

***Engaging Students in Research***  
An Online Course using the  
National Consortium for Mathematics, Science and Technology publication  
*Guiding Student Research Making Research Happen in Your School*

**Course Syllabus**  
**Fall 2006**  
**October 2 – November 10**

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**Purpose**

The purpose of the online course is to provide professional development in support of NCSSSMST's *Guiding Student Research Making Research Happen in Your School*. Through guided study, students will develop knowledge and skills to deliver a student research program. The online dimension allows participation worldwide. The title of the course is *Engaging Students in Research*.

The Consortium has taken a major step with *Guiding Student Research* to realize the organization's mission of transforming mathematics, science and technology education. Professional development in workshops and the online course further that step. This work is intended to increase the number of students engaged in high-quality research activities.

**Course Description**

This six-week online course explores the elements of implementing a student research program in the secondary school. This is accomplished through guided study of *Guiding Student Research Making Research Happen in Your School* written by the National Consortium for Specialized Secondary Schools of Mathematics, Science and Technology. Participants will study materials and then share thoughts and insights online. An online chat with authors will be included contingent on the availability of authors during the semester. The final project will include a plan of action by each participant that will express how student research may be included in his or her setting.

## Objectives

- 1) Participants will identify and understand the components of student research in the secondary setting.
- 2) Participants will be able to discuss components of student research.
- 3) Participants will be able to describe how a student research program may be implemented in their own setting.

## Contact Hours for Graduate Coursework

Direct online class time requires five hours a week. This activity includes working through the online material, discussions with classmates and the instructor, using the recommended web resources, a live chat, discussions of weekly assignments and other online activities.

Participants will spend three and a half to four hours per week studying *Guiding Student Research*, reading supplementary materials, preparing weekly assignments, visiting web sites, and preparing the final project.

Online class hours: 30

Out of class hours: 20

## Assignments (tentative schedule)

	<b>Assignment</b>	<b>Due Date</b>	<b>Time Due Eastern Time</b>
Week 1	Readings, Chapter 1 & 2	October 8	
	Orientation to <i>Moodle</i>	October 8	
	Introductory Paragraph	October 7	11:59 pm
Week 2	Posting 1 (Chapters 1 & 2)	October 9	5:00 pm
	Posting 1 Response	October 13	5:00 pm
Week 3	Readings, Chapter 3	October 15	
	Posting 2	October 16	5:00 pm
	Posting 2 Response	October 20	5:00 pm
Week 4	Final Project Assigned	November 17	
	Readings, Chapter 4	October 22	
	Posting 3	October 23	5:00 pm
	Posting 3 Response	October 27	5:00 pm
Week 5	Readings, Chapters 5 & 6	October 29	
	Posting 4	October 30	5:00 pm
	Posting 4 Response	November 6	5:00 pm
	Online Chat with Authors	TBD	

Week 6	Readings, Chapters 7 & 8	November 10	
	Posting 5	November 10	5:00 pm
	Response not required		
	Final Project	November 17	11:59 pm
	Optional Course Feedback	November 22	11:59 pm

Assignment descriptions:

- The Introductory Paragraph will give participants an opportunity to introduce themselves and allow practice in the Moodle learning system.
- Readings include chapters from the text and suggested web sites.
- Postings are weekly responses to questions posed by the instructor. Postings should be one or two paragraphs.
- Posting responses are a brief comment to a paragraph response to a classmate’s posting. Participants will be expected to respond to at least two postings. Responses will not be required in week 6.
- A live evening chat will be scheduled with authors.
- The final project will be a plan of action that will express the participant’s plan to implement what is learned and what impact will be on students.
- The instructor will post weekly assignments by noon each Monday.

With an online course, there can be technology issues that may make it difficult to make deadlines. If there is a technology problem, the instructor should be notified as soon as possible. Should there be a problem at anytime with the *Moodle* server deadlines may need to be adjusted. The deadline for the Final Project is extend one week beyond the course’s six-week design.

**Grading**

Introductory Paragraph and Posted weekly assignments	10 points	60 points total
Responses to weekly posts	5 points	20 points total
Live chat with authors		10 points total
Final Project		20 points total

Total possible points: 110 points

Letter Grades	Andrews/GVSU
90-100+ points	A
80-89 points	B
70-79 points	C
60-69 points	D
less than 60 points	F

Letter Grades	WMU
90-100+ points	A
85-89 points	BA
80-84 points	B
75-79 points	CB
70-74 points	C
65-69 points	DC
60-64 points	D
less than 60 points	F

### **Audience**

The primary target audience is secondary school teachers particularly in the areas of mathematics, science and behavioral science. Individuals engaged in curriculum development, media services and administration may also benefit from the course.

### **Partners**

The course is a partnership of NCSSSMST and the Berrien County Intermediate School District (BCISD) with the Berrien County Mathematics and Science Center. *Moodle* support is provided by the BCISD Instructional Services Department.

### **College Credit Option**

Participants will have the option of earning two graduate credits from Andrews University, a NCSSSMST Affiliate in Berrien Springs, Grand Valley State University (GVSU), and Western Michigan University (WMU). Credit and tuition information is available on the BCISD Web site.

Andrews University	EDTE 648 Engaging Students in Research	2 Credits
GVSU	ED 601F1 Engaging Students in Research	2 Credits
WMU		2 Credits

### **Costs**

The fee for the course is \$150.00. This fee will include the text, *Guiding Student Research Making Research Happen in Your School*, and shipping. BCISD will provide to the student a certificate upon completion of the course to document participation and to satisfy local requirements for professional development.

Graduate credit is optional. Credit is available from Andrews University, Grand Valley State University and Western Michigan University. Tuition information is on the BCISD web site, Professional Development Catalog, at the [www.berriencountyisd.org](http://www.berriencountyisd.org).

Michigan SBCEUs are available. Students must accurately log hours as they work on the course. Fees are available on the BCISD web site, Professional Development Catalog, at [www.berriencountyisd.org](http://www.berriencountyisd.org).

### **Registration**

Course registration will be administered by the BCISD registration secretary. BCISD can accept credit card payments, purchase orders and checks. This can be done by mail, fax, phone or online. Go to [www.berriencountyisd.org](http://www.berriencountyisd.org), click on Professional Development in the upper right hand corner, then search under “science” in the PD Catalog. Additional information is available at [www.bcmsc.org/engage.html](http://www.bcmsc.org/engage.html).

An enrollment of 10 students is required to offer the course. The registration deadline is **Friday, September 22, 2006**.

### **Delivery**

BCISD online courses are delivered on a BCISD server using *Moodle*, an online student learning system. Students are required to have Web access, an Email address and basic technology skills. For information about *Moodle* go to [www.moodle.com](http://www.moodle.com).

### **Virtual Office Hours**

Contact the instructor with questions, concerns and comments by email. Online chat time will be announced.

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