## Instructional Equipment

This section will be filled out by faculty and reviewed by the Department Chair, the AREA Dean, the Instructional Equipment Committee, IPC and Budget.

Please enter items that will be used over a period of semesters BY STUDENTS. (Note: These should be NEW items that you are requesting one time only – not ongoing or consumable. Ongoing and consumable requests go under "Other Instructional Equipment". Technology-related requests should go under "Technology Requests".

Select whether the item is less than or more than $200 each. If you are a large discipline with several areas, please include which area this item is for. Include Tax, Shipping and Handling in the total cost for each item.

### Importance:
- ‘A’ means that your discipline cannot teach your course(s) without the requested equipment.
- ‘B’ means that your course(s) would be greatly enhanced with the requested equipment.
- ‘C’ means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

### I. Instructional Equipment/Materials Requirements

<table>
<thead>
<tr>
<th>Importance</th>
<th>Priority</th>
<th>To Support Annually:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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<td>Category Over $200</td>
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</table>

#### Discipline Area
- ACRT

#### Description and part number for ordering:

Build A Bay storage cabinets

<table>
<thead>
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<th>Qty.</th>
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<th>Tax:</th>
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<tr>
<td>8</td>
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### One-time expenses: (e.g. construction, electrical, installation)

None

### On-going Expenses: (e.g. maintenance, repairs, staffing, and/or upgrades)

None

### Item to be shared with the following Department/Program: (Include any shared expenses)

No

### Do you have space for this equipment?

Yes

### Justification for Item (See Rating Rubric)

1. Is this equipment required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
   Is this equipment required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)
   
   No

2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

   These cabinets are necessary for the proper storage and handling of ACRT tools, equipment and materials.
These cabinets are necessary for the proper storage and handling of ACRT tools, equipment and materials. This type of storage was overlooked in the modernization process. The facility currently has inadequate storage for tools and equipment. Safety is an issue due to the inadequate storage in the ACRT lab.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

All students in the program will benefit. Students will have more work space available to them because tools and equipment will not be left in undesignated areas. Storage is an issue in the ACRT lab. Tools and equipment need to be properly stored.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

Students will learn the necessity of keeping a clean, properly functioning “shop”. Various people have commented that materials and tools are not stored properly at this time.

5. Additional Justification for this item:

Designers miscalculated the amount of tools and material we have to store. Storage needs to be addressed.

I. Instructional Equipment/Materials Requirements

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<th>Category</th>
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<tr>
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Description and part number for ordering:
Anvil

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One-time expenses: (e.g. construction, electrical, installation)
none

On-going Expenses: (e.g. maintenance, repairs, staffing, and/or upgrades)
none

Item to be shared with the following Department/Program: (Include any shared expenses)
no

Do you have space for this equipment? Yes

Justification for Item (See Rating Rubric)
1. Is this equipment required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
Is this equipment required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)
no
2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

Students in the Metal Fabrication class need to be able to shape metal. An anvil is one of the basic tools used in metal fabrication.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

All students will be able to use the anvil to properly shape their metals. It is required for existing students and will attract new students. This will also add an additional work station in the metal fabrication area of the ACRT lab.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

Students will be able to work metal to a higher level of expertise. An anvil is one of the basic tools in metal fabrication and it is important we have this tool to teach theory and practice of metal fabrication. Students will be able to form metal to a high degree of accuracy.

5. Additional Justification for this item:

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### I. Instructional Equipment/Materials Requirements

<table>
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<th>Importance:</th>
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<th>To Support Annually:</th>
<th>Category</th>
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**Description and part number for ordering:**

Stake Table and Stakes

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**One-time expenses:** (e.g. construction, electrical, installation)

none

**On-going Expenses:** (e.g. maintenance, repairs, staffing, and/or upgrades)

none

**Item to be shared with the following Department/Program:** (Include any shared expenses)

no

**Do you have space for this equipment?**

Yes

**Justification for Item (See Rating Rubric)**

1. Is this equipment required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
Is this equipment required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

no

2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

A stake table is needed to form sheet metal into curved surfaces. This is part of metal fabrication. Use of a stake table is one of the basic tools used in metal fabrication. Students will be able to form compound angles using this tool.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

This will provide an additional work station in the metal fabrication area of the ACRT lab. Students need to be able to demonstrate their ability to use this tool safely and properly. The addition of this table will allow another work station allowing more students to work at one time. This will allow more students to work simultaneously in the ACRT lab thus attracting new students.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

The more skills students acquire while taking classes in the ACRT program increases their opportunity for employment. ACRT technicians need to have a wide range of metal fabrication skills. Having various pieces of equipment for them to learn on will make them more successful in the workforce.

5. Additional Justification for this item:

I. Instructional Equipment/Materials Requirements

<table>
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Description and part number for ordering:
Plenteousing Hammer

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One-time expenses: (e.g. construction, electrical, installation)
none

On-going Expenses: (e.g. maintenance, repairs, staffing, and/or upgrades)
none

Item to be shared with the following Department/Program: (Include any shared expenses)
none
Do you have space for this equipment?  Yes

Justification for Item (See Rating Rubric)
1. Is this equipment required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
   Is this equipment required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)
   no

2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?
   Students will be able to form metals to irregular shape with the use of a plenteousing hammer. Most fabrication shops will have this type of tool. It is important for students to understand and be able to use this tool properly and safely.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?
   This will add an additional work station to the metal fabrication area of the ACRT lab. This hammer is necessary for students in the ACRT class to fabricate floor panels and other curved surfaces. It will attract new students.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?
   Metal stretching and forming is one of the goals of the Metal Fabrication class. By using a plenteousing hammer, students can fabricate irregularly shaped sheet metal parts for use in auto restoration and collision repair.

5. Additional Justification for this item:
I. Technology/Software Requests

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

Importance:
• ‘A’ means that your discipline cannot teach your course(s) without the requested equipment.
• ‘B’ means that your course(s) would be greatly enhanced with the requested equipment.
• ‘C’ means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

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<th>To Support Annually</th>
<th>Category</th>
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Description and part number for ordering. Please include system requirement.
Paint Mixing Station Software update

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Type
License
Renewal

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<td>College-wide</td>
<td>Open Lab</td>
</tr>
<tr>
<td>Lab use</td>
<td></td>
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Item to be shared with the following Department/Program: (Include any shared expenses)

no

Justification for Item (See Rating Rubric)
1. Is this software required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
   Is this software required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

no

2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?
Students who are working towards a painting and refinishing certificate will need to know how to mix paint. Most collision repair shops have their own paint mixing station. Technicians need to be able to retrieve paint formula information from the computer base and mix it to the proper ratios. It is impossible to mix paint without having an online service to look up paint formulas. Students entering the auto collision repair field will be expected to retrieve data and mix paint.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

It is important to keep the paint and mixing station updated. Failure to renew this licence would make it impossible to retrieve paint formulas and we would not be able to mix paint. College of Marin one of the only locations in the Bay Area where students can learn and practice the art of painting and refinishing automobiles. This attracts new students.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

If the paint mixing station is maintained properly and software is updated monthly, students will be able to mix paint properly to obtain the correct color match to perform automotive paint work. After students have retrieved the color formula, mixed the paint and sprayed the paint on a test panel, the panel can be evaluated to see if it matches the color desired.

5. Additional Justification for this item:

I. Technology/Software Requests

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Importance:
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• 'B' means that your course(s) would be greatly enhanced with the requested equipment.
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In addition, how many times have you requested this item, but you have not received it?

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<tbody>
<tr>
<td>A</td>
<td>01</td>
<td>500 Students</td>
<td>Discipline-Related Software</td>
<td>ACRT / AUTO</td>
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</table>

Description and part number for ordering. Please include system requirement.

Estimators Guide for Auto Collision Repair on-line Subscription.
<table>
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<th>Qty.</th>
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<tbody>
<tr>
<td>License</td>
<td>Specific</td>
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<tr>
<td>Renewal</td>
<td>Open Lab</td>
</tr>
<tr>
<td></td>
<td>Lab use</td>
</tr>
</tbody>
</table>

**Item to be shared with the following Department/Program:** (Include any shared expenses)

This software will be shared with Auto Technology in the Auto 225 Career and Customer Relations Course.

**Justification for Item (See Rating Rubric)**

1. **Is this software required to meet Title 5 and/or Ed Code? If so, how? (Cite code)**
   - Is this software required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

   Students need to look up specifications while working on vehicles. Because of the vast amount of information it is no longer possible to store it in a book as previously done. Information is updated daily with on-line services. Today technicians use on-line sources to find information about how to repair vehicles. In order for students to enter the work force, they need to be proficient in the use of on-line retrieval systems such as All Data. At the present time we do not have this system available.

2. **How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?**

   Students need to learn how to read and write repair orders in order to enter the work force. With this software they will learn how to estimate the cost of repair to vehicles. This program will help students learn the necessary skills to read, write and estimate repair orders.

3. **How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?**
All students working in the field need to have an understanding of how this software works. The industry has progressed from hand written work orders and estimates to computer based work orders and estimates. This increases the accuracy and consistency of work orders and estimates. All students in the Auto Tech and Auto Collision Repair Program will benefit as well as existing students.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

Students will learn the proper method for writing repair orders. Repair orders are an essential part of the Automotive Industry. The repair order is the legal contract between the customer and the repair facility. It needs to be written properly to avoid misunderstanding and disputes. This new software increases the accuracy of the repair order and estimate. All technicians need to have a good understanding of how this software works. We will teach the use of this software in our Career and Customer Relation class.

5. Additional Justification for this item:

I. Technology/Software Requests

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

Importance:
• ‘A’ means that your discipline cannot teach your course(s) without the requested equipment.
• ‘B’ means that your course(s) would be greatly enhanced with the requested equipment.
• ‘C’ means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

<table>
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<th>Importance</th>
<th>Priority</th>
<th>To Support Annually</th>
<th>Category</th>
<th>Discipline Area</th>
</tr>
</thead>
<tbody>
<tr>
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<td>None</td>
<td>500 Students</td>
<td>Discipline-Related Software</td>
<td>ACRT</td>
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</table>

Description and part number for ordering. Please include system requirement.

Genesis laser measuring system update.

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Type             Discipline-
License          Specific
Renewal          Open Lab       Lab use

Item to be shared with the following Department/Program: (Include any shared expenses)

no

Justification for Item (See Rating Rubric)

1. Is this software required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
   Is this software required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

   no

2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

   The Genesis measuring system requires an update on an annual basis. If the software is not updated, the measuring system will not function. This was known when we purchased the equipment. This expense should be transferred from General to Categorical Funding so that we don't have to ask for the updates on a yearly basis. Funding needs to be automatic.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

   Frame measurements are a key component for insuring the car is repaired correctly. All students in the auto collision repair program should become familiar with the safe and proper operation of the Genesis laser measuring system. Keeping our software updated will assure we are teaching our students the most current and up to date systems and will attract additional students from the community.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

   Students will be able to measure and straighten cars to a high degree of accuracy. Their skill level will meet industry standards thus preparing them for the job market. College of Marin is one of the only locations where students can learn the use of laser measuring systems. We are fortunate to have this equipment purchased through the
modernization project. We need to keep its programs updated to meet industry standards.

5. Additional Justification for this item:
## Technology Requests

### Part II: Hardware for Lab and Classroom or other student use

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

**Importance:**
- 'A' means that your discipline cannot teach your course(s) without the requested equipment.
- 'B' means that your course(s) would be greatly enhanced with the requested equipment.
- 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

<table>
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<th>Importance</th>
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<th>To Support Annually:</th>
<th>Category</th>
<th>Discipline Area</th>
</tr>
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<tbody>
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<td>A</td>
<td>01</td>
<td>500 Students</td>
<td>Other</td>
<td>ACRT - EV</td>
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**Description and part number for ordering:**

Parts of Restoring 1976 CitiCar to Stock 1- 55 gallon of Safest Rust Remover @ $960 8- 6 volt deep cycle batteries @ $225 each 4 - sets of aircraft brake parts (Bendix and others) @ $200 each

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<th>Total:</th>
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**Type**

- College-wide: Open Lab
- Discipline-Specific: Lab use

If this is an upgrade or replacement, please briefly describe your existing equipment in terms of age and capability or lack thereof:

Item to be shared with the following Department/Program: (Include any shared expenses)

Electronics

**Justification for Item (See Rating Rubric)**

1. Is this hardware required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
2. Is this software required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

no
2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

These parts are required to restore the 1976 Citi Car to stock. These Citic Cars were a reaction to the gas crisis of the 1970's. They are one of the first mass produced 100% electric cars. 2000-3000 car were produced. Students will learn the basic practical design steps of designing and producing an electric car. These cars have batteries divided into different banks and at different speed the contactors combine different batteries together to drive the motor.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

Students will gain the practical knowledge of how basic electrical cars are built. Students will be able to apply these basic principles to the electrics and hybrid of today. We are teaching hybrid technology in all of our ACRT Classes. It is expected that 65% of all cars manufactured by 2016 will incorporate hybrid technology or 100% electrics. Having these different systems available will attract new students to the programs.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

Students outcomes cannot be met without these items. Students must understand the basics of the electric cars. Restoring this vehicle will allow us to use it as a teaching tool for the rest of the classes. It will provide, in the most simple terms, the basics of all the electric and hybrid designs.

5. Additional Justification for this item:

I. Technology Requests-Hardware for Lab and Classroom or other student use

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

Importance:
• 'A' means that your discipline cannot teach your course(s) without the requested equipment.
• 'B' means that your course(s) would be greatly enhanced with the requested equipment.
• 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

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<th>Category</th>
<th>Discipline Area</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>01</td>
<td>500 Students</td>
<td>Other</td>
<td>ACRT - EV</td>
</tr>
</tbody>
</table>

Description and part number for ordering:
Elite Power System Lithium Battery system consisting of: 12-GBS-LFM P100A battery @ $620 each 44-BL-40 Balancers @$8.95 each 1-TSL12-15 Charger @$90 each 11-EMS-$SB sense board@$66 each

<table>
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Type: College-wide
Discipline-Specific: Lab use

If this is an upgrade or replacement, please briefly describe your existing equipment in terms of age and capability or lack thereof:

Item to be shared with the following Department/Program: (Include any shared expenses)

Electronics

Justification for Item (See Rating Rubric)
1. Is this hardware required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
   Is this software required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)
   no

2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?
   These batteries are required to complete the Miata conversion. This is the third parts of our EV/Hybrid build. Step one was the solar golf cart with "standard" batteries. Step two was the VW Thing with GEL batteries. Step three is the Miata with Lithium batteries. Students must understand each of these technologies to be successful in the future in this industry.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?
   We are teaching hybrid technology in all of our ACRT Classes. It is expected that 65% of all cars manufactured by 2016 will incorporate hybrid technology or 100% electrics. Tesla brought the first lithium powered vehicle to the market place. Toyota is expected to have a lithium power car available for mass purchase by 2015. Students must be exposed to these systems. Having these different systems available will attract new students to the programs.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or
evidence supports your request?

Students outcomes cannot be met without these items. Students must understand these different systems. Students that wish to be involved with emerging technology designs must be able to test and be aware of the safety aspects of lithium batteries. After collisions it will be more and more important to not only check the structural damage but also check the proper operation and shut down of the different battery systems.

5. Additional Justification for this item:

I. Technology Requests-Hardware for Lab and Classroom or other student use

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

Importance:
• ‘A’ means that your discipline cannot teach your course(s) without the requested equipment.
• ‘B’ means that your course(s) would be greatly enhanced with the requested equipment.
• ‘C’ means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

<table>
<thead>
<tr>
<th>Importance</th>
<th>Priority</th>
<th>To Support</th>
<th>Category</th>
<th>Discipline Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>01</td>
<td>500 Students</td>
<td>Computer</td>
<td>ACRT</td>
</tr>
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Description and part number for ordering:
Desk top Computer

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<td>$1,735.00</td>
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</table>

Type
College-wide
Discipline-Specific

New
Open Lab
Lab use

If this is an upgrade or replacement, please briefly describe your existing equipment in terms of age and capability or lack thereof:

We only have one computer for the ACRT lab to use. Class size is 35. We need an additional computer to help students gain access to information services online such as All Data.

Item to be shared with the following Department/Program: (Include any shared expenses)

Justification for Item (See Rating Rubric)
1. Is this hardware required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
Is this software required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

no

2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

Students need access to Service and Repair Information Data. We need to use the most current and up to date systems. The students need quick and reliable access to on-line data.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

Students need access to Service and Repair Information Data. We need to use the most current and up to date systems. The students need quick and reliable access to on-line data.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

Students need access to on-line data continuously. At the present time we have only one computer available for student use. We need to increase access so that students can retrieve information while they are working on vehicles. Today’s vehicles incorporate a variety of different types of steels, plastics and paints; which require a technician to check data and repair procedure for the different types of products used. Students will be able to demonstrate the use of information technology used in the Automotive Collision Repair Industry. This is the most up to date technology used. Students are required to show competence in the use of information technology on manipulative and written tests.

5. Additional Justification for this item:

I. Technology Requests-Hardware for Lab and Classroom or other student use

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

Importance:
• 'A' means that your discipline cannot teach your course(s) without the requested equipment.
• 'B' means that your course(s) would be greatly enhanced with the requested equipment.
• 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.
In addition, how many times have you requested this item, but you have not received it?
Importance: Priority: To Support Annually: Category Discipline Area
A 01 500 Students Other ACRT

Description and part number for ordering:
Scan tool for Toyota Prius

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<th>Qty.</th>
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<th>Tax:</th>
<th>Shipping:</th>
<th>Total:</th>
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<td>$500.00</td>
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Type College-wide Discipline-Specific
New Open Lab Lab use

If this is an upgrade or replacement, please briefly describe your existing equipment in terms of age and capability or lack thereof:

Item to be shared with the following Department/Program: (Include any shared expenses)

no

Justification for Item (See Rating Rubric)
1. Is this hardware required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
Is this software required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

no

2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

In order for students to read the level of charge on batteries in a Toyota Prius, it is necessary to have the scan tool to retrieve the information. There are several different scan tools on the market but the Toyota scan tool is the most widely used. Technicians should become accustomed to the proper use and safety of this equipment. At the present time, we do not have the capability of reading battery voltage. We will not be able to teach properly without this tool.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

We are now teaching hybrid technology in all of our ACRT classes. This tool is important for students to learn how to test hybrid battery voltage. It is expected by the year 2016, 65% of all cars manufactured will incorporate hybrid technology. Having the ability to teach this new technology will attract new students.
4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

Students will become familiar with the safety and testing of hybrid battery packs. After a car is involved in a collision, not only is it important to check the body for structural damage, but it is important to check the battery for proper operation to determine if it were damaged.

5. Additional Justification for this item:

I. Technology Requests-Hardware for Lab and Classroom or other student use

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

Importance:
- 'A' means that your discipline cannot teach your course(s) without the requested equipment.
- 'B' means that your course(s) would be greatly enhanced with the requested equipment.
- 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

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<th>Priority</th>
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<th>Category</th>
<th>Discipline Area</th>
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<td>ACRT</td>
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Description and part number for ordering:
Lap top Computer

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<td>$50.00</td>
<td>$1,370.00</td>
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</table>

Type
- College-wide
- Discipline-Specific

If this is an upgrade or replacement, please briefly describe your existing equipment in terms of age and capability or lack thereof:
Replacement of 10 year old lap top.

Item to be shared with the following Department/Program: (Include any shared expenses)
No
Justification for Item (See Rating Rubric)
1. Is this hardware required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
   Is this software required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

   NO

2. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

   Students need access to Service and Repair Information Data. We need to use the most current and up to date systems. The students need quick and reliable access to on-line data.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

   Students need access to on-line data continuously. At the present time we have only one computer available for student use. We need to increase access so that students can retrieve information while they are working on vehicles. Today's vehicles incorporate a variety of different types of steels, plastics and paints which require a technician to check data and repair procedure for the different types of products used.

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

   Students will be able to demonstrate the use of information technology used in the Automotive Collision Repair Industry. This is the most up to date technology used.

5. Additional Justification for this item:
Instructional Operating Supplies

ACRT-2011

I. Consumable Instructional Operating Supplies

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, PRAC.

Note: Please group requests into broad categories of items required to teach a class. Make ONE entry for each category. Please enter only if your costs have gone up or down or you need additional funds for some reason. Don’t fill out if your supply budget has not changed.

Note: These are generally ongoing costs. One-time items go under Instructional Equipment.

Importance:
• ‘A’ means that your discipline cannot teach your course(s) without the requested equipment.
• ‘B’ means that your course(s) would be greatly enhanced with the requested equipment.
• ‘C’ means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

<table>
<thead>
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<th>Importance</th>
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<th>Discipline Area</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>01</td>
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<td>ACRT</td>
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</table>

Broad Category (for example in Chemistry - "Chemicals")

Instructional Supplies (Lottery) Automotive Collision Repair #12400-23201-43000-094900

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Type: Increasing Cost  How Long? Ongoing/Recurring

Item to be shared with the following Department/Program: (Include any shared expenses)

Justification for Item (See Rating Rubric)

1. Is it necessary for students to succeed in a series of courses?

Students need supplies and materials to work with in all of our courses. Students practice the correct procedures in the Auto Collision Repair class using these supplies. Without these supplies we cannot simulate repairs that will prepare students to work in the field of Auto Collision Repair.

2. How will access for students be improved? How many students (annually) will benefit from
this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

As students perform laboratory exercises and tasks, they use materials and supplies such as sand paper, thinner, welding gas, gloves and other necessary supplies. We offer six classes per semester in Auto Collision Repair with a class size of 30 students each. We need to have supplies on hand to keep all students working and learning how to perform collision repair processes that meet industry standards. Students are attracted to our program because we have a modern and up to date facility. They know they will receive up to date training with the most modern tools, equipment and supplies which are necessary for making repairs properly and meet the ASE/NATEF standards. We have had the same budget for the last several years. As the cost of living increased, our supply budget has not. The ACRT program needs to keep the supply budget inline with inflation so that quality instruction is maintained.

3. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

As students perform laboratory exercises and tasks, they use materials and supplies such as sand paper, thinner, welding gas, gloves and other necessary supplies. We offer six classes per semester in Auto Collision Repair with a class size of 30 students each. We need to have supplies on hand to keep all students working and learning how to perform collision repair processes that meet industry standards. Students are attracted to our program because we have a modern and up to date facility. They know they will receive up to date training with the most modern tools, equipment and supplies which are necessary for making repairs properly and meet the ASE/NATEF standards. We have had the same budget for the last several years. As the cost of living increased, our supply budget has not. The ACRT program needs to keep the supply budget inline with inflation so that quality instruction is maintained.

The best way to measure success is through enrollment and number of students successfully completing AS degrees, master technician certification, career and skill certificates and ACRT classes. The Auto Collision Repair classes are grouped together so students can earn skill certificates and career certificates. Some students may choose to go to four year institutions and can use the courses they’ve taken in the ACRT program for either electives or required courses at state universities. In recent years, some of our students have transferred to state colleges such as Chico State University to enroll in the Manufacturing Technology program and other related degrees.
I. Consumable Instructional Operating Supplies

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, PRAC. Note: Please group requests into broad categories of items required to teach a class. Make ONE entry for each category. Please enter only if your costs have gone up or down or you need additional funds for some reason. Don't fill out if your supply budget has not changed. Note: These are generally ongoing costs. One-time items go under Instructional Equipment.

Importance:
• 'A' means that your discipline cannot teach your course(s) without the requested equipment.
• 'B' means that your course(s) would be greatly enhanced with the requested equipment.
• 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

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<th>Discipline Area</th>
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<tbody>
<tr>
<td>A</td>
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Broad Category (for example in Chemistry - "Chemicals")

Furniture, Fixtures, and Equipment for Automotive Collision Repair # 11100-23201-64000-094900

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<th>Annual Cost</th>
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<table>
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<tr>
<th>Type</th>
<th>How Long?</th>
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<tbody>
<tr>
<td>Increasing Cost</td>
<td>Ongoing/Recurring</td>
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</tbody>
</table>

Item to be shared with the following Department/Program: (Include any shared expenses)

Justification for Item (See Rating Rubric)

1. Is it necessary for students to succeed in a series of courses?

Students need supplies and materials to work with in all of our courses. Students practice the correct procedures in the Auto Collision Repair class using these supplies. Without these supplies we cannot simulate repairs that will prepare students to work in the field of Auto Collision Repair.

2. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

As students perform laboratory exercises and tasks, they use materials and supplies such as sand paper, thinner, welding gas, gloves and other necessary supplies. We offer six classes per semester in Auto
Collision Repair with a class size of 30 students each. We need to have supplies on hand to keep all students working and learning how to perform collision repair processes that meet industry standards. Students are attracted to our program because we have a modern and up to date facility. They know they will receive up to date training with the most modern tools, equipment and supplies which are necessary for making repairs properly and meet the ASE/NATEF standards. We have had the same budget for the last several years. As the cost of living increased, our supply budget has not. The ACRT program needs to keep the supply budget inline with inflation so that quality instruction is maintained.

3. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

Students in our classes must increase their individual skills. Student learning outcomes will include manipulative skills and a manipulative skill final. The ability to use standard industry equipment is a required student goal.

I. Consumable Instructional Operating Supplies

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, PRAC. Note: Please group requests into broad categories of items required to teach a class. Make ONE entry for each category. Please enter only if your costs have gone up or down or you need additional funds for some reason. Don't fill out if your supply budget has not changed. Note: These are generally ongoing costs. One-time items go under Instructional Equipment.

Importance:
- ‘A’ means that your discipline cannot teach your course(s) without the requested equipment.
- ‘B’ means that your course(s) would be greatly enhanced with the requested equipment.
- ‘C’ means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

<table>
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<th>Importance:</th>
<th>Priority:</th>
<th>To Support Annually:</th>
<th>Discipline Area</th>
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<tr>
<td>A</td>
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<td>500 Students</td>
<td>ACRT</td>
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<table>
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<td>Annual Cost</td>
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Type | How Long?

Increasing Cost  Ongoing/Recurring

Item to be shared with the following Department/Program: (Include any shared expenses)

no

Justification for Item (See Rating Rubric)
1. Is it necessary for students to succeed in a series of courses?

Students need shop towels in all of our courses. Students use shop towels to clean up after themselves. Without these towels students cannot clean up after themselves after simulating repairs that will prepare students to work in the field of Auto Collision Repair.

2. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

As students perform laboratory exercises and tasks, they use materials and supplies such as sand paper, thinner, welding gas, gloves and other necessary supplies. We offer six classes per semester in Auto Collision Repair with a class size of 30 students each. We need to have supplies on hand to keep all students working and learning how to perform collision repair processes that meet industry standards. Students are attracted to our program because we have a modern and up to date facility. They know they will receive up to date training with the most modern tools, equipment and supplies which are necessary for making repairs properly and meet the ASE/NATEF standards. We have had the same budget for the last several years. As the cost of living increased, our supply budget has not. The ACRT program needs to keep the supply budget inline with inflation so that quality instruction is maintained.

3. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

Students in our classes will increase their individual skills. Student learning outcomes will include manipulative skills and a manipulative skill final. The ability to use standard industry equipment is a required student goal.

I. Consumable Instructional Operating Supplies

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, PRAC.

Note: Please group requests into broad categories of items required to teach a class. Make ONE entry for each category. Please enter only if your costs have gone up or down or you need additional funds for some reason. Don't fill out if your supply budget has not changed.
Note: These are generally ongoing costs. One-time items go under Instructional Equipment.

Importance:
• ‘A’ means that your discipline cannot teach your course(s) without the requested equipment.  
• ‘B’ means that your course(s) would be greatly enhanced with the requested equipment.  
• ‘C’ means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

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<th>Importance:</th>
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Broad Category (for example in Chemistry - "Chemicals")
Other Supplies Automotive Collision Repair #11100-23201-45000-094900

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<td>Ongoing/Recurring</td>
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Item to be shared with the following Department/Program: (Include any shared expenses)

no

Justification for Item (See Rating Rubric)
1. Is it necessary for students to succeed in a series of courses?

Students need supplies and materials to work with in all of our courses. Students practice the correct procedures in the Auto Collision Repair class using these supplies. Without these supplies we cannot simulate repairs that will prepare students to work in the field of Auto Collision Repair.

2. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

As students perform laboratory exercises and tasks, they use materials and supplies such as sand paper, thinner, welding gas, gloves and other necessary supplies. We offer six classes per semester in Auto Collision Repair with a class size of 30 students each. We need to have supplies on hand to keep all students working and learning how to perform collision repair processes that meet industry standards. Students are attracted to our program because we have a modern and up to date facility. They know they will receive up to date training with the most modern tools, equipment and supplies which are necessary for making repairs properly and meet the ASE/NATEF standards. We have had the same budget for the last several years. As the cost of living increased, our supply budget has
not. The ACRT program needs to keep the supply budget inline with inflation so that quality instruction is maintained.

3. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

Students in our classes must increase their individual skills. Student learning outcomes will include manipulative skills and a manipulative skill final. The ability to use standard industry equipment is a required student goal.

I. Consumable Instructional Operating Supplies

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, PRAC.

Note: Please group requests into broad categories of items required to teach a class. Make ONE entry for each category. Please enter only if your costs have gone up or down or you need additional funds for some reason. Don't fill out if your supply budget has not changed.

Note: These are generally ongoing costs. One-time items go under Instructional Equipment.

Importance:
• 'A' means that your discipline cannot teach your course(s) without the requested equipment.
• 'B' means that your course(s) would be greatly enhanced with the requested equipment.
• 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

In addition, how many times have you requested this item, but you have not received it?

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Broad Category (for example in Chemistry - "Chemicals")

Instructional Supplies Summer ACRT #11100-23201-43100-094900

<table>
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Type
Increasing Cost

How Long?
Ongoing/Recurring

Item to be shared with the following Department/Program: (Include any shared expenses)

no
Justification for Item (See Rating Rubric)
1. Is it necessary for students to succeed in a series of courses?

Students need supplies and materials to work with in all of our summer school courses. Students practice the correct procedures in the Auto collision Repair Industry. Without these supplies we cannot simulate repairs that prepare students to work in the field of Auto Collision Repair.

2. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

As students perform laboratory exercises and tasks, they use materials and supplies such as sand paper, thinner, welding gas, gloves and other necessary supplies. We offer two Auto Collision Repair workshops with a class size of 30 students each. We need to have supplies on hand to keep all students working and learning how to do collision repair. We have had the same budget for the last several years. As the cost of living increased, our supply budget has not. Students are attracted to our program because they know they can have the necessary tools, equipment and supplies to learn the tasks outlined in the ASE/NATEF standards for teaching Auto Collision Repair. All students enrolled in Auto Collision, Welding, Machine and Electronics will benefit. Having access to this equipment will allow students to use their classroom knowledge, combined with problem solving and critical thinking, to successfully modify donor cars for electric retrofit. The ability to actually modify and retrofit existing vehicles will make COM unique in the Bay Area. This will attract additional students to the initial class and expose them to the many other classes available.

3. What student learning or other outcomes are expected? Is it important to the achievement of student goals? How will these outcomes be measured for future planning? What data or evidence supports your request?

Students in our classes must increase their individual skills. Student learning outcomes will include manipulative skills and a manipulative skill final. The ability to use standard industry equipment is a required student goal.
Non-Instructional Support Staff

I. Current Support Staff
II. Request for additional support staff (clerical, lab tech, IS, comp tech, tutor, etc.)

<table>
<thead>
<tr>
<th>Purpose:</th>
<th>Type</th>
<th>Approx. hours per week:</th>
<th>To support:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Tech</td>
<td>Hourly</td>
<td>10</td>
<td>1000 Students</td>
</tr>
</tbody>
</table>

Justification: Please address the following areas as applicable. How will it be used? How will instruction be improved for student learning and success? How will access be improved? What student learning outcomes are expected? How will the outcomes be measured? What data or evidence is supplied to support your justification?

Since the completion of the new Trans Tech building, we are finding ourselves still in the process of moving in. We are finding that equipment and supplies do not necessarily fit into the places designed for them. Our current lab tech is finding he does not have enough time to perform his duties of preparing the lab for each class and organize all of the storage and equipment from the move. We still have much material to be sorted through and unpacked. Tool boards need to be constructed for tool storage and easy access for students. It is important to have our shops looking as professional as possible. Although we have reused much of our old tools and equipment, it is necessary to perform maintenance on some of the aging equipment.

Shared Resources: If you have requested additional staff that will be used by more than one department, please indicate here. Please indicate which disciplines and/or departments and the number of combined students/faculty or classes he/she would serve. Please indicate how it will improve access or outcomes and if it is needed for health and safety concerns or required by law.

This position would serve both Auto Tech and Auto Collision Repair. About 1000 students use the facility on a weekly basis. Because there are still materials sitting in boxes, there is a concern for safety. Not all of our supplies and materials are accessible to students. Modernization project funded some of the move in last year but the projects are not completed and will not get completed without additional help.
Program Summary
ACRT-2011

Instructions: after reviewing your data and reports from all other sections of your program review, use this form to briefly summarize all of the information you have provided by closing with your concluding remarks (e.g. an executive one-page summary) for your entire program review.

I. Assessment of Previous Program Reviews:

1. What resources have you been granted from your previous program reviews?
2. Please assess how these resources have been used to improve access, learning outcomes and student success in your program?
3. What changes have you implemented based on previous program reviews?
4. What results have you found?

1. We received supplies and equipment to build and work on our electric vehicle projects. We also received software to help in the process of estimating collision repair damage. We received monies to help with tracking student progress and collecting data to make decisions about course offerings.

2. We used supplies and equipment we received last year to work on our electric vehicles. We currently have a Volkswagen Thing which has been converted from gas to electric and is operational but still undergoing minor improvements. Our second project was a Mazda Miata. We received some money for electrical components and batteries from last years instructional equipment money. We will be asking for additional funding to continue working on this project next year.

The Electrical Conversion class has proved to be a very positive program for the college. We have been featured on television news clips and promotions featuring the College of Marin in "green" technology.

Students are excited about learning how to convert gas powered cars to electric which is evident by the positive enrollment in the course over the last four semesters.
3. The modernization project for the Transportation Technology complex at the Indian Valley campus at College of Marin has allowed students to become familiar with the ever changing automotive industry. The automotive future may be electric power, hybrid, fuel cell, compressed natural gas, synthetic fuel, bio fuels or some unknown technology at this time. If we look at the history of the automobile, the repair side of the industry reacts slower than the design industry. If the design of the vehicle is too radical, the industry cannot supply technicians fast enough to repair them. We have recognized that students need a broad base of education including chemistry, physics, mathematics, English and other subject matter. We have integrated electric and hybrid theory and practices into all of our auto collision repair courses.

Faculty and Administration at College of Marin need to keep their minds open and encourage cross curricular education. Today's cars are designed by mechanical and electrical engineers with high levels of understanding of lightweight composite materials. It is important that technicians today have a good understanding of the physics, chemistry and engineering that goes into a modern automobile. This philosophy and technology is being integrated into our curriculum and updated yearly so that students are prepared to work on cars of the present and future.

4. We have found that the electric car class is very popular. Currently, a large number of students are excited about "green" technology including hybrid and electric vehicles. We have also integrated the hybrid/electric technology into all of our ACRT courses. This has also sparked much interest for people enrolling in future classes in the ACRT program. Another course that has been very popular this year has been our metal fabrication course. Through the modernization process, we have purchased metal fabrication equipment to supplement the curriculum in ACRT. The new course we are offering, Metal Fabrication, has become successful.

Students who have taken previous classes in welding and ACRT are finding that the metal fabrication class provides them with additional knowledge and skills to be able to understand and work metal to a higher level competency. We will be asking for additional funds to continue the development of our metal fabrication equipment. Metal fabrication is important for auto restoration. Students learn to make parts that are too expensive or no longer available.

II. Requests Summary:

1. Please summarize the main requests you have made in this program review in order of your priority starting with the most important one.
2. Summarize briefly why you want each one.
3. Summarize your overall rationale.

We are asking for additional funds to purchase more equipment for the metal fabrication portion of our curriculum. We need the additional equipment to provide all students with a work station while taking Metal Fabrication class. We need to continually upgrade our lab with new equipment to make it the best possible educational experience for students. We also need to continuously update all of our software.

a. The Genesis Measuring System for the Goliath frame rack needs program updates annually.

b. The paint mixing station needs software updates monthly.

c. The All Data information system needs updates annually.

d. Mitchell's Estimators guide needs updates annually.

e. Scan tools need update annually.

We also need additional funding to continue to work on our electric vehicle conversions. We need the additional supplies so that we can finish the projects we have started and continue with the enthusiasm and success of the program. In the future, we may be considering altering district vehicles to run on electricity. We have considered a partnership with the organic farm to produce an electric vehicle for them to transport organic produce to the farmer's market.

Although the college has done an excellent job of modernizing the Transportation Technology complex and ACRT program, they have run short on funding to fully outfit the ACRT lab with all the necessary tools and equipment to meet the ASE standards. At this point, it will be up to the district to continually fund and find resources to complete the modernization project so that we are able to meet or exceed ASE standards. Once the facility has met the standards for NATEF and ASE, it will be possible to apply for ASE certification. At this time, all of the faculty members meet and exceed ASE standards for education. The curriculum has been aligned to meet ASE/NATEF certification.
III. Other concluding remarks.

Over the past 10 years, the ACRT program has updated its curriculum to meet the need of the ever changing automobile and transportation systems. We are currently working with the electronics program to design and build electric vehicles. Both the ACRT and ELEC programs have experienced a steady growth in enrollment over the last several years. The modernization of the Transportation Technology Facility has been a big “plus” for enrollment. Although the Trans Tech building is a great asset to the district, there are still several pending issues that need to be addressed. Our concerns include the following:

a. The floors are cracked throughout the entire complex because they were installed incorrectly and subsequently cracked. The contractor added too much water to the concrete mix because the outside temperature on the pouring date was over 100 degrees. This is a simple chemistry problem. There is a given space between sand particles that water can fill during pouring. If the sand space is increased by adding too much water, the cement will crack when it dries.

The solution to this problem is to coat the floors with epoxy to cover the cracks.

b. The counter tops in both Pomo 1 and Pomo 2 were supposed to be finished with a chemical resistant paint. The planners of the Trans Tech complex made a mistake on the plans and did not specify "chemical resistant" paint. We noticed this problem halfway through the planning process and pointed it out to the planners. The planners said it would be too costly to make a change order, halfway through the project to rectify the problem. It was decided to wait until the project was completed and then install stainless steel countertops on top of the incorrectly painted counter tops. As of now, it has not been completed. The current counter top finish dissolves when brake fluid, lacquer thinner, acetone, brake cleaner etc. are placed on them. Obviously, these counter tops are not...
suitable for our type of usage and we need the stainless steel counter tops installed as agreed upon.
Department Chair Comments

ACRT-2011

1. Please rank the instructional equipment requests, technology requests and other instructional materials requests sections. Please comment especially on any specific priorities without which this program cannot function.

The instructional equipment requests for ACRT are important to make the discipline function properly. The technology requests are important to keep the ACRT program current with industry standards. Students need to know how to use the most modern electronic equipment to diagnose and repair automobiles. The modernization project fell short of funds for fully equipping the Transportation Technology complex. The Automotive Collision Repair program will have to continue to seek other funding to outfit the facility so that it meets ASE and NATEF standards for certification. The ACRT department has prioritized the needed equipment list. It is unclear at this time, how many items on the list will be purchased by the modernization project and how many items will remain unfunded. All equipment listed is required for ASE and NATEF certification. The ACRT department will have to search for additional funding to cover the shortfall of the modernization project. I support the ranking of the supplies and equipment requested by the ACRT department.

2. Please comment if additional units, faculty, or staff have been requested.

There is no need for additional faculty in ACRT. We have a well rounded part time faculty pool for staffing. We are in need of additional "lab tech" hours. The modernization process has left us with an incomplete Auto Tech lab and Auto Collision Lab. We are asking for an additional 10 hours per week to help with the construction of new tool boards, organizing of tool storage areas and placement of equipment. We have been struggling for the past year and a half with items not properly stored and equipment not fitting where planned.

3. Other comments

The faculty and staff in the ACRT program typically work fairly well together. Their teaching philosophies and teaching styles are aligned with one another. The ACRT program works and operates smoothly. The ACRT staff is working with the Electronics and Machine Metals program on the electric vehicle and alternative fuels project which is a cross curricular activity.