

# Program Assessment

2019-2020

## Engineering, Physical Science & Process Technology

| Process Technology  |   |
|---|---|
| Date  | Click or tap to enter a date.   |
| Competency # and Description                                      | 1. Communicate technical information related to process technology  |
| Course  | PTEC 1113 – Intro to Process Technology<br>PTEC 1124 – Process Troubleshooting<br>PTEC 1313 – Safety, Health & Work Pract<br>PTEC 2014- Process Tech I - Equipment<br>PTEC 2024 – Industrial Instrumentation<br>PTEC 2124 – Process Tech II - Systems<br>PTEC 2243 – Principles of Quality    |
| Activity  | PTEC 1113 – Final Exam<br>PTEC 1124 – Final Exam<br>PTEC 1313 – Final Exam<br>PTEC 2014 – Final Exam<br>PTEC 2024 – Final Exam<br>PTEC 2124 – Final Exam<br>PTEC 2243 – Final Exam  |
| Measurement (attached copy of instrument with point distribution) | PTEC 1113 – Written Projects (2)<br>PTEC 1124 – Final Exam<br>PTEC 1313 – Final Exam<br>PTEC 2014 – Final Exam<br>PTEC 2024 – Final Exam<br>PTEC 2124 – Final Exam (Specific Questions, related to technical information)<br>PTEC 2243 – Final Exam   |
| Evaluation Criteria   | Overall goal at this point is 70% passing for each item.  |
| 2015-2016 Results   | PTEC 1113 – Data not collected<br>PTEC 1124 – 10 out of 12 - 83% passed<br>PTEC 1313 – 16 out of 18 - 89% passed<br>PTEC 2014 – 15 out of 17 - 88% passed<br>PTEC 2024 – 17 out of 21 - 81% passed<br>PTEC 2124 – 12 out of 13 - 92% passed<br>PTEC 2243 – Data not collected                 |
| 2016-2017 Results   | PTEC 1113 – 27 out of 28 – 96% passed<br>PTEC 1124 – 18 out of 18 – 100% passed<br>PTEC 1313 – 16 out of 18 – 89% passed<br>PTEC 2014 – 17 out of 21 – 81% passed<br>PTEC 2024 – 21 out of 22 – 95% passed<br>PTEC 2124 – 13 out of 17 – 76% passed<br>PTEC 2243 – 16 out of 16 – 100% passed |
| 2017-2018 Results   | PTEC 1113 – 13 out of 10 – 77% passed<br>PTEC 1124 – 18 out of 18 – 100% passed<br>PTEC 1313 – 25 out of 19 – 76% passed<br>PTEC 2014 – 17 out of 21 – 81% passed<br>PTEC 2024 – 16 out of 20 – 80% passed<br>PTEC 2124 – 8 out of 19 – 42% passed<br>PTEC 2243 – 18 out of 20 – 90% passed   |

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| 2018-2019 Results   | PTEC 1113 – 12 out of 18 – 66.7% passed<br>PTEC 1124 – 18 out of 18 – 100% passed<br>PTEC 1313 – 19 out of 19 – 100% passed<br>PTEC 2014 – 21 out of 21 – 100% passed.<br>PTEC 2024 – 16 out of 19 – 84% Passed<br>PTEC 2124 – 14 out of 18 – 77% Passed<br>PTEC 2243 – 17 out of 19 – 89.5 % Passed |
| 2019-2020 Results   |  |
| Summary of changes for 2018-2019                                  | To incorporate more questions and assignments where students need to describe or present technical information related to processes.   |
| Recommendation for changes for 2019-2020                          | No Changes.  |
| Recommendation for changes for 2020-2021                          |  |
| Timeline for Review   | Fall/spring data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.   |
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| Date  | Click or tap to enter a date.  |
| Competency # and Description                                      | 2. Identify common equipment including the use of components and their characteristics   |
| Course  | PTEC 1113 – Intro to Process Technology<br>PTEC 1124 – Process Troubleshooting<br>PTEC 1313 – Safety, Health & Work Pract<br>PTEC 2014- Process Tech I - Equipment<br>PTEC 2024 – Industrial Instrumentation<br>PTEC 2124 – Process Tech II - Systems  |
| Activity  | PTEC 1113 – Final Exam<br>PTEC 1124 – Final Exam<br>PTEC 1313 – Final Exam<br>PTEC 2014 – Final Exam<br>PTEC 2024 – Final Exam<br>PTEC 2124 – Final Exam   |
| Measurement (attached copy of instrument with point distribution) | PTEC 1113 – Exam #3 specific to equipment<br>PTEC 1124 – Final Exam<br>PTEC 1313 – Final Exam<br>PTEC 2014 – Final Exam<br>PTEC 2024 – Final Exam<br>PTEC 2124 – Final Exam (Specific question related to equipment)   |
| Evaluation Criteria   | Overall goal at this point is 70% passing for each item.   |
| 2015-2016 Results   | PTEC 1113 – data not collected<br>PTEC 1124 – 10 out of 12 – 83% passed<br>PTEC 1313 – 15 out of 18 – 83% passed<br>PTEC 2014 – 14 out of 17 – 82% passed<br>PTEC 2024 – 17 out of 21 – 81% passed<br>PTEC 2124 – 12 out of 13 – 92% passed  |
| 2016-2017 Results   | PTEC 1113 – 18 out of 18 – 100% passed<br>PTEC 1124 – 13 out of 17 – 76% passed<br>PTEC 1313 – 21 out of 21 – 100% passed<br>PTEC 2014 – 21 out of 22 – 95% passed   |

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|   | PTEC 2024 – 16 out of 21 – 76% passed<br>PTEC 2124 – 13 out of 17 – 76% passed   |
| 2017-2018 Results   | PTEC 1113 – 11 out of 13 – 84% passed<br>PTEC 1124 – 16 out of 18 – 88% passed<br>PTEC 1313 – 22 out of 25 – 88% passed<br>PTEC 2014 – 17 out of 21 – 81% passed<br>PTEC 2024 – 16 out of 20 – 80% passed<br>PTEC 2124 – 12 out of 19 – 83% passed     |
| 2018-2019 Results   | PTEC 1113 – 12 out of 18 – 66.7 Passed<br>PTEC 1124 – 18 out of 18 – 100% passed<br>PTEC 1313 – 19 out of 19 – 100% passed<br>PTEC 2014 – 21 out of 21 – 100% Passed<br>PTEC 2024 – 18 out of 19 – 95% Passed<br>PTEC 2124 – 15 out of 18 – 83% Passed |
| 2019-2020 Results   |  |
| Summary of changes for 2018-2019                                  | No changes   |
| Recommendation for changes for 2019-2020                          | No Changes   |
| Recommendation for changes for 2020-2021                          |  |
| Timeline for Review   | Fall/spring data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.   |
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| Date  | Click or tap to enter a date.  |
| Competency # and Description                                      | 3. Identify common process including function, type, and equipment   |
| Course  | PTEC 1113 – Intro to Process Technology<br>PTEC 1124 – Process Troubleshooting<br>PTEC 2014- Process Tech I - Equipment<br>PTEC 2124 – Process Tech II – Systems<br>PTEC 2214 – Process Tech III - Operations  |
| Activity  | PTEC 1113 – Final Exam<br>PTEC 1124 – Final Exam<br>PTEC 2014 – Final Exam<br>PTEC 2124 – Final Exam<br>PTEC 2214 – Final Exam   |
| Measurement (attached copy of instrument with point distribution) | PTEC 1113 – Final Exam<br>PTEC 1124 – Final Exam<br>PTEC 2014 – Final Exam<br>PTEC 2124 – Final Exam<br>PTEC 2214 – Final Exam   |
| Evaluation Criteria   | Overall goal at this point is 70% passing for each item.   |
| 2015-2016 Results   | PTEC 1113 – no data collected<br>PTEC 1124 – 7 out of 12 – 58% passed<br>PTEC 2014 – 14 out of 17 – 82% passed<br>PTEC 2124 – 12 out of 13 – 92% passed<br>PTEC 2214 – no data collected   |

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|---|---|
| 2016-2017 Results   | PTEC 1113 – 18 out of 18 – 100% passed<br>PTEC 1124 – 14 out of 18 – 83% passed<br>PTEC 2014 – 13 out of 17 – 76% passed<br>PTEC 2124 – 13 out of 17 – 76% passed<br>PTEC 2214 – 17 out of 18 – 94% passed      |
| 2017-2018 Results   | PTEC 1113 – 12 out of 13 – 92% passed<br>PTEC 1124 – 16 out of 18 – 89% passed<br>PTEC 2014 – 17 out of 21 – 81% passed<br>PTEC 2124 – 10 out of 19 – 52% passed<br>PTEC 2214 – 18 out of 18 – 100% passed      |
| 2018-2019 Results   | PTEC 1113 – 12 out of 18 - 66.7% passed<br>PTEC 1124 – 18 out of 18 – 100% passed<br>PTEC 2014 – 21 out of 21 – 100% passed<br>PTEC 2124 – 18 out of 18 – 100% passed<br>PTEC 2214 – 18 out of 18 – 100% Passed |
| 2019-2020 Results   |   |
| Summary of changes for 2018-2019                                  | Provide more field opportunities to allow for field identification of equipment.  |
| Recommendation for changes for 2019-2020                          | No Changes.   |
| Recommendation for changes for 2020-2021                          |   |
| Timeline for Review   | Fall/spring data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.  |
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| Date  | Click or tap to enter a date.   |
| Competency # and Description                                      | 4. Apply chemistry and physics concepts to identify and solve processing problems   |
| Course  | PTEC 1113 – Intro to Process Technology<br>PTEC 1124 – Process Troubleshooting<br>PTEC 2014- Process Tech I - Equipment<br>PTEC 2124 – Process Tech II – Systems<br>CHEM 2014 – Process Organic Chem            |
| Activity  | PTEC 1113 – Final Exam<br>PTEC 1124 – Final Exam<br>PTEC 2014 – Final Exam<br>PTEC 2124 – Final Exam<br>CHEM 2014 – Final Exam  |
| Measurement (attached copy of instrument with point distribution) | PTEC 1113 – Final Exam<br>PTEC 1124 – Final Exam<br>PTEC 2014 – Final Exam<br>PTEC 2124 – Final Exam<br>CHEM 2014 – Final Exam  |
| Evaluation Criteria   | Overall goal at this point is 70% passing for each item.  |
| 2015-2016 Results   | PTEC 1113 – no data collected<br>PTEC 1124 – 9 out of 12 – 75% passed<br>PTEC 2014 – 15 out of 17 – 88% passed<br>PTEC 2124 – 12 out of 13 – 92% passed<br>CHEM 2014 – no data collected                        |

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| 2016-2017 Results                        | PTEC 1113 – 18 out of 18 – 100% passed<br>PTEC 1124 – 15 out of 18 – 88% passed<br>PTEC 2014 – 21 out of 21 – 100% passed<br>PTEC 2124 – 10 out of 19 – 52% passed<br>CHEM 2014 – 12 out of 17 – 71% passed          |
| 2017-2018 Results                        | PTEC 1113 – 12 out of 13 – 92% passed<br>PTEC 1124 – 16 out of 18 – 88% passed<br>PTEC 2014 – 17 out of 21 – 81% passed<br>PTEC 2124 – 13 out of 17 – 76% passed<br>CHEM 2014 – 12 out of 17 – 71% passed            |
| 2018-2019 Results                        | PTEC 1113 – 12 out of 18 – 66.6 % Passed<br>PTEC 1124 – 18 out of 18 – 100 % passed.<br>PTEC 2014 – 21 out of 21 – 100% passed.<br>PTEC 2124 – 18 out of 18 – 100% passed<br>CHEM 2014 – 13 out of 15 – 86.7% passed |
| 2019-2020 Results                        |  |
| Summary of changes for 2018-2019         | Incorporate information to allow the integration of these concepts for troubleshooting and electrical applications.  |
| Recommendation for changes for 2019-2020 | No Changes   |
| Recommendation for changes for 2020-2021 |  |
| Timeline for Review                      | Fall/spring data will be collected and reviewed in the spring and instructors from all campuses will determine needed adjustments.   |

| Summary of Program and Divisional Changes |  |
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| 2016-2017                                 | <ul style="list-style-type: none"> <li>Opened PTEC 1113 and PTEC 1313 to all students.</li> <li>Offered PTEC 1113 as an online course to allow students to determine if PTEC was a degree area they were interested in pursuing.</li> <li>Began offering PRVD 2321 in the spring semester (now offered during both semesters).</li> <li>Participated in the National Troubleshooting Competition.</li> </ul> |
| 2017-2018                                 | <ul style="list-style-type: none"> <li>Participated in the National Troubleshooting Competition, sent one team to National Competition.</li> <li>Provided consistency with instructors, to allow for incorporation of current assignments.</li> </ul>  |
| 2018-2019                                 | <ul style="list-style-type: none"> <li>Participated in the National Troubleshooting Competition, made alternate.</li> <li>Worked to provide consistency with instructors.</li> </ul>   |
| 2019-2020                                 | <ul style="list-style-type: none"> <li></li> </ul>   |

### Recommendations for Program Changes

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| 2017-2018 | <ul style="list-style-type: none"> <li>Schedule PTEC advisory meetings more frequently for recognition as a National PTEC program.</li> <li>Include representatives from Wind Energy companies on PTEC advisory board.</li> <li>Explore the possibilities of offering pipeline and electrical courses.</li> </ul>  |
| 2018-2019 | <ul style="list-style-type: none"> <li>Provide more field opportunities for students in the Introduction to PTEC and System courses.</li> <li>Working with advisory group to realign some program questions to address turbines, electrical energy and pipeline considerations.</li> <li>Provide more opportunities to develop trouble shooting skills and hands-on applications.</li> </ul> |
| 2019-2020 | <ul style="list-style-type: none"> <li>Continue to work with advisory group.</li> <li>Provide a power generation course.</li> </ul>  |
| 2020-2021 | <ul style="list-style-type: none"> <li></li> </ul>   |

## Ag, Science, & Engineering

| Program Level Outcomes Timeline  |   |           |           |           |           |           |
|--|---|-----------|-----------|-----------|-----------|-----------|
| Program Objectives – Process Technology  | Course Map  | 2015-2016 | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 |
| 1. Communicate technical information related to process technology                     | PTEC 1113<br>PTEC 1124<br>PTEC 1313<br>PTEC 2014<br>PTEC 2024<br>PTEC 2124<br>PTEC 2243 | X         | X         | X         | X         | X         |
| 2. Identify common equipment including the use of components and their characteristics | PTEC 1113<br>PTEC 1124<br>PTEC 1313<br>PTEC 2014<br>PTEC 2024<br>PTEC 2124              | X         | X         | X         | X         | X         |
| 3. Identify common process including function, type, and equipment                     | PTEC 1113<br>PTEC 1124<br>PTEC 2014<br>PTEC 2124<br>PTEC 2214                           | X         | X         | X         | X         | X         |
| 4. Apply chemistry and physics concepts to identify and solve processing problems      | PTEC 1113<br>PTEC 1124<br>PTEC 2014<br>PTEC 2124<br>CHEM 2014                           | X         | X         | X         | X         | X         |