

How to effectively learn with

# Innovative Problem Solving

 Tutorial for Instructors



The University of Georgia

The Department of Educational Psychology & Instructional Technology

The Department of Biological & Agricultural Engineering

# Welcome to the Innovative Problem Solving Site

Hello! This tutorial will help instructors manage the Case-Based e-Learning Group's Food & Sustainability case.

The project was created through the collaborative efforts of University of Georgia's Department of Educational Psychology and Instructional Technology and the Department of Biological and Agricultural Engineering.

The goals of the project are to provide undergraduate engineering students with an online option for participating in community design projects. The website also provides students with an opportunity to learn problem solving skills and develop multiple perspectives through an exploration of ill-defined issues with input from consultants and community members.

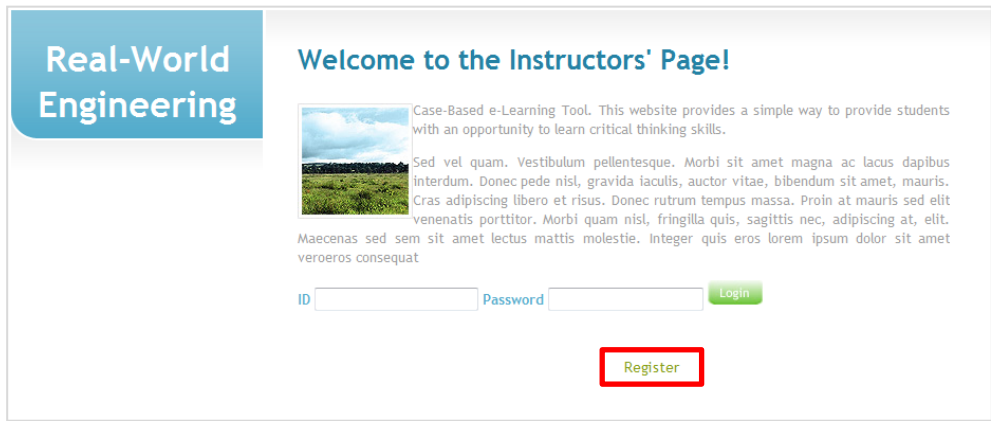
This tutorial is made up of two parts:

1. How to use this site
2. How to manage classes.

"How to use this site" shows general guidelines for using this site and "How to manage classes" presents specific guidelines for managing your courses.

# HOW TO USE THIS SITE

■ Register .....	4
■ Log in/ Log Off .....	5
■ The Navigation Bar .....	6
■ The Side Bar .....	9



**Real-World Engineering**

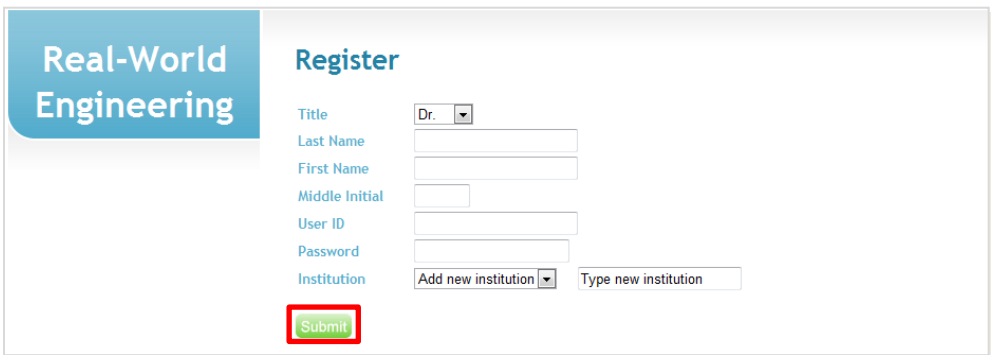
## Welcome to the Instructors' Page!

Case-Based e-Learning Tool. This website provides a simple way to provide students with an opportunity to learn critical thinking skills.

Sed vel quam. Vestibulum pellentesque. Morbi sit amet magna ac lacus dapibus interdum. Donec pede nisl, gravida iaculis, auctor vitae, bibendum sit amet, mauris. Cras adipiscing libero et risus. Donec rutrum tempus massa. Proin at mauris sed elit venenatis porttitor. Morbi quam nisl, fringilla quis, sagittis nec, adipiscing at, elit. Maecenas sed sem sit amet lectus mattis molestie. Integer quis eros lorem ipsum dolor sit amet veroeros consequat

ID  Password

- Visit the instructor's page, [http://edesign.coe.uga.edu/app/index.php?args\[\]=Instructor&args\[\]=Login](http://edesign.coe.uga.edu/app/index.php?args[]=Instructor&args[]=Login)
- In order to manage the case study, you need to register with this site first. Please click **Register**.



**Real-World Engineering**

## Register

Title

Last Name

First Name

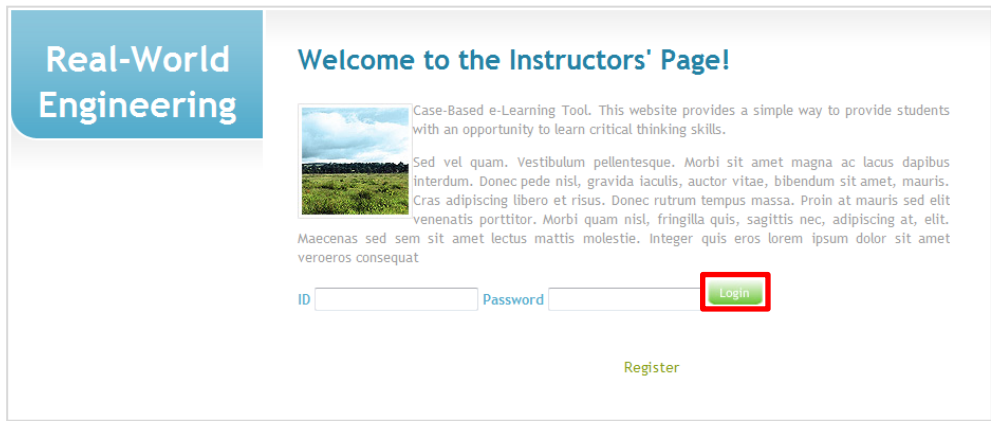
Middle Initial

User ID

Password

Institution

- After entering all needed information on the Registration page, click **Submit** button.
- In order to proceed with class management, the administrator's approval is needed.



The screenshot shows the 'Real-World Engineering' website. On the left is a blue sidebar with the text 'Real-World Engineering'. The main content area has a header 'Welcome to the Instructors' Page!'. Below this is a small landscape image. To the right of the image is a paragraph of placeholder text: 'Case-Based e-Learning Tool. This website provides a simple way to provide students with an opportunity to learn critical thinking skills. Sed vel quam. Vestibulum pellentesque. Morbi sit amet magna ac lacus dapibus interdum. Donec pede nisl, gravida iaculis, auctor vitae, bibendum sit amet, mauris. Cras adipiscing libero et risus. Donec rutrum tempus massa. Proin at mauris sed elit venenatis porttitor. Morbi quam nisl, fringilla quis, sagittis nec, adipiscing at, elit. Maecenas sed sem sit amet lectus mattis molestie. Integer quis eros lorem ipsum dolor sit amet veroeros consequat'. Below the text are two input fields labeled 'ID' and 'Password', followed by a green 'Login' button with a red border. At the bottom right of the main area is a green 'Register' link.

- To login to the site, enter your valid ID and password and then click [Login](#).



The screenshot shows the 'Real-World Engineering' website's 'Instructor Management Page'. At the top is a green navigation bar with links: HOME, ABOUT US, TUTORIAL, DEMO, INSTRUCTORS, and HELP. On the far right of this bar is a red 'LOG OFF' button with a red border. Below the navigation bar is a blue sidebar with the text 'Real-World Engineering'. The main content area has a header 'Instructor Management Page'. Below this are three green links: 'Creating New Courses', 'Managing Classes', and 'Changing My Profile'.

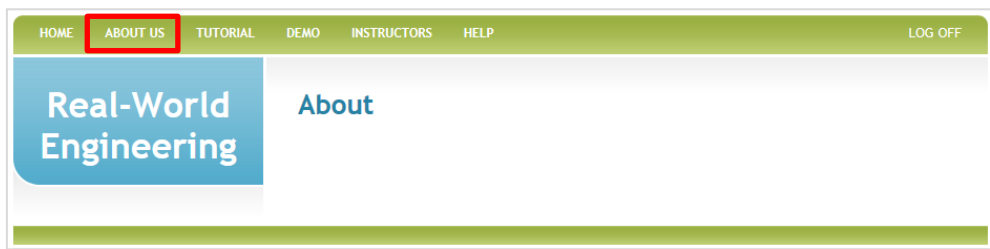
- To logout of the site, simply select [LOG OFF](#) found in the upper right hand of the screen.

## The navigation bar

There are two ways to navigate the site. To navigate outside of the site, you must use the navigation bar, located at the top of the screen.



- **HOME** takes you back to the first page of the site, the module selection screen.

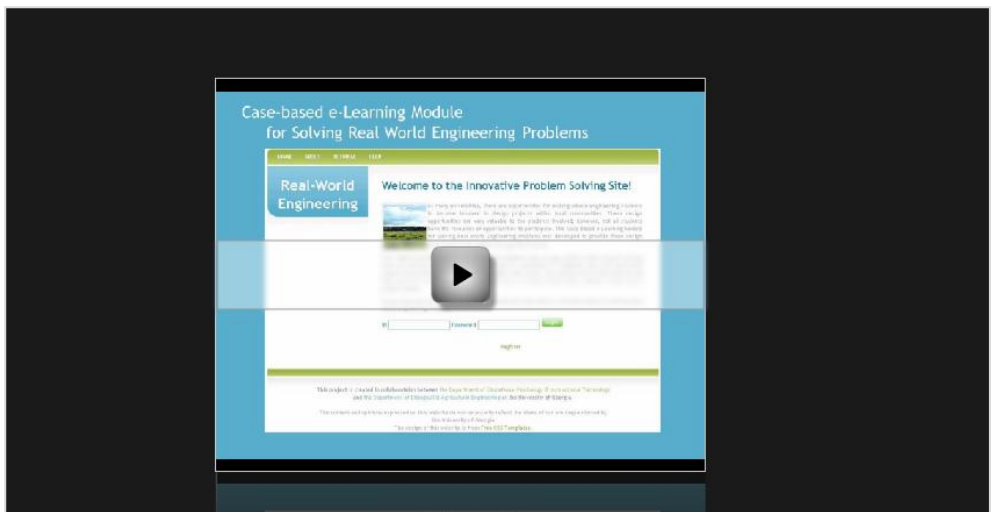


- **ABOUT US** gives you general information about this project.

## The navigation bar

 How to effectively learn with <b>Innovative Problem Solving</b> <small>Tutorial for Instructors</small>   <small>The University of Burgundy The Department of Educational Psychology &amp; Instructional Technology The Department of Biological &amp; Agricultural Engineering</small>	<b>HOW TO USE THIS SITE</b>	<b>HOW TO MANAGE CLASSES</b>
	<ul style="list-style-type: none"><li>Register ..... 4</li><li>Login/Log Off ..... 5</li><li>The Navigation Bar ..... 6</li><li>The Side Bar ..... 9</li></ul>	<ul style="list-style-type: none"><li>How to Create Courses ..... 11</li><li>How to Manage Classes ..... 13<ul style="list-style-type: none"><li>Course Management ..... 14</li><li>Student Management ..... 15</li><li>Student Interface ..... 18</li></ul></li><li>How to Change My Profile ..... 20</li></ul>

- **TUTORIAL** takes you back to this tutorial to help you navigate the site and module.

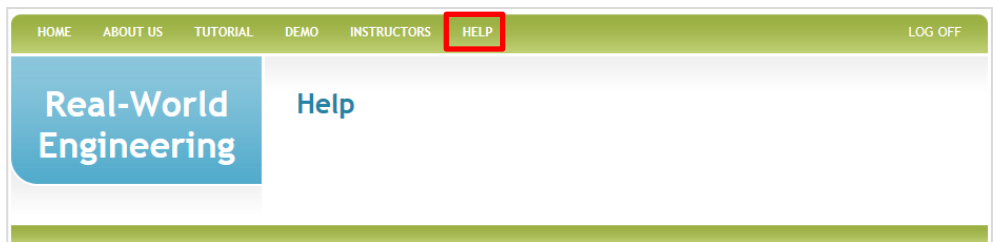


- **DEMO** takes you to a brief video introduction to the site.

## The navigation bar



- **INSTRUCTORS** gives you the ability to request a class account, manage classes, and explore the evidence of the effectiveness of this project.



- **HELP** can give you further assistance with the project, site, or module.



## The sidebar

On the left-hand side of the screen is the sidebar. This helps you navigate the sub-menus within the site. These menus are the same with the menus you are given after logging in this site.

The image shows a web interface for 'Real-World Engineering'. On the left is a sidebar with a blue header and three menu items: '1. Creating New Courses', '2. Managing Classes', and '3. Changing My Profile'. The first item is highlighted with a red border. The main content area is titled 'Creating New Courses' and contains a form with fields for 'Instructor's Name' (inst01), 'Course Name' (Add new course dropdown and Type new course text input), 'Section No.' (text input), 'Semester' (Fall dropdown), 'Year' (2010 dropdown), and 'Course Code' (text input). A green 'Create New Course' button is at the bottom. A note explains the course code is used as a password for students, and asterisks indicate required fields.

**Real-World Engineering**

1. Creating New Courses  
2. Managing Classes  
3. Changing My Profile

### Creating New Courses

Instructor's Name: inst01

Course Name: Add new course ▼ Type new course \*

Section No.:

Semester: Fall ▼ \*

Year: 2010 ▼ \*

Course Code: \*

The course code is to be used as a "password" for your students to enter when registering, in order to gain access to the case information set up for this section of this course and to prevent users that have not been granted access from seeing and responding to the case. Please record this password to distribute to your students.

\* required fields

Create New Course

To navigate the menus, simply click on the menu on the left-hand side of the screen.

# HOW TO MANAGE CLASSES

■ How to Create Courses .....	11
■ How to Manage Classes .....	13
Content Management .....	14
Student Management .....	15
Student Interface .....	18
■ How to Change My Profile .....	20

# How to Create Courses

After logging in to the site, you are given the following options:

- (1) Creating New Courses
- (2) Managing Classes
- (3) Changing My Profile

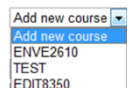


In order to let students begin the case study, a new course has to be created.

The screenshot shows the 'Creating New Courses' form. The left sidebar is the same as the previous page. The main content area is white and contains the title 'Creating New Courses' in blue. Below the title, there are several input fields: 'Instructor's Name' (with the value 'inst01'), 'Course Name' (with a dropdown menu 'Add new course' and a text input 'Type new course'), 'Section No.' (with a text input), 'Semester' (with a dropdown menu 'Fall'), 'Year' (with a dropdown menu '2010'), and 'Course Code' (with a text input). Below these fields, there is a small text block explaining the course code: 'The course code is to be used as a "password" for your students to enter when registering, in order to gain access to the case information set up for this section of this course and to prevent users that have not been granted access from seeing and responding to the case. Please record this password to distribute to your students.' Below this text, there is a small asterisk and the text '\* required fields'. At the bottom of the form, there is a green button labeled 'Create New Course'.

## Course Name

- You need to name your course.
- You can select one of three courses created in advance by clicking drop down menu or you can type a new name of a course.



## Section No.

- Enter your course section number.

## Semester/ Year

- By clicking the drop down menu, choose when will your course be delivered.

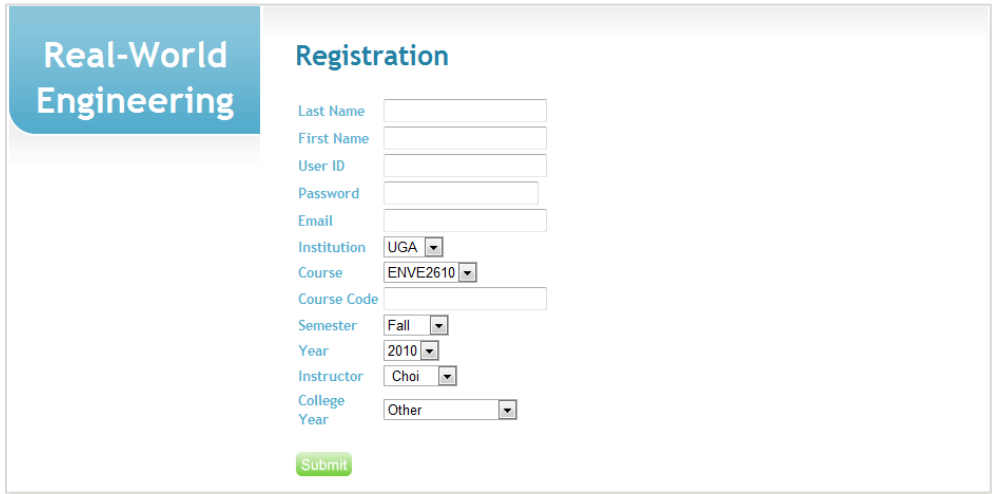
## Course Code

- The course code acts as a password for your students to register with this site.

## How to Create Courses

### IMPORTANT

- The students need to enter basic information about your course to enroll in your class.
- This is a screenshot of the registration form for students.

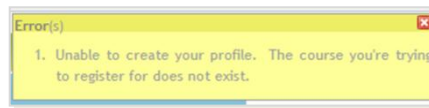


The screenshot shows a web form titled "Real-World Engineering" and "Registration". The form contains the following fields:

- Last Name:
- First Name:
- User ID:
- Password:
- Email:
- Institution:
- Course:
- Course Code:
- Semester:
- Year:
- Instructor:
- College Year:

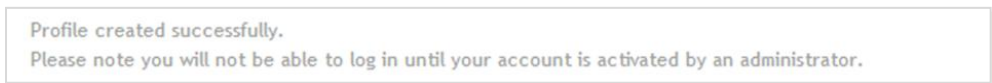
A green "Submit" button is located at the bottom of the form.

- Students need to enter correct information about institution, course, course code, semester, year, and instructor. If any of the information is wrong, then the student CANNOT REGISTER in your course and they will receive the following error message:



Please notify your students that they must enter the correct information.

- If the student entered the correct information, the student will see this message:



- The instructor needs to activate the students' account in order to let them study the case. (☞ See "Student Management" on p. 16)

## How to Manage Classes

On the *Managing Classes* screen, you are provided a list of all classes created, both yours and others. You can manage the content, the students, and the student interface.

### Real-World Engineering

- 1. Creating New Courses
- 2. Managing Classes
- 3. Changing My Profile

### Managing Classes

My Classes

Year	Semester	Course Name	Content Management	Student Management	Student Interface
2012	Fall	TEMP P001	Enter	Enter	Enter

Other Classes

Year	Semester	Course Name	Instructor	Content Management	Student Management	Student Interface
2010	Fall	ENVE 2610		Enter	Enter	Enter
2010	Fall	TEST TEST		Enter	Enter	Enter
2010	Fall	TEST TEST		Enter	Enter	Enter
2010	Spring	ENVE 2610		Enter	Enter	Enter
2011	Fall	ENVE 2610		Enter	Enter	Enter
2011	Spring	ENVE 2610		Enter	Enter	Enter
2011	Spring	ENVE 2610		Enter	Enter	Enter
2011	Spring	ENVE 2610		Enter	Enter	Enter
2012	Fall	EDIT 8350		Enter	Enter	Enter
2012	Spring	ENVE 2610		Enter	Enter	Enter

### What's the difference between the course and class?

The course is a broader concept than the class. Usually multiple classes can exist under the same course. You can create a new course if there is no matched course in the system. If you need further information for creating a new course or a class, please see "How to Create Courses" on page 11.

# How to Manage Classes

## Content Management

### Real-World Engineering

- 1. Creating New Courses
- 2. Managing Classes
- 3. Changing My Profile

### Content Management

Arrange Schedule

Case1	Set up date	Year	2010	Month	1	Date	1	<a href="#">Open immediately</a>
	Hour	00	Minute	00				
	Set up date	Year	2010	Month	1	Date	1	<a href="#">Close immediately</a>
	Hour	00	Minute	00				

Stage1	Set up date	Year	2010	Month	1	Date	1	<a href="#">Open immediately</a>
	Hour	00	Minute	00				
	Set up date	Year	2010	Month	1	Date	1	<a href="#">Close immediately</a>
	Hour	00	Minute	00				

### Arrange Schedule

- You can set up the duration of your course.
- The duration is also manageable by stage.
- The course (or each stage) will be immediately opened by clicking on [Open immediately](#).
- The course (or each stage) will be immediately closed by clicking on [Close immediately](#).

Step 1	Q1. Explain the weaknesses and strengths of your final suggestions and solutions to the problems presented. How would you assess their overall quality?	<input checked="" type="radio"/> Hide <input type="radio"/> Release
	Q2. How has your approach to solving the problem changed as you learned more about the given situation?	<input checked="" type="radio"/> Hide <input type="radio"/> Release
	Q3. How do you think this learning experience has influenced your problem-solving ability in general?	<input checked="" type="radio"/> Hide <input type="radio"/> Release

- For each stage, one to three steps exist. As instructor you may decide whether or not to release or hide the questions in each stage. If you select to release the question, the students are able to see and answer the question. If you hide the question, the question will not be appear on the students' learning interface.

[Submit](#)[Release All](#)[Hide All](#)

- If you want to release all the questions, simply click [Release All](#) at the bottom of the page.
- If you want to hide all the questions, please click [Hide All](#) on the bottom of the page.
- After managing all stages, steps, and questions, please hit [Submit](#) button.

# How to Manage Classes

## Student Management

The screenshot shows the 'Managing Students' interface. On the left is a sidebar with the 'Real-World Engineering' logo and a list of navigation items: '1. Creating New Courses', '2. Managing Classes', and '3. Changing My Profile'. The main content area is titled 'Managing Students' and includes 'Class Information' for '2012 Fall TEMP P001 inst01'. Below this is a table with columns: ID, Name, Password Change, Active/Inactive, and Case 1. The first row shows 'student01' in the ID column, a greyed-out name field, a 'Change' button (highlighted with a red box), an 'Activate' button, and 'Stage 1 | 2 | 3 | 4 | All' in the Case 1 column.

ID	Name	Password Change	Active/Inactive	Case 1
student01		<a href="#">Change</a>	<a href="#">Activate</a>	Stage 1   2   3   4   All

### Change Students' Password

- The students cannot change their password independently. The instructor must change their password.
- By clicking [Change](#), you can enter a new password for the student. After entering a new password, please hit [Update](#).

The screenshot shows a form titled 'New Password' with a text input field and an 'Update' button below it.

# How to Manage Classes

## Student Management

### Real-World Engineering

- 1. Creating New Courses
- 2. Managing Classes
- 3. Changing My Profile

### Managing Students

Class Information

2012 Fall TEMP P001 inst01

ID	Name	Password Change	Active/Inactive	Case 1
student01		<a href="#">Change</a>	<a href="#">Activate</a>	Stage 1   2   3   4   All

### Activate/ Deactivate

- Activating or deactivating the students' IDs is used for screening invalid learners.
- By clicking [Activate](#), you allow a student to begin the case study.
- The student will be notified of their case study activation via the e-mail that was entered while registering with the site.

### Real-World Engineering

- 1. Creating New Courses
- 2. Managing Classes
- 3. Changing My Profile

### Managing Students

Successfully updated access for this student to active. Student has been emailed.

Class Information

2012 Fall TEMP P001 inst01

ID	Name	Password Change	Active/Inactive	Case 1
student01		<a href="#">Change</a>	<a href="#">Deactivate</a>	Stage 1   2   3   4   All

- Once the student's account is activated, the button will change to [Deactivate](#).
- If you want to make the student's account inactive, please click on [Deactivate](#). The student cannot log into the site with the inactive ID.



# How to Manage Classes

## Student Management

The screenshot shows the 'Managing Students' page. On the left is a sidebar with the 'Real-World Engineering' logo and a list of links: '1. Creating New Courses', '2. Managing Classes', and '3. Changing My Profile'. The main content area is titled 'Managing Students' and includes 'Class Information' for '2012 Fall TEMP P001 inst01'. Below this is a table with columns: ID, Name, Password Change, Active/Inactive, and Case 1. The first row shows 'student01' with a 'Change' button, an 'Activate' button, and a 'Case 1' dropdown menu. The dropdown menu is open, showing 'Stage 1', '2', '3', '4', and 'All', with 'All' highlighted in red.

ID	Name	Password Change	Active/Inactive	Case 1
student01		<a href="#">Change</a>	<a href="#">Activate</a>	Stage 1   2   3   4   All

### Review students' answers

- You can either review the students' answers by stage or all at once.

The screenshot shows the 'Student Answers' page. At the top, a red box highlights the student's basic information: 'Name: [redacted] Year: Other ID: student01', 'Course: TEMP P001', and 'Instructor: inst01'. Below this, the page shows 'Case 1 : Food & Sustainability', 'Stage 1: Exploring the Situation', and 'Step 1: Discovering the Situation'. A red box highlights the question 'Q1. Please define and explain the problem(s) present in the scenario presented.' and the completion date '(Date Completed: 6 May 2012 2:19PM)'. Below the question is a large text input box.

- The student's basic information such as name, year, ID, course and instructors appears at the top of the answer sheet.
- Under each question, the student's answer appears in a box. You can also check when the student completed the question.

This screenshot shows the same question 'Q1. Please define and explain the problem(s) present in the scenario presented.' as the previous one, but the student has not answered it. A red box highlights the text '(Not Attempted)' in the top left corner of the answer box. The rest of the answer box is empty.

- If the student did not answer the question, a blank answer box will appear with the message 'Not Attempted.'

# How to Manage Classes

## Student Interface

The screenshot shows the 'Managing Classes' page. On the left is a sidebar with the 'Real-World Engineering' logo and three menu items: '1. Creating New Courses', '2. Managing Classes', and '3. Changing My Profile'. The main content area is titled 'Managing Classes' and contains two tables. The first table, 'My Classes', has columns for Year, Semester, Course Name, Content Management, Student Management, and Student Interface. The second table, 'Other Classes', has columns for Year, Semester, Course Name, Instructor, Content Management, Student Management, and Student Interface. In both tables, the 'Enter' buttons in the 'Student Interface' column are highlighted with a red box.

Year	Semester	Course Name	Content Management	Student Management	Student Interface
2012	Fall	TEMP P001	Enter	Enter	Enter

Year	Semester	Course Name	Instructor	Content Management	Student Management	Student Interface
2010	Fall	ENVE 2610		Enter	Enter	Enter
2010	Fall	TEST TEST		Enter	Enter	Enter
2010	Fall	TEST TEST		Enter	Enter	Enter
2010	Spring	ENVE 2610		Enter	Enter	Enter
2011	Fall	ENVE 2610		Enter	Enter	Enter
2011	Spring	ENVE 2610		Enter	Enter	Enter
2011	Spring	ENVE 2610		Enter	Enter	Enter
2011	Spring	ENVE 2610		Enter	Enter	Enter
2012	Fall	EDIT 8350		Enter	Enter	Enter
2012	Spring	ENVE 2610		Enter	Enter	Enter

- If you want to check the student interface, simply click the **Enter** button under 'Student Interface.'

The screenshot shows the 'Welcome to the Innovative Problem Solving Site!' page. It features a green navigation bar with links: HOME, ABOUT US, TUTORIAL, DEMO, INSTRUCTORS, and HELP. The main content area has a blue sidebar with the 'Real-World Engineering' logo. The main text area includes a welcome message, a paragraph about design projects, a paragraph about the website's purpose, and a login section with fields for ID and Password, a 'Login' button, and a 'Register' link.

HOME ABOUT US TUTORIAL DEMO INSTRUCTORS HELP

## Welcome to the Innovative Problem Solving Site!

At many universities, there are opportunities for undergraduate engineering students to become involved in design projects within local communities. These design opportunities are very valuable to the students involved; however, not all students have the resources or opportunities to participate. The Case-Based e-Learning Module for Solving Real World Engineering Problems was developed to provide these design experiences to all students through the internet.

This website provides a simply way to provide students with an opportunity to learn problem solving skills and develop multiple perspectives through an exploration of ill-defined issue with input from experts and community members. At each stage in the process, the students will provide input that be later assessed to determine their progression from a novice problem solver towards a more expert problem solver.

Please enter your ID and password below to begin the Case-Based e-Learning Modul for Solving Real World Engineering Problems.

ID  Password

[Register](#)

- This button guides you to student version of the website - [http://edesign.coe.uga.edu/app/index.php?args\[\]=Student&args\[\]=Login&args\[\]=41](http://edesign.coe.uga.edu/app/index.php?args[]=Student&args[]=Login&args[]=41). The instructor can check the student interface by logging in with a student ID.
- You can simply create a student ID for testing. The next page lets you know how to create a student ID.

# How to Manage Classes

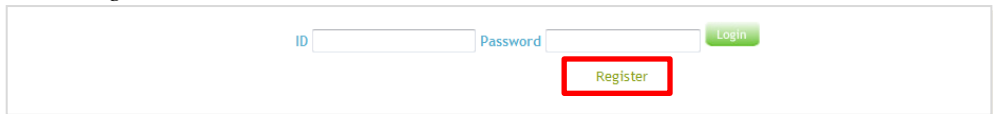
## Student Interface

### How to create a student ID

Step 1. Visit the students' website,

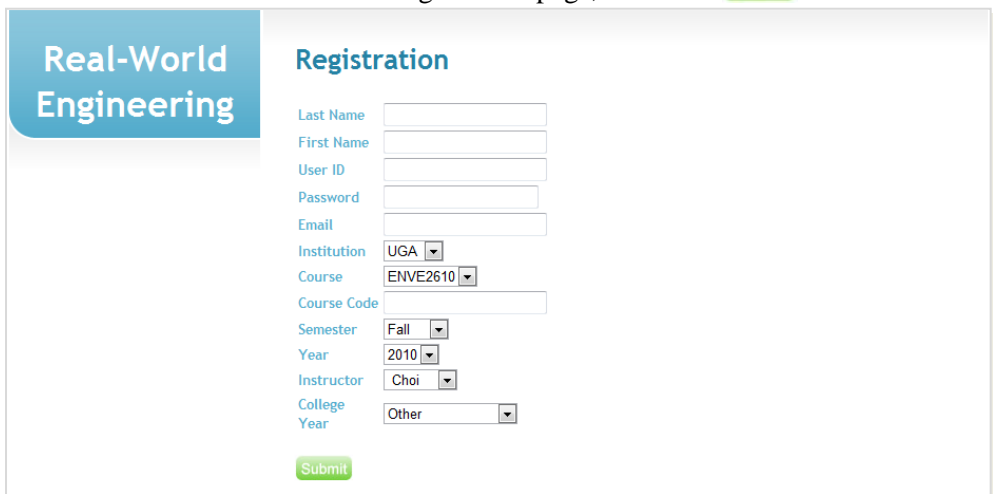
[http://edesign.coe.uga.edu/app/index.php?args\[\]=Student&args\[\]=Login&args\[\]=41](http://edesign.coe.uga.edu/app/index.php?args[]=Student&args[]=Login&args[]=41)

Step 2. Click *Register* button.



A horizontal bar containing three elements: an 'ID' label followed by a text input field, a 'Password' label followed by a text input field, and a green 'Login' button. Below the password field is a red rectangular box containing a green 'Register' button.

Step 3. Enter all needed information on Registration page, then click *Submit* button.

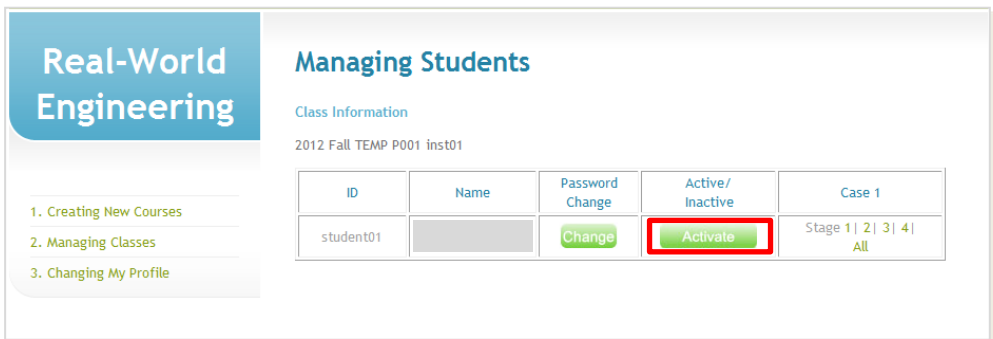


The registration page features a blue sidebar with the text 'Real-World Engineering'. The main content area is titled 'Registration' and contains a form with the following fields: Last Name, First Name, User ID, Password, Email, Institution (a dropdown menu with 'UGA' selected), Course (a dropdown menu with 'ENVE2610' selected), Course Code, Semester (a dropdown menu with 'Fall' selected), Year (a dropdown menu with '2010' selected), Instructor (a dropdown menu with 'Choi' selected), College, and Year (a dropdown menu with 'Other' selected). A green 'Submit' button is located at the bottom of the form.

Step 4. Back to the instructor's pages,

[http://edesign.coe.uga.edu/app/index.php?args\[\]=Instructor&args\[\]=Login](http://edesign.coe.uga.edu/app/index.php?args[]=Instructor&args[]=Login)

Step 5. Click *Activate* button under Student Management of Managing Classes



The 'Managing Students' interface includes a blue sidebar with 'Real-World Engineering' and a list of links: '1. Creating New Courses', '2. Managing Classes', and '3. Changing My Profile'. The main content area is titled 'Managing Students' and shows 'Class Information' for '2012 Fall TEMP P001 inst01'. Below this is a table with five columns: ID, Name, Password Change, Active/Inactive, and Case 1. The first row of data shows 'student01' in the ID column, a greyed-out Name column, a green 'Change' button in the Password Change column, a red rectangular box containing a green 'Activate' button in the Active/Inactive column, and 'Stage 1 | 2 | 3 | 4 | All' in the Case 1 column.

ID	Name	Password Change	Active/Inactive	Case 1
student01		<a href="#">Change</a>	<a href="#">Activate</a>	Stage 1   2   3   4   All

## How to Change My Profile

The screenshot shows a web interface for 'Real-World Engineering'. On the left is a sidebar with a blue header and three menu items: '1. Creating New Courses', '2. Managing Classes', and '3. Changing My Profile'. The main area is titled 'Changing My Profile' and contains a form with the following fields: 'Title' (with 'Dr.' selected), 'Last Name' (with 'inst01'), 'First Name' (with 'inst01'), 'Middle Initial' (empty), 'User ID' (with 'inst01'), 'Password' (with masked characters '•••••'), and 'Institution' (a dropdown menu with 'TEST' selected). To the right of the 'Institution' dropdown is a text input field labeled 'Type new institution'. At the bottom of the form is a green 'Update' button with a red border.

- The instructor can change their profile by clicking **Changing My Profile**.
- The following information can be adjusted:
  1. Title
  2. Last name
  3. First name
  4. Middle initial
  5. User ID
  6. Password
  7. Institution
- After changing the information, you must hit **Update** at the bottom of the page.



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**Contact Information for Further Questions**

Case-Based e-Learning

[help.cbcl@gmail.com](mailto:help.cbcl@gmail.com)

<http://elearning.coe.uga.edu/>

