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**George Mason University  
College of Education and Human Development**

**EDPD 502 6R6  
“Using Action Research to  
Increase Student Learning in Science”  
3 Credit Graduate Fall Semester/2016  
Wednesdays 4:30- 7:30 pm  
September 14- December 7, 2016**

**Faculty**

**Name:** *Joy Greene*

**Office Hours:** *By appointment only*

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**Prerequisites/Corequisites:**

None

**University Catalog Course Description:**

Teacher researchers will utilize the Action Research Cycle to improve professional practice resulting in continuously improving student learning. Educators will explore a variety of learning experiences and pedagogy applications that foster student interest, involve students in the inquiry process, advance critical thinking, and develop conceptual understanding of scientific topics.

**Course Delivery Method:**

During the course participants will engage in face to face and online class discussions, small group meetings, and oral presentations.

**Learner Outcomes or Objectives:**

Upon completion of the course, learners will be able to accomplish the following:

- Define and design Action Research for individual use or for a Professional Learning Community.
- Utilize the Action Research Cycle to improve professional practice resulting in continuously improving student learning.

**Professional Standards:**

This professional development opportunity supports Prince William County Public Schools Professional Educator Performance Standard I (Knowledge of Students), Standard II (Instructional Planning), Standard III (Instructional Delivery), Standard IV (Assessment of

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and for Student Learning), Standard V (Learning Environment), Standard VI (Professionalism), and Standard VII (Student Academic Progress).

**Required Texts:**

Mills, G. E. (2014). *Action Research: A Guide for the Teacher Researcher* (5<sup>th</sup> edition). Prentice Hall, Upper Saddle River, New Jersey.

Supplemental readings and additional resources will be provided during course.

**Course Performance Evaluation:**

The assignments for this course include personal reflections, scientific journal summaries, and a formal write up of the Action Research report. All assignments should be written for clarity and edited carefully for grammatical errors. Use a consistent format (such as APA) for citing and listing references. Students are expected to submit all assignments on time in the manner outlined by the instructor.

**Assignments and Examinations**

- **Action Research Planning Guide (10%)**  
Complete Action Research Planning Guide
  
- **Discussion Forums and Reflections (10%)**  
Discussion forum requirements:
  - An original post between 100-200 words is required
  - Participants must submit a response to at least one (1) classmate
  - All responses must be submitted during the assigned timeframe
  - Reactions must be posted in the required location in the online discussion forum.
  - Focus on how you will use information and strategies learned in class in your classroom instruction and tell your opinion of activities and class discussions.
  
- **Action Research Report (40%)**  
Class participants will prepare a detailed Action Research Report. The report will include an area of focus statement, research questions, brief review of literature, data collection, data analysis, and your action plan. The course instructor will provide resources/rubric during the course. Participants will present a summary of area of focus, research questions, review of literature, data collection, data analysis, and your action plan to the entire class as a presentation.

Written Requirements:

- Visuals should be used to present the Action Research Report (example: PowerPoint and/or videos)
- Accurately site references using APA format (*course instructor will provide examples*)
- Copies of all resources/materials used or created for each class participant

**Other Requirements:**

- **Presentation (20%)**

Prepare and give a presentation of your Action Research Project and Report. Each presentation must focus on all aspects of the research and report such as the area of focus statement, research question, brief review of literature, data collection, data analysis, and your action plan. A time limit for the presentation will be established based on the number of class participants. The course instructor will establish the timeframe on the first night of class.

Presentation requirements:

- Visuals must be used to present research (example: PowerPoint or videos)
  - Handouts (*as applicable*) of data collection instruments and other resources used during project
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- **Attendance & Participation (20%)**  
Attendance and active participation are vital to the successful completion of the course. Every class participant is expected to contribute to class activities and discussions. Participants must attend all class sessions.
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- **Grading Policies:**  
**Grading Scale:**  
A 95 – 100 percent  
A- 90 – 94 percent  
B+ 85 – 89 percent  
B 80 – 84 percent  
C 70 – 75 percent  
F 69 percent or below

**Professional Dispositions**

Students are expected to exhibit professional behaviors and dispositions at all times.

**Core Values Commitment**

The College of Education & Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles. <http://cehd.gmu.edu/values/>

**GMU Policies and Resources for Students**

*Policies*

- Students must adhere to the guidelines of the Mason Honor Code (see <http://oai.gmu.edu/the-mason-honor-code/>).
- Students must follow the university policy for Responsible Use of Computing (see <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>).
- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All

communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.

- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see <http://ods.gmu.edu/>).
- Students must follow the university policy stating that all sound emitting devices shall be silenced during class unless otherwise authorized by the instructor.

### *Campus Resources*

- Support for submission of assignments to Tk20 should be directed to [tk20help@gmu.edu](mailto:tk20help@gmu.edu) or <https://cehd.gmu.edu/aero/tk20>. Questions or concerns regarding use of Blackboard should be directed to <http://coursesupport.gmu.edu/>.
- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing (see <http://writingcenter.gmu.edu/>).
- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance (see <http://caps.gmu.edu/>).
- The George Mason University Office of Student Support staff helps students negotiate life situations by connecting them with appropriate campus and off-campus resources. Students in need of these services may contact the office by phone (703-993-5376). Concerned students, faculty and staff may also make a referral to express concern for the safety or well-being of a Mason student or the community by going to <http://studentsupport.gmu.edu/>, and the OSS staff will follow up with the student.

**For additional information on the College of Education and Human Development, please visit our website <https://cehd.gmu.edu/>.**

## Class Schedule

Date	Topic/Learning Experiences	Readings/Assignments
<b>Session One:</b> Wednesday, September 14, 2016 4:30 – 7:30 PM	<ul style="list-style-type: none"> <li>• Course overview, objectives, expectations</li> <li>• What is Action Research?</li> <li>• Identify types of Action Research</li> </ul>	<ul style="list-style-type: none"> <li>• Complete starting point questions.</li> <li>• Read Chapters 1 and 2 Mills, G. E.</li> <li>• Solicit feedback from content co-workers, PLC, and other work groups to gather information about your area of focus.</li> </ul>
<b>Session Two:</b> Wednesday, September 21, 2016 4:30 – 7:30 PM	<ul style="list-style-type: none"> <li>• Review Action Research Planning Guide</li> <li>• Introduce the Action Research cycle</li> <li>• Discuss Areas of Focus, Research, Ethics</li> </ul>	<ul style="list-style-type: none"> <li>• Begin the Action Research Planning Guide provided by the instructor.</li> <li>• Complete required on line discussion by 9/28</li> <li>• Read Chapter 3 Mills, G. E..</li> </ul>
<b>Session Three:</b> Wednesday, September 28, 2016 4:30 – 7:30 PM	<ul style="list-style-type: none"> <li>• Designing Research Questions</li> <li>• Discuss and debate what good research questions are</li> <li>• Participate in small group discussions focused on Action Research Planning Guide</li> </ul>	<ul style="list-style-type: none"> <li>• Develop Research Question</li> <li>• Literature Review</li> <li>• Solicit feedback from content co-workers, PLC, and other work groups to gather information about your research question.</li> </ul>
<b>Session Four:</b> Wednesday, October 5, 2016 4:30 – 7:30 PM	<ul style="list-style-type: none"> <li>• Group discussion and peer review research questions</li> <li>• Peer Review of Findings from Literature Review</li> <li>• Discuss how to collect data and types of data</li> </ul>	<ul style="list-style-type: none"> <li>• Review and Edit Action Research Planning Guide</li> <li>• Refine research question</li> <li>• Complete all the required discussions by 10/12</li> <li>• Read Chapter 4 and 5 Mills, G. E..</li> </ul>
<b>Session Five:</b> Wednesday, October 12, 2016 4:30 – 7:30 PM	<ul style="list-style-type: none"> <li>• Discuss data analysis and why researchers triangulate data</li> <li>• Explore and discuss how to triangulate data</li> <li>• Discuss how to analyze data</li> <li>• Peer Review of Action Research Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Finalize data collection instruments</li> <li>• Complete all the required discussions by 10/19.</li> </ul>
<b>Session Six:</b> Wednesday, October 19, 2016 4:30 – 7:30 PM	<ul style="list-style-type: none"> <li>• Finalize Action Research Planning Guide, research questions, and data collection instruments</li> <li>• Discuss developing and Action Plan</li> <li>• Review challenges and brainstorm solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Complete all the required discussions by 10/26</li> <li>• Collect classroom and student data using instrument you developed</li> <li>• Read Chapter 6 and 8 Mills, G. E..</li> </ul>
<b>Session Seven:</b> Wednesday, October 26, 2016 (Peer review- meet with partner)	<ul style="list-style-type: none"> <li>• Review data regularly and reflect on professional practice</li> <li>• Peer review of Action Research Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Collect classroom and student data using instrument you developed</li> <li>• Read Chapter 9 Mills, G. E..</li> </ul>

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<p><b>Session Eight:</b> Wednesday, November 2, 2016 4:30 – 7:30 PM</p>	<ul style="list-style-type: none"> <li>• Writing up the Action Research</li> <li>• Sharing Obstacles, Challenges, Successes</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to finalize Action Research report and presentation of findings.</li> <li>• Read Appendix A Mills, G. E..</li> </ul>
<p><b>Session Nine:</b> Wednesday, November 9, 2016 4:30 – 7:30 PM</p>	<ul style="list-style-type: none"> <li>• Evaluating Data</li> <li>• Discuss how Action Plan can facilitate educational change</li> <li>• Developing Action Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Finalize Action Research report and presentation of findings</li> <li>• Read Appendix C Mills, G. E.</li> </ul>
<p><b>Session Ten:</b> Wednesday, November 16, 2016 (Peer review- meet with partner)</p>	<ul style="list-style-type: none"> <li>• Peer review of evaluation of data and final Action Research</li> </ul>	
<p><b>Session Eleven:</b> Wednesday, November 30, 2016 4:30 – 7:30 PM</p>	<p><b>Presenting Action Research</b> (<i>reports and data</i>)</p>	
<p><b>Session Twelve:</b> Wednesday, December 7, 2016 4:30 – 7:30 PM</p>	<p><b>Presenting Action Research</b> (<i>reports and data</i>)</p>	
<p>Additional instructional hours will be obtained through participation in an online class discussion forum via the Office of Student Learning- Science &amp; Family Life Education website.</p>		