

# HUTCHINSON COMMUNITY COLLEGE PROGRAM REVIEW

| Date: 02.29.16 Program: Natural Science & Mathematics: Biology, Chemistry, Mathematics, Physics, & Physical Science |   |   |   |                            |  |   |
|---|---|---|---|----------------------------|--|---|
| Indicators  | Opportunity Analysis  | Goals / Expectations (1-3)  | Responsible   | Timeline                   | Expected Outcomes  | Follow-Up Projects  |
| <b>CAPACITY</b>   |   |   |   |                            |  |   |
| <b>Math</b>   | Examine math sequence length in terms of semesters.                                   | Offer combo classes. Students may enroll in 2 algebra classes in one semester                                       | Math Faculty  | AY 2015-2016, AY 2016-2017 | Student success and retention will increase using this model   | Assessment of student success and retention data.   |
| <b>DEMAND</b>   |   |   |   |                            |  |   |
| <b>Full Dept</b>  | Improve Open House  | Overhaul the current Open House that is offered to create a virtual Open House.                                     | Full dept, Andrew Tash, Marketing, ITS                | AY 2017-2018               | Open House virtual tour completed and on website.  | Assessment of the site and views.   |
| <b>Math</b>   | Eliminate EPOM by combining the concepts into Basic Algebra.                          | Accelerate through the math sequence.   | Math Faculty  | AY 2016-2017               | Student success and retention will increase using this model.  | Assessment of student success and retention data.   |
| <b>CURRICULUM</b>   |   |   |   |                            |  |   |
| <b>Physical Science</b>   | Improve the hybrid Physical Science course.   | A. Expand and improve online resources available to the students.<br>B. Evaluate need for altering schedule of lab. | Dan Smith   | AY2015-2016, AY2016-2017   | A. Ensure that what is taught in the course matches the syllabus (and traditional course).<br>B. Improve student success rate. | Annual comparison of what was taught vs. syllabus. Annual review of enrollment and student success rate.  |
| <b>Biology</b>  | Re-organization of outcomes & competencies for BI101. Re-organization of BI101L labs. | To improve logical flow of topics and thereby improve student success in General Biology.                           | General Biology instructors (face-to-face and online) | 2016                       | Student scores on assessments will improve. Students will show evidence of greater understanding.                              | A. Revision and modernization of labs for BI101L.<br>B. Assessment of student success in General Biology. |

| CURRICULUM, CONT.           |  |   |   |                            |   |                            |
|-----------------------------|--|---|---|----------------------------|---|----------------------------|
| Chemistry                   | Editing and rewriting / updating lab manuals for both General Chemistry and Chemistry I & II | All lab manuals should include: *An equipment list with pictures; *Updated safety information and quizzes; *Periodic Table; *Fill-in-the-blank polyatomic ion exercise; *Handouts that could also be used for lecture, including therodynamic data, cell potentials, solubility rules, etc. | Department faculty                      | AY 2016-17                 | Lab manuals revised.  | Ongoing review of content. |
|                             | Create master course for the hybrid General Chemistry course, including OWL assignments      | Consistency would be achieved between instructors, and each instructor would not have to create the course from scratch each time it is taught.   | Department faculty                      | AY 2016-2017               | CH101 master complete.  | Ongoing review of content. |
| QUALITY OF PROGRAM OUTCOMES |  |   |   |                            |   |                            |
| Math                        | Math Final Exam Revision   | Review for accuracy and align with outcomes.  | Math Faculty                            | Spring 2016                | System wide compliance.   | Ongoing review & testing   |
| Physical Science            | Revise the Physical Geology lab class PY104  | Geology Lab schedule will more closely follow the lab manual. Geology Lab will do a better job of reinforcing the lecture.  | Brian A. Bird and Dolores Neshyba-Bird. | AY 2015-2016, AY 2016-2017 | Geology lab that more closely follows the textbook sequence and is more aligned with the online and hybrid class. | Revisions complete         |

| QUALITY OF PROGRAM OUTCOMES, CONT.          |   |   |                    |              |   |  |
|---|---|---|--------------------|--------------|---|--|
| <b>Chemistry</b>                            | Development and use of "Turn-It-In" on Canvas to reduce plagiarism in lab reports, specifically in the Chemistry I & II sequence. | Turn-it-in would create a master copy of each report turned in and then compare new reports to the master list to identify possible plagiarism.     | Department faculty | AY 2016-2017 | Better comparison of lab reports from semester to semester. | Review of the process.                             |
| IMPACT, JUSTIFICATION, OVERALL ESSENTIALITY |   |   |                    |              |   |  |
| <b>Biology</b>                              | Increase co-curricular activities / opportunities   | A. Offer a Science or Biology Club. B. Offer more well-rounded education in all courses including field trips. C. Develop a science seminar series. | Biology Faculty    | AY 2017-2018 | Increase retention and student satisfaction.                | Assess student satisfaction in individual courses. |
| <b>Full Dept</b>                            | Generate further interest in science  | Bulletin board for current events in science  | Faculty            | AY 2016-2017 | Students interacting with the board weekly.                 | Assess interaction.                                |
| <b>Chemistry</b>                            | All Chemistry lab manuals in a bound, perforated page format  | More professional looking, easier for students to carry. Perforated pages so report sheets and handouts can be removed when necessary.              | Department faculty | AY 2016-2017 | Manuals complete.   | Ongoing review of content.                         |

# HUTCHINSON COMMUNITY COLLEGE PROGRAM REVIEW

| Date: 2015 Program: Natural Science & Mathematics: Biology, Chemistry, Mathematics, Physics, & Physical Science |  |   |   |              |  |  |
|---|--|---|---|--------------|--|--|
| Indicators ↓  | Opportunity Analysis   | Goals / Expectations (1-3)  | Responsible   | Timeline     | Expected Outcomes  | Follow-Up Projects   |
| <b>Capacity</b>   | 1. Examine algebra sequence length in terms of semesters. 2. Replace and expand labs for physics.  | 1. Offer combo classes. Students may enroll in 2 algebra classes in one semester. 2. Introduce new labs in each physics course in order to fill each lab session with a lab that complements the lecture well. Supplement equipment to accommodate six stations for each lab in each physics course.  | Department Chair and faculty                                  | AY 2015-2016 | 1. Student success and retention will increase using this model. 2. The implementation of new labs and lab equipment into the physics courses. | 1. Assessment of student success and retention data. If shown as positive, more class offerings of this type made available. 2. Improved student learning through the updated labs.  |
| <b>Demand</b>   | Improve Open House   | Overhaul the current Open House that is offered. Work towards making Open House a campus-wide event.  | Department Chair, Faculty, and Other HCC Programs Campus-Wide | AY 2017-2018 | Open House is an all-day institution-wide event giving more time for departments and programs to interact with students.                       | Assessment of the Open House   |
| <b>Curriculum</b>   | Review of curriculum   | Ensure syllabus reflects what is being taught in class. Assess transferability of courses. Check that lab and lecture hours match with credit hours.  | Faculty   | AY 2015-2016 | Updated syllabi for all classes with updated knowledge regarding transferability.  | Annual review of syllabi.  |
| <b>Quality of Program Outcomes</b>  | 1. Create Curriculum Maps Aligning Programs to Transfer Programs 2. Improve students ability with technology that would assist with their success. | 1. Develop curriculum maps for Physical Therapy, Chemistry, Pre-Med, Pre-Pharmacy to KS Regent schools. 2. Offer a TI graphing calculator workshop (boot camp) prior to start of the semester.  | Faculty   | AY 2015-2016 | 1. Curriculum maps developed to illustrate alignment of internal majors to transfer programs. 2. Workshops offered.                            | 1. Annual reviews of the curriculum maps. 2. Assessment of the impact of the workshops.  |
| <b>Impact, Justification, Overall Essentiality</b>  | Increase enrollment numbers in courses. Improve success rates in classes.  | 1. Create more informative brochures to include jobs, salaries, etc. Include career information on curriculum guides also. Bulletin board for current events in science. Use the TV in the lobby. Increase social media presence. 2. Provide students with information about expectations in college level math courses and what they can do to be better prepared for those courses. | Faculty and Department Chair                                  | AY 2016-2017 | 1. Increased marketing presence. 2. Assembled and published attractive guidebook directed towards high school student population               | 1. Assess marketing efforts to see impact of each. 2. Track student success levels for students from schools where the guidebook has been shared. Compare average math placement scores. Use three years prior to introduction of guidebook as a baseline. |