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Program Review  
Form for External Review  
Committee  
Instructional

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Form ID
57
Division
Sciences and Engineering
Department
Physical Sciences
Program
Physical Science
Review Year
2006-2007
Member Names
Jon Kohler
Division Overview
<u>Program/Department Purpose</u>
State the purpose of the program/department. How is this purpose within the mission of Amarillo College?
The physical science department provides

quality academic classes for students to successfully transfer to universities in pursuit of advanced degrees, to complete associate degrees, and to improve employment opportunities in technical and scientific fields. This statement supports the mission statement of the college in the area of educational opportunities to enhance the quality of life for the diverse population of the Amarillo College service area.

**Does the answer include a purpose statement for the program/department? Does the answer indicate how this program/department is within the mission of Amarillo College?**

Acceptable

N/A

When was the last time the program's/department's purpose statement was reviewed/revised by faculty and staff in the program/department?

The purpose statement of the Physical Science department was reviewed in the Spring of 2006 and again for the submission of the current program

review. The latest review includes minor changes in the wording of the statement.

**Does the answer indicate the last time the program's/department's purpose statement was reviewed/revised by faculty and staff in the program/department? Does the answer indicate how this program/department is within the mission of Amarillo College? within the mission of Amarillo College?**

Acceptable

N/A

If the program/department offers continuing education credits, how are these courses consistent with the mission of Amarillo College?

The Physical Science Department does not offer continuing education credits.

**Does the program/department offer continuing education credits? Does the answer indicate how these courses are consistent with the mission of Amarillo College?**

Acceptable

N/A

Does the program have admissions policies?

**no**

Where are the policies published?

**Are all the locations where the policies are published included in the answer?**

Acceptable

N/A

Explain how these policies are consistent with the mission of Amarillo College.

**Does the explanation of how the policies are consistent with the mission of Amarillo College appear to be accurate?**

Acceptable

N/A

Is the program/department accredited?

**no**

Which agencies or organizations accredit the department/program?

**Are the complete names of the agencies or organizations which accredit the department/program cited?**

Acceptable

N/A

How many years are in the accreditation cycle?

**How many years are in the accreditation cycle?**

Acceptable

N/A

When were the accreditations affirmed or granted?

**When were the accreditations affirmed or granted?**

Acceptable

N/A

What is the current status of the accreditation?

**Are the current statuses of the accreditations identified (e.g. accredited, in process of renewal, in process of candidacy, other)?**

Acceptable

N/A

**If not required, is the program eligible for accreditation?**

Acceptable

N/A

**Has this program/department sought accreditation even though it is not required (e.g. yes; If no, explain)?**

Acceptable

N/A

Is this program/discipline required to receive approval from an external agency or organization (other than the Texas Higher Education Coordinating Board) in order to offer courses?

**no**

Identify the external approver(s) for the department/program.

**IF the program/discipline is required to receive approval from an external agency or organization (other than the Texas Higher Education Coordinating Board) in order to offer courses, was (were) the external approver(s) for the department/program identified?**

Acceptable

N/A

What approval schedule is required by the external approver(s)?

**Was the approval schedule required by the external approver(s) identified?**

Acceptable

N/A

When did the program/department last receive approval?

**When did the program/department last receive approval?**

Acceptable

N/A

**Is the reason why the program/department is required to receive this approval clear?**

Acceptable

N/A

Improvements

Identify at least one example of an improvement/revision which resulted from the annual PET forms for the last five years

The Physics department has new laboratory equipment replacing very old equipment. The new equipment has computer interface and is more in line with what other schools offer for their physics laboratories. The American Chemical Society Standardized Finals are used for Principles of Chemistry I and II, and Organic Chemistry I and II.

**After reviewing at least one example of improvements/revisions that resulted from the annual PET forms for the last five years, determine the extent that this program/department**

**has used the PET forms to make improvements/revisions. Does this meet the minimum expectations for using PET forms to make improvements/revisions to the program/department?**

Acceptable

N/A

Identify at least one example of improvements/revisions which resulted from the last Program Review.

The Physical Science Department has added two fully on-line courses, Meteorology and Thanatochemistry. Technology is being used by most instructors in the classroom. Many equipment upgrades have been made.

**After reviewing at least one example of improvements/revisions that resulted from the last Program Review, determine the extent to which this program/department values the Program Review process to make improvements/revisions.**

Acceptable

Concern

The department needs to specify what types of technology are being used in the



classrooms and what kind of equipment upgrades (give examples) have been made.

Identify all the delivery approaches used for courses within this program/department: (Select all that apply.)

traditional classroom, web, video,

**After reviewing all delivery approaches for courses within this program/department, is this program positioned for growth? Does the committee have recommendations for delivery options which will provide additional growth?**

**After reviewing at least one example of improvements/revisions that is a response to accomplish a strategy or tactical objective within the Strategic Plan 2010-2015, determine the extent to which this program/department has contributed to the implementation success of the Strategic Plan? Does this department/program understand how it relates to the**

## **institution's future based on the Strategic Plan?**

Unacceptable

Recommendation

The department needs to answer the question concerning delivery approaches.

Identify at least one example of an improvement/revision that is a response to accomplish a strategy or tactical objective within the Strategic Plan 2010-2015.

The physical sciences department has implemented two on-line courses, one in chemistry and one in earth science. This is in line with the Strategic Plan, Expanding Student Access, Goal 1, "Develop responsive programs and courses to meet documented community needs.", and Strategy 1.1, "Target degree and workforce programs for online delivery." There are plans to include at least one more on-line course for earth science, possibly as early as Fall 2007.

**After reviewing at least one example of improvements/revisions that is a response to accomplish a strategy or tactical objective within the Strategic**

**Plan 2010-2015, determine the extent to which this program/department has contributed to the implementation success of the Strategic Plan? Does this department/program understand how it relates to the institution's future based on the Strategic Plan?**

Acceptable

Note: This question is repeated.

**Does this Committee have recommendations as to how this program/department may contribute to the implementation of the Strategic Plan?**

Acceptable

N/A

Provide names and titles of those who determined the process used to assess outcomes of the program and/or courses in the department.

The faculty of the Physical Science department are all involved in the processes to assess outcomes of the courses offered in the department. Dr. Yufeng Sun and Arthur Schneider work

with physics. Dr. Richard Hobbs is primarily responsible for the Earth Sciences. Paul Teichmann, Emery Shier, and Mary Graff collaborate about the Chemistry classes. This department also offers three Integrated Science courses for the Teacher Education program and those classes are reviewed by Dr. Richard Hobbs (Earth Science), Mary Graff (Chemistry) and Arthur Schneider (Physics).

**Has the program/department had a broad base of involvement from a majority of faculty and staff with the program/department regarding implementation of student learning outcomes of the program(s) (or department) and courses? What recommendations does the committee have for increasing involvement?**

Unacceptable

Recommendation

The department needs to provide personnel titles.

Explain the primary reasons behind the competencies that were selected.

The department is in the early stages of

investigating what outcomes should be tested and in what manner. Chemistry, and the use of the ACS standardized final, is the only area currently using an assessment tool that has been nationally recognized.

**Do the selected competencies appear to be valid?**

Unacceptable

Recommendation

The department mentions Chemistry, but needs to explain how the other departments (e.g. physics, geology, etc.) assess their programs.

Identify the primary reasons for the assessment tool(s) selected.

The ACS test was chosen because it has been verified as a reliable assessment of chemistry knowledge for both the General Chemistry and Organic Chemistry.

**Will the assessment tool(s) selected provide valid and reliable results?**

Acceptable

Concern

The department needs to explain if assessment tools are available for the other physical science departments, and

if so, what they are.

Evaluate the assessment approaches to date.

The student scores on the standardized test have shown that our students are in line with the national averages on these exams.

**Will the assessment approaches(s) selected provide valid and reliable results?**

For student or program/course outcome assessments, review the program's/department's five-year graph(s) of quantitative results or provide a brief narrative summary of qualitative results.

The department does not have defined program/course outcome assessments, other than grade distribution at the end of each term. The number of students who are dropping courses, especially in chemistry and physics, is higher than we would like. After meeting with the faculty who teach these classes, and discussing drop rates, the conclusion is that many of

the students who enroll in these classes are underprepared for the rigor. By modifying prerequisites and being more strict about students meeting those prerequisites, we expect to see an improvement in retention.

**Review the program's/department's five-year graph(s) of quantitative results for student or program/course outcome assessments, or provide a brief narrative summary of qualitative results.**

Unacceptable

Recommendation

The department needs to develop outcomes assessments and use them to measure program success.

What changes have been made in the curricula of the program/department because of the analysis of these results? Some prerequisites have been changed to reflect better backgrounds in math and reading.

**Have any changes been made in the curricula because of the analysis of these results?**

Unacceptable

## Recommendation

The department needs to indicate if any changes have been proposed or made to the actual curriculum taught in the physical science courses.

Review the five-year graph(s) of course completions for the program/department. Explain any increase or decrease that is more than a one-year anomaly.

The course completion rate with grades of A-C for the Physical Sciences averages 71.65% and ranged from a high of 75.13% in 2002 to a low of 68.22 % in 2005. The number of D and F grades has increased from a low of 7.22% in 2002 to a high of 10.32% in 2005, averaging 8.69%. The number of Audits and Withdrawals averages 19.22%, varying from a low of 17.50% in 2002 to a high of 21.03% in 2005. Whether any of the changes from year to year are more than an anomaly is hard to say, but the trend is that fewer students are completing the courses each year with grades of A-C and more are withdrawing, most likely because they are not passing the class.

**Does the review of the five-year graph(s) of course completions**



**demonstrate the use of analysis to implement a plan of action for retention? Is the analysis of any increase or decrease that is more than a one-year anomaly accurate?**

Acceptable

N/A

Provide the program's/department's plan of action for improving any identified problem or results from the implementation of the plan of action. The Physical Sciences Department is continuing to improve completion rates for courses offered by the department. Faculty members of this department provide study/tutor sessions in addition to scheduled classtime. These give students an opportunity to obtain focused one-on-one help that is not available in the general classroom. All faculty encourage students to schedule office appointments for additional help. It was found that students were given overrides into classes without prerequisites. The department is more strictly adhering to completed prerequisites before students are allowed to enroll in classes. It will be at least two more semesters before there

might be evidence that this is a plan of action that will help student success.

**Will the plan of action likely improve the number of course completers?**

Acceptable

Concern

The department could utilize a type of "early warning" system to advise students who are not successfully completing the course.

Does the program/department provide for alternative methods of awarding credit?

CLEP Advanced Placement

**Has the program/department provided for alternative methods of awarding credit? If not, which alternative methods would be recommended?**

CLEP, Advanced Placement

**What approaches are used to assure outcomes are comparable to those expected of students who enrolled and completed the course?**

Unacceptable

Recommendation

The department needs to present data that assures that advanced placement

outcomes are comparable to those expected of students who enrolled and completed the course.

For general education and/or core curriculum required by this program/department, identify the relevant competencies approved by the Academic Affairs Committee (see Catalog section entitled Degrees and Certificates: General Education Competencies).

The relevant competencies for general education and/or core curriculum required by the Physical Science department have not been established.

The competencies will have to reflect successful completion of the core courses by the students with majors in the Physical Sciences. These will be determined after further study in the design and implementation of assessment of specific competencies.

**Have all relevant competencies for general education and/or core curriculum been identified for this program/department? If not, which are obviously a part of this program/department's general education competencies?**

Unacceptable

Recommendation

Outcomes assessment for general education competencies are non-existent. Such competencies should be developed.

Explain how outcomes for the competencies have been assessed and achieved and provide links to the documentation.

This area is under development and currently there are no competencies which have been identified.

**Is the explanation of assessment approach(es) for general education competencies (outcomes) thorough? Is the analysis of the results accurate? Have links to documentation which verify the assessment results been included?**

Unacceptable

Recommendation

There has been no assessment since there are no general education competencies in place.

Outline a plan for correcting any weaknesses.

N/A

**If assessment results and analysis**

**are included, is there a plan for correcting any weaknesses included?**

Unacceptable

Recommendation

The department needs to establish general education outcomes competencies.

Do students/graduates in this program/department have to be certified or licensed?

no

Review the results for certification/licensure results of the program/department and/or job placement for the past five years. Explain any increase or decrease that is more than one-year anomaly.

Provide a plan of action for the identified problem.

**IF students/graduates in this program/department have to be certified or licensed, do the results over the past five-years indicate that certification/licensure have been equal to or greater than the average of the past five-years AND/OR equal to the statewide or national benchmark for this**

**certification/licensure? IF NOT, does the analysis and plan of action appear that the program/department has thoroughly reviewed the problem?**

Acceptable

N/A

**Is the program's/department's plan of action for improving any identified problem or results likely to improve the certification/licensure results? Did program/department explain any increase or decrease that is more than a one-year anomaly? Does the plan correct any weaknesses included? If not, what is missing?**

Acceptable

N/A

IF the department or program offers one or more technical programs (Associate in Applied Science or Certificates), has the program/department included an explanation of the job placement success during the past five years AND are these results at least equal to the statewide annual benchmark (90%)?  
Is the analysis of any increase or decrease that is more than a one-year

anomaly accurate?

N/A

Is the program's/department's plan of action for improving any identified problem or results likely to improve the job placement rate for graduates of the technical program(s)? If not, what is missing?

N/A

**IF the department or program offers one or more technical programs (Associate in Applied Science or Certificates), has the program/department included an explanation of the job placement success during the past five years? Is the analysis of any increase or decrease that is more than a one-year anomaly accurate?**

Acceptable

N/A

**Is the program's/department's plan of action for improving any identified problem or results likely to improve the job placement rate for graduates of the technical program(s)?**

Acceptable

N/A

## Curricula

Does the program/department have affiliation(s)/agreement(s)/contract(s) with any other entity for the purpose of delivering instructional content?

no

Review the affiliation(s)/agreement(s)/contract(s), consider Amarillo College's mission, and then make a recommendation to:

Provide an analysis of the review.

**If the program/department has affiliation(s)/agreement(s) with any other entity for the purpose of delivering instructional content, do these affiliations/agreements make it clear that Amarillo College maintains the responsibility for controlling all aspects of the educational program? Has the College ensured the quality of the program with these affiliations/agreements? If so, how? What is the schedule for reviewing the quality of these programs? Has the College ensured that programs remain with Amarillo College's mission?**



Acceptable

N/A

How many curricula changes were approved by the Academic Affairs Committee during the past five years?

5

Which steps in the curricula change process had faculty involvement prior to submitting the curricula proposal(s) to the Academic Affairs Committee?

Addition of Thanatochemistry and Meteorology. Change in prerequisites for classes (reading and math prerequisites were changed or modified). Removal from the catalog of two classes no longer offered.

**Was the departmental faculty involvement documented and broad in representation? If not, what steps within curricula change process should have had more proof of greater departmental faculty involvement? Is the primary responsibility for curricula changes under the control of faculty? Does the program have a qualified faculty member in charge of the program's coordination and curriculum**

## **development?**

Acceptable

N/A

Is any program within the department a technical program (e.g. AAS or certificate)?

no

When was the last Advisory Committee meeting?

Provide a link to the minutes of the last Advisory Committee(s) minutes in the Electronic Archives.

Provide a link to the appropriate committee membership of the Advisory Committee(s) in the Electronic Archives.

**If the department offers an AAS and/or certificate, do the minutes of the Advisory Committee prove that the curricula for each program is appropriate to the degree and/or certificate? Has the Advisory Committee been consulted in designing each degree and certificate? Has the Advisory Committee met at least once a year and been provided ample opportunity to guide the faculty in curricula changes?**

Acceptable  
N/A

**Is the membership of the Advisory Committee broad enough to provide the scope of advice necessary for input on curricula? If not, what changes are recommended to the program/department?**

Acceptable  
N/A

#### Enrollment Data

After receiving the data indicating the number of students enrolled in the program/department, by total students, number of full-time equivalents, and number of completers, determine if there is more than a one-year anomaly. If so, provide the faculty and staff analysis of their assessment of the problem.

There does not seem to be any unusual variation in the numbers of students enrolled in Physical Science classes. The graphs show a steady increase in enrollment over the past five years.

**Does the analysis by the faculty and staff of this data address any obvious problems/declining statistics?**

Acceptable

N/A

Create an action plan for needed improvement and commendation for any dramatic improvement.

N/A

**Does the action plan or commendation address the problem addressed within the analysis? Does it appear that implementation of the action plan will resolve the problem and correct the decline?**

Acceptable

N/A

**Does the External Review Committee have any other analysis or recommendations for increasing enrollments based on the program/department's data?**

Acceptable

N/A

For programs/departments with majors, review the graphs of program majors and the number of new majors by year.

Provide an analysis of the program's/department's faculty and staff assessment of the problem and an action plan for needed improvement and

commendation for any dramatic improvement.

The general trend in enrollments for Physical Sciences is an increase of total students across all of the majors offered through the department. Physics has shown a steady decline in majors, but this may not be particularly significant. Most of our physics enrollment is for courses required by Engineering, Chemistry, Prepharmacy, Math and Biology majors to fulfill graduation requirements. Most of the students in the major fields offered by Physical Science do not get degrees from Amarillo College, but transfer to universities to complete degrees. Many declare General Studies at Amarillo College and then move to a major field after transferring. The overall increase in student enrollment may partly be attributed to more students electing Prepharmacy as a major, as well as other pre-professional fields. The only irregularity in the data for enrollment was in 2003 when there was a decline in Chemistry and in Geology, but the numbers came back to previous levels in 2004 and 2005.

**Does the analysis by the faculty and staff of this data address any obvious problems/declining statistics regarding students enrolled as majors within the program/department? Does the action plan or commendation address the problem addressed within the analysis? Does it appear that implementation of the action plan will resolve the problem and correct the decline? Does the External Review Committee have any other analysis or recommendations for increasing the number of students majoring in this program/department based on this program's/department's data?**

Acceptable

N/A

#### Resources

Review the five-year graph(s) of the student-to-faculty ratio in the program/department.

Explain any increase or decrease that is more than a one-year anomaly.

The student to faculty ratio has remained consistent for the past five years.

**Does the analysis by the faculty and staff of this data address any obvious problems/declining statistics regarding student-to-faculty ratio within this program/department?**

Acceptable

N/A

Provide an action plan for improvement of any identified problem.

N/A

**Does the action plan or commendation address the problem addressed within the analysis? Does it appear that implementation of the action plan will resolve the problem and correct the decline? Does the External Review Committee have any other analysis or recommendations regarding student-to-faculty ratio within this program/department?**

Acceptable

N/A

In the database for [Roster of Instructional Staff](#) (also known as Roster of Faculty), review the credentials of each full-time and part-time faculty member within the program/department. If any faculty member does not meet the

SACS and THECB requirements, evaluate whether additional documentation is significant to grant an exemption. All Faculty are qualified and meet the SACS and THECB requirements.

**Identify any faculty teaching a transfer course which, according to the information within the database for [Roster of Instructional Staff](#) (also known as Roster of Faculty) do not meet the requirements of faculty teaching a transfer course and explain the credential problem. Identify any faculty teaching a technical course which, according to the information within the database for [Roster of Instructional Staff](#) (also known as Roster of Faculty) do not meet the requirements of faculty teaching a technical course and explain the credential problem based on SACS requirements and/or THECB requirements. Identify any faculty teaching a developmental course which, according to the information within the database for [Roster of Instructional Staff](#) (also known as Roster of Faculty) do not meet the**



**requirements of faculty teaching a developmental course and explain the credential problem.**

Acceptable

N/A

List the names and the last date for all full-time faculty evaluations based on the schedule indicated in the Faculty Performance Review (FPRP).

Spring 2006, the following faculty were reviewed: Mary Graff, Richard Hobbs, Yufeng Sun, Emery Shier, and Paul Teichmann. Darryl Maddox was also reviewed in 2006 and retired in Summer 2006. Fall 2006, Emery Shier, Paul Teichmann and Mary Graff were reviewed.

**If any full-time faculty member (or Board-appointed faculty member) has not been completed the Faculty Performance Review (FPRP) within the past two years and is listed in the aforementioned [Roster of Instructional Staff](#) (also known as Roster of Faculty), identify the faculty member's name and the date of the last FPRP.**

Acceptable

N/A

List the names of each part-time faculty and the last date of evaluation by students and supervisor for each course taught.

Glen Green - Spring 2006, Eddie Edwards - Fall 2006, David Pertl - Fall 2006.

**If any part-time faculty member has not been evaluated by both students and supervisor for each course taught within the past year and is listed in the aforementioned Roster of Instructional Staff (also known as Roster of Faculty), identify the faculty member's name and state the specific problem.**

Acceptable

N/A

Amarillo College's Board Policy Manual defines each faculty member's academic freedom as "full freedom in the classroom in discussing the subject being taught and to pursue research and publications. However, a faculty member must not attempt to force on students a personal viewpoint and must at all times allow for diversity of opinion." Has anyone in the program/department filed

a grievance for violation of the  
aforementioned academic freedom?

no

**If anyone within the department has filed a grievance for violation of academic freedom based on the definition stated in Amarillo College's Board Policy Manual, briefly describe the violation (excluding personal identifiers) and the total number of violations.**

Acceptable

N/A

Which of the following library collections/resources/services have been used by faculty, staff and/or students within the past five years? (Select all that apply.)

Reserve collection Circulating collection

Reference collection Tutorials/guides

Interlibrary loan Classroom instruction

Personalized instruction Circulating collection

**Does it appear that the library collections/resources/services used by the faculty, staff, and/or students within the past five years are accurate and thorough?**

Acceptable

N/A

Which two or three collection/resources/services should be improved to support Amarillo College's mission regarding teaching and service? The move away from print material makes it difficult for students to do print based research when assigned.

**Has the program/department identified which two or three collections/resources/services should be improved to support Amarillo College's mission regarding teaching and service?**

Acceptable

N/A

Does your program/department have discipline accreditation?

no

How has the library participated in this discipline's accreditation?

**Does the program/department have a discipline accreditation? IF SO, has the library participated in completing the approver's evaluation?**

Acceptable

N/A

After assessing the strengths and weaknesses of the program's/department's access to technology, what improvements would ensure that students have access and training in the use of technology? Longer hours for open computer labs. Many students need weekends to work on studies. When the labs are not available because the building housing the labs is closed, it makes it difficult for students to study effectively.

**Does the program's/department's assessment of strengths and weaknesses include ways to improve both students' access to & training in the use of technology?**

Acceptable

N/A

What improvements would ensure that students use technology? Up to date technology for on-line assignments and data acquisition in the laboratories.

**Does the program's /department's answer include improvements that would ensure that students use technology? Are the**

**recommendation(s) of this program/department feasible?**

Acceptable

N/A

Review program/department operations. Does any operation present the possibility for violations of security, confidentiality, or integrity of student records?

no

What changes need to be made to prevent violations of this nature?

**After a review of this program's /department's operations based on this Self-Study and any other information available to this Committee, does any operation present the possibility for violations of security, confidentiality, or integrity of student records? If so, describe those operations and identify the violation possibility in detail.**

Acceptable

N/A

**What changes need to be made to prevent violations of this nature?**

Acceptable

N/A

Which support services need to be strengthened to better serve students in this program/department?

Students need access to the assessment center on the weekends and later evening hours.

Explain what aspects of the services need to be strengthened.

Working students and evening only students have difficulty using the assessment center with its limited hours.

**Do the Self-Study recommendations of this program/department for support services that need to be improved appear to be valid?**

Acceptable

N/A

Describe any indicators or problems that prevent a healthy, safe and secure environment for the students, faculty and staff of this program/department.

Warren Hall received many improvements about 12 or 13 years ago during the last major renovation of the campus. However, now carpeting is severely frayed and separated in lecture rooms and some offices making tripping

hazards. Plumbing needs repairs. Door knobs should be replaced with lever handles for disabled students.

**Are recommendations to assure a healthy, safe and secure environment for staff and students of this program/department valid? Are any of these recommendation(s) more significant and/or urgent?**

Acceptable

N/A

Describe any indicators or problems that hamper adequate physical facilities, both on and off campus, to meet the needs of the program/department.

Warren Hall has only three lecture halls. This limits the number of classes that can be offered at any particular class period. This is the primary physical limitations of this building's physical facilities. Also, of these three lecture halls, 205 needs a ceiling mounted projector and computer for faculty use. Room 105, although it is a lab, is used for lecture on a regular basis and also should have, at minimum, a ceiling mounted projector, with wall connection for computer use. The computers in 201 and 109 are



desperately in need of upgrades to handle the visual data used by faculty.

**Do any of the problems or concerns regarding adequate physical facilities appear to be significant and/or urgent? Are there any other needs which this Self-Study didn't cite but are critical based on other information? Which of these needs are most significant and/or urgent?**

Acceptable

N/A

Budget

Which program/department outcomes have resulted in budget requests to date? The department as a whole requests a budget each year. The money is distributed in the department as needed for supplies and supporting equipment. Much of the annual budget goes for chemistry supplies and chemicals. Physics requires the next largest amount with geology requiring the least.

**Have any of this program's/department's outcomes resulted in budget requests to date? If not, why not?**

Acceptable

N/A

Project the program's/department's strategic initiatives for the next five years based on the program's/department's outcomes.

If enrollment increases in the future, this will necessitate the offering of more classes. The department will need expanded staff, faculty, classrooms, labs and office space.

**Has this program/department been able to project strategic initiatives for the next five years based on the program's/department's outcomes? If not, what appears to be blocking this program/department from accomplishing this?**

Acceptable

N/A

Publications

If the program/department publishes any advertising or recruitment documents (electronic or paper), do the documents accurately represent Amarillo College and the program/department?

no

If no, explain what is inaccurate.

The department does not publish and

advertising or recruitment documents.

**IF the program/department has published any advertising or recruitment documents (electronic or paper), check at least one copy of each document and determine whether it accurately represents Amarillo College and the office/department?**

Acceptable

N/A

**IF anything appears to be inaccurate, identify the apparent violation.**

Acceptable

N/A

Does the program/department publish any documents (electronic or paper) with references to SACS accreditation?

no

Are the references in compliance with SACS approved statement?

Which reference is not in compliance?

Describe how you will assure compliance for all references in the future.

**IF the program/department has published any document(s) with a reference to SACS accreditation, are all references consistent with the**

**approved statement? (Approved reference: Amarillo College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees. Contact the Commission on Colleges at 1866 Southern Lane Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Amarillo College.) IF any references are inconsistent, identify all documents with the inconsistent reference(s).**

Acceptable  
N/A

**IF the Self-Study did identify the inconsistencies, does the plan for assuring future compliance appear to correct the problem? IF the Self-Study did NOT identify all inconsistencies, what plan does this Committee recommend?**

Acceptable  
N/A

Other

State any additional comments/concerns which may impact this

program/department during the next five years.

**Concern:** Fluctuation in enrollments could impact the course offerings in the physical sciences. The declaration of pre-pharmacy as a major by many students keeps the chemistry classes near capacity. If this trend continues, more lab space might be a serious consideration. The enrollment in physics also fluctuates, depending on the number of engineering students, pre-professional enrollments, and the allied health students who are required to take a physics course.

**Concern:** Physical Sciences is a support department for general education requirements as well as technical fields and teacher education. The enrollment in these areas will impact the course offerings of this department.

**Comments:** Some of the faculty members of this department have been involved in community projects for at least 15 years, and in many cases longer. Art Schneider and Mary Graff have

worked with Region 16 Education Service Center, Texas Education Agency (TEA) and the Regional Collaborative for Excellence in Science Teaching providing workshops and classes for science teachers throughout the Texas Panhandle since 1992. Richard Hobbs has also been involved with the Collaborative since he began work at Amarillo College eight years ago. Most of the faculty have volunteered with organizations such as TAME, Pantex Science Bowl, National Chemistry Day (Week), and the High Plains Regional Science Fair, serving as judges, content experts and directors of these activities. Art Schneider provides star parties at Wildcat Bluff and in Palo Duro Canyon, reaching several hundred Panhandle residents every year. He also works with Amarillo Independent School District at Ceta Glen with their outdoor education program and the astronomy programs at Crowell, TX. The outreach of Amarillo College, especially through the efforts of Art Schneider, is felt from eastern New Mexico to as far as the Dallas area. This community involvement addresses several areas of the strategic

plan such as Goal1, "Develop responsive programs and courses to meet documents community needs.", Strategy 1.4, "Expand regional access to higher education."; Goal 6,"Enhance quality of life.", Strategy 6.2, "Increase awareness of cultural and intellectual opportunities.", and Goal 7, "Encourage community support.", Strategy 7.1, "Demonstrate community impact.." The courses offered through the Regional Collaborative also would fit into the strategic plan, Goal 10. "Recruit and retain faculty and staff who facilitate learning and strengthen programs and services.", Strategy 10.2. "Recruit and retain faculty and staff who demonstrate and deliver targeted skills and productivity."

**IF additional comments/concerns were included in the Self-Study regarding items which may impact this program/department during the next five years, what recommendations and/or concerns are warranted? IF NO such items were included in the Self-Study but this Committee feels such comments**

**or concerns are valid, cite them and include any relevant recommendations.**

Acceptable

Commendation

The Program Review Committee commends the faculty of the physical sciences department for their continuing and extraordinary level of community service involvement.