

**ATTACHMENT "A"**  
**Academic Year 2017-2018**

<b>Program (Discipline) or Department Name</b>	<b>TOPS (Required for programs)</b>
Plant Science	010300

List the projects included in your 2017-2018 by name and number

<b>Number</b>	<b>Project Name</b>	<b>Total Perkins Funds Requested</b>
1.0	Soil water vacuum extractor, glassware, and filters	\$1,000
2.0	Replacement electrodes for selective ion meters	\$3,000
3.0	Soil hydrometers	\$300
4.0		
5.0		
<b>Total Amount of Perkins Funds Requested</b>		<b>\$4,300</b>

**Perkins Discipline/Department Planning/Implementation Team**

<b>VTEA Primary Contact Name</b>	<b>Phone</b>	<b>Email Address</b>
Greg Cluff	661-395-4697	gcluff@bakersfieldcollege.edu

List other departments/discipline members/key staff who will be involved in the 2017-2018 Perkins plan and implementation:

<b>Name</b>	<b>Phone</b>	<b>Email Address</b>

**Signatures (Required)**

Your signature below indicates that this proposal has the support of the department/discipline and that the plan is aligned with overall college objectives:

\_\_\_\_\_  
Department Chair (Date)

\_\_\_\_\_  
Dean, Career Technical Education (Date)

**ATTACHMENT “B” (Limit to one project)  
Academic Year 2017-2018**

<b>Program (Discipline) or Department Name</b>	<b>TOPS (Required for programs)</b>
Plant Science	010300

**Description of Project**

<b>Number</b>	<b>Project Name</b>	<b>Total Perkins Funds Requested</b>
<b>1.0</b>	Soil water vacuum extractor, glassware, and filters	<b>\$1,000</b>

**Limit to one project**

<p><b>Briefly describe gap to be addressed (Briefly describe program improvement issue(s))</b></p>	<ul style="list-style-type: none"> <li>● <b>Brief Summary of Request:</b> We need a second soil water extraction setup to extract water from soil samples for chemical analysis.</li> <li>● <b>Brief Rationale of Program:</b> Student numbers have increased to the point where a second extraction unit is needed to successfully complete the labs in the allotted time period. The soil water extraction equipment is required by the Course Outline of Record as described in the C-ID for Soils B1 and Crops B5, which are required courses for the new AS-T in plant science.</li> <li>● <b>Improvement Issues:</b> Lack of adequate equipment and supplies for a good environment to learn skills needed in the industry.</li> <li>● <b>Core Indicators to Address: Labor Market:</b> Core 3 – Persistence – Students get discouraged having to sit around and wait to use the extractor unit and even when it is their turn to use the equipment, they must be in large groups where most just sit and watch.  Core 4 - Employment as a Certified Crop Advisor, Soils Specialist, Conservation Scientist, Environmental Scientist, Plant and Soil teacher or Crop Manager.</li> <li>● <b>Supporting Labor Market Data (data provided by SOC Code):</b> 3,529 Workers in service area in SOC codes of professions needing expertise in soil analysis using extraction equipment.</li> <li>● <b>EMSI Data:</b> 3,709 workers needed in service area in SOC codes of professions above by 2021. That is an increase of 5.1% in five years.</li> </ul>
<p><b>Briefly describe how the gap(s) will be addressed (Briefly describe how the issue(s) will be addressed)</b></p>	<p>A second soil water extraction setup will allow for smaller teams and more students to physically use the equipment and successfully complete the lab for a better learning environment.</p>
<p><b>Measurement or Evidence of Project Success</b></p>	<ul style="list-style-type: none"> <li>● <b>Identify specific core indicator measures to be improved/evidence:</b> Core 3 – Persistence, as evidenced by improvement in Perkins IV Core Data Core 4 - Employment, as evidenced by improvement in Perkins IV Core Data</li> <li>● <b>Other measures to be improved/evidence:</b></li> </ul>

**Description of Project Activities and Spending Plan (add or delete rows as needed):**

No.	Describe Activity	Timeline	Must Reference Requ'd. Use	Approx Amount of Funds Requested	Object Code	Description of Vendor
1.0	Construction of a second soil water extraction unit that will include a vacuum pump, PVC manifold, five vacuum flasks, and five large filter units.	All materials should be obtained by July 2017 and assembled by Fall 2017 semester.	Core 4	\$1,000	4000 supplies 6000 equipment?	Harbor Freight Tools for vacuum pump  Ward's Scientific for vacuum flasks and filter units
<p><b>Describe project details including:</b></p> <ul style="list-style-type: none"> <li>• <b>who will responsible for project</b></li> <li>• <b>when it will be done</b></li> <li>• <b>what outcomes are expected or targeted and</b></li> <li>• <b>how/when/who assessment will be reported</b></li> </ul>						
<p>1. <b>Who will responsible for project?</b> Greg Cluff</p> <p>2. <b>When it will be done?</b> By fall 2017 semester</p> <p>3. <b>What outcomes are expected or targeted?</b> Allow more students to gain the hands-on experience of using soil water extractors to obtain soil water samples for doing almost all chemical analysis of soils. This should result in a greater number of students completing courses and greater employability of students working in the plant/soil science industry.</p> <p>4. <b>How/when/who assessment will be reported?</b> Beginning in fall 2017, Core 3 and Core 4 indicator data will be tracked to see if there is an uptick in persistence and employment.</p>						