

NAME: W&M HHMI Undergraduate Science Education Program

INSTITUTION: College of William and Mary

Wren Scholars Program to Increase STEM Persistence & Diversity

Inputs	Strategies	Outputs	Outcomes		Impacts (Long Term-Conditions)
			(Short Term-Learning)	(Medium Term-Action)	
<p>W&M admitted students from disadvantaged or diverse backgrounds- program includes ALL students in this category</p> <p>W&M faculty mentors for Wren Scholars program</p> <p>Resources for weekly meetings, administrative support</p> <p>Supplies for program</p> <p>Equipment and facilities</p> <p>Undergraduate students as peer mentors</p> <p>Speakers for discussions and workshops: directors of advising, counseling center, writing center, etc.</p> <p>Support systems - administrative support</p>	<p>Establish overarching Wren Scholars program for students from groups underrepresented in STEM - to increase persistence; program will organize and recruit for and administer other relevant programs.</p> <p>Program will sponsor talks/workshops from various offices that offer student services</p> <p>Program will sponsor tutoring and workshops on time management and active study techniques</p> <p>Program will focus on strengthening quantitative skills</p> <p>Program will serve as clearinghouse for announcing other available opportunities</p> <p>Program will sponsor meetings every other week to discuss topics of interest to STEM students</p>	<p>Establishment of the program specifically for ALL STEM URM students</p> <p>Number of students who enroll in subsequent science courses</p> <p>Number of students who persist in STEM</p> <p>Number of faculty and graduate students who mentor in program</p> <p>Number of all participants in Wren Scholars program</p>	<p>Students are excited about scientific research and plan to pursue their interest in science by continuing with STM fields</p> <p>Students continue contact with faculty mentors</p> <p>Students continue research in labs of faculty mentors</p> <p>Students enroll in introductory science courses and use skills learned in program</p> <p>Students show sense of community with each other</p>	<p>Students are prepared to pursue college level science classes; show confidence</p> <p>Students succeed in introductory science courses and labs; show strong performance</p> <p>Students continue to declare major in science or math</p> <p>Students serve as mentors for the following year's class</p> <p>Students take advantage of the services discussed in the workshops and discussion periods; these activities contribute to success</p>	<p>Attract and prepare more students from underrepresented groups and disadvantaged backgrounds to pursue science in college</p> <p>Students complete science majors</p> <p>Participating students pursue post-graduate science careers</p> <p>Students serve as role models and leaders in effort to attract members of underrepresented groups into science</p>

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Evaluation Questions for OUTCOMES	Possible Indicators/Measures	Possible Data Collection Methods and Information Sources	Rank/Priority (include brief rationale)
<ol style="list-style-type: none"> 1. Is the program successful in attracting and retaining students from underrepresented groups and disadvantaged backgrounds in the sciences? 2. Does the program prepare students for college level science courses? 3. Does this program help retain students in the sciences longer term? to Graduation? Post-graduation? 	<ol style="list-style-type: none"> 1 <ol style="list-style-type: none"> a. Students gain confidence in ability to transition to college life and to college-level academic work b. Students learn academic strategies for handling college-level demands for reading comprehension, writing, study skills, and a time management c. Students successfully complete introductory laboratory experience c. Concerns and viable solutions are discussed at weekly meetings with students and advisors d. Students are enthusiastic about studying science 2 <ol style="list-style-type: none"> a. Students learn transferable laboratory and research skills b. Students perform well in introductory courses c. Retention through freshmen courses is increased 3 <ol style="list-style-type: none"> a. Students major in science; students graduate in STEM and go on to post-graduate careers in science b. Students participate in other co-curricular science activities 	<ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> a. Entrance and exit questionnaire b. Focus group c. Transcripts d. Mentor/advisor observations e. Course evaluations 2. <ol style="list-style-type: none"> a. Laboratory assignments b. Course evaluations b. Self evaluations c. Transcripts d. Registrar records e. Quarterly questionnaires 3. <ol style="list-style-type: none"> a. W&M student surveys b. Comparative Registrar records c. Student tracking; post graduation d. Transcript analysis 	<p>Evaluation questions are ranked in order of how quickly an effect is expected to be seen. However data for all outcomes will be collected simultaneously.</p>

