20 Weight 20%	Quiz 1-Spring-2005 Exam Pts Possible 10 Weight 5%	Midterm Exam, Spring 2005, Female Exam Pts Possible 20 Weight 20%	Total Pts Possible 165	Weight
Ali, Noura	200213993	-	5	5	-	-	9	19	38	
Baloushi, Maitha	200104311	91	5	5	-	-	8.5	17	126.5	
Burshaid, Ahlam	200210110	91	5	5	-	-	10	17.5	128.5	
DHANHANI, Safaa	200312432	81	5	5	-	-	10	19.5	120.5	
Kaabi, Mariam	200104225	91	5	5	-	-	10	18.5	129.5	
Marbouei, Fatima	200202484	91	5	5	-	-	5	19	125	

6 Users
Displaying records 1 - 6

- In Progress
- No Information
- Needs Grading
- Grading Error
- Completed
- * Denotes an unavailable item

OK



The Course on Blackboard

Class Management out of Class





Class Management out of Class

Announcements

Student Duties on Sunday 24 April, 2005

Posted by
Abdou
Soaud

Dear Students,

The following activities are required from you during class time on **Sunday, April 24th, 2005:**

1. Read Lecture-13 Soil Water (see link below).
2. Each group should search the internet about soil water presentation or video and then send me your search result on the digital drop box.

Through the Blackboard, I will check your work activities during class time and I will take the absences based on that.

Good Luck

Course Link: [Course Documents / Module 3 – Soil Mineralogy, Chemistry and Fertility / Lecture 13: Soil Water](#)



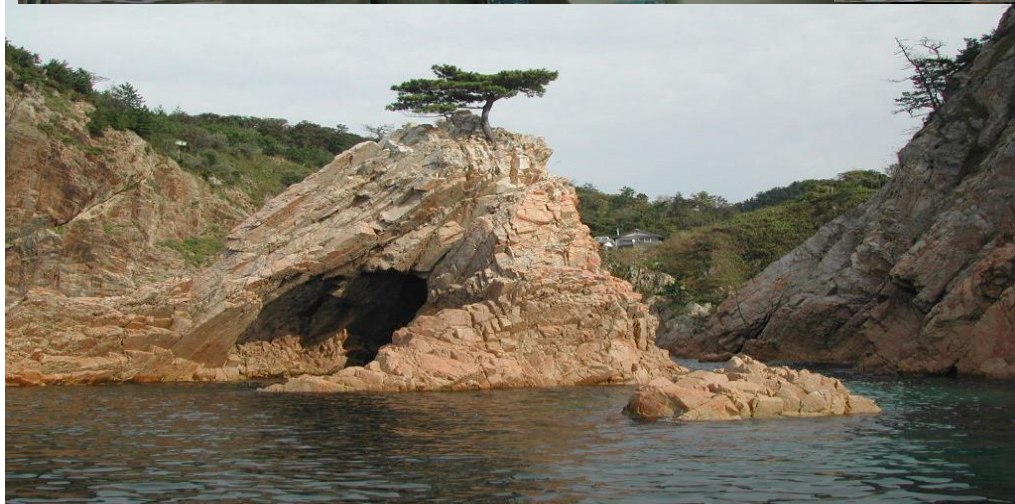
Class Management from Japan



Class Management from Japan



Class Management from Japan



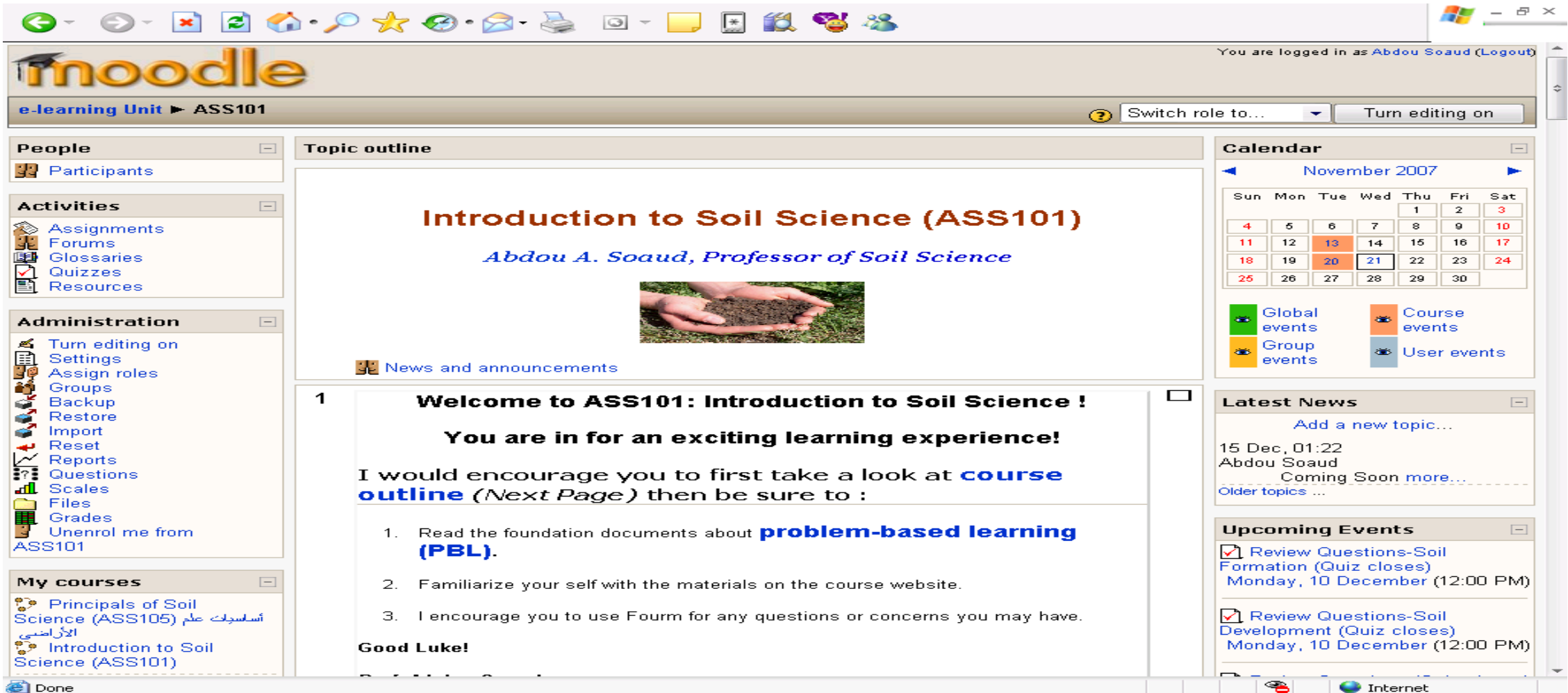


The Course on Moodle, Cairo University

Introduction to Soil Science (ASS 101)



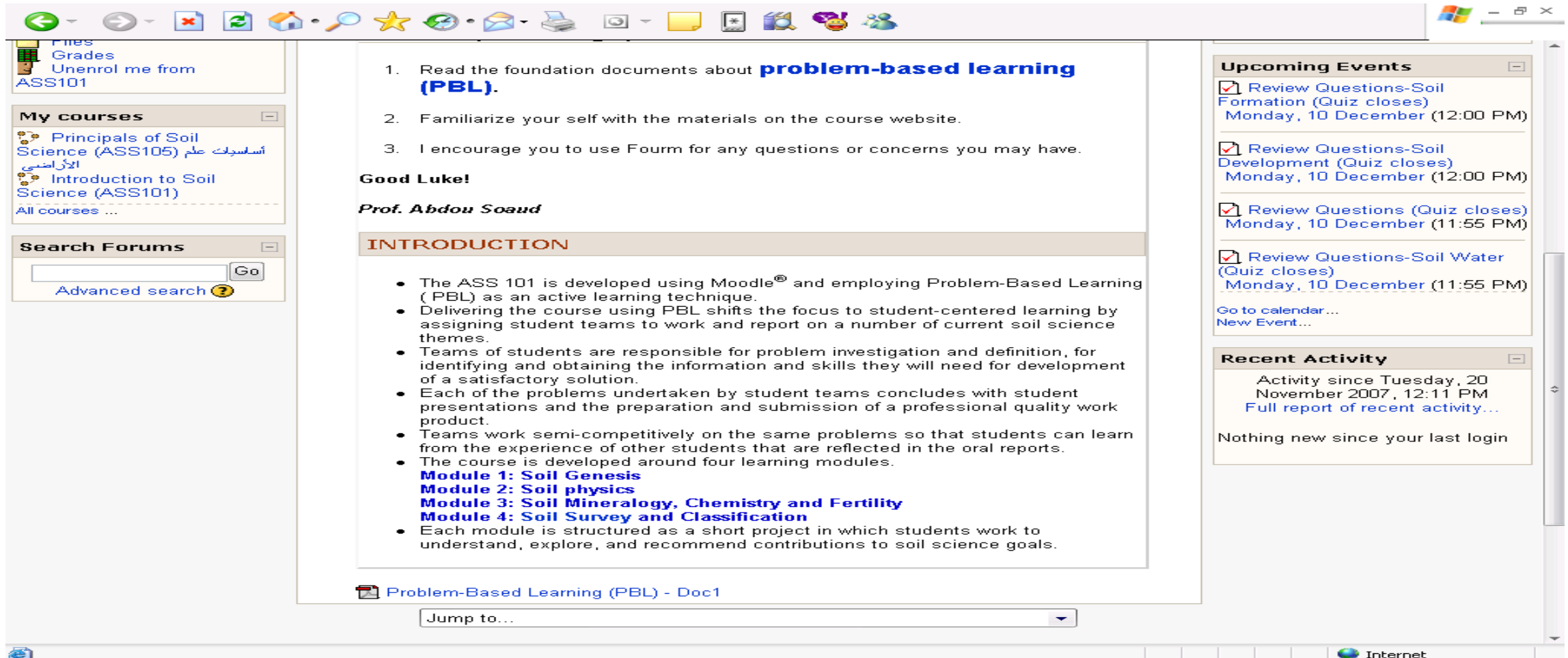
The Course on Moodle, Cairo University



The screenshot shows a Moodle course interface. At the top, the Moodle logo is visible, along with the course name 'e-learning Unit > ASS101'. The user is logged in as 'Abdou Soaud'. The main content area displays the course title 'Introduction to Soil Science (ASS101)' and the instructor's name 'Abdou A. Soaud, Professor of Soil Science'. Below this, there is a photo of hands holding soil. The course outline shows a single topic: '1 Welcome to ASS101: Introduction to Soil Science!'. The welcome message encourages students to look at the course outline and provides three tasks: reading foundation documents about problem-based learning (PBL), familiarizing themselves with the course website, and using the forum for questions. The page also features a sidebar with navigation options like 'People', 'Activities', and 'Administration', and a right-hand panel with a calendar, latest news, and upcoming events.



The Course on Moodle, Cairo University



Files
Grades
Unenrol me from ASS101

My courses

- Principals of Soil Science (ASS105) علم الأراضى
- Introduction to Soil Science (ASS101)

All courses ...

Search Forums

Advanced search ?

1. Read the foundation documents about **problem-based learning (PBL)**.
2. Familiarize your self with the materials on the course website.
3. I encourage you to use Fourm for any questions or concerns you may have.

Good Luck!

Prof. Abdou Soaud

INTRODUCTION

- The ASS 101 is developed using Moodle® and employing Problem-Based Learning (PBL) as an active learning technique.
- Delivering the course using PBL shifts the focus to student-centered learning by assigning student teams to work and report on a number of current soil science themes.
- Teams of students are responsible for problem investigation and definition, for identifying and obtaining the information and skills they will need for development of a satisfactory solution.
- Each of the problems undertaken by student teams concludes with student presentations and the preparation and submission of a professional quality work product.
- Teams work semi-competitively on the same problems so that students can learn from the experience of other students that are reflected in the oral reports.
- The course is developed around four learning modules.
Module 1: Soil Genesis
Module 2: Soil physics
Module 3: Soil Mineralogy, Chemistry and Fertilty
Module 4: Soil Survey and Classification
- Each module is structured as a short project in which students work to understand, explore, and recommend contributions to soil science goals.

Problem-Based Learning (PBL) - Doc1

Jump to...

Upcoming Events

- Review Questions-Soil Formation (Quiz closes) Monday, 10 December (12:00 PM)
- Review Questions-Soil Development (Quiz closes) Monday, 10 December (12:00 PM)
- Review Questions (Quiz closes) Monday, 10 December (11:55 PM)
- Review Questions-Soil Water (Quiz closes) Monday, 10 December (11:55 PM)

Go to calendar...
New Event...

Recent Activity

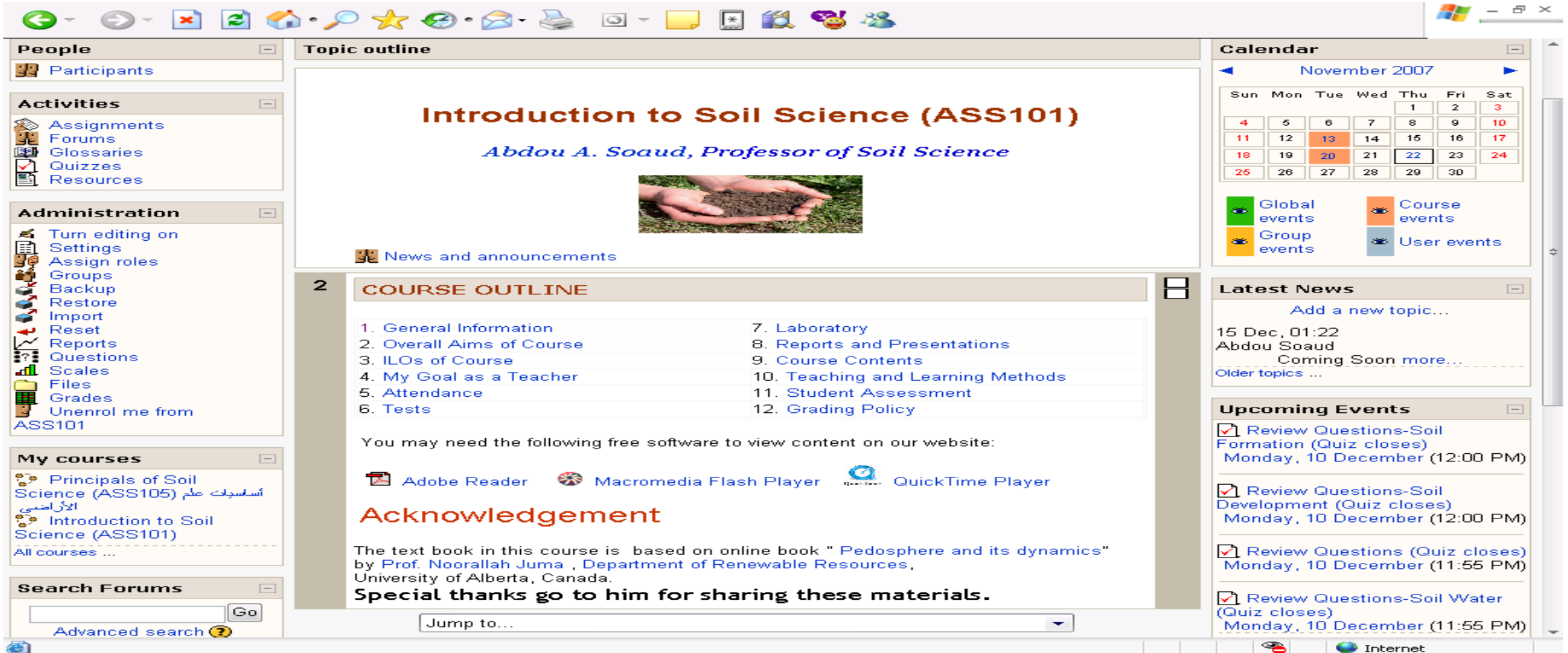
Activity since Tuesday, 20 November 2007, 12:11 PM
[Full report of recent activity...](#)

Nothing new since your last login

Internet



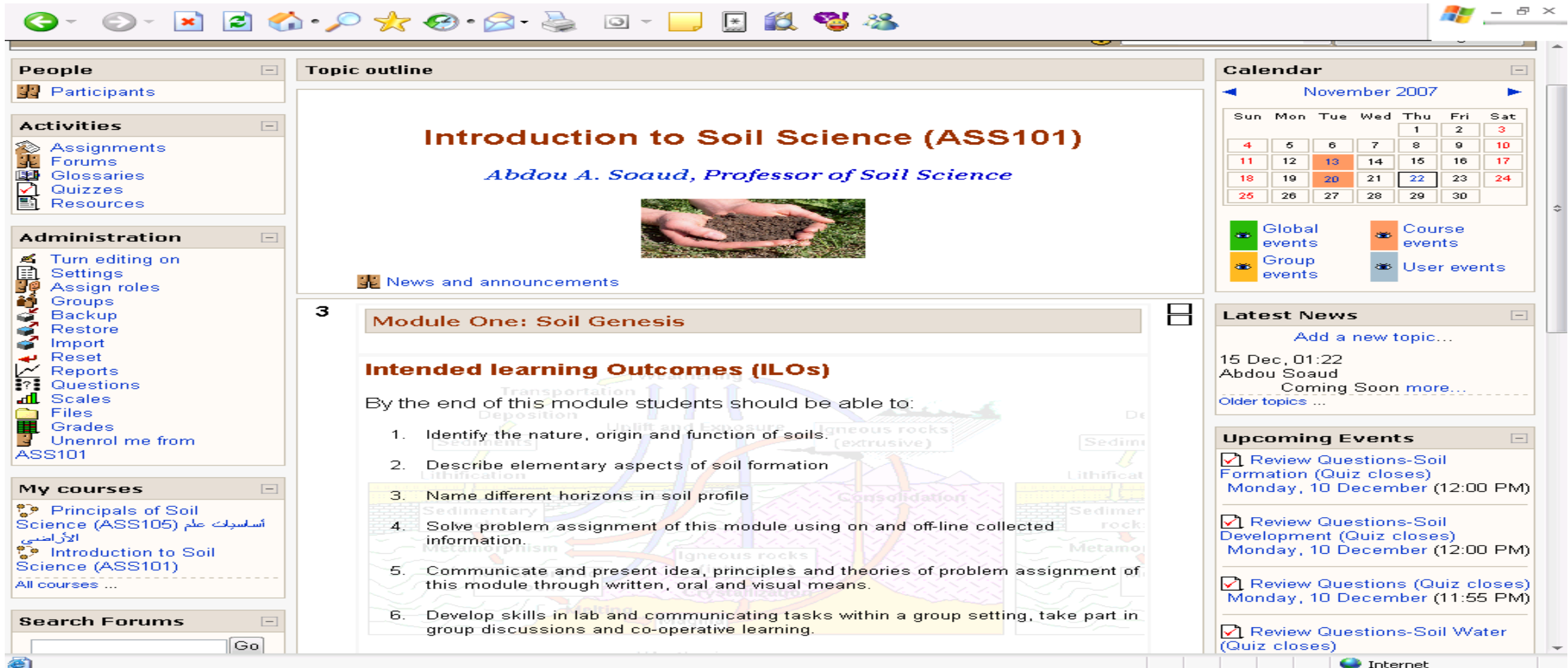
The Course on Moodle, Cairo University



The screenshot shows a Moodle course interface. The main content area displays the course title 'Introduction to Soil Science (ASS101)' and the instructor's name 'Abdou A. Soaud, Professor of Soil Science'. Below this is a photo of hands holding soil. A 'Topic outline' section lists 12 topics, including 'General Information', 'Laboratory', and 'Grading Policy'. A note mentions the need for free software like Adobe Reader, Macromedia Flash Player, and QuickTime Player. An 'Acknowledgement' section thanks Prof. Noorallah Juma for sharing materials. The right sidebar contains a calendar for November 2007, 'Latest News' with a 'Coming Soon' message, and 'Upcoming Events' for December 10th. The left sidebar includes navigation menus for 'People', 'Activities', 'Administration', and 'My courses'.



The Course on Moodle, Cairo University



The screenshot shows a Moodle course interface. The main content area displays the course title 'Introduction to Soil Science (ASS101)' and the instructor's name 'Abdou A. Soaud, Professor of Soil Science'. Below this is a photo of hands holding soil. The left sidebar contains navigation menus for 'People', 'Activities', 'Administration', and 'My courses'. The right sidebar includes a 'Calendar' for November 2007, 'Latest News', and 'Upcoming Events'. The main content area is titled 'Module One: Soil Genesis' and lists 'Intended learning Outcomes (ILOs)'.

People
Participants

Activities
Assignments
Forums
Glossaries
Quizzes
Resources

Administration
Turn editing on
Settings
Assign roles
Groups
Backup
Restore
Import
Reset
Reports
Questions
Scales
Files
Grades
Unenrol me from ASS101


My courses
Principals of Soil Science (ASS105) أساسيات علم الأراضى
Introduction to Soil Science (ASS101)
All courses ...

Search Forums
Go

Topic outline

Introduction to Soil Science (ASS101)

Abdou A. Soaud, Professor of Soil Science



News and announcements

Calendar
November 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Global events
Course events
Group events
User events

Latest News
Add a new topic...
15 Dec, 01:22
Abdou Soaud
Coming Soon [more...](#)
Older topics ...

Upcoming Events
 Review Questions-Soil Formation (Quiz closes)
Monday, 10 December (12:00 PM)
 Review Questions-Soil Development (Quiz closes)
Monday, 10 December (12:00 PM)
 Review Questions (Quiz closes)
Monday, 10 December (11:55 PM)
 Review Questions-Soil Water (Quiz closes)

3 Module One: Soil Genesis

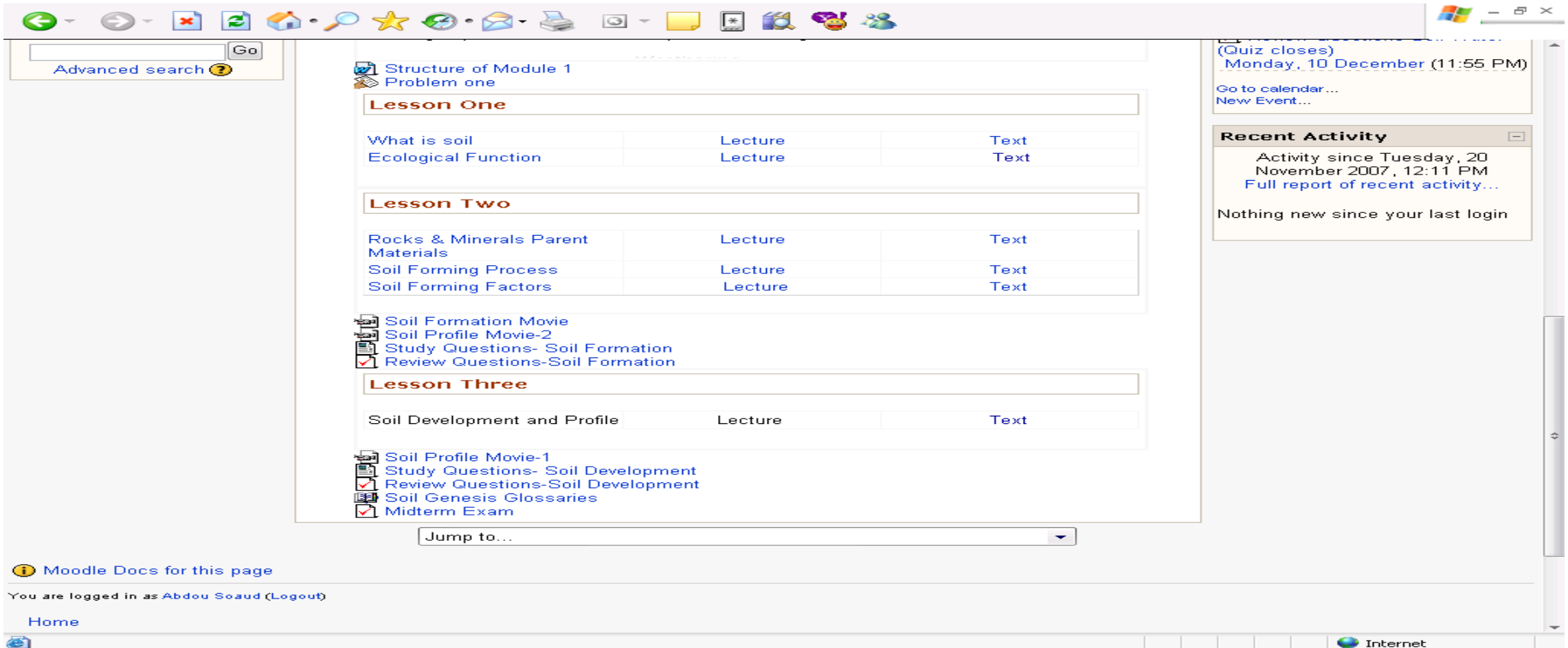
Intended learning Outcomes (ILOs)

By the end of this module students should be able to:

1. Identify the nature, origin and function of soils.
2. Describe elementary aspects of soil formation
3. Name different horizons in soil profile
4. Solve problem assignment of this module using on and off-line collected information.
5. Communicate and present idea, principles and theories of problem assignment of this module through written, oral and visual means.
6. Develop skills in lab and communicating tasks within a group setting, take part in group discussions and co-operative learning.



The Course on Moodle, Cairo University



The screenshot shows a Moodle course page titled "Structure of Module 1". The page is organized into three lessons:

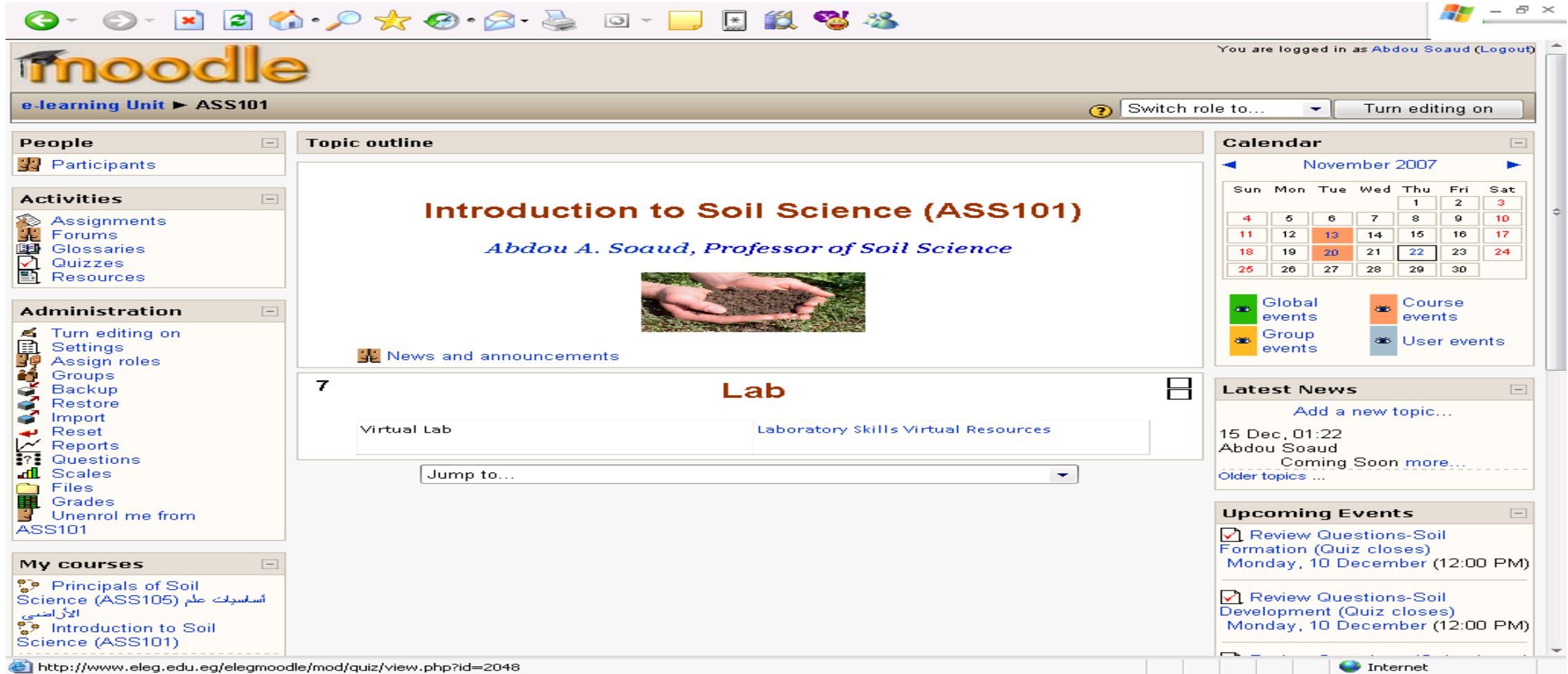
- Lesson One:**
 - What is soil (Lecture, Text)
 - Ecological Function (Lecture, Text)
- Lesson Two:**
 - Rocks & Minerals Parent Materials (Lecture, Text)
 - Soil Forming Process (Lecture, Text)
 - Soil Forming Factors (Lecture, Text)
- Lesson Three:**
 - Soil Development and Profile (Lecture, Text)

Additional resources listed include "Soil Formation Movie", "Soil Profile Movie-2", "Study Questions- Soil Formation", and "Review Questions-Soil Formation".

At the bottom of the page, it indicates the user is logged in as "Abdou Soaud" and provides a "Home" link.



The Course on Moodle, Cairo University



The screenshot shows a Moodle course interface. At the top, the Moodle logo and course name 'e-learning Unit ► ASS101' are visible. The user is logged in as 'Abdou Soaud'. The main content area displays the course title 'Introduction to Soil Science (ASS101)' and the instructor's name 'Abdou A. Soaud, Professor of Soil Science'. Below this is a 'Lab' section with a 'Virtual Lab' and 'Laboratory Skills Virtual Resources' link. The left sidebar contains navigation menus for 'People', 'Activities', 'Administration', and 'My courses'. The right sidebar includes a 'Calendar' for November 2007, 'Latest News', and 'Upcoming Events'.

Calendar: November 2007

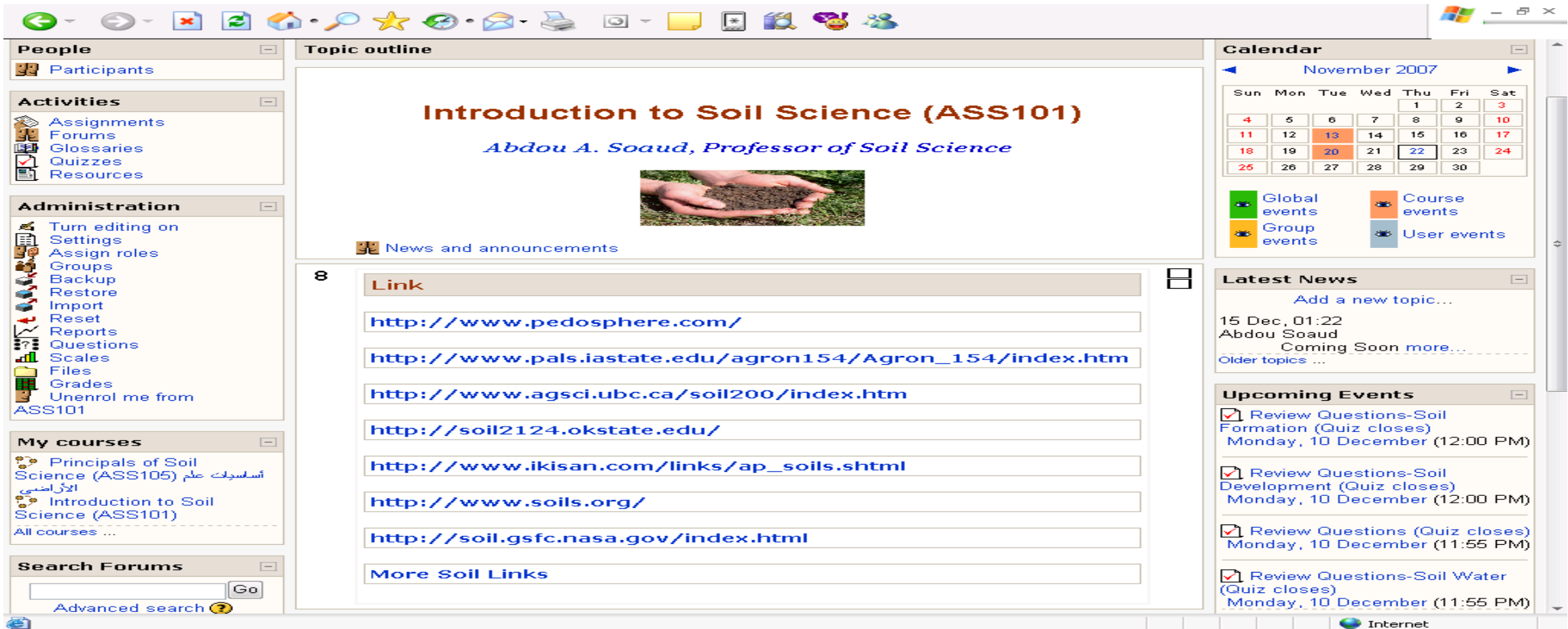
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Upcoming Events:

- Review Questions-Soil Formation (Quiz closes) Monday, 10 December (12:00 PM)
- Review Questions-Soil Development (Quiz closes) Monday, 10 December (12:00 PM)



The Course on Moodle, Cairo University



The screenshot shows a Moodle course interface. The main content area displays the course title "Introduction to Soil Science (ASS101)" and the instructor's name "Abdou A. Soaud, Professor of Soil Science" above a photo of hands holding soil. Below this is a "Link" section with several URLs related to soil science resources. The left sidebar contains navigation menus for "People", "Activities", "Administration", and "My courses". The right sidebar includes a "Calendar" for November 2007, "Latest News", and "Upcoming Events".

People

- Participants

Activities

- Assignments
- Forums
- Glossaries
- Quizzes
- Resources

Administration

- Turn editing on
- Settings
- Assign roles
- Groups
- Backup
- Restore
- Import
- Reset
- Reports
- Questions
- Scales
- Files
- Grades
- Unenrol me from ASS101

My courses

- Principals of Soil Science (ASS105) *أسسيات علم الأراضي*
- Introduction to Soil Science (ASS101)
- All courses ...


Search Forums

Advanced search ?

Topic outline

Introduction to Soil Science (ASS101)

Abdou A. Soaud, Professor of Soil Science



News and announcements

8

Link

- <http://www.pedosphere.com/>
- http://www.pals.iastate.edu/agron154/Agron_154/index.htm
- <http://www.agsci.ubc.ca/soil200/index.htm>
- <http://soil2124.okstate.edu/>
- http://www.ikisan.com/links/ap_soils.shtml
- <http://www.soils.org/>
- <http://soil.gsfc.nasa.gov/index.html>
- More Soil Links

Calendar

November 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

- Global events
- Course events
- Group events
- User events

Latest News

Add a new topic...

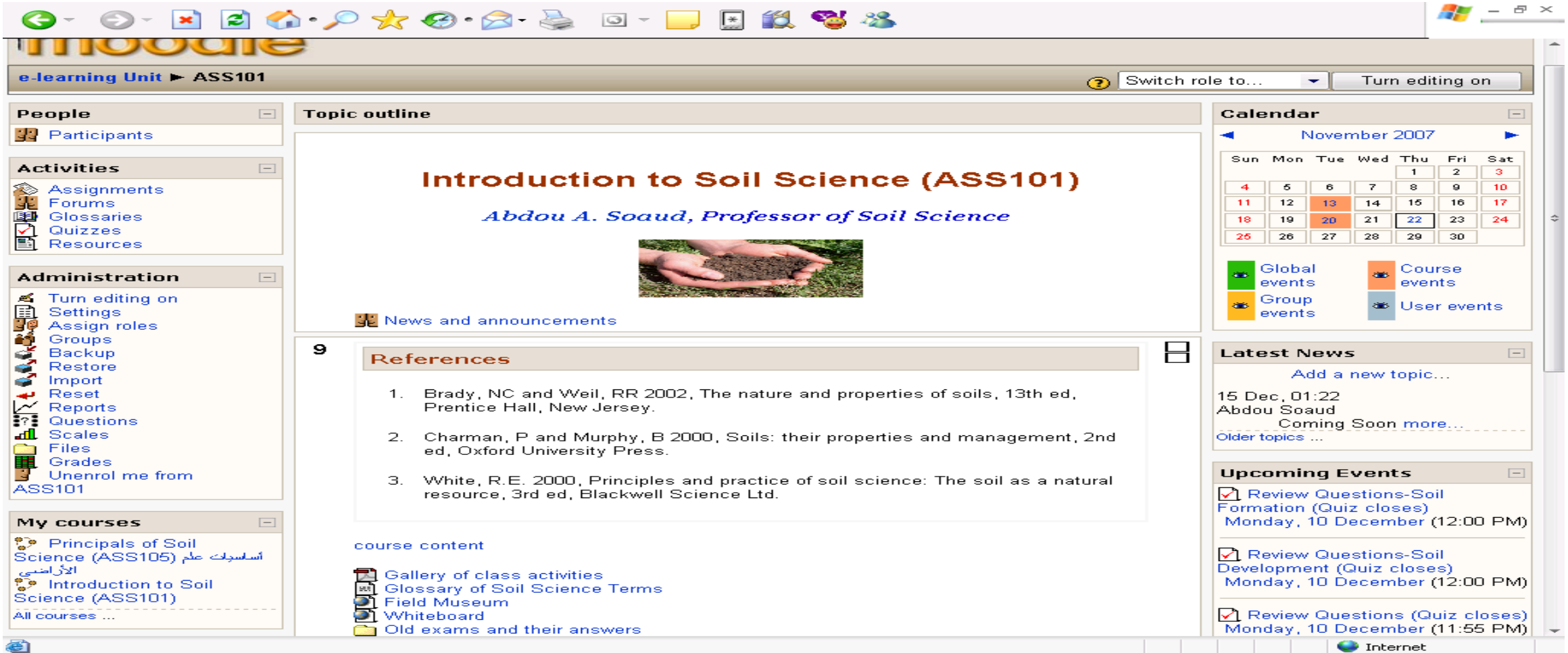
15 Dec, 01:22
Abdou Soaud
Coming Soon [more...](#)
Older topics ...

Upcoming Events

- Review Questions-Soil Formation (Quiz closes) Monday, 10 December (12:00 PM)
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- Review Questions (Quiz closes) Monday, 10 December (11:55 PM)
- Review Questions-Soil Water (Quiz closes) Monday, 10 December (11:55 PM)



The Course on Moodle, Cairo University



The screenshot shows a Moodle course page for 'Introduction to Soil Science (ASS101)'. The page is viewed from the perspective of a user with the role of 'Participant'. The course is taught by Abdou A. Soaud, Professor of Soil Science. The page includes a topic outline, a list of references, and a list of course content items. The left sidebar contains navigation menus for People, Activities, Administration, and My courses. The right sidebar contains a calendar, latest news, and upcoming events.

e-learning Unit ▶ ASS101

Switch role to... Turn editing on

People

- Participants

Activities

- Assignments
- Forums
- Glossaries
- Quizzes
- Resources

Administration

- Turn editing on
- Settings
- Assign roles
- Groups
- Backup
- Restore
- Import
- Reset
- Reports
- Questions
- Scales
- Files
- Grades
- Unenrol me from ASS101


My courses

- Principals of Soil Science (ASS105) *أساسيات علم الأراضين*
- Introduction to Soil Science (ASS101)
- All courses ...

Topic outline

Introduction to Soil Science (ASS101)

Abdou A. Soaud, Professor of Soil Science



News and announcements

References

- Brady, NC and Weil, RR 2002, The nature and properties of soils, 13th ed, Prentice Hall, New Jersey.
- Charman, P and Murphy, B 2000, Soils: their properties and management, 2nd ed, Oxford University Press.
- White, R.E. 2000, Principles and practice of soil science: The soil as a natural resource, 3rd ed, Blackwell Science Ltd.

course content

- Gallery of class activities
- Glossary of Soil Science Terms
- Field Museum
- Whiteboard
- Old exams and their answers

Calendar

November 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
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- Global events
- Course events
- Group events
- User events

Latest News

Add a new topic...

15 Dec, 01:22
Abdou Soaud
Coming Soon [more...](#)
[Older topics ...](#)

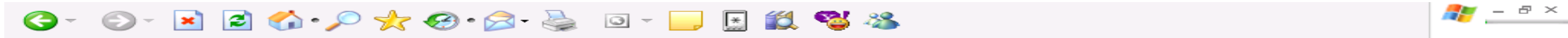
Upcoming Events


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- Review Questions-Soil Development (Quiz closes) Monday, 10 December (12:00 PM)
- Review Questions (Quiz closes) Monday, 10 December (11:55 PM)

Internet



The Course on Moodle, Cairo University




You are logged in as **Abdou Soaud** (Logout)


e-learning Unit ▶ **ASS101** ▶ **Grades**


[View Grades](#) [Set Preferences](#)


[Download in ODS format](#) [Download in Excel format](#) [Download in text format](#)

Grades ?

Student Sort by Lastname Sort by Firstname	Problem one		Review Questions-Soil Formation		Review Questions-Soil Development		Midterm Exam		Problem Two		Review Questions		Review Questions-Soil Water		Problem Three		Problem 4		Total ↓↑ Stats		Student Sort by Lastname Sort by Firstname
	100	Raw %	10	Raw %	10	Raw %	10	Raw %	100	Raw %	10	Raw %	10	Raw %	100	Raw %	10	Raw %	360	Percent	
abd el ghaffar, mahmoud	-	0%	-	0%	-	0%	4	40%	-	0%	-	0%	-	0%	-	0%	-	0%	4	1.11%	abd el ghaffar, mahmoud
ahmed, ahmed	-	0%	-	0%	-	0%	3	30%	-	0%	-	0%	-	0%	-	0%	-	0%	3	0.83%	ahmed, ahmed
ali, amira	-	0%	-	0%	-	0%	3	30%	-	0%	-	0%	-	0%	-	0%	-	0%	3	0.83%	ali, amira
awsados, abdoulsamad	-	0%	5	50%	-	0%	8	80%	-	0%	-	0%	-	0%	-	0%	-	0%	13	3.61%	awsados, abdoulsamad
caajil, c/weli	-	0%	6	60%	-	0%	5	50%	-	0%	-	0%	-	0%	-	0%	-	0%	11	3.06%	caajil, c/weli
hudazidane, huda	-	0%	-	0%	-	0%	5	50%	-	0%	-	0%	-	0%	-	0%	-	0%	5	1.39%	hudazidane, huda
ibrahim, abdiaziz	-	0%	5	50%	-	0%	6	60%	-	0%	-	0%	-	0%	-	0%	-	0%	11	3.06%	ibrahim, abdiaziz
mohamed, abd el azez	-	0%	4	40%	-	0%	6	60%	-	0%	-	0%	-	0%	-	0%	-	0%	10	2.78%	mohamed, abd el azez
moussa aden, saad	-	0%	4	40%	-	0%	7	70%	-	0%	-	0%	-	0%	-	0%	-	0%	11	3.06%	moussa aden, saad
ouda, ahmed	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	ouda, ahmed
ragaie, hatem	-	0%	-	0%	-	0%	6	60%	-	0%	-	0%	-	0%	-	0%	-	0%	6	1.67%	ragaie, hatem
said, abdi	-	0%	-	0%	-	0%	4	40%	-	0%	-	0%	-	0%	-	0%	-	0%	4	1.11%	said, abdi
shimaa fathy, shimaa	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	shimaa fathy, shimaa
zakaria, dina	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	zakaria, dina

 Moodle Docs for this page

 Done

 Internet



**International
Decade of Soils**
2015-2024

Thank You!

