

PORTLAND COMMUNITY COLLEGE

Emergency Medical Services

PROGRAM/DISCIPLINE REVIEW

2019-20 Academic Year

Prepared by:

James Gray, BA, NRP, Faculty Department Chair

Mark Hornshuh, BS, Paramedic, Subject Area Committee Chair

Jackilyn Williams, RN, MSN, NRP, Full Time Faculty & Paramedic Program Director

Robert Victorino, BHS, NRP, Clinical Coordinator

Janeen Hull - Division Dean: Allied Health, Emergency and Legal Services

Table of Contents

1. Program/Discipline Overview	3
2. Outcomes and Assessment	6
3. Other Instructional Issues	11
4. Needs of Students and the Community	15
5. Faculty	18
6. Facilities, Instructional, and Student Support	19
7. Career and Technical Education (CTE) Programs	20
8. Recommendations	24
9. Assurances	27
Appendix 1	28
Appendix 2	29
Appendix 3	30

Commented [1]: These page numbers might not match with all of the edits/changes.

1. Program/Discipline Overview:

- A. What are the educational goals or objectives of this program/discipline? How do these compare with national or professional program/discipline trends or guidelines? Have they changed since the last review, or are they expected to change in the next five years?

The Emergency Medical Services (EMS) department at PCC offers entry-level training and job readiness for Emergency Medical Technicians (EMT), Advanced Emergency Medical Technicians (AEMT) and Paramedics. We offer a one-year certificate in Emergency Medical Services (EMS), less than one-year certificate in AEMT, less than one-year career pathway, and Associate of Applied Science Degree (AAS) in Emergency Medical Technician-Paramedic.

The department has recently been approved to offer a less than one year pathway certificate. National curriculum changes and State Scope of Practice changes require more contact hours to deliver content. The EMS 105/106 course increased from 10 to 12 credits. This increase has been determined necessary by Oregon EMS Education Consortium, and has been approved by PCC EMS Advisory Committee. This certificate offering will allow the SAC to significantly increase its completion numbers.

Changes are also being made to the AAS degree. EMS 240 Didactic I will see an increase of credits from 12 to 14, EMS 242 Didactic II, credits will increase from 9 to 11, EMS 244 Clinical I will increase from 9 to 11, EMS 246 Clinical II will increase from 5 to 9, EMS 248 Field I will increase from 2 to 3, EMS 250 Field II will stay at 7 credits, and EMS 252 Didactic III will stay at 2 credits. National accreditation standards have changed, requiring more lab time for degree students to meet eligibility requirements for certification. This change has been recognized and approved by the Statewide EMS Education Consortium.

A new 1 credit course has been proposed, EMS 238 Pre-Paramedic Orientation. Changes to the national Accreditation Standards now require the program to document hands on demonstrations of entry-level skills in a formalized manner. This course will allow the program to meet this requirement.

The goals below are required by The Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP) of the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Standard II.C. Minimum Expectations. These goals must be published word for word and available to all AAS students, potential and actual. A few of the words have changed slightly in the last 5 years, but not the intent. These goals would change only if the standard changed.

Paramedic: "To prepare competent entry-level Paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains with or without exit points at the Advanced Emergency Medical Technician and/or Emergency Medical Technician, and/or Emergency Medical Responder levels."

Commented [2]: I don't feel like the information in this section answers this question really. You should introduce the Emergency Medical Services program that we have multiple certificates (& a new one just approved) & an AAS (give a brief overview of the purpose of each).

Commented [MOU3R2]:

Advanced Emergency Medical Technician: “To prepare competent entry-level Advanced Emergency Medical Technician in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.”

AAS: Emergency Medical Technician - Paramedic

- ☐ Act in accordance with the ethical and professional medical standards of the entry level Paramedic
- ☐ Meet the academic eligibility requirements for taking both cognitive and practical State and National Certification examinations at the Paramedic level
- ☐ Demonstrate communication skills of the medical environment in order to develop and maintain professional client relationships at the Paramedic level
- ☐ Demonstrate the professional and technical skill set necessary to meet the Paramedic standard of care in a safe manner under diverse conditions. 4.2009

One-Year Certificate: Emergency Medical Technician

- ☐ Act in accordance with the ethical and professional medical standards of the entry level EMT.
- ☐ Meet the academic eligibility requirements for taking both cognitive and practical State and National Certification examinations at the EMT level.
- ☐ Meet the academic eligibility requirements to enter any Oregon Paramedic AAS degree program.
- ☐ Demonstrate communication skills of the medical environment in order to develop and maintain professional client relationships at the EMT level.
- ☐ Demonstrate the professional and technical skill set necessary to meet the EMT standard of care in a safe manner under diverse conditions. 03.2012

- B. Briefly describe curricular, instructional, or other changes that were made as a result of your SAC's recommendations in the last program review and/or the administrative response. *(The administrative response can be found opposite your SAC's listing at the web page where the Program Reviews are posted – look for the “AR” pdf.)* Note: Any changes NOT made as a result of the last program review should be described in the appropriate section elsewhere in this template.

The EMS SAC recently created a new less than one-year career pathway certificate. The need for this certificate came out of the data from the last program review and discussions of enrollment and completion and employment opportunities for our EMT students.

In order to become an Emergency Medical Technician (EMT) in the state of Oregon, students need to participate in training from an accredited institution approved by the Oregon Health Authority (OHA). PCC is an approved institution. Upon successful completion of the training, students are then eligible to apply to sit for the national registry exams for EMT and if a student passes both the written & practical exams, then the OHA grants state licensure.

Each year around 350 students come to PCC's EMS program to take the 2 courses that are considered the training necessary to be eligible to apply & sit for the National Registry exams. These courses already exist (EMS 105 & EMS 106) and have been 5 credits each. This year, these courses were approved to increase to 6 credits each by the statewide consortium and PCC. This allowed us to propose the new 12 credit stackable, career pathway certificate that can be earned in 1-2 terms and improving student completion.

EMS 105 & 106 are a subset of the existing EMS one-year certificate, as well as, the EMS AAS, making this a true career pathway certificate and an opportunity for students to receive academic recognition for successful completion.

Other exciting additions for the program that have taken place since the last program review (2015) includes the hiring of a full-time faculty member, as well as multiple part-time instructors, lab assistants and SIMulation professionals.

As noted in the 2015 Administrative Response, The EMS program, like many PCC programs, had significant work to do and improvements to make in the area of cultural competency. Diversity training and improved cultural competence was called out and has become a focus of ongoing professional development.

The SAC started addressing a need for faculty & staff professional development with a focus on respecting & being responsive to cultural differences and gender identities.

The SAC invited interim Dean of Students Traci Simmons to a SAC meeting to discuss PCC's commitment to DEI, available resources at PCC, and what the SAC can do to increase awareness. Of interest was the lack of diversity in the student population in the EMS program in comparison to the college and the district. The SAC continues to explore more effective options for recruiting and retaining underrepresented students and faculty.

American Medical Response (AMR) approached the SAC with assistance for their new diversity scholarship. Scholarship recipients would enroll at PCC to complete prerequisite and EMS courses. The SAC continues its involvement with AMR's diversity scholarship committee by providing suggestions for improvement as well as serving on the selection committee.

Our SAC continually works to improve their own ideals, becoming culturally competent is an ongoing process that we have embraced. Initially it was difficult to find any resources specific to EMS. This is something that was discussed at Advisory Committee and with our

Clinical & Field partners. In 2018, the National Association of EMS Educators (NAEMSE) released The Impact of Cultural Humility in Prehospital Healthcare Delivery and Education. NAEMSE believes that EMS educators should work to improve the ability of their students to provide equal care to all their patients. The NAEMSE document is an excellent guide for educators, as well as students.

A sampling of what our SAC has specifically done:

- Invited Jamie Kennel to speak about his published paper on the Racial Disparity in EMS Treatment in Oregon
- Increased our efforts to recruit & retain minority students (especially at the high school level)
- Visuals used in course materials, as well as, marketing and recruiting materials aim to reflect the diversity of the Portland Metro area.
- Intentional development and use of course materials and purchases of Simulation manikins now better reflect diversity in skin color, age/gender, dress & script communications
- An additional 2 hrs. have been added to the paramedic curriculum of case study to guide students efforts to take the patient's cultural differences into consideration during assessment & treatment
- Additional scenario & simulation training to address LGBTQ patients and bystanders
- Changes to or outright removal of some policies in the EMS Program Handbook that created unintended barriers for our students
- Removed the Paramedic AAS application fee in an effort to create better equity and opportunity, rather than another unintended barrier for students
- Removed the applicant interview from the Paramedic AAS application selection process in a better effort to decrease potential bias

2. Outcomes and Assessment: Reflect on learning outcomes and assessment, teaching methodologies, and content in order to improve the quality of teaching, learning and student success.

A. Course-Level Outcomes: The college has an expectation that course outcomes, as listed in the CCOG, are both assessable and assessed, with the intent that SACs will collaborate to develop a shared vision for course-level learning outcomes.

- i. What is the SAC process for review of course outcomes in your CCOGs to ensure that they are assessable?

Reviewed by the SAC annually as a group, changes are made if needed. As all outcomes are assessed in every course, changes are rare unless needed to better address student learning or accreditation requirements. The EMS SAC has just completed a review of course level, as well as, certificate and degree outcomes for the creation of the new less than one-year career pathway certificate, revisions to the one-year certificate and the AAS.

- ii. Identify and give examples of changes made in instruction, to improve students' attainment of course outcomes or outcomes of requisite course sequences (such as are found in in MTH, WR, ESOL, BI, etc.), **that were made based on the results of assessment of student learning.**

The Oregon Health Authority (OHA) changed the administration of the State EMT Psychomotor Exam. The OHA allowed EMS programs to administer the test, but did not prescribe the specifics of administration. Our SAC devised a plan and proposed it to the OHA. Previously, EMT students completed psychomotor skill testing for course completion. The students would then repeat the same skill test for the State Psychomotor Exam. Typically, most EMT students passed the State exam, however, there are always a few students that do not pass the first time around. The same testing criteria is used both in our classes and at the state exam. In this model, students were burdened with paying an additional fee to retest, on top of the fee for the initial test. The new skill testing structure we proposed removed the testing fee and the need to repeat the successfully completed skills test. EMT students are skills tested in house.

The ability to skills test the students freed up more time to conduct case studies, scenarios and run simulations in the EMS 105 and EMS 106 courses. Simulation integrates individual skills into a comprehensive patient assessment. Simulation allows for assessing the affective domain of learning. A rubric mirroring the paramedic IOOH was created to evaluate the simulation. Cultural sensitivity training can and is being incorporated into our simulation training (SIM). Standardized patients allow for scenarios, simulation and role play of people of various cultures, backgrounds or marginalized members of our society with the intention of increasing EMS student exposure, cultural sensitivity and DEI awareness.

Major exams in our EMS 105 and 106 courses were due for review & revision. The question of validity and reliability was raised with no clear answers. The SAC looked at options for updating these major exams and decided to use a company called *EMSTesting*. Features of this company include item analysis of exams, an extensive test and quiz bank, the ability to select questions based off of Bloom's Taxonomy, the ability to use cut score vs. raw score, and exams are administered via the web.

No more pen and paper exams. The paramedic course has been utilizing *EMSTesting* and Platinum Education for years, but the EMT courses have only been using it for a little over a year. We are gathering data to determine the effectiveness of this exam delivery method and if it has any impact on pass rates of our students on the National Registry Cognitive Exam. Stay Tuned!

Addressing College Core Outcomes

- iii. Update the Core Outcomes Mapping Matrix.

<http://www.pcc.edu/resources/academic/core-outcomes/mapping-index.html>

For each course, choose the appropriate Mapping Level Indicator (0-4) to match **faculty expectations for the Core Outcome for passing students**. (You can copy from the website and paste into either a Word or Excel document to do this update, and embed it in your report or provide as an appendix. Or, you may send the revised matrix to Susan Wilson, swilson@pcc.edu, in advance of your program review due date so she can update the web page; then, you can insert a link to the web page in the body of your report).

<https://www.pcc.edu/core-outcomes/emsemergencymedicalservices/>

The SAC recently updated the mapping matrix in preparation for the program review.

B. Assessment of Core Outcomes (LDC) or Degree and Certificate (CTE) Outcomes.

- i. Reflecting on the last five years of assessment, provide a brief summary of one or two of your best assessment projects, highlighting efforts made to improve students' attainment of the Core Outcomes (LDC-DE disciplines) or Degree and Certificate Outcomes (CTE programs). *(If including any summary data in the report or an appendix, be sure to redact all student identifiers.)*

2016-2017 LAC Outcome Reassessment Report (Exemplary Report):

Initially the outcome being assessed was only a program standard, but quickly became a national standard for paramedic training. It is now a national standard that is a component of the Paramedic Psychomotor Competency Portfolio (PPCP) which includes all paramedic skills, as well as simulated patient encounters, now referred to as integrated out-of-hospital (IOOH) scenarios. The simulation outcomes being reassessed at PCC are now in alignment with the IOOH scenarios. The IOOH scenarios must be passed to be eligible to take the paramedic licensing exam. We originally wanted to assess how effective our simulation program was for student success in clinical & field rotations. Then our focus shifted slightly to

how effective the IOOH scenarios were to student success at the program capstone event, after clinical & field rotations.

- ii. Do you have evidence that the changes made were effective by having reassessed the same outcome? If so, please describe briefly.

100% (n24) attained the desired results in the initial assessment, 100% (n22) attained the desired results in the reassessment. With the inclusion of the Integrated Out-of-Hospital (IOOH) Scenario in the NREMT certifying/licensing exam affecting the 2016 cohort, the results were very encouraging. The students taking the exam prior to inclusion of the IOOH were as expected at 100%. The remainder of the cohort that tested after the January 1, 2017 change that included the IOOH were a pleasant affirmation of student success on Summative Simulation Evaluations, even using a newer evaluation instrument. Consistent feedback from simulation scenario raters (experienced paramedics) encouraged effective self-directed improvement of critical thinking and problem solving skills with simulated patients, family members/bystanders, other medical professionals and potential preceptors. Formative simulation scenarios allowed students to tailor their improvement goals to their individual learning needs. At the end of each formative simulation scenario, the student was asked for 2 goals to improve on during the next simulation. Simulation scenarios during both the initial assessment and the reassessment showed attainment of learning goals, showing consistent improvement from simple to complex critical thinking/problem solving skills, professionalism & self-reflection skills. This showed that use of the new IOOH evaluation instrument during simulation scenarios throughout the program, and at the conclusion of the program, were meeting our expectations as hoped.

- iii. Evaluate your SAC's assessment cycle processes. What have you learned to improve your assessment practices and strategies?

EMS assesses our AAS degree outcomes for the paramedic cohort every year. The data is used for program evaluation and program improvement. All course outcomes in the program are assessed every year. The program has been very successful in our assessment processes and continue to monitor our practices, looking for trends that we can improve on the following year.

- iv. Are there any Core Outcomes that are particularly challenging for your (LDC-DE) SAC to assess, or difficult to align and assess within your (CTE) program? If yes, please identify which ones and the challenges that exist.

None of the PCC Core Outcomes are difficult to align or assess with our program. However, outcomes reporting for our program is always a challenge. The paramedic program runs on a calendar year, not an academic year, so reporting results for a cohort in June is challenging for us. Interpretation for attainment of the core outcomes is not possible until all data has been obtained at the end of the calendar year.

For instance, the 2016-2017 reassessment report mentioned above completed the reassessment data for the 2016 cohort, but did not include data on the 2017 cohort. The SAC could, however, interpret results from Spring Term data only, as an indicator of positive progression of the overall project to its conclusion. For instance, data from 2017 Spring Term was collected and evaluated, but was not documented in that years report. Results at the end of Spring Term have historically proven to be consistent with results at the end of the program, so that gives the SAC an indication of performance.

- v. CTE only: Briefly describe the evidence you have, determined by direct assessment, that students are meeting your Degree and/or Certificate outcomes.

Our SAC continuously assesses our entire AAS paramedic cohort using rubrics and maintaining inter-rater reliability at around 90% agreement for all outcomes. Performance benchmarks minimums are suggested by paramedic national accreditation standards, and by the national testing body (NREMT). NREMT minimums in the Paramedic Psychomotor Competency Portfolio have to be met 100% ("Pass") by 100% of the students, to be allowed to test the national certification exam. The additional suggested benchmarks by national accreditation standards are used as a starting point for the program to set the numbers, and then those numbers are endorsed by the program advisory committee on an annual basis. The benchmark numbers may be re-set according to program review/evaluation by the program director/instructor, and/or input from the advisory committee.

- NREMT-P Exam = Pass within 1 yr. of program completion
- Global Affective Evaluation = "Competent" in all categories at the conclusion of each course & at program completion
- Clinical Shift Evaluation = "3" rating using a 1-3 Likert Scale (Platinum Planner)
- Field Internship Shift Evaluation = "3" rating using a 1-3 Likert Scale (Platinum Planner)
- Clinical/Field Affective Evaluation = "3" or higher rating using a 1-5 Likert Scale (Platinum Planner)
- Simulation Summative Performance = "Competent" score within 3 attempts (Platinum Planner)

- Patient Care Report Documentation = Required ALS Calls (40/40) & Team Leads (50/50) have been met (Platinum Planner)
- Field Preceptor & Medical Director Statement of Entry-Level Competency = "Competent as Entry-Level" by both at program completion

At the conclusion of the paramedic program, each student has to have met the benchmark 100% for every outcome assessed to exit the program successfully.

NREMT evidence of pass rates of graduates are as follows:

- 2018 Cohort (n21) Pass within 1 yr. = 100% *1 did not graduate
- 2017 Cohort (n19) Pass within 1 yr. = 100%
- 2016 Cohort (n22) Pass within 1 yr. = 100%

3. Other Instructional Issues (Note: for questions A-C, specific information can be found at:

https://www.pcc.edu/ir/program_profiles/index.html

This link is to the Program Review Dashboard Data Tables, use the pull down menu to select the subject/course you are wanting to look at and the dashboard will display the data for 5 years trend;

Here are the [Printing Guidelines](#)

The profiles in dashboards are organized by following areas;

[FTE & Headcount](#)
[Race/Ethnicity](#)
[Gender](#)
[Age](#)
[Collegewide Grade Counts](#)
[Campus Grade Counts](#)

- A. Please review the data for course enrollments in your subject area. Are enrollments similar to college FTE trends in general, or are they increasing or decreasing at a faster rate? What (if any) factors within control of your SAC may be influencing enrollments in your courses? What (if any) factors within control of the college may be influencing enrollments in your courses?

There has been a decline in the EMS headcounts since our last program review (roughly 550 in 2015 & 450 in 2018). This follows the same trend seen throughout the college (Appendix 1).

EMS has experienced a slight increase in our EMS 100 intro course each year since our last program review. Declining completion numbers (especially in the one-year certificate), yet enrollment still remained fairly strong & steady in most of the EMS courses, including EMS 105 & 106. The data informed the need for creating the new EMT less than one-year career pathway certificate.

Increasingly students enrolled in our EMS courses are using them as a stepping stone to other healthcare & emergency careers. EMT course completion may provide an edge to a student in the competitive application process for nursing, physician assistant, physical therapy or medical school. The SAC is looking into collaborating with other allied health departments to suggest EMS training as an option to many of the more than 500 candidates (annually) at PCC that are denied entry into their respective first choice programs.

- B. Please review the grades awarded for the courses in your program. What patterns or trends do you see? Are there any courses with consistently lower pass rates than others? Why do you think this is the case, and how is your SAC addressing this?

A trend we are currently tracking is the increasing pass rate in our EMS 106 - Emergency Medical Technician part 2 course. We are seeing an increase in class pass rates, but a decrease in pass rates on the National Registry of EMT cognitive exam. The NREMT exam is required for candidates to obtain state EMT licensure. The SAC recently started utilizing a third party vendor (*EMSTesting*) to administer all EMS 105 and EMS 106 exams. We don't have enough data to conclude if this may be a contributing factor for this trend. The decrease in pass rates in the EMS 115 - Crisis Intervention course may be attributed to the change in course format and delivery modality. This course has only been offered as an online course for the past year. It is the first experience with a completely online for many of our EMS students. We are currently monitoring these trends and gathering more data.

In our AAS or second year, paramedic level clinical and field courses, EMS 246 and EMS 248/EMS 250, respectively, we tend to see a high number of Incompletes recorded at the end of term grading. Due to the nature of how clinical (hospital) and field (ambulance) rotations are scheduled, students may not have met the required course terminal competencies during the time frame for assigning grades. The program cannot guarantee the presence of patients of the required ages and complaints either in the hospital, or those using emergency services. Industry standards for these courses are competency based, and not hourly based for successful completion, as are our program standards. If a student receives an Incomplete in EMS 246 Clinical II, their grade is changed within a couple of days of successful completion of the clinical competencies. In the last 5 years, all of the EMS 246 Incompletes have been successfully changed to a Pass. EMS 248 Field I is also tied to the completion of EMS 246. Students cannot begin field rotations until they have successfully completed clinical rotations. The final field component EMS 250 cannot be completed until a very specific set of competencies have been met successfully. Again, the length of time for completion is at the whim of when and who is using emergency services, which for most students doesn't fall within the PCC term grading. All students in EMS 248 Field I have received a Pass in the last 5 years. If a student is going to be unsuccessful in field rotations, it will be during EMS 250, which

occasionally happens, and can usually be linked to failure in the team leading role. Occasionally there are other factors out of our control, such as when preceptors are sent out of the area on strike teams to fight fires, or the preceptor has a work related injury. In these cases, the student might have a delayed start, or an unavoidable break in their internship.

- C. Which of your courses are offered online and what is the proportion of on-campus and online? For courses offered both via online and on campus, are there differences in student success? If yes, describe the differences and how your SAC is addressing them. When referencing classes taught online, it is acceptable to refer to those offerings as 'OL.' In the PCC vernacular, 'Online Learning' has replaced 'Distance Learning (DL)' in the PCC vernacular due to the recent name change of the Online Learning Division.

The only 100 level EMS courses offered via online are EMS 113 - Emergency Response Communication/Documentation and EMS 115 - Crisis Intervention. EMS 100 - Introduction to Emergency Medical Services is going through the OL developmental phase to offer students the option of either a section online or a section on-campus, all in an effort to aid in access and completion.

These courses are the only anticipated online courses for the EMS program. The program is best as an overall hybrid program.

Paramedic level courses are not offered online, however, the didactic courses do utilize a "blended" formats of the required face-to-face class with supplemental online screen casts, videos, articles and case presentations to use a "flipped classroom" model to maximize class time learning.

The SAC currently has one full-time and two part-time instructors that have completed the OIO training. The intent of the SAC is to have all its full time faculty OIO trained. The SAC sent two PT faculty through OIO to develop two EMS courses (EMS 115 and EMS 113). After completing OIO, one of the PT faculty needed to take a step back from PCC to focus on his new job as a Fire Chief. Additional duties outside of teaching is always a challenge in CTE programs. Our plan of having each of the SAC's FT faculty OIO trained will assist with our ability to be able to offer online options for students and of course help with necessary last minute course takeovers.

- D. Has the SAC made any curricular changes as a result of exploring/adopting educational initiatives (e.g., Community-Based Learning, Internationalization of the Curriculum, Inquiry-Based Learning, etc.)? If so, please describe.

The paramedic AAS degree program has been shifting the focus away from lecture based instruction to an inquiry-based approach. Students are randomly assigned to a three-person team at the beginning of the program, which increases communication, fosters confidence, and gives each student a chance to improve their teamwork skills. Active learning has helped to improve student outcomes. There is a smoother transition from simple to complex learning, students are building a framework of understanding as they engage in peer-to-peer teaching and learning, they are more engaged, and they are receiving feedback from their peers which makes their progress easier for them to see and self-evaluate. Students are learning to develop their own explanations as they interact with their peers, which helps to reinforce learned content. We are also exploring audience response systems for use with large group instruction, and embedding quiz questions within presentations. Another change made to support inquiry-based learning has been the move to allow all paramedic students to use any current (2015 AHA Guidelines) paramedic textbook. There is no set textbook and this encourages discussion points within the teams that wouldn't be possible if everyone had the same text. When the students see the disparities, they want to know why and with discussion all team members are exposed to multiple interpretations of subjects. The result is increased depth and breadth to the student's knowledge base.

- E. Are there any courses in the program that are offered as Dual Credit at area high schools? If so, describe how the SAC develops and maintains relationships with the HS faculty in support of quality instruction.

The EMS introductory class (EMS 100) is currently offered as Dual Credit at Liberty High school and Banks High School. This course has the best potential for future dual credit offerings with other schools and school districts. A review of course content, course evaluations and curricular or instructional changes from previous reviews are discussed annually with HS faculty. PCC and HS faculty are required to attend the yearly PCC Dual Credit Symposium. This allows for programmatic changes to be discussed, as well as issues or concerns from similar Dual Credit programs. Communication lines are always available for HS faculty to contact the EMS Dual Credit Liaison when needed.

- F. Please describe the use of Course Evaluations by your SAC. Have you created SAC-specific questions? Do you have a mechanism for sharing results of the SAC-specific questions among the members of your SAC? Has the information you have received been of use at the course/program/discipline level?

The SAC has developed and used SAC specific questions in the past, but are not using those specific questions at this time. A very poor return rate of less than 25% is the norm

for EMS courses using PCC online evaluations. While some limited-value information may be available at the course level for feedback purposes, program evaluation should not be based on a return rate that may include only a majority of dissatisfied students (those receiving lower grades, for instance), rather than an appropriate sample size. The current evaluations do provide instructor feedback that may not otherwise be available to individual instructors.

Program specific evaluations (versus PCC evaluations) are used at the paramedic level during every course within the AAS program. Paper/pencil evaluations are still being used; as they can provide a “ticket-out-the-door” return of 100%. The paramedic program is developing online program evaluations to use within D2L where response can be tracked for completion, and to eliminate a multitude of hard copies.

Paramedic course evaluations for didactic and skills lab include: Instructor evaluations, guest speaker evaluations, medical director speaker evaluations, lab evaluations, simulation evaluations, lab assistant evaluations, affective evaluation, and a course evaluation. Clinical (hospital) and Field (ambulance) evaluations include ongoing (throughout the course) evaluations of clinical sites, clinical preceptors, field sites and field preceptors. Affective evaluations are completed for every course. At the completion of EMS 252, the capstone course, a program evaluation is completed as well as a graduate survey. Graduate surveys are requested at six and twelve months post program completion as well. Employer surveys are completed by advisory committee members, and resource assessment by advisory members and faculty.

All paramedic AAS degree program evaluations and surveys are used for ongoing program improvement, and include assessment, evaluation and planning. This is required of the program director and program to maintain national accreditation. The annual report includes program assessment based on evaluations and surveys, and actions plans to address areas needing improvement and/or revision. This process has not changed in the last 5 years.

4. Needs of Students and the Community

- A. Have there been any changes in the demographics of the student populations you serve? If there have been changes, how have they impacted curriculum, instruction, or professional development, and, if so, in what way?

There have been no significant changes to the student population demographics. The EMS student demographics are significantly different than the campus and college demographics. The EMS student population is predominantly white & male (73%). This demographic closely matches the EMS industry. (Appendix 2)

The SAC has actively recruited underrepresented students through various activities. We put time into recruiting at high schools, community events, PCC preview days, and career fairs. The numbers for students in the underrepresented student population has remained fairly steady. The only significant increase is in the Hispanic and multiethnic student population. The SAC is evaluating its recruitment efforts. (Appendix 2)

There has been no significant change in the number of female students entering the EMS program. Interestingly, we did have a significant uptick of female students in the paramedic AAS cohort of 2019 (from 4-6/24 typically to 10/21 for 2019). We are not sure why, but hope it is a parity trend that continues. (Appendix 2)

- B. What strategies are used within the program/discipline to facilitate success for students with disabilities? If known, to what extent are your students utilizing the resources offered by Disability Services? What does the SAC see as particularly challenging in serving these students?

Students are informed of available resources for PCC students, one of which is Disability Services. Students with documented disabilities are encouraged to contact Disability Services for arrangements for accommodations to facilitate success in the class. We are able to comply with these accommodation requests.

The challenge encountered is with students that do not self-identify as needing resources or accommodations. We encourage all students to seek and take advantage of the resources offered by PCC, including Disability Services.

- C. What strategies are used within the program/discipline to facilitate success for online students? What does the SAC see as particularly challenging in serving online students?

Faculty attend workshops and utilize resources offered by Online Learning. The Faculty Online Summit, webinars, and hybrid workshops provide examples of best practice models to facilitate student success.

Communication is one of the keys to success with OL classes. Instructors post announcements and email students about any changes to class schedules or assignments. Announcements that may be of benefit to students are posted. Examples include scholarship opportunities, job postings, OL tutoring assistance, and community events. Email is the most common modality used to communicate with students. While the option of calling the instructor is also available, most students opt to communicate through email. Google Voice is an option that can provide a phone number that will allow students the ability to send text messages to the instructor. This option might provide for

faster response to pressing issues that may often be missed through email communications. The SAC is exploring this option to better serve students.

Timely feedback on assignments will contribute to student success. A student receiving positive feedback and constructive criticism for improvement on an assignment will do better on subsequent assignments. If no feedback is provided, the student will continue to make the same mistake over and over and will not improve.

CPN's are used for students doing well and poorly in class. CPN's provide information on course status as well as suggestions for improvement. Care reports are also used for students that disclose having personal issues. The challenge is the student may not disclose having a personal problem. The noticeable change may be what is said in the discussion posts or not submitting coursework.

- D. Has feedback from students, community groups, transfer institutions, business, industry or government been used to make curriculum or instructional changes (if this has not been addressed elsewhere in this document)? If so, describe.

Curriculum for EMS is outlined by the National Highway Traffic Safety Administration (NHTSA) in the form of the *National EMS Education Standards*. Educational programs must adhere to the standards for each EMS level, but the format allows for programs to choose different implementation methods to achieve the standards. The standards define the minimum competencies, clinical behaviors, and judgments required to meet practice guidelines defined in the *National EMS Scope of Practice Model* and the *National EMS Core Content*.

The PCC EMS programs use feedback from students, instructors, the Medical Director and our Advisory Committee members to guide changes in implementation of the curriculum. Due to the large amount of information that must be learned by the student, we have changed a mostly lecture orientated format, to more inquiry-based learning and "flipped classroom" format. This allows us to make use of screencasts and a series of short videos prior to in class time. Small group/large group discussions and other learning opportunities have increased the value of instruction during face-to-face classroom experience.

The EMS Simulation Program continues to grow and is a major factor of graduates' entry-level field readiness, critical thinking and decision making skills. Positive and encouraging feedback is being returned by industry employers of PCC Graduates, advisory committee members and other EMS programs.

5. **Faculty: reflect on the composition, qualifications, and development of the faculty**

- A. Provide information on how the faculty instructional practices reflect the strategic intentions for diversity, equity and inclusion in PCC's Strategic Plan, [Theme 5](#). What has the SAC done to further your faculty's inter-cultural competence and creation of a shared understanding about diversity, equity, and inclusion?

The SAC strives to create a safe environment for people of different backgrounds and abilities. Many examples have been provided in section 1-B. We are reviewing the EMS grading policy and discussing changes to align it with PCC's grading policy. We continue to revise the EMS handbook in efforts to better serve all of our students.

To foster a more diverse, inclusive, and equitable environment, faculty attend professional development workshops to improve instructional practice to be more inclusive. Examples of workshops include "Whiteness in leadership", OL accessibility workshops, and "Working Effectively Across Differences". Special guests are invited to present at department meetings to share DEI information. Interim Dean of Students Traci Simmons was invited to a SAC meeting to discuss PCC's commitment to DEI and our role in PCC's YESS work. PCC guests and EMS students were also present for Jamie Kennel's presentation on Racial Disparity in EMS Treatment in Oregon.

- B. Report any changes the SAC has made to instructor qualifications since the last review and the reason for the changes. Current Instructor Qualifications are available at:

<http://www.pcc.edu/resources/academic/instructor-qualifications/index.html>

There have been no significant changes made to instructor qualifications, other than some changes in terminology (National Standards have changed the term "EMT-Basic" to "EMT") and some changes in style of text and format. Additionally, some courses have been inactivated (EMS 118 and EMS 120) so instructor qualifications no longer apply to those.

- C. How have professional development activities of the faculty contributed to the strength of the program/discipline? If such activities have resulted in instructional or curricular changes, please describe.

Staff attendance at simulation conferences such as the International Meeting on Simulation in Healthcare and individual certifications such as the Certified Healthcare Simulation Educator have equipped our staff and faculty to guide the evolution of the healthcare simulation programs district wide. An example of this evolutionary change in the simulation program for the EMS department has been the shift away from

mannequin-based SIM to Standardized Patient or SP(actor)-based sim. This shift allows for a higher degree of fidelity in the teaching and evaluation of the affective domain of healthcare delivery and is a direct result of staff and faculty exposure to new technologies and ideas through conference attendance and certification.

SAC members annually attend the Oregon EMS Conference, not just as attendees, but also as presenters and conference committee members. Continuing education is required to renew EMS licenses, and the conference also provides an opportunity to network with other professionals as well as other Oregon educators. Exposure to the newest tools and technologies available from the exhibitors and vendors provides the opportunity to stay on top of new developments in EMS practice which can be brought back to the classroom.

The paramedic program director continues in the role of CoAEMSP Site Visitor Team Captain, attending 4-5 site visits per year. These opportunities are absolutely invaluable to our own program, not only due to an extreme familiarity with the CAAHEP Standards and Guidelines, but also by providing insight into how other programs across the nation are practicing, including the chance to see what works well in other areas and especially what does not work well. Every site visit provides something that can be used to improve our own program and student outcomes. CoA site visitors are the first to be trained on any changes to the standards or practice before they are presented to the public, and many times have direct input into possible changes.

6. Facilities, Instructional, and Student Support

- A. Describe how classroom space, classroom technology, laboratory space, and equipment impact student success.

The continued development of the fidelity of the simulation program has provided students with the opportunity to apply the concepts and skills that they have learned in lecture and lab. This early application allows them to achieve a higher degree of initial aptitude as new healthcare providers.

- B. Describe how students are using the library or other outside-the-classroom information resources (e.g., computer labs, tutoring, Student Learning Center). If courses are offered online, do students have online access to the same resources?

Paramedic students are required to complete a research paper on new and emerging medical devices or services using resources other than their textbooks. The library online health science databases are used heavily for peer reviewed article searches, particularly CINAHL Complete, EBSCOhost, MEDLINE, ProQuest, and Nursing and Allied Health

(GaleOneFile). Students are encouraged to use PCC tutors and other resources for review of their paper prior to submission.

Students in the OL environment have access to similar resources.

- C. Does the SAC have any insights on how students are using Academic Advising, Counseling, Student Leadership, and Student Resource Centers (e.g., the Veterans, Women's, Multicultural, and Queer Centers)? What opportunities do you see to promote student success by collaborating with these services?

Most students utilize our Perkins Advisor (Michelle Butler) for academic advising. EMT students intending to apply for the AAS degree all see our Perkins Advisor, Michelle Butler, to map out prerequisites and have a plan to apply to the paramedic program. Students are informed of PCC resources on day one and are reminded throughout the course. Announcements are posted on D2L.

One of the challenges we do encounter is access to resources. We have evening courses, weekend courses, courses off-site (Forest Grove) and courses at Willow Creek.

Our FDC participated in a division wide FDC meeting with our Dean and our Associate Dean of Students to discuss ways to better serve our students that are not on campus during traditional hours. We realize this is an issue for multiple programs and students and we are open to getting creative and being a part of the solution.

Note to LDC-DE SACs: In your report, put N/A for Section 7 and continue with Sections 8 and 9.

7. Career and Technical Education (CTE) Programs only: To ensure that the curriculum keeps pace with changing employer needs and continues to successfully prepare students to enter a career field...

- A. Evaluate the impact of your program's advisory committee on curriculum and instructional content methods, and/or outcomes. Please include the minutes from the last three advisory committee meetings in the appendix.

The paramedic program is required by accreditation to have a Medical Director. Our Medical Director must first review and approve instructional content methods and outcomes prior to it being reviewed by the EMS Advisory Committee. The Advisory Committee is then responsible for reviewing the goals, outcomes and instructional content methods for the prior year's program and making recommendations to the program. Review and approval includes all minimum competency requirements. Included are team leads, achievement of goals, analysis of the goals, action plan, and the

results of action, where appropriate, and review of the CoAEMSP annual report, along with any other objective data used for program evaluation and revision, as required. This is required under CoAEMSP Standard II.B.

- B. Describe current and projected demand and enrollment patterns for your program. Include discussion of any impact this will have.

As mentioned, there has been a decline in the EMS headcounts since our last program review (roughly 550 in 2015 & 450 in 2018). This follows the same trend seen throughout the college. (Appendix 2)

However, EMS has experienced a slight increase in our EMS 100 intro course each year since our last program review. We are watching this closely to see if these numbers translate into actual completions or even an increase in Paramedic applications.

Declining completion numbers (especially in the one-year certificate) along with steady enrollment numbers in EMS 105/106 courses informed the need for creating the new EMT less than one-year career pathway certificate.

The paramedic program has filled its maximum 24 seats every year in the last 5 except for 2017. In 2017, 23 applicants were selected, but 2 were unable to begin the program for personal or professional reasons. The decrease in paramedic enrollment is consistent with the decrease throughout all programs in the Statewide EMS Education Consortium.

- C. How are students selected and/or prepared (e.g., prerequisites) for program entry?

Completion of prerequisite requirements is the criteria used for entry into most of the EMS courses. A completed application, background check, drug screen, and vaccination information are a few of the required prerequisites for entry into the EMS 105 course. Completion of EMS 105 & 106 are the primary prerequisites for entry into the rest of the 100 and 200 level EMS courses. The only EMS course that does not require any prerequisite is EMS 100-Introduction to EMS. Most of the prerequisite requirements are mandated by the clinical sites utilized by the SAC. Oregon Revised Statutes require a set number of clinical hours to be eligible for state licensure.

The paramedic program accepts 24 students into its cohort. Students complete prerequisite coursework, complete an application, take a comprehensive EMT level cognitive written exam, and are evaluated performing an EMT level patient assessment using simulation. Points are awarded for all components of the application process and scores are used to rank applicants with the top 24 selected into the program.

- D. Review job placement data for students over the last five years, including salary information where available. Forecast future employment opportunities for students, including national or state forecasts if appropriate.

According to the U.S. Bureau of Labor and Statistics (BLS), employment of paramedics and other EMTs is predicted to grow 7% for the years 2018-2028 (www.bls.gov). This growth is secondary to an increasing number of emergency medical calls and an increasing aging population. *PayScale.com* reported that the median annual salary for an EMT is \$26,353 and the annual salary for paramedics is \$46,809 nationally. EMS job placement data for EMT and paramedic students includes full time paid, part time paid, and volunteer positions, working within one year of graduation. A paramedic graduate working as an EMT is not considered to be positive job placement. Paramedic data is collected via a graduate survey tool distributed at the time of program completion and post graduation at 6 and 12 months. Positive job placement of paramedic graduates is required to be tracked annually and published on the website. There is no accreditation requirement to track job placement for EMT's. The SAC has no mechanism to track job placement of our EMT graduates.

2014:	n24	100%	
2015:	n21	100%	
2016:	n22	95.45%	(1 graduate never became licensed)
2017:	n20	95%	(1 graduate never became licensed)
2018:	n22	95.45%	(1 graduate never became licensed)

- E. Present data on the number of students completing degree(s) and/or certificate(s) in your program. Analyze any barriers to degree or certificate completion that your students face, and identify common reasons why students may leave before completion. If the program is available 100% online, please include relevant completion data and analysis.

AAS EMTP Degree completers:

2018:	n22/24 (2 terminated from program - unsuccessful field competency)
2017:	n21/21
2016:	n23/24 (1 academic failure during didactic)
2015:	n21/24 (2 academic failures during didactic, 1 termination from field)
2014:	n24/24

Students tend to be unsuccessful during field rotations when they are unable to consistently perform as a competent team leader. Expanded use of simulation has helped students strengthen their leadership roles.

- F. Is the program Perkins-eligible? If so, answer the questions below. If not, put N/A for F. With which secondary school(s) does the program have aligned Programs of Study? Do PCC faculty meet with these HS program faculty on a regular basis?

Yes. EMS is a Perkins-eligible program. The SAC currently has Dual Credit affiliation with Liberty High School in the Hillsboro school district and Banks High School. The EMS liaison meets with HS faculty at a minimum of twice a year.

- i. Please describe the Technical Skill Assessments (TSAs) that are reported annually. Include information about the nature of the assessment, content covered, alignment of degree and certificate outcomes, when the assessment is taken by students, the number of completers, and the percentage of students meeting the identified benchmark(s) for the last 5 years

The Technical Skill Assessment used for our Program is the NREMT Paramedic Exam. The paramedic exam has two parts, a cognitive Computer Adaptive Test, and psychomotor skills exam. The NREMT exam is the National Standard for demonstrating entry level competence at the Paramedic Level, and is recognized by all fifty states. The following lines illustrate pass numbers by completers of the PCC AAS-EMTP degree for the past five years:

2014: 24 degree completers 100% NREMT pass rate

2015: 21 degree completers, 100% NREMT pass rate

2016: 22 degree completers, 95.45% NREMT pass rate (one student failed the NREMT exam one time, and did not reattempt)

2017: 20 degree completers, 95% NREMT pass rate (one student never attempted to take the certification exam)

2018: 22 degree completers 95.45% NREMT pass rate (one student never attempted to take the certification exam)

- ii. What does the SAC consider to be the most impactful use of Perkins funding for your program?

Our Perkins advisor is utilized frequently by our students. Students receive guidance on required coursework towards completion of their respective majors. Additionally, Perkins funding has been very welcome in off-setting conference fees and even small equipment purchases. Every little bit helps as EMS is reliant on expensive equipment to educate students to achieve competency.

- G. Describe opportunities that exist or are in development for graduates of this program to continue their education in this career area or profession.

PCC has recently approved the use of classroom space for Dr. Ameen Ramzy's Critical Care Emergency Medical Transport Program course. "Essentially, CCEMTSM is 'post graduate education' for the paramedic or nurse that attempts to standardize training and level of care in inter-facility transport." Students are encouraged to enroll in ED 131 - Applied learning theory, to support their interest in becoming an EMS instructor. This course fulfills the EMS instructor qualification requirement.

8. Recommendations

- A. What is the SAC planning to do to improve teaching and learning, student success, and degree or certificate completion, for on-campus and online students as appropriate?

The paramedic AAS degree program is required to maintain national CAAHEP accreditation status so our graduates will be allowed to test for the licensing exam (NREMT). Maintaining CAAHEP accreditation status assures the program continues to see high student success rates, and is using student learning outcomes to make improvements on an annual basis. National accreditation as well as Oregon Administrative Rule (OAR) require EMS education to strictly adhere to the National EMS Education Standards. Content is set, so program improvement and student success are centered around improving delivery methods. Extensive use of simulation has increased the opportunity to practice critical thinking skills in a way that the student would when responding to a real patient. We are constantly expanding what we can do with simulation in the classroom, and student success grows with it. At the paramedic level, all course outcomes are assessed every year, and students are required to meet the benchmarks 100% of the time to continue in the program. Increased use of frequent case-based classroom scenarios with clear expectations also increase student success.

As of July 1, 2019, national accreditation requires expanded verification of the roles of Team Leader and Team Member prior to capstone field internship. Students must now be evaluated as competent in a Team Leader role 10 times in simulation, and as competent in a Team Member role 20 times in simulation. 100% of the students must be verified as competent in these roles 100% of the time prior to field internship. For our program, with 24 students, this will mean 240 simulations just for verification of the team leader role. Only 1 student can be evaluated in a team leader role per simulation, but 2-3 team members can be evaluated in the team member role during the same simulation. 240 simulations at a minimum of 20 minutes per simulation is 80 hours of simulation time in the didactic lab. 30 hours of simulation time will be spent in EMS 240, an additional 30

hours in EMS 242, and the remaining hours will be completed during EMS 244, a clinical course with required lab hours. We cannot support more than 2 simulations running simultaneously, and only then if we have enough personnel available. The SAC is in the process of updating CCOGs and adding credits and/or redistributing credits within the paramedic program. This response and changes have been recognized and approved by the Statewide EMS Education Consortium.

- B. What support do you need from administration in order to carry out your planned improvements? (For recommendations asking for financial resources, please present them in priority order. Understand that resources are limited and asking is not an assurance of immediate forthcoming support. Making the administration aware of your needs may help them look for outside resources or alternative strategies for support.

1. The SAC strives for a more diverse instructor pool. The SAC is having difficulty recruiting interested parties to apply for EMS part-time faculty positions. One factor contributing to the lack of a diverse pool is the instructor certification requirement. This instructor qualification is required by the OHA to teach an EMS course. The instructor qualification requirement is at least one of the following: NFPA Instructor 1, DPSST Fire Service Instructor I and II, NAEMSE EMT Instructor, 40 hours of the Instructor Development Program offered by the DPSST, transcribed 3 credits adult learning theory, or equivalent. The SAC is requesting resources and assistance to recruit and mentor interested individuals to get them up to speed to be successful educators. New faculty are often thrown into the lion's den without any tools other than a textbook, a copy of the syllabus, and the keys to the room. Currently the SAC has no real onboarding process for new hires. The SAC will adopt a best practice model or models and identify a mentor for new hires. The mentor need not be from the EMS SAC.

2. There is a need for PCC to recognize the Program Director (PD) as a necessary and vital component to maintaining CAAHEP accreditation that cannot be covered by the FDC position. The amount of time spent on PD administrative duties is equal to and at times, possibly more labor intensive than FDC. The PD, currently in a FT Faculty position, has no release time, yet spends approximately the same amount of time on administrative duties that is granted to the FDC. There are other allied health programs at PCC with CAAHEP accreditation where the FDC can easily also cover the administrative duties of the PD. There is a large disparity in the requirements of other allied health PDs compared to paramedic program PDs. The Paramedic program director has more in common with those of the nursing or dental programs. The reality is more time is spent on administrative tasks than on instructional related ones. This is true nation-wide for PD's that are also FT faculty, spending an average of 67.4% of their time on administrative tasks. (Bryan, 2015) EMS programs are being held to a higher standard than many other allied health programs. When a paramedic program CoAEMSP site visit is held, the very first question to the PD is "How much release time is provided to you outside of

classroom and student activities for accreditation activities?” The CAAHEP Standards *recommend* that “For most programs, the Program Director should be a full-time position” as well as “Program Directors should have a minimum of a master’s degree.” Those two things are not *required* at this time, but national accreditation is moving in that direction, and PCC is known for leading accreditation in Oregon. The PCC program is the only program in Oregon to have no cited deficiencies on initial accreditation, and none on reaccreditation, which is a direct result of how well the program director has administered the required responsibilities. For supporting documents, please refer to the link under Appendix 3 labeled Program Director Supporting Docs.

3. The near future of the EMS (and AHELS) simulation program includes the development and ongoing evolution of the *simulation theater*, including analog equipment (e.g. ambulance simulator), A/V and data management technologies. Acquisition of rooms 102 and 103 and the installation of the equipment and technologies would allow for a *full-environment simulation* (FES). The FES provides the learner with a higher degree of simulation fidelity and immersion and provides a space for the application, analysis and synthesis of the didactic knowledge and lab skills acquired throughout the EMT and paramedic programs. The evaluation stage of learning is facilitated by the A/V technology and the data storage and access features unique to a high fidelity simulation theatre.

4. The SAC really needs to expand its Simulation program. The SAC has a limited number of faculty trained in simulation. The SAC would like to increase this pool with training and professional certification. Simulation program advancement includes sim theater development as well as sim staff development. We would like to see professional development dollars available for simulation educator certification reimbursement for dedicated part time faculty.

Commented [4]: You need to make the ask for the money and equipment and spell out your vision.

9. Assurances

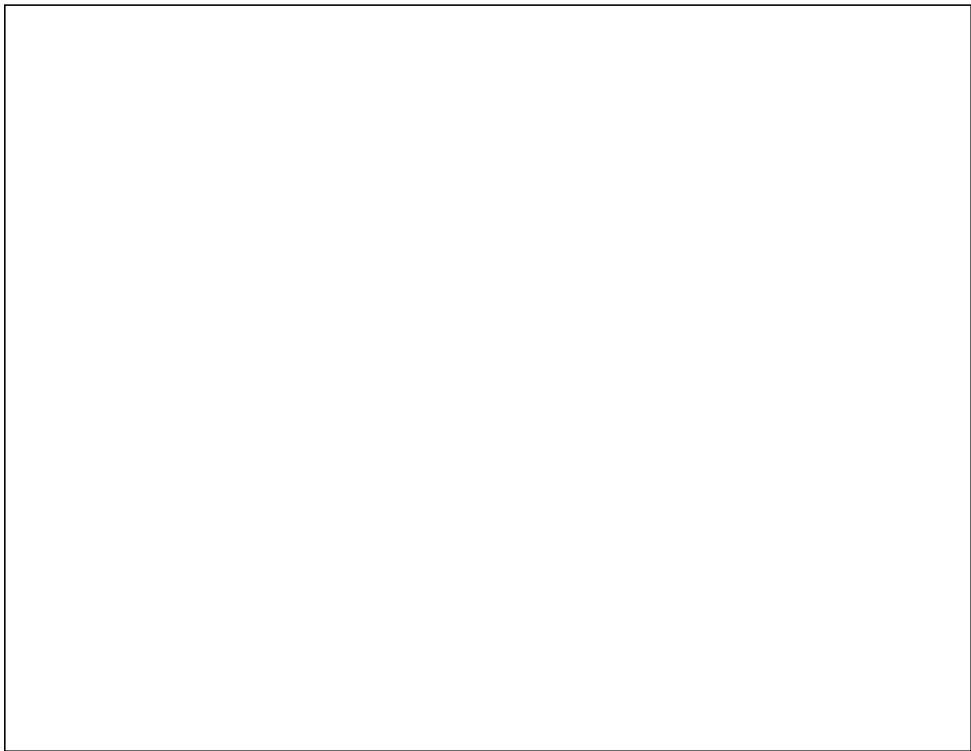
Please put X's next to all three boxes to verify that...

☒ faculty and FDCs at all of the campuses offering courses in this discipline/program have received a late-stage draft of the Program Review document.

☒ all of the division deans offering courses in this discipline/program have been sent the late-stage draft.

☒ the SAC administrative liaison has reviewed and had the opportunity to provide feedback on the final report.

Appendix 1



Appendix 2

	2013-14		2014-15		2015-16		2016-17		2017-18	
Race/Ethnicity	Headcounts	% of total	Headcounts	% of total	Headcounts	% of total	Headcounts	% of total	Headcounts	% of total
Asian	16	2.90%	2	4.50%	24	4.90%	11	2.40%	16	3.50%
Black	18	3.20%	14	2.50%	8	1.60%	14	3.00%	18	4.00%
Hispanic	36	6.50%	35	6.40%	33	6.70%	30	6.50%	40	8.80%
Multi	26	4.70%	27	4.90%	22	4.50%	25	5.40%	31	6.80%
Native	5	0.90%	8	1.50%	4	0.80%	3	0.70%	2	0.40%
Pacific			2	0.40%	3	0.60%	2	0.40%	3	0.70%
Unreported	46	8.30%	37	6.70%	39	8.00%	33	7.20%	26	5.70%
White	410	73.60%	403	73.10%	357	72.90%	342	74.30%	317	70%
Grand Total	557	100%	551	100%	490	100%	460	100%	453	100%

	2013-14		2014-15		2015-16		2016-17		2017-18	
Gender	Headcounts	% of total	Headcounts	% of total	Headcounts	% of total	Headcounts	% of total	Headcounts	% of total
Female	179	32%	176	31.90%	149	30.40%	149	32.40%	144	31.80%
Male	378	67.90%	368	66.80%	335	68.40%	296	64.30%	299	66.00%
Unreported	1	0.20%	7	1.30%	6	1.20%	15	3.30%	10	2.20%
Grand Total	557	100%	551	100%	490	100%	460	100%	453	100%

	2013-14		2014-15		2015-16		2016-17		2017-18	
Age Group	Headcounts	% of total	Headcounts	% of total	Headcounts	% of total	Headcounts	% of total	Headcounts	% of total
Under 20	102	18.30%	104	18.90%	99	20.20%	96	20.90%	111	24.50%
20-24	210	37.70%	194	35.20%	192	39.20%	162	35.20%	160	35.30%
25-49	236	42.40%	247	44.80%	193	39.40%	198	43.00%	175	38.60%
50+	9	1.60%	6	1.10%	6	1.20%	4	0.90%	7	1.50%
Grand Total	557	100%	551	100%	490	100%	460	100%	453	100%

Note: 75% of nationally certified EMS professionals in the United States are male, 85% are of non-minority status, and 45% have a college degree or higher.
Source: www.nrermi.org

Appendix 3

Program Director Supporting Docs are located at the following link:

https://drive.google.com/drive/folders/1dUNyW7ffmXRqa192_z_JVOM8wNI2cmc?usp=sharing

Advisory Committee Meeting Minutes:

<https://drive.google.com/drive/folders/1am7hiHbpFU6FjpsX0Jz1W-l7yWIFJqLF?usp=sharing>