2016-17 Academic Department Annual Report

Academic Department: Physical Sciences
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Annual Report Submission Instructions:

This Annual Report of your Academic Department is intended to serve as a summary of departmental activities over the past year and as an outline of plans for the upcoming year.

Please note that responses are limited to the space provided below for each prompt and do not need to be written in narrative form (you are welcome to use bullet points/lists, as appropriate).

Please submit your Academic Department 2016-17 Annual Report to your Dean via email by May 31st.

For your reference, prior year reports (2011-2015) can be found on the Instructional Support website, http://www.grcc.edu/instructionalsupport/departmentyearendreports. If you have any questions about the 2015-16 reports entered into WEAVEonline, please contact Sheila Jones, Dean of Instructional Support, sheilajones@grcc.edu or x4289.

Part I: Report on 2016-17 Progress

Part I is intended to provide a "big picture" overview of your department's activities during this past academic year. When completing the sections below, please consider the main points/highlights of each category.

Current Year Goals & Outcomes

This section asks you to provide details about the status of your department's goals and outcomes for this past year. Please limit your response to the space provided in the text boxes below.

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Goal: Curriculum Development and Improvement

GH 200- Discussion between SWD Dental department and Physical Sciences occurred to use GH 200 as a pre-requisite for the dental hygiene program. These sections will be added Winter 2018.

New Middle College Work- John VanRegenmorter taught GL 106 at Wyoming Middle College winter semester.

Assessment Projects- Through Assessment Projects, the Department members have and will continue to evaluate our course content and quality so that we are always enhancing the courses that we deliver. This work is ongoing and will continue.

New Lab Manuals for CHM 251, 231, and updates for CHM 110 The new CHM 251 lab manual was used and rewrites were done in summer 2016 to the lab manual for future CHM 251 sections by Tom Neils. Ashley Camapnali and Bill Faber have started writing new labs for CHM 231 with the goal being a new lab manual for CHM 231. Amy Kudrna introduced two new CHM 110 and CHM 210 labs for use in Fall 2016 and Winter 2017.

OER- Will Millar and Lauren Woolsey have adopted the OER Astronomy textbook and is being used this semester. Thank you for all the work that goes into transitioning to a new textbook mid-year. Our department now uses openstax for Chemistry, Physics and Astronomy. Great job!

Geology- Five new geology courses are being offered at the Lakeshore Campus and in Middle College. We have three new geology adjuncts teaching these courses. Equipment was purchased to supply these new courses. Tari Mattox has the augmented reality sand table running for students! Tari was able to showcase it at Community Science Day in November.

GL 101-This course was updated and approved for general education in Curriculog.

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GOAL: Student Service

Physical Sciences Faculty Scholarships - Bernard Liburd organized the Physical Sciences Scholarship committee and applicants. Bernard reported that the following Department Scholarships were awarded.

Physical Sciences Scholarship Recipients: The following students were awarded physical science scholarships for the winter 2017 semester:

1. Christopher Williams---Wherity
2. Harriet Omenge---Elve 1
3. Kayla Rooney---Elve 2
4. Jenica Barrett---Women In Science 1
5. Sabrina Jenkins---Women In Science 2
6. Marcus Barissi--Faculty
7. Mayleen Calderon---LJK
8. Nick Psyhos---Physics/Engineering

Geology students from GRCC, GVSU take field trip to Upper Peninsula -On a cold and wet September weekend this fall, geology students from GRCC stepped 2 billion years into the past! Some of the oldest rocks in the world are exposed in the Upper Peninsula of Michigan and are evidence of our continent's tumultuous beginning. A GRCC field trip provided students with an opportunity to put their geology skills to good use identifying and interpreting rocks from a vast array of outcrops. They moved from the "sea to the shore" as they identified submarine lava flows, beach sands now tilted to a near-vertical angle, ancient lifeforms called stromatolites, and stacked beds of pure iron ore that fueled Michigan's automobile industry. By the end of the day the group was a little damp but happy with their shared experience and U.P. rock samples!

More Geology Field Trips- This winter on March 24th, Tari Mattox and her geology students at GRCC waded through Pennsylvanian swamps and Mississippian seas all without leaving the Midwest! To see the rocks deposited in Mississippian seas, geology students traveled to Southern Indiana and studied outcrops of rock deposited during a time when the North American Continent was repeatedly inundated by warm, shallow seas.

Independent Study- Tari Mattox worked with an Independent Study student this past fall. Tari worked with a student creating graphical representation of the geologic time scale in Fall 2016 with Kie Bachman. This will be displayed on the 4th floor for students in the Fall of 2017.

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Goal: Infrastructure Improvement

Instrument Repairs/Updates- Pam Scott continued maintenance of the GC-MS, including repairing the pump. Pam Scott also continued maintenance of the NMR and other instruments.

Website Updates- Bill Faber maintains the department web page. Many changes were made to the Physical Sciences website including updating the photos of our adjunct faculty and a new geology web page.

Facebook page- Amy Kudrna has developed and maintains a department Physical Sciences Facebook page.

Department Cleanup- Clean Storage space in the Department's area has been getting full. We have begun disposing items that are no longer useful to free up space. This is a very large task as there is a lot of very old and out dated equipment in storage. Jared Johnson and Bob Cebelak reorganized the Physics storage room space. This work continued from 2015/2016 year into the 2016/2017 school year.

Geology Research Space- Tari Mattox continued this year improving on the work she did in 2015/2016 year for the Geology Research space. There are sample prep areas, more organized storage, new microscopes and equipment that is being used. This is an ongoing project with Tari Mattox and John VanRegenmorter now archiving and creating usable teaching sets from the geology fossil collection. Thank you to Pam Scott and Janis Qualls for facilitating purchases and ordering needed items.

New Geology Microscopes-Tari Mattox improved the technology for the geology students by adding two new WiFi capable microscopes. One is being used by the Lakeshore courses and the other is on the main campus.

New Laptop Cart - 4th Floor Laptop Computers and Cart-The department has purchased 12 new laptops on a cart for the 4th floor. The laptops are for all 4th floors lab/lecture courses for geology, physics and astronomy. This is a great addition for our faculty and our students!

Rotovaps for organic labs-We have acquired more rotovaps for our organic students. Pam Scott has set them up and they are ready for use for our organic students.

New Lab Assistant-Patricia McIntyre was hired as a chemistry laboratory assistant. She started in January 2017 and has been improving the classrooms and prep spaces since starting. She is highly organized ad her organization has helped Pam Scott, our faculty and the students.

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Goal: College Service

College Service- The Physical Sciences Department was represented on the following College wide Teams and Committees: Curriculum Approval, Athletic Advising, AGC, General Education, Guided Pathways Steering Committee, and Excellence in Education, IIPD, Faculty Association, and Repeat Course Policy.

Fall Open House – Thank you to Tari Mattox, Matt Wang, Lauren Woolsey, Ashley Campanali, and Janis Qualls for your work at this event.

Spring Open House- Matt Wang represented our Department at the Spring Open house that was held in the ATC on March 26th.

Physical Sciences Student of the Year- The Department awarded the third Physical Sciences Students of the Year Awards. This year three awards were made at the Student Leadership Awards banquet. Amy Kudrna presented the awards to Michelle (Chemistry), Alex Antonakis (Physics and Astronomy) and Kie Bachman (Geology) and was assisted by Dan Groh. Thank you to Amy Kudrna and Dan Groh for their work on this project.

External collaborations and partnerships

Chemistry in the Mall- This is a community service event that brings chemistry hands-on activities and demonstrations to area children and their parents. It is organized by the Western Michigan chapter of the American Chemical Society (WMACS) was held Saturday October 22, 2016 at the Woodland Mall in Kentwood. The event involved area chemists from industry and academia and students from area colleges performing chemical demonstrations and hands on activities for the general public around the theme of forensic chemistry. GRCC showcased DNA extraction from strawberries and ink chromatography with 50 student volunteers organized by Bernard Liburd. Thank you to Pam Scott and Leah Engemann for all of their work in readying the supplies and materials for the tables.

Fall in love with STEM event-The Physical Sciences Department hosted a collaborative public outreach event led by faculty and students from GRCC and Van Andel Institute. The event, titled “Fall in Love With STEM” was part of a series of similar events sponsored by the Association of Women in Science West Michigan chapter. Lauren Woolsey organized the STEM even on February 18th, 12pm-3pm. This event is part of a series called "Fall in Love with STEM" and is aimed at middle-school students. Lauren coordinated the event and Ashley Campanali ran robotics project.

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External collaborations and partnerships

Physical Sciences Department Hosted Forensic Chemistry Summer Camp- The Physical Sciences Department hosted a week long summer camps that taught 22 West Michigan high school students the basics of forensic chemistry and how it is used to solve an arson crime. The camp was in part sponsored by the Dean's office. The camp allowed the students to use GRCC's advanced instrumentation to carry out the analysis of different types of evidence and then use the evidence to solve a simulated arson crime. Along with using the College's atomic absorption spectrophotometer to analyze soil samples and gel electrophoresis equipment to analyze DNA, the students used the gas chromatograph –mass spectrometer to analyze materials that could be used to accelerate a fire. In addition to the hands on experience, Deputy Dale Dekorte and his canine partner, Ritzey, from the Kent County Sheriff's Office showed the students how canines are used to help investigators and scientists solve arson crimes. Terra Wesseldyk and Wendy Brittian from the Wyoming Crime Lab presented information on the role of chemists in solving crimes. A number of staff and faculty worked to make the camp a success including Amy Kudrna, Pam Scott, Leah Engemann, Annette Dobrzynski, and Christina Westveer.

K-12 Outreach-

Dan Groh gave a lecture at Sparta High school about nuclear chemistry to chemistry and physics students as he does every year. He also performed a guest lecture covering the atom and radioactivity for the 8th grade science class at All Saints Academy on Nov 4 and stated that 8th graders sure are an interesting group!

Amy Kudrna was invited back to present a Chemistry day event for Mrs. Erin Grob's 1st – 3rd grade class at Black River Public School on May 25, 2016. This year's theme included demonstrations over catalysts, exothermic and endothermic reactions. The student activities this time were making polymers and paper chromatography. The students were able to get their hands on experience and had fun making silly putty and slime. The students moved on to seeing the different colors in markers with paper chromatography. The favorite part was watching the elephant's toothpaste demo and they enjoyed it so much, Amy performed it twice.

Tutoring at City High- **Tom Neils and Bill Faber** have been supporting area high schools and area high school students by tutoring math and science at City High Middle school after school on Mondays.

Community Science Day - The Science Open House was a huge success! Thanks you to the following Physical Sciences faculty and staff who helped out: Janis Qualls, Amy Kudrna, Ashley Campanali, Dan Groh, Tom Neils, Bill Faber, Tari Mattox, Pam Scott, Lauren Woolsey, and Will Millar. A Big Thank You to Biological Sciences for including us and working out all of the logistics!

Regional Science Olympiad- Dan Groh served as an event supervisor for the Regional Science Olympiad competition held at GVSU during winter 2017. Ashley Campanali served as an official for the Robotics Competition.

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Departmental Professional Development

In this section, please provide details about your department's emphasis for professional development during this year. Please limit your response to the space provided in the text box below.

Chemical Safety Training- Dan Groh presented the Department's annual safety training. This training was attended by FT faculty but will be put in place for all Department Faculty and will bring us into compliance with our Chemical Hygiene Plan. Future plans for Fall 2017 is to have all adjuncts undergo training.

Respirators- The majority of the chemistry faculty and Pam's support staff were fit tested for respirators. The testing took place on April 14th and is part of the Department's overall effort to become more proactive in chemical safety. Thank you to Pam Scott for organizing the testing and for procuring the respirators.

Fall 2016- Bill Faber present to our department for a departmental professional development activity. His presentation was over Google Drive and how to use it in our classrooms. Lauren Woolsey gave her doctoral thesis presentation to the department.

Winter 2017-Jennfer Batten presented to our department over the Guided Pathways Initiative. The presentation was tailored to the students in our department's pre-majors. Sarah Rose came to present to us over DSS accommodations. This presentation involved reading accommodations forms, responsibilities of the instructors and flexible attendance.

Departmental Advising Plan & Outcomes

In this section, please describe your department's advising plan and outcomes for this year. Please limit your response to the space provided in the text boxes below.

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Description of departmental advising plan and outcomes

The Physical Sciences has four avenues for student academic advising. These avenues are:

- Science Advising Days- In collaboration with the Mathematics and Biological Sciences, we held a science advising event in the fall. This event was advertised and students were encouraged to attend. The success of the event was modest as only between 15 and 20 students participated per department. Full-time faculty participation was high and all assisted with event.
- The Department webpage has an "advising" tab that links to the Physical Sciences faculty and the areas in which they advise. Students can find information about faculty advising and pre-majors there.
- Students often just drop in during office hours or send emails to faculty regarding questions that they may have about careers and coursework. Students may be using the webpage to get faculty information on advising. This route to advising seems to be most favored by the students.
- In March, the Physical Science Department set up three advising days to correspond with Fall 2017 registration. These days were advertised and held in the Physical Sciences Tutorial Lab.

Program Accreditation Updates

In this section, please provide details regarding any program accreditation or re-accreditation that occurred this past year, if applicable. Please limit your response to the space provided in the text boxes below.

NA-The chemical technology program does not have accreditation requirements

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Perkins & Key Performance Indicators

In this section, please discuss Perkins and Key Performance Indicators for programs (total student enrollment, demographic profile, new students, student progress rate (transferred, graduated, enrolled), number of graduates, graduate employment rate, time to completion), if applicable. Please limit your response to the space provided in the text boxes below.

There were no students enrolled in the chemical technology program this past year.

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Learning Outcomes Assessment Data & Findings on Past Year's Projects

In this section, please summarize your department's assessment work for this year, outlining the Program Learning Outcomes (PLOs) or Institutional Learning Outcomes (ILOs) assessed, the assessment measure, the findings, and the improvements planned based on the findings. Please limit your response to the space provided in the text boxes below.

ILO assessed: Use rules or frameworks to provide context for and understand problems or issues.

- Bob Ceblelak - PH 125: Uses an algebra pre-test to determine the math level of his PH 125 students. This helps determine the needs of his students. The assessment project is ongoing as he is working to improve his student's ability to solve multiple step physics problems successfully.
- Jared Johnson- PH 245 : Used a flipped classroom approach presenting angular momentum to students and compared the method with traditional classroom teaching method. The results were a vast improvement. Jared will continue using this approach for different types of problems along with keeping this method for angular momentum.
- Will Millar-PC 141 CLO: Describe and calculate the properties of simple harmonic motion. Changes were made on how to approach simple harmonic motion problems. There was an increased focus on the subject, with more SHM property calculation examples and practice with problem solving. This resulted in better student comprehension. This shall be continued along with a new focus and assessment on the relationship between SHM and musical sound.
- Tom Neils- CHM 130: Uses a pre-chemistry quiz over various CLO's for CHM 130 to assess where students are starting at and where they finish the course at in fulfilling the CLO's. The same quiz over the same CLO's is given to students at the end of the class. The results are that 95% of the CHM 130 students improved their scores. Improvements to course work include more classroom techniques around the difficult topic of quantum mechanics and chemical terminology.
- Amy Kudrna- CHM 210: Assess various CLO's for CHM 210 by using a pre-CHM 210 quiz and a post CHM 210 quiz. The results were improvement on each CLO for students. It showed the difficult topics are still issues with students. Improvements to those topics such as biochemistry and organic reactions will be to try a flipped classroom approach along with group-work exercises.
- Bill Faber-CHM 230: CLO assessed: Recall and apply nomenclature rules for naming organic and biochemicals. Assessed students' knowledge of naming organic compounds using a traditional approach and an inquiry based approach. That both methods for teaching nomenclature (straight lecture and then inquiry based) work pretty similarly. Improvements are to get a larger assessment project going with the other CHM 130 instructors. It could focus learning activities and discussion around a difficult topic and hopefully get more data (pre and post) that will help improve our instructions.

- Bernard Liburd-CHM 120: Various CLO's assessed by having more frequent, low-stakes testing. CHM 120 is a very topic heavy course. Because the course covers so much material in one semester, the assessment is to determine if students retain the material by having more frequent tests. The goal is to see by having more frequent tests, would this improve student's grades. The project is still ongoing and will continue as more data is collected.
- Tari Mattox-GL 101: Various CLO's assessed using low stakes quizzing to help with retention and test scores in GL101. This was an effort to foster deeper and more durable learning and improve retention and test scores. To do so, one method implemented was low stakes quizzing and exercises at the start of each class. Issues were adjusting to the different schedule and added grading load. More grading meant that quizzes were difficult to return to students sometimes in a timely fashion. This seemed to diminish its' impact. The most effective method seemed to be going over the quiz and material immediately. This seems to foster more engagement and interaction. This assessment project is on-going.
- Dan Groh-CHM 130 : CHM 130-uses a pre-chemistry quiz over various CLO's for CHM 130 to assess where students are starting at and where they finish the course at in fulfilling the CLO's. Data showed 45.6% got it right the first time but fewer show improvement (only 64.2% got it right the second go around). This is not at all surprising – students are notoriously poor at learning on their own from the text. Altogether, 6 course outcomes are directly or tangentially assessed by this quiz. This was a pop quiz administered without any warning of any kind, thus they had no chance to review or study. This assessment will be repeated in the fall with the same quiz (with a few minor tweaks to the language in a few problems) and then will be able to do the full assessment at the end of the semester.
- Lauren Woolsey-AS 102 and AS 103: Various CLO's for both courses. This report will summarize the analysis of learning gains for sections of AS 102 and AS 103 in the Fall 2016 semester. The goal is to use this project to describe a improvement strategy and remaining planned data collection for this project. In Fall 2016, the assessment is over a lab based course, AS 103 and then a lecture based course, AS 102. The Astronomy Diagnostic Test was used for this assessment, which is a set of 21 questions that span the key topics in the course learning outcomes. This will be an ongoing project. The next steps are to analyze the winter semester courses in the same way to see if her changes to the way she focused on topics has improved the learning gains for my students.
- Ashley Campanali-CHM 100: Various CLO's assessed- The goal of this project was to focus on shorter lectures with a large amount of group and community learning experiences. This was the first semester of working on this project. A quiz at the start of the semester was given with questions over various course learning outcomes. The same quiz was given at the end of the semester. For this project, it was noted that after evaluating the scores on each question, the topics that did not do any group work on resulted in the worst scored questions. Project is ongoing with plans of continuing group-work approach to topics.
- Matt Wang PH 125 lab-Used an approach of verbal/chalkboard lecture to problem solving versus providing students with example calculations for the lab with the examples accessible on blackboard written out. The data collected couldn't be applied for assessment due to issues. It would seem both approaches work for students. There will be a new project for Fall 2017.

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Part II: Plan for Upcoming Year

Part II is intended to provide a guide for your department's plans for the upcoming year with regards to the following: Operational Goals and/or Plans, Curriculum Goals and/or Plans, Learning Outcomes Assessment Plans, and Advising Plans. When answering the questions or completing the sections below, please consider the main points/highlights of each category.

A. Operational Goals and/or Plans

What are your departmental goals and plans for 2017-18?

Goals for next year

The Goals for next year will include the following:

- To develop pre-majors including astronomy and physics.
- To develop online general education science courses.
- Continued improvement of the department infrastructure including maintaining equipment and clean-up.
- To be a presence in the community and support other groups on campus for events like Community Science Day and Counselor to Counselor Day.
- To hire additional adjunct faculty.
- To serve and honor our students.
- Incorporate meaningful department professional development to improve ourselves for our students, the department and GRCC
- To update the laboratory experiments for our laboratory courses in all disciplines so that our students are able to use, access, and have exposure to modern technology
- To ensure our courses maintain direct transferability to our 4-year partner institutions in terms of credit and contact hours

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Internal collaborations and partnerships

The Physical Sciences Department will collaborate with internal departments in the following ways:

- Biological Sciences and Mathematics on Science and Math Advising days
- Dean's office on scheduling, hiring, and student issues
- Facilities on building maintenance and special improvement projects
- IT on maintaining and upgrading the department laptops and other department owned equipment
- Purchasing to secure equipment, reconcile purchases and maintain department credit cards
- Print Services to maintain copiers and handle printing
- College Bookstore to secure books and classroom supplies
- Grants Office to prepare grant applications
- Institutional Research and Planning office to obtain data for grant and report writing
- Foundation to develop and award scholarships
- HR for hiring new full-time and adjunct faculty

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What new information from external sources has influenced your planning for next year?

Are your goals targeting any Perkins or Key Performance indicators? If yes, please explain.

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What resources do you need to accomplish your departmental goals for the upcoming year?

Potential funding for our department professional development activities

Do you need support from other departments to accomplish these goals? If yes, please explain.

While there are no specific needs at this time, all departments rely on many other departments every day to complete their work.

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Do you need professional development in order to accomplish these goals? If yes, please explain.

For each of your departmental goals/plans/projects, please list the name of the lead faculty member(s) involved.

Our department goals will be achieved through a collaborative effort by all our faculty.

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For each of your departmental goals/plans/projects, please provide a brief timeline for completion.

All are ongoing goals for the department.

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B. Curriculum Goals and/or Plans

What are your departmental curriculum development goals and plans for 2017-18?

The curriculum development goals are:

- To update any courses that are in Curriculog
- To revise any courses that need revision
- To benchmark and update
- To review pre-majors and develop new pre-majors
- To complete any pre-program pathways for our department
- To review courses and benchmark with other institutions to maintain transferability

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Review of Department's Curriculum Transferability

Please note: this section should be completed by all SAS Departments, Business, and CIS.

Using transferability data provided by Instructional Support, please summarize your perceptions of how courses in your department transfer to our four-year university partners and how this understanding will impact your curriculum goals for the upcoming year.

Transferability to four-year University Partners:

- Chemistry courses all transfer to 4-year institutions. Six of our chemistry courses are general education courses.
- Physics courses-Our year-long sequence physics classes all transfer to our 4 year university partners. Our PH 115 is a required course for some health programs at GVSU. PH 111-Physics of Everyday life transfers as general education lab science to many of our 4-year partner institutions
- Physical Science-PC 101 is required for the education program for Ferris for students studying elementary education and fulfills a general education course. Other PC courses are for in-house programs at GRCC.
- Geology courses-Transfer to our 4-year institutions with a new geology pre-program A.S.

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Potential issues with transferability:

- The lecture/laboratory combination course with 4 credit/6 contact hours are not representative of the courses they transfer as. The transfer institutions do not have lecture/laboratory combination course of 4 credit/6 contact hours. One goal for 2017-2018 is to look into the potential transferability issues with these lecture/laboratory combinations. This issue will be addressed in PC 101 and to update it to a 3 hour lecture/2 hour laboratory section equaling 4 credit hours for our students.
- Courses we will benchmark and determine if changes are needed are AS 103 ,GL 101, CHM 110 along with PC 101.
- CHM 110 will be looked at to see if a 3 hour lecture/2 hour laboratory section better fits with transfer institutions.
- CHM 251-Currently it is a 1 credit/1.5 contact hour laboratory course. This will be updated to a better transferable course.

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What new information from external sources has influenced your curriculum development planning for next year?

Transfer institutions course equivalence has influenced this development.

Are your curriculum development goals targeting any Perkins or Key Performance Indicators? If yes, please explain.

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What resources do you need to accomplish these curriculum development goals?

Do you need support from other departments to accomplish these curriculum development goals? If yes, please explain.

No other support is needed

For each of your departmental curriculum development goals/plans/projects, please list the name of the lead faculty member(s) involved.

- Tari Mattox-develop new Geology course and look into restructuring the Lecture/Lab GL 101 to have separate lecture and laboratory sections to be equivalent to our transfer institutions.
- Amy Kudrna and Dan Groh-Redevelop PC 101 as a 3 hours lecture-2 hour lab course
- Lauren Woolsey is going to develop a pre-physics and pre-astronomy program
- Bill Faber and Ashley Campanali -CHM 251 lab and make it a 1 credit: 2 contact hour courses.
- Lauren Woolsey and Will Millar-Look at transferability of the lecture/lab combination course for Astronomy
- Amy Kudrna-CHM 110-Investigate the ratio of lecture to lab hours in 4 year transfer institutions

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For each of your departmental curriculum development goals/plans/projects, please provide a brief timeline for completion.

- GL 101-Benchmark during 2017-2018 and apply any changes in 2018/2019 year
- PC 101-Prepare course update to 3 hour lecture/2 hour lab for Curriculog update in 2018/2019 year. Course changes will begin Fall 2018.
- AS 103-Lauren Woolsey and Will Millar will benchmark during 2017-2018 and apply any changes in 2018/2019 year
- CHM 251-This change should go into effect by 2018/2019
- CHM 110-Benchmark during 2017/2018

C. Learning Outcomes Assessment Plan for 2017-18

In this section, please outline your department's plan for learning outcomes assessment work for the upcoming academic year, outlining the Program Learning Outcomes (PLOs) or Institutional Learning Outcomes (ILOs) that will be assessed as well as the assessment instruments/measure that will be used. Please limit your response to the space provided in the text boxes below.

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TBD-There are no PLO's to be assess at this time

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D. Departmental Advising Plan for 2017-18

In this section, please outline your department's advising plan for the upcoming academic year. Please limit your response to the space provided in the text box below.

Description of departmental advising for 2017-2018

The Physical Sciences has four avenues for student academic advising. These avenues are:

- Science Advising Days- In collaboration with the Mathematics and Biological Sciences, we will have an interdepartmental science advising event in the fall. This events will be advertised and students are encouraged to attend.
- The Department webpage has an "advising" tab that links to the Physical Sciences faculty and the areas in which they advise. Students can find information about faculty advising and pre-majors there.
- Students often just drop in during office hours or send emails to faculty regarding questions that they may have about careers and coursework. Students may be using the webpage to get faculty information on advising. This route to advising seems to be most favored by the students.
- March Physical Science Advising days-This event will be held in the Physical Sciences Tutorial Lab in March to coordinate with Fall 2018 registration.

Part III: 2016-17 Faculty & Staff Accomplishments/Awards

Part III is intended to provide a space to share the accomplishments, awards, and/or accolades achieved by faculty and staff in your department during the course of this past year.

EOL/Release Time Work

General Chemistry and General Education Chemistry Coordinator- Bernard Liburd, who has for many years done a wonderful job in coordinating the General Chemistry I and II courses. Bernard continued his work with General Chemistry I and II lecture and laboratory courses. This support is greatly appreciated.

Honors Coordinator-Amy Kudrna received EOL for her work as the honors coordinator.

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Sabbatical- Tom Neils was awarded a sabbatical for the winter 2017 semester.

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Thank you for completing this report. Please submit to your Dean via email.