I. Service Area Name: Advanced Technology and Applied Science

II. Date of Review: May 2015

III. Service Area Mission Statement (optional):

IV. Service Area’s key duties, responsibilities, functions, activities, and tasks:
Advanced Technology and Applied Science comprises the following disciplines: Agriculture (which includes Agriculture Business, Agriculture Production, and Food Safety), Agricultural and Industrial Technology, Advanced Automotive Technology, Advanced Diesel Technology, Computer Science and Information Technology (Computer Science, Digital and Web Design, Network and Security), Construction (Sustainable Construction and Sustainable Design), Drafting Technology, and Welding. Students in Advanced Technology pursue transfer and career technical education paths that lead to high demand, and high wage careers. The focus is on providing up-to-date hands-on education in state of the art facilities that focuses on labor market demands and industry-driven educational offerings. The ultimate goal is to prepare the most effective workforce to serve the local and regional industry needs. Additionally, the Alisal campus, which is the home of the division of Advanced Technology, is at the center of numerous outreach activities focusing on energizing the community and empowering citizens through education. The division is an active participant in the local and regional workforce development, and an ally to numerous businesses and associations.
We are committed to working with K-12 students and institutions to establish effective pathways for students to come to CTE programs at Hartnell.

V. Greatest strengths and most significant accomplishments during the past three years:
Some of the most significant accomplishments of Advanced Technology are:
- CSIT-in-3: this program is the nation’s first seamless collaboration between a community college and a 4-year institution to increase success and completion in computer science. Students have been recruited for cohort 3. And will begin the program in Fall 2015.
- 13 articulated courses were offered this year in Salinas Valley high schools. These courses will provide K-12 students an opportunity to receive college credit and explore CTE, while still deciding on future directions. We hope to continue growing the program and the relations with K-12.
- Significant strides forward were accomplished toward a 2+2 degree in Agricultural Business with CSUMB. At the time of the preparation of this document, work is being performed on the alignment of curricula at both institutions.
- Two new emphases in agriculture (Horticultural Technician, and Sustainable Crop Management) were approved by the respective advisory committees and all courses are in the process of approval locally and through CCCCO. These new emphases will be added to the two AS-Ts in agriculture (Plant Science and Ag. Business) that we are seeking approvals for.
- The various food safety program activities and workshops and the Western Regional Food Safety Summit at Hartnell College remain highly appealing to the local and regional industry. Our program and conference are the premier educational venues for practitioners and have proven to be successes with students and professionals.
- In collaboration with Salinas HS and the MTROP, our students built a mobile Tiny House during the Summer 2014 semester. This 12x18ft structure was highlighted in local newspaper articles and TV news stories. For Summer 2015 we are continuing our partnership and are building a house for a family from Santa Cruz.
- New curriculum for AIT is currently being worked on. This curriculum is built with stackable certificates in the design. These certificates will focus on: fabrication (2 courses), hydraulics and pneumatics (4 courses), and industrial electricity.
- Initiated several grants:
  - California Career Pathways Trust grant
  - Bachelor degree at Community college (food safety)
  - US Department of Agriculture, National Institute of Agriculture (Agriculture)
  - Innovation in Higher Education award with CSUMB (computer science)
- iAgriculture was a new program initiated to provide K-12 and first year college students with a keener knowledge of various local and regional agricultural careers, and of transfer possibilities to UC and CSU institutions.
- Training in food safety for professionals through a collaboration with the Department of Homeland Security, Global GAP and other entities. These activities have provided a unique opportunity for local first responders and food safety practitioners to get invaluable training.
- Alisal Campus Open House was the first campuswide recruitment event for all programs. We estimate that about 250 individuals came to learn more about our programs. This is a great and successful first attempt at increasing the scope of what used to be the Diesel Open House.

VI. Major challenges during the past three years—that is, the aspects that are most in need of improvement:
- Finding adjuncts that would teach. Professionals are paid more in their respective industries than Hartnell pays
- Getting adjuncts equivalencies. Extremely challenging to get people who have ample experience through the equivalency process
- Budget allocations do not cover actual cost of instruction and upgrade
- Lack of funds for memberships in professional and industry trade groups, organizations, etc.
- Lack of library services
- Lack of consistent tutorial services
- Lack of study spaces for students. No quiet and no group study spaces
- Restricted hours of A&R services
- Restricted food service
VII. Brief summary of continuous quality improvement actions to be taken that will help to build upon strengths and address challenges.
- We have surveyed students for their preference of means of communication. And identified that emails are the preferred means of communication
- New curricula in preparation in: ABT, AIT, CONS, CSS, WLD
- New program: AAT to replace AUT
- ABT proposes: 2 AS-Ts, 2 2+2 with CSUMB, 3 new emphases
- AIT proposes: AS, and 4 stackable certificates
- AUT/ADT propose: regulatory and industry certifications
- CSS proposes: new emphasis (web development)
- CONS: 2 revamped emphases, industry accreditation, preparation to transfer