Department of Chemistry
Program Review Self-Study Report

Based on
Version 1.1
10/21/2015

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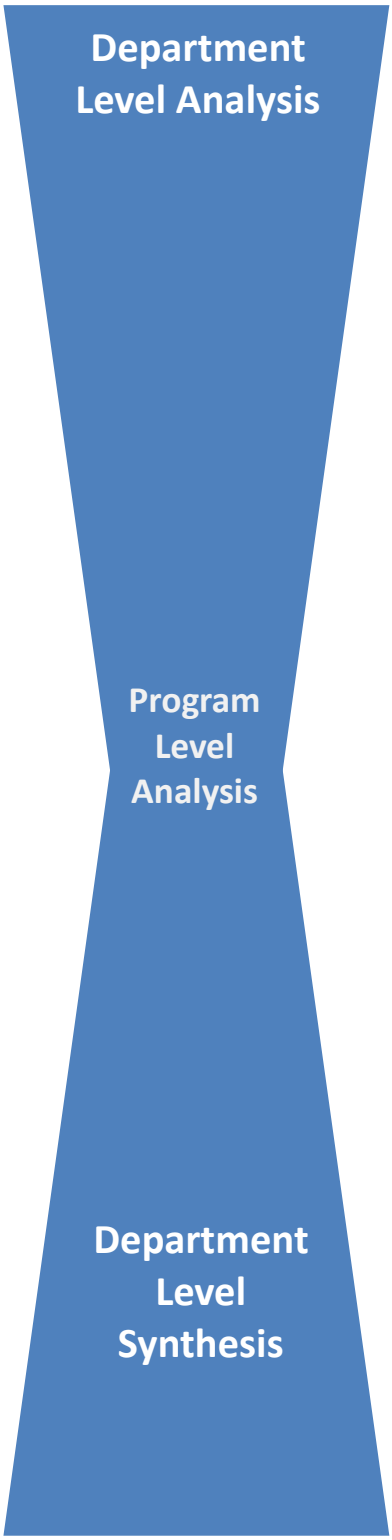

Instructions

Please use the data provided and the guiding questions to prepare your program review self-study. Please note that the data provided is not all of the data available to you and a more complete set of program review data will also be provided by the IE office. Also note that there may be a few questions that are not relevant to your academic unit and you can simply write "NA" in those text boxes where this is the case. Finally, the text boxes are intended for the reflective answers to the guiding questions and the summaries of your analyses. If there are related documents that contain data or more detailed information that will help the reviewers better understand your narratives, feel free to add these as appendices at the end. Please do not include anything in the appendices that is not necessary or referenced and discussed in the self-study itself.

Technical Note: For your convenience, fillable text boxes have been inserted after each question. If you have non-text items (e.g. tables, charts, etc.) you would like to insert into the document, feel free to remove and replace the textbox placeholder with your information.

Department Level Analysis

A) Introduction (context for department)

1. Name of Academic Unit, Program(s), and Center(s) that are included in this self-study: Include graduate and undergraduate, undergraduate majors, minors and concentrations, etc.

   Click here to enter text.

2. This document will be read by both the PLNU Program Review Committee and external reviewers. What do these reviewers need to know about your current programs to understand their context and how they function within the department and across the university? (500 word maximum)

   Click here to enter text.

3. If you believe that it will help the reviewers to understand your context, provide a brief history of what has led to your department's current structure and program offerings.

   Click here to enter text.

B) Alignment with Mission

Please answer the following questions for all student populations served by your department: residential, graduate and extended learning:

1. Briefly describe how your department contributes to the intellectual and professional development of PLNU students.

   Click here to enter text.

2. Review your department's mission, purpose and practice and discuss how your programs contribute to your student's spiritual formation, character development, and discernment of call.

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C) Quality, Qualifications and Productivity of Department Faculty

Current Full-Time Faculty				
Faculty Name	**Rank**	**Tenure**	**Degree**	**PLNU Service Years**
Beauvais, Laurance	Assistant	Tenure-track	PhD	2
Choung, Sara	Professor	Tenured	PhD	11
Jansma, Ariane	Assistant	Tenure-track	PhD	1
Maloney, Katherine	Associate	Tenure-track	PhD	3
Martin, Kenneth	Professor	Tenured	PhD	25
Perry, Marc	Associate	Tenure-track	PhD	5
Rouffet, Matthieu	Associate	Tenure-track	PhD	4
Department percent of full-time faculty with doctorate (terminal) degree				**100%**
PLNU percent of full-time faculty with doctorate (terminal) degree (Fall 2014)				**82%**

1. Summarize the most recent scholarly and creative activities of the faculty in this department. If desired, include information about peer reviewed scholarship.

Click here to enter text.

2. Summarize the grants/awards received by the faculty.

Click here to enter text.

3. Describe how the scholarly and creative activities of the faculty impact the mission and quality of your department.

Click here to enter text.

4. Comment on the adequacy and availability of institutional support and outside funding for professional development and travel.

Click here to enter text.

Department Faculty Instructional Loads (FT, PT, and Adjuncts) (excludes release time and independent studies)				
	2012/13	2013/14	2014/15	3-yr Average
SCH per IFTE	**441**	**466**	**449**	**452**
PLNU SCH per IFTE	*TBD*	*TBD*	*TBD*	*TBD*
SFTE per IFTE	**13.78**	**14.57**	**14.03**	**14.14**
PLNU SFTE per IFTE	*TBD*	*TBD*	*TBD*	*TBD*
Independent Studies Units Generated	1	0	1	0.7

Individual Faculty Instructional Loads

	2012/13			2013/14			2014/15			3-Yr
Full-Time Faculty	**IU**	**SCH**	**SCH/ IU**	**IU**	**SCH**	**SCH/ IU**	**IU**	**SCH**	**SCH/ IU**	**SCH/IU**
Beauvais, Laurance				22.0	516	23.5	24.5	723	29.5	26.6
Choung, Sara	8.0	69	8.6	16.0	482	30.1	9.0	111	12.3	20.1
Lingner, David	24.5	451.4	18.4							
Jansma, Ariane				9.0	95	10.6	15.4	174.6	11.3	11.0
Koudelka, Kristopher (Bio)							1.1	15.4	13.4	
Maloney, Katherine	22.0	335	15.2	24.5	281	11.5	12.5	201	16.1	13.8
Martin, Kenneth	16.0	519	32.4	18.0	445	24.7	19.0	593	31.2	29.4
McConnell, Michael (Bio)	2.3	52	22.5	3.1	84	26.7				
Perry, Marc	25.0	499	20.0	23.5	483	20.6	26.0	518	19.9	20.1
Rouffet, Matthieu	26.0	699.6	26.9	23.5	767.6	32.7	26.5	726	27.4	28.9
• Links to complete reports that include part-time and adjunct faculty o 2014-15 o 2013-14 o 2012-13										
Total Full-Time Faculty	123.8	2,625	21.2	139.6	3,153.6	22.6	134.1	3,062	22.8	22.2
Total Part-Time Faculty	--	--	--	16.0	172	10.8	26.5	293.5	11.1	11.0
Total Adjunct Faculty	51.0	587	11.5	31.0	300.4	9.7	32.5	257	7.9	10.0

IU = Instructional Units: Generated faculty workload units excluding release time
IFTE = Instructional Full-Time Equivalent: Total Instructional workload units divided by 24
SCH = Student Credit Hours: Generated student credit hours associated with the faculty member
SFTE = Student Full-Time Equivalent: Total Student Credit hours divided by 32 for undergraduates/24 for graduate students

5. Compare the SCH load of each faculty member against the departmental average. What does this tell you about the distribution of faculty workload within the department? What changes, if any, might be appropriate?

Click here to enter text.

6. Does looking at the SCH and SFTE to IFTE ratios compared to PLNU averages provide any insights for your program? Explain.

Click here to enter text.

7. Looking at the longitudinal history of independent study units generated in this program, does this provide any insights that might be worth looking into? Explain.

Click here to enter text.

8. What role do part time and adjunct faculty play in the quality and success of the department.

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D) Progress on Recommendations from Previous Program Review

1. List the findings from the previous program review and discuss how each finding has been addressed.

Click here to enter text.

2. What additional significant changes have been made in department programs since the last program review? (e.g. introduction of new major or minor, significant reshaping of a program, etc.)

Click here to enter text.

E) General Education and Service Classes

Link(s) to the Department's GE data stored on the GE assessment wheel:

- CHEM_Evidence_2014-2015 Assessment Report_GELO

Reflection on longitudinal assessment of general education student learning data: (If you don't have longitudinal data, use the data that you do have)

1. What have you learned from your general education assessment data?

Click here to enter text.

2. What changes (curricular and others) have you made based on the assessment data?

Click here to enter text.

3. What additional changes are you recommending based on your review of the assessment data?

Click here to enter text.

4. How do the pedagogical features of your GE courses compare with the best practices for teaching GE in your discipline?

Click here to enter text.

5. What new pedagogical practices have been tried in GE and service classes by members of your department in the last few years? What has your department learned from these experiments?

Click here to enter text.

6. Are there changes that you could make that would make your part of the GE more efficient and effective (e.g. reducing the number of low-enrollment sections, resequencing of classes, reallocation of units, increase interdisciplinary efforts, etc…)?

Click here to enter text.

7. What service courses (non-GE courses that primarily support a program in another department) does your department teach? Are there changes that you could make that would make your service courses more efficient and effective?

Click here to enter text.

********** Future: find a way to include a GE committee review in this step **********

Program Level Analysis (Chemistry)

Bachelor of Science in Chemistry

Chem-F1) Trend and Financial Analysis

First-Time Freshman Admissions Funnel							
Chemistry	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Inquiries	**52**	**82**	**102**	**138**	**122**	**144**	**111**
Share of PLNU inquiries	*0.5%*	*0.5%*	*0.6%*	*0.8%*	*0.7%*	*0.7%*	*0.7%*
Completed Applications	**20**	**13**	**14**	**26**	**15**	**18**	**16**
Share of PLNU Applications	*1.0%*	*0.5%*	*0.5%*	*0.9%*	*0.5%*	*0.7%*	*0.6%*
Applicant Conversion Rate	**38.5%**	**15.9%**	**13.7%**	**18.8%**	**12.3%**	**12.5%**	**14.4%**
PLNU Applicant Conversion Rate	*18.6%*	*17.3%*	*17.0%*	*15.7%*	*16.1%*	*12.1%*	*15.0%*
Admits	**17**	**11**	**10**	**20**	**15**	**16**	**14**
Share of PLNU Admits	*0.9%*	*0.6%*	*0.5%*	*1.0%*	*0.7%*	*0.8%*	*0.7%*
Selection Rate	**85.0%**	**84.6%**	**71.4%**	**76.9%**	**100.0%**	**88.9%**	**87.5%**
PLNU Selection Rate	*87.4%*	*72.9%*	*68.9%*	*69.0%*	*70.5%*	*79.5%*	*79.8%*
New Transfer Admissions Funnel							
Chemistry	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Inquiries	**5**	**2**	**3**	**7**	**6**	**10**	**4**
Share of PLNU inquiries	*0.6%*	*0.3%*	*0.3%*	*0.4%*	*0.4%*	*0.5%*	*0.2%*
Completed Applications	**2**	**1**	**3**	**2**	**4**	**4**	**3**
Share of PLNU Applications	*0.5%*	*0.3%*	*0.6%*	*0.4%*	*0.8%*	*0.6%*	*0.7%*
Applicant Conversion Rate	**40.0%**	**sm**	**sm**	**28.6%**	**66.7%**	**40.0%**	**sm**
PLNU Applicant Conversion Rate	*50.2%*	*55.5%*	*56.2%*	*28.4%*	*33.2%*	*36.9%*	*21.7%*
Admits	**2**	**1**	**2**	**1**	**4**	**3**	**3**
Share of PLNU Admits	*0.6%*	*0.4%*	*0.7%*	*0.4%*	*1.2%*	*0.7%*	*0.8%*
Selection Rate	**sm**	**sm**	**sm**	**sm**	**sm**	**sm**	**sm**
PLNU Selection Rate	*79.3%*	*57.9%*	*54.8%*	*60.5%*	*65.4%*	*64.1%*	*79.2%*
sm = cell size too small							

1. What does this data tell you about the external demand for your program? What does this say about the future viability of your program?

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First-Time Freshman Admissions Yield							
Chemistry	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Admits	17	11	10	20	15	16	14
Matriculants	**8**	**2**	**3**	**4**	**7**	**2**	**5**
Share of PLNU Matriculants	*1.5%*	*0.3%*	*0.6%*	*0.7%*	*1.1%*	*0.3%*	*0.8%*
Yield Rate	**47.1%**	**18.2%**	**30.0%**	**20.0%**	**46.7%**	**12.5%**	**35.7%**
PLNU Yield Rate	*29.3%*	*30.5%*	*27.7%*	*30.3%*	*31.0%*	*27.9%*	*29.9%*
New Transfer Admissions Yield							
Chemistry	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Admits	2	1	2	1	4	3	3
Matriculants	**1**	**1**	**2**	**0**	**1**	**2**	**2**
Share of PLNU Matriculants	*0.6%*	*0.7%*	*1.3%*	*0.0%*	*0.7%*	*1.0%*	*1.2%*
Yield Rate	**sm**	**sm**	**sm**	**sm**	**sm**	**sm**	**sm**
PLNU Yield Rate	*51.1%*	*60.2%*	*54.7%*	*47.3%*	*44.6%*	*46.0%*	*48.0%*
sm = cell size too small							

2. How does your yield rate (percentage of students who enroll at PLNU after being admitted) compare to the PLNU average? If your rate is more than 8 percentage points above the PLNU average, what factors do you believe are contributing to this positive outcome? If your rate is more than 8 percentage points below the PLNU average for more than one year, what factors do you believe are contributing to this difference?

Click here to enter text.

Enrollment							
Majors	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Chemistry	**25**	**25**	**25**	**18**	**15**	**17**	**18**
Share of PLNU Undergraduates	*1.0%*	*1.0%*	*1.1%*	*0.7%*	*0.6%*	*0.7%*	*0.7%*
Minors	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
No minors in this program							
Major Migration of Completers*							
Top Importing Programs:	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**6-yr Total**
Pre-Nursing					1	1	2
Biology (BS)				1			1
Biology-Chemistry		1					1
Engineering Physics	1						1
Mathematics		1					1
Undeclared		1					1
Top Export Destinations:	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**6-yr Total**
Environmental Science				1	1		2
Exercise Science	1		1				2
* Based on degree completions of students who either started or finished within the program and who originally matriculated as first-time freshmen							

3. What does this data tell you about the internal demand for your program? Does this raise any questions about the viability and/or sustainability of your program as it is currently configured? Explain why or why not. Are there any actionable strategies that you can do that might make a difference if your trends are in the wrong direction?

Click here to enter text.

General Education and Service Credit Hour Production Department of Chemistry (duplicated in other program-level sections)				
	2011/12	**2012/13**	**2013/14**	**2014/15**
Total Dept UG student credit hours	3,247	3,071	3,479	3,445
Number of GE sections taught	7	7	9	9
% of SCH that are GE	47.7%	48.9%	54.3%	51.8%
Share of PLNU GE SCH	*4.5%*	*4.2%*	*5.2%*	*5.0%*
Number of service course sections taught	No service courses in this program			
% of SCH that are service				
Share of PLNU service SCH				

4. What does this data tell you about how your program is impacted by the needs of GE and other academic disciplines? Does this raise any questions about the viability and/or sustainability of your program if these non-programmatic trends continue? Explain why or why not.

Click here to enter text.

Delaware Study Data Department of Chemistry (duplicated in other program-level sections)												
	2010/11			**2011/12**			**2012/13**			**2013/14**		
Program Cost per SCH	**$268**			**$284**			**$279**			**$258**		
Benchmark Percentiles	$194	$240	$271	$177	$242	$293	$183	$233	$292	$191	$247	$306
Ranking	Medium			Medium			Medium			Medium		

5. We know that the following factors influence the Delaware cost per credit hour:
   - Large amount of GE and service classes taught by the program
   - The career stage of the program faculty (early career faculty are less expensive)
   - The number of elective courses in the program
   - The amount of unfunded load (faculty receiving more credit for a course than the number of units received by a student – e.g. 4 units of faculty load for teaching a 3 unit class)
   - The amount of release time associated with the program
   - Faculty members on sabbatical
   - The size of the department budget and the cost of specialized equipment

   Please reflect on your program's Delaware data in light of this information. In particular, what factors contribute to your program having a high (above 75th percentile), medium (50th-75th percentile), or low (below 50th percentile) ranking?

Click here to enter text.

6. Recognizing that not all factors above are under departmental control, what kinds of adjustments might be made to reduce the cost per student credit hour?

Click here to enter text.

***** Future *****
Financial Data: (possibly delayed to the future)
Extra Revenue Generated by Program (lab fees, studio fees, etc.)
Extra Revenue per student credit hour
Extra Costs for the program (equipment not purchased outside of department budget, etc.)
Extra costs per student credit hour
Modified Delaware values: Delaware – extra revenue per SCH + extra costs per SCH

7. Do these modified Delaware values tell you anything new about the future viability and/or sustainability of your program as it is currently configured? Please explain.

Click here to enter text.

Chem-F2) Findings from Assessment

Links to the department's assessment wheel
• Student Learning Outcomes • Curriculum Maps • Assessment Plan • Evidence of Student Learning • Use of the Evidence of Student Learning

Reflection on longitudinal assessment of student learning data:

1. What have you learned from this program's student learning assessment data?

Click here to enter text.

2. What changes (curricular and others) have you made based on the student learning assessment data?

Click here to enter text.

3. What additional changes are you recommending based on your review of the student learning assessment data?

Click here to enter text.

DQP Outcomes with Scores
***** TBD *****
DQP Definitions
Intellectual Skills Intellectual Skills define proficiencies that transcend the boundaries of particular fields of study: analytic inquiry, use of information resources, engaging diverse perspectives, ethical reasoning, quantitative fluency, and communicative fluency.
Specialized Knowledge What students in any specialization should demonstrate with respect to the specialization, often called the major field. All fields call more or less explicitly for proficiencies involving terminology, theory, methods, tools, literature, complex problems or applications and cognizance of limits.
Applied and Collaborative Learning Applied learning suggests what graduates can do with what they know. This area focuses on the interaction of academic and non-academic settings and the corresponding integration of theory and practice, along with the ideal of learning with others in the course of application projects.
Broad and Integrative Knowledge Students integrate their broad learning by exploring, connecting and applying concepts and methods across multiple fields of study to complex questions—in the student's areas of specialization, in work or other field-based settings and in the wider society.
Civic and Global Learning Civic and Global Learning proficiencies rely principally on the types of cognitive activities (describing, examining, elucidating, justifying) that are within the direct purview of the university, but they also include evidence of civic activities and learning beyond collegiate settings. These proficiencies reflect the need for analytic inquiry and engagement with diverse perspectives.

Reflection on DQP related data:

Understanding that the DQP framework provides one particular lens on the meaning, quality and integrity of your curriculum, reflect on the DQP data and framework provided for your program.

4. What have you learned from this program's DQP comparison?

   Click here to enter text.

5. What changes (curricular and others) have you made based on the DQP comparison?

   Click here to enter text.

6. What additional changes are you recommending based on your review of the DQP comparison?

   Click here to enter text.

Links to stakeholder assessment data (if present this will be department housed data)
• Surveys • Focus Groups • Market Analysis • Etc…

Reflection on stakeholder feedback data:

7. What have you learned from this program's stakeholder assessment data? If you do not have stakeholder data, please provide a plan for how you will regularly collect this in the future.

Click here to enter text.

8. What changes (curricular and others) have you made based on the stakeholder assessment data?

Click here to enter text.

9. What additional changes are you recommending based on your review of the stakeholder assessment data?

Click here to enter text.

Chem-F3) Curriculum Analysis

In looking at your curriculum, the program review process is asking you to analyze it through three different lenses. The first lens is looking at your content and structure from the perspective of guild standards or standards gleaned from looking at programs at comparator institutions. The second lens that of employability and is asking you to look at your curriculum and educational experiences from the perspective of skills and professional qualities that you are developing in your students that will serve them will in their future work and vocational callings. The third lens is that of pedagogy and is asking you to look at the delivery of your curriculum to ensure a high quality student learning experience.

Menu and Elective Unit Analysis Chemistry	
Number of menu and elective units required by the program	0
Number of menu and elective units offered by the program	0
Menu/Elective Ratio	0.00
Longitudinal Class Section Enrollment Data	
• Link to Class Section Enrollment Report	

Comparison of current curriculum to guild standards and/or comparator institutions.

If your guild standards are associated with a specialized accreditation that your program has, these should be the basis of your analysis. If your guild standards are associated with specialized accreditation that we do not have, then you should primarily use comparator institutions as the basis for your analysis.

If your guild has standards that are not associated with specialized accreditation, then you may choose to use those standards and/or comparator institutions.

After consultation with your Dean, provide the set of guild standards or a list of the comparator institutions that you are using in your analysis.

If using guild standards:

1. Please provide a list of the guild standards that you are using to evaluate your curriculum.

   Click here to enter text.

2. Indicate if and how your curriculum satisfies the standards (this can be done in a table or narrative form). If applicable, indicate areas where your curriculum falls short of the standards.

   Click here to enter text.

Based on the analysis of standard and reflection on the menu and elective ratio above, consider and discuss the following questions:

3. Are there courses in your program that should be modified? Why or why not.

   Click here to enter text.

4. Are there courses that should be eliminated? Why or why not.

   Click here to enter text.

5. Are there courses that could be merged? Why or why not.

   Click here to enter text.

6. Are there courses that should be added? Why or why not. Note that in general, in order to create the space to add a new course, another course will need to be eliminated or taught less frequently.

   Click here to enter text.

7. What did you learn about your overall curricular structure in terms of its complexity, breadth and depth in light of the guild standards and our institutional size and scope? Are there any structural changes that need to be made in light of your analysis (e.g. sequencing of courses, % and or grouping of electives, overall units required, use of concentrations, etc…)?

   Click here to enter text.

If using comparator institutions:

1. Begin by working with your Dean to identify a list of 5-8 comparator schools to use. In selecting schools, consideration should be given to type of institution, mission of the institution and the number of students majoring in the program.

Institution 1
Institution 2
Institution 3
Institution 4
Institution 5
Institution 6

Gather the curricular requirements for the program in question at each of the comparator institutions.

2. Use this collection of curricular requirements to develop a list of curricular features that are essential for programs of this type. In addition, make note of any innovative or creative curricular feature that may be useful in enhancing the quality of you program.

Click here to enter text.

Review this list with your Dean before using it to analyze your own curriculum.

3. Indicate how your curriculum compares to the list of curricular features from your analysis (this can be done in a table or narrative form).

Click here to enter text.

Based on the analysis of comparator programs and reflection on the menu and elective ratio above:

4. Are there courses in your program that should be modified? Why or why not.

Click here to enter text.

5. Are there courses that should be eliminated? Why or why not.

Click here to enter text.

6. Are there courses that could be merged? Why or why not.

Click here to enter text.

7. Are there courses that should be added? Why or why not. Note that in general, in order to create the space to add a new course, another course will need to be eliminated or taught less frequently.

Click here to enter text.

8. What did you learn about your overall curricular structure in terms of its complexity, breadth and depth in light of the comparator schools and our institutional size and scope? Are there any structural changes that need to be made in light of your analysis (e.g. sequencing of courses, % and or grouping of electives, overall units required, use of concentrations, etc…)?

Click here to enter text.

Burning Glass Skills Data Chemistry		
1. Communication Skills	5. Problem Solving	9. Planning
2. Writing	6. Quality Assurance and Control	10. Project Management
3. Research	7. Detail-Oriented	11. Management
4. Organizational Skills	8. Leadership	12. Multi-Tasking

Analysis of the curriculum against preparation for employment

9. The Burning Glass data provides a list of skills for students entering common professions that are often linked to your major. Indicate in the table if and where each skill is being taught in your program. Based on reflecting on this data, are there changes you would recommend making to your curriculum?

Click here to enter text.

10. Some programs may serve to prepare students with professional qualities and skills that can serve them well in a great variety of professions that may not show up in data sets like Burning Glass. If this is indicative of your program, please identify the unique skills and/or professional qualities that your program develops in your students and indicate where in the curriculum this is being taught or developed.

Click here to enter text.

Analysis of the teaching of your curriculum

11. How do the pedagogical features of your program compare with the best practices for teaching in your discipline?

Click here to enter text.

12. What new pedagogical practices have been tried by members of your department in the last few years? What has your department learned from these experiments?

Click here to enter text.

13. Are there new developments in pedagogy in your discipline? What would be required to implement these changes in pedagogy in your department?

Click here to enter text.

Chem-F4) Potential Impact of National Trends

Top Burning Glass Occupations for the Program Chemistry		
Occupation	**Hiring Demand**	**Salary Range**
Actuary	Medium	$92K - $98K
Chemist	Medium	$64K - $68K
Clinical Research Coordinator	Medium	$46K - $50K
Data/Data Mining Analyst	Medium	$70K - $73K
Medical Laboratory Technologist	Medium	$58K - $60K
Quality Control Analyst	Medium	$50K - $54K
Chemical Technician	Low	$32K - $56K
Environmental Compliance Specialist	Low	$42K - $65K
Physical Science Technician	Low	$39K - $46K
Physical Scientist	Low	$91K - $101K
Quantitative Analyst	Low	$109K - $123K
Research Manager	Low	$59K - $69K
Research Scientist	Low	$60K - $87K
Researcher/Research Associate	Low	$41K - $45K

Note that some programs do not have as many professions listed in the Burning Glass data as others do. In these cases we will want to get a list of professions from the chair/school dean to supplement the Burning Glass data.

1. Which professions in the Burning Glass data were you already aware of and for which are you already intentionally preparing students and does the hiring demand in these professions signal anything about the future that you need to be aware of regarding the design and structure of your program ?

   Click here to enter text.

2. Are there additional professions in the Burning Glass list or from your knowledge of occupations your alumni have entered, for which you should be preparing students?

   Click here to enter text.

3. What changes in your program would be necessary in order to prepare students for the skills and professional qualities needed to succeed in these additional professions?

   Click here to enter text.

4. Are there national trends in higher education or industry that are particularly important to your discipline? If yes, how is your program reacting to those trends?

   Click here to enter text.

Chem-F5) Quality Markers

Retention/Graduation Rates (First-Time Freshmen)							
	Matriculation Term						
Chemistry	**Fall 2008**	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**
First-Year Retention	**100.0%**	**100.0%**	**sm**	**sm**	**sm**	**80.0%**	**sm**
PLNU First-Year Retention	*84.2%*	*84.1%*	*81.1%*	*82.9%*	*89.3%*	*84.5%*	*84.5%*
	Matriculation Term						
Chemistry	**Fall 2005**	**Fall 2006**	**Fall 2007**	**Fall 2008**	**Fall 2009**	**Fall 2010**	**Fall 2011**
Four-Year Graduation Rate	**sm**	**sm**	**sm**	**100.0%**	**87.5%**	**sm**	**sm**
PLNU Four-Year Graduation Rate	*62.0%*	*65.2%*	*61.7%*	*59.1%*	*63.4%*	*62.2%*	*63.2%*
	Matriculation Term						
Chemistry	**Fall 2003**	**Fall 2004**	**Fall 2005**	**Fall 2006**	**Fall 2007**	**Fall 2008**	**Fall 2009**
Six-Year Graduation Rate	**sm**	**sm**	**sm**	**sm**	**sm**	**100.0%**	**100.0%**
PLNU Six-Year Graduation Rate	*72.4%*	*73.2%*	*73.0%*	*74.9%*	*72.2%*	*73.6%*	*75.0%*
Degree Completions							
Majors	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
Chemistry	**0**	**4**	**5**	**7**	**8**	**2**	**4**
Share of PLNU Bachelor's Degrees	*0.0%*	*0.8%*	*0.9%*	*1.3%*	*1.4%*	*0.3%*	*0.7%*
Minors	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
No minors in this program							
FTF Time to Degree *(in semesters)*	**sm**	**sm**	**sm**	**8.0**	**8.0**	**sm**	**sm**
PLNU FTF Time to Degree	*8.2*	*8.2*	*8.3*	*8.2*	*8.3*	*8.3*	*8.3*
Study Abroad Participants		3	1				
sm = cell size too small							

1. Based on comparing the quality marker data for your program with the PLNU averages:
   a. What does this tell you about your program?

Click here to enter text.

   b. If your values are below the PLNU averages, what changes could you make to address any areas of concern?

Click here to enter text.

   c. If your values are above the PLNU averages, what do you believe contributes to this success?

Click here to enter text.

2. Describe regular opportunities for students to apply their knowledge (internships, practicums, research projects, senior projects, etc.). Estimate what percentage of your students in this program participates in these kinds of opportunities.

Click here to enter text.

3. Describe any public scholarship of your undergraduate and graduate students in this program (conference presentations, publications, performances, etc.). What percentage of your undergraduate students are involved in these kinds of activities?

Click here to enter text.

4. How many of your students participate in study abroad opportunities in general? Describe any study abroad opportunities specifically organized by your program. What percentage of your majors are involved annually (annualize the number)? How many students outside of your department participate in this departmentally organized program (Annualize the number)?

Click here to enter text.

5. What are any other distinctives of your program? Describe how they contribute to the program's success.

Click here to enter text.

6. Does your program have an advisory board? If so, describe how it has influenced the quality of your program? If not, could it benefit from creating one?

Click here to enter text.

7. Describe any current joint interdisciplinary degrees (majors or minors) offered by your department. Are there additional areas where interdisciplinary programs should be considered?

Click here to enter text.

8. Describe your success with students acquiring jobs related to their discipline.

Click here to enter text.

9. Describe your undergraduate and graduate student success rate for passing licensure or credentialing exams (if they exist in your discipline).

Click here to enter text.

10. Describe your success with undergraduate student acceptance into post-baccalaureate education.

Click here to enter text.

11. What kind of support does your program provide for students encountering academic difficulties? How do you intentionally facilitate these students' connection with institutional support services?

Click here to enter text.

Chem-F6) Infrastructure and Staffing

Full-Time Faculty Program Contribution Department of Chemistry (duplicated in other program-level sections)			
	2012-13	**2013-14**	**2014-15**
Percentage of UG classes taught by FT faculty	68.8%	71.6%	65.5%
PLNU percentage of UG classes taught by FT Faculty	*TBD*	*TBD*	*TBD*
Includes: regular lectures, labs, seminars Excludes: independent studies, private lessons, internships			

1. Are your program's current technological resources and support adequate? If not, what is needed? Do you foresee any additional needs in this area?

   Click here to enter text.

2. Are your program's current facilities adequate? If not, what is needed? Do you foresee any additional needs in this area?

   Click here to enter text.

3. Is your program's current staffing (administrative, clerical, technical and instructional) adequate? If not, what is needed? Do you foresee any additional needs in this area?

   Click here to enter text.

Chem-F7) Challenges and Opportunities

1. Are there any particular challenges regarding this program that have not been addressed through the analysis and reflection on data or questions in sections F1-F6 that you would like to include here?

   Click here to enter text.

2. Are there any particular opportunities regarding this program that have not been addressed through the analysis and reflection on data or questions in sections F1-F6 that you would like to include here?

   Click here to enter text.

Chem-F8) Recommendations for Program Improvement

List the recommendations you are making regarding this program analysis with a brief rationale for each recommendation.

Click here to enter text.

Program Level Analysis (Bio-Chem)

Bachelor of Science in Biology-Chemistry

BCHM-F1) Trend and Financial Analysis

First-Time Freshman Admissions Funnel							
Biology-Chemistry	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Inquiries	**370**	**651**	**771**	**987**	**848**	**1,097**	**674**
Share of PLNU inquiries	*3.3%*	*4.3%*	*4.7%*	*5.4%*	*4.6%*	*5.0%*	*4.0%*
Completed Applications	**65**	**85**	**106**	**112**	**96**	**85**	**75**
Share of PLNU Applications	*3.1%*	*3.2%*	*3.8%*	*3.9%*	*3.2%*	*3.2%*	*3.0%*
Applicant Conversion Rate	**17.6%**	**13.1%**	**13.7%**	**11.3%**	**11.3%**	**7.7%**	**11.1%**
PLNU Applicant Conversion Rate	*18.6%*	*17.3%*	*17.0%*	*15.7%*	*16.1%*	*12.1%*	*15.0%*
Admits	**61**	**74**	**89**	**80**	**75**	**77**	**69**
Share of PLNU Admits	*3.3%*	*3.8%*	*4.6%*	*4.0%*	*3.6%*	*3.6%*	*3.4%*
Selection Rate	**93.8%**	**87.1%**	**84.0%**	**71.4%**	**78.1%**	**90.6%**	**92.0%**
PLNU Selection Rate	*87.4%*	*72.9%*	*68.9%*	*69.0%*	*70.5%*	*79.5%*	*79.8%*
New Transfer Admissions Funnel							
Biology-Chemistry	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Inquiries	**12**	**12**	**20**	**16**	**20**	**41**	**29**
Share of PLNU inquiries	*1.5%*	*1.7%*	*2.2%*	*1.0%*	*1.3%*	*2.3%*	*1.4%*
Completed Applications	**7**	**8**	**13**	**5**	**14**	**15**	**7**
Share of PLNU Applications	*1.7%*	*2.0%*	*2.6%*	*1.1%*	*2.8%*	*2.2%*	*1.5%*
Applicant Conversion Rate	**58.3%**	**66.7%**	**65.0%**	**31.3%**	**70.0%**	**36.6%**	**24.1%**
PLNU Applicant Conversion Rate	*50.2%*	*55.5%*	*56.2%*	*28.4%*	*33.2%*	*36.9%*	*21.7%*
Admits	**7**	**5**	**11**	**3**	**9**	**14**	**4**
Share of PLNU Admits	*2.2%*	*2.2%*	*4.0%*	*1.1%*	*2.8%*	*3.3%*	*1.1%*
Selection Rate	**100.0%**	**62.5%**	**84.6%**	**60.0%**	**64.3%**	**93.3%**	**57.1%**
PLNU Selection Rate	*79.3%*	*57.9%*	*54.8%*	*60.5%*	*65.4%*	*64.1%*	*79.2%*

1. What does this data tell you about the external demand for your program? What does this say about the future viability of your program?

Click here to enter text.

First-Time Freshman Admissions Yield							
Biology-Chemistry	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Admits	61	74	89	80	75	77	69
Matriculants	**20**	**29**	**38**	**23**	**20**	**25**	**22**
Share of PLNU Matriculants	*3.7%*	*4.9%*	*7.1%*	*3.8%*	*3.1%*	*4.3%*	*3.7%*
Yield Rate	**32.8%**	**39.2%**	**42.7%**	**28.8%**	**26.7%**	**32.5%**	**31.9%**
PLNU Yield Rate	*29.3%*	*30.5%*	*27.7%*	*30.3%*	*31.0%*	*27.9%*	*29.9%*
New Transfer Admissions Yield							
Biology-Chemistry	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Admits	7	5	11	3	9	14	4
Matriculants	**4**	**3**	**7**	**0**	**3**	**7**	**3**
Share of PLNU Matriculants	*2.4%*	*2.2%*	*4.7%*	*0.0%*	*2.1%*	*3.5%*	*1.7%*
Yield Rate	**57.1%**	**60.0%**	**63.6%**	**sm**	**33.3%**	**50.0%**	**sm**
PLNU Yield Rate	*51.1%*	*60.2%*	*54.7%*	*47.3%*	*44.6%*	*46.0%*	*48.0%*
sm = cell sizes too small							

2. How does your yield rate (percentage of students who enroll at PLNU after being admitted) compare to the PLNU average? If your rate is more than 8 percentage points above the PLNU average, what factors do you believe are contributing to this positive outcome? If your rate is more than 8 percentage points below the PLNU average for more than one year, what factors do you believe are contributing to this difference?

Click here to enter text.

Enrollment							
Majors	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Biology-Chemistry	**59**	**69**	**87**	**85**	**89**	**89**	**87**
Share of PLNU Undergraduates	*2.5%*	*2.9%*	*3.7%*	*3.5%*	*3.5%*	*3.5%*	*3.3%*
Minors	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
No minors for this program							
Major Migration of Completers*							
Top Importing Programs:	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**6-yr Total**
Undeclared			1	1	1	2	5
Biology (BS)			1		1	2	4
Business Administration	1		1		1		3
Biology (BA)			1	1			2
Pre-Nursing	1					1	2
Top Export Destinations:	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**6-yr Total**
Biology (BS)	5	7	3	6	10	8	39
Exercise Science		2	2	2		2	8
Applied Health Science					2	3	5
Business Administration	2				3		5
Nursing				2	1	1	4
* Based on degree completions of students who either started or finished within the program and who originally matriculated as first-time freshmen							

3. What does this data tell you about the internal demand for your program? Does this raise any questions about the viability and/or sustainability of your program as it is currently configured? Explain why or why not. Are there any actionable strategies that you can do that might make a difference if your trends are in the wrong direction?

Click here to enter text.

General Education and Service Credit Hour Production Department of Chemistry (duplicated in other program-level sections)				
	2011/12	**2012/13**	**2013/14**	**2014/15**
Total Dept UG student credit hours	3,247	3,071	3,479	3,445
Number of GE sections taught	7	7	9	9
% of SCH that are GE	47.7%	48.9%	54.3%	51.8%
Share of PLNU GE SCH	*4.5%*	*4.2%*	*5.2%*	*5.0%*
Number of service course sections taught	No service courses in this program			
% of SCH that are service				
Share of PLNU service SCH				

4. What does this data tell you about how your program is impacted by the needs of GE and other academic disciplines? Does this raise any questions about the viability and/or sustainability of your program if these non-programmatic trends continue? Explain why or why not.

Click here to enter text.

Delaware Study Data Department of Chemistry (duplicated in other program-level sections)												
	2010/11			**2011/12**			**2012/13**			**2013/14**		
Program Cost per SCH	**$268**			**$284**			**$279**			**$258**		
Benchmark Percentiles	$194	$240	$271	$177	$242	$293	$183	$233	$292	$191	$247	$306
Ranking	Medium			Medium			Medium			Medium		

5. We know that the following factors influence the Delaware cost per credit hour:
   - Large amount of GE and service classes taught by the program
   - The career stage of the program faculty (early career faculty are less expensive)
   - The number of elective courses in the program
   - The amount of unfunded load (faculty receiving more credit for a course than the number of units received by a student – e.g. 4 units of faculty load for teaching a 3 unit class)
   - The amount of release time associated with the program
   - Faculty members on sabbatical
   - The size of the department budget and the cost of specialized equipment

   Please reflect on your program's Delaware data in light of this information. In particular, what factors contribute to your program having a high (above 75th percentile), medium (50th-75th percentile), or low (below 50th percentile) ranking?

Click here to enter text.

6. Recognizing that not all factors above are under departmental control, what kinds of adjustments might be made to reduce the cost per student credit hour?

Click here to enter text.

***** Future *****
Financial Data: (possibly delayed to the future)
Extra Revenue Generated by Program (lab fees, studio fees, etc.)
Extra Revenue per student credit hour
Extra Costs for the program (equipment not purchased outside of department budget, etc.)
Extra costs per student credit hour
Modified Delaware values: Delaware – extra revenue per SCH + extra costs per SCH

7. Do these modified Delaware values tell you anything new about the future viability and/or sustainability of your program as it is currently configured? Please explain.

Click here to enter text.

BCHM-F2) Findings from Assessment

Links to the department's assessment wheel
• Student Learning Outcomes • Curriculum Maps • Assessment Plan • Evidence of Student Learning • Use of the Evidence of Student Learning

Reflection on longitudinal assessment of student learning data:

1. What have you learned from this program's student learning assessment data?

Click here to enter text.

2. What changes (curricular and others) have you made based on the student learning assessment data?

Click here to enter text.

3. What additional changes are you recommending based on your review of the student learning assessment data?

Click here to enter text.

DQP Outcomes with Scores
***** TBD *****
DQP Definitions
Intellectual Skills Intellectual Skills define proficiencies that transcend the boundaries of particular fields of study: analytic inquiry, use of information resources, engaging diverse perspectives, ethical reasoning, quantitative fluency, and communicative fluency.
Specialized Knowledge What students in any specialization should demonstrate with respect to the specialization, often called the major field. All fields call more or less explicitly for proficiencies involving terminology, theory, methods, tools, literature, complex problems or applications and cognizance of limits.
Applied and Collaborative Learning Applied learning suggests what graduates can do with what they know. This area focuses on the interaction of academic and non-academic settings and the corresponding integration of theory and practice, along with the ideal of learning with others in the course of application projects.
Broad and Integrative Knowledge Students integrate their broad learning by exploring, connecting and applying concepts and methods across multiple fields of study to complex questions—in the student's areas of specialization, in work or other field-based settings and in the wider society.
Civic and Global Learning Civic and Global Learning proficiencies rely principally on the types of cognitive activities (describing, examining, elucidating, justifying) that are within the direct purview of the university, but they also include evidence of civic activities and learning beyond collegiate settings. These proficiencies reflect the need for analytic inquiry and engagement with diverse perspectives.

Reflection on DQP related data:

Understanding that the DQP framework provides one particular lens on the meaning, quality and integrity of your curriculum, reflect on the DQP data and framework provided for your program.

4. What have you learned from this program's DQP comparison?

   Click here to enter text.

5. What changes (curricular and others) have you made based on the DQP comparison?

   Click here to enter text.

6. What additional changes are you recommending based on your review of the DQP comparison?

   Click here to enter text.

Links to stakeholder assessment data (if present this will be department housed data)
• Surveys • Focus Groups • Market Analysis • Etc…

Reflection on stakeholder feedback data:

7. What have you learned from this program's stakeholder assessment data? If you do not have stakeholder data, please provide a plan for how you will regularly collect this in the future.

Click here to enter text.

8. What changes (curricular and others) have you made based on the stakeholder assessment data?

Click here to enter text.

9. What additional changes are you recommending based on your review of the stakeholder assessment data?

Click here to enter text.

BCHM-F3) Curriculum Analysis

In looking at your curriculum, the program review process is asking you to analyze it through three different lenses. The first lens is looking at your content and structure from the perspective of guild standards or standards gleaned from looking at programs at comparator institutions. The second lens that of employability and is asking you to look at your curriculum and educational experiences from the perspective of skills and professional qualities that you are developing in your students that will serve them will in their future work and vocational callings. The third lens is that of pedagogy and is asking you to look at the delivery of your curriculum to ensure a high quality student learning experience.

Menu and Elective Unit Analysis Biology-Chemistry	
Number of menu and elective units required by the program	2
Number of menu and elective units offered by the program	0
Menu/Elective Ratio	0.00
Longitudinal Class Section Enrollment Data	
• Link to Class Section Enrollment Report	

Comparison of current curriculum to guild standards and/or comparator institutions.

If your guild standards are associated with a specialized accreditation that your program has, these should be the basis of your analysis. If your guild standards are associated with specialized accreditation that we do not have, then you should primarily use comparator institutions as the basis for your analysis.

If your guild has standards that are not associated with specialized accreditation, then you may choose to use those standards and/or comparator institutions.

After consultation with your Dean, provide the set of guild standards or a list of the comparator institutions that you are using in your analysis.

If using guild standards:

1. Please provide a list of the guild standards that you are using to evaluate your curriculum.

   Click here to enter text.

2. Indicate if and how your curriculum satisfies the standards (this can be done in a table or narrative form). If applicable, indicate areas where your curriculum falls short of the standards.

   Click here to enter text.

Based on the analysis of standard and reflection on the menu and elective ratio above, consider and discuss the following questions:

3. Are there courses in your program that should be modified? Why or why not.

   Click here to enter text.

4. Are there courses that should be eliminated? Why or why not.

   Click here to enter text.

5. Are there courses that could be merged? Why or why not.

   Click here to enter text.

6. Are there courses that should be added? Why or why not. Note that in general, in order to create the space to add a new course, another course will need to be eliminated or taught less frequently.

   Click here to enter text.

7. What did you learn about your overall curricular structure in terms of its complexity, breadth and depth in light of the guild standards and our institutional size and scope? Are there any structural changes that need to be made in light of your analysis (e.g. sequencing of courses, % and or grouping of electives, overall units required, use of concentrations, etc…)?

   Click here to enter text.

If using comparator institutions:

1. Begin by working with your Dean to identify a list of 5-8 comparator schools to use. In selecting schools, consideration should be given to type of institution, mission of the institution and the number of students majoring in the program.

Institution 1
Institution 2
Institution 3
Institution 4
Institution 5
Institution 6

Gather the curricular requirements for the program in question at each of the comparator institutions.

2. Use this collection of curricular requirements to develop a list of curricular features that are essential for programs of this type. In addition, make note of any innovative or creative curricular feature that may be useful in enhancing the quality of you program.

Click here to enter text.

Review this list with your Dean before using it to analyze your own curriculum.

3. Indicate how your curriculum compares to the list of curricular features from your analysis (this can be done in a table or narrative form).

Click here to enter text.

Based on the analysis of comparator programs and reflection on the menu and elective ratio above:

4. Are there courses in your program that should be modified? Why or why not.

Click here to enter text.

5. Are there courses that should be eliminated? Why or why not.

Click here to enter text.

6. Are there courses that could be merged? Why or why not.

Click here to enter text.

7. Are there courses that should be added? Why or why not. Note that in general, in order to create the space to add a new course, another course will need to be eliminated or taught less frequently.

Click here to enter text.

8. What did you learn about your overall curricular structure in terms of its complexity, breadth and depth in light of the comparator schools and our institutional size and scope? Are there any structural changes that need to be made in light of your analysis (e.g. sequencing of courses, % and or grouping of electives, overall units required, use of concentrations, etc…)?

Click here to enter text.

Burning Glass Skills Data Biology-Chemistry		
1. Communication Skills	5. Quality Assurance and Control	9. Planning
2. Writing	6. Problem Solving	10. Management
3. Research	7. Leadership	11. Project Management
4. Organizational Skills	8. Detail-Oriented	12. Supervisory Skills

Analysis of the curriculum against preparation for employment

9. The Burning Glass data provides a list of skills for students entering common professions that are often linked to your major. Indicate in the table if and where each skill is being taught in your program. Based on reflecting on this data, are there changes you would recommend making to your curriculum?

Click here to enter text.

10. Some programs may serve to prepare students with professional qualities and skills that can serve them well in a great variety of professions that may not show up in data sets like Burning Glass. If this is indicative of your program, please identify the unique skills and/or professional qualities that your program develops in your students and indicate where in the curriculum this is being taught or developed.

Click here to enter text.

Analysis of the teaching of your curriculum

11. How do the pedagogical features of your program compare with the best practices for teaching in your discipline?

Click here to enter text.

12. What new pedagogical practices have been tried by members of your department in the last few years? What has your department learned from these experiments?

Click here to enter text.

13. Are there new developments in pedagogy in your discipline? What would be required to implement these changes in pedagogy in your department?

Click here to enter text.

BCHM-F4) Potential Impact of National Trends

Top Burning Glass Occupations for the Program Biology-Chemistry		
Occupation	**Hiring Demand**	**Salary Range**
Chemist	Medium	$64K - $68K
Clinical Research Coordinator	Medium	$46K - $50K
Medical Laboratory Technologist	Medium	$58K - $60K
Quality Control Analyst	Medium	$50K - $54K
Biochemist	Low	$55K - $112K
Chemical Technician	Low	$32K - $56K
Environmental Compliance Specialist	Low	$42K - $65K
Microbiologist	Low	$48K - $92K
Physical Scientist	Low	$91K - $101K
Research Scientist	Low	$60K - $87K

Note that some programs do not have as many professions listed in the Burning Glass data as others do. In these cases we will want to get a list of professions from the chair/school dean to supplement the Burning Glass data.

1. Which professions in the Burning Glass data were you already aware of and for which are you already intentionally preparing students and does the hiring demand in these professions signal anything about the future that you need to be aware of regarding the design and structure of your program ?

   Click here to enter text.

2. Are there additional professions in the Burning Glass list or from your knowledge of occupations your alumni have entered, for which you should be preparing students?

   Click here to enter text.

3. What changes in your program would be necessary in order to prepare students for the skills and professional qualities needed to succeed in these additional professions?

   Click here to enter text.

4. Are there national trends in higher education or industry that are particularly important to your discipline? If yes, how is your program reacting to those trends?

   Click here to enter text.

BCHM-F5) Quality Markers

Retention/Graduation Rates (First-Time Freshmen)							
	Matriculation Term						
Biology-Chemistry	**Fall 2008**	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**
First-Year Retention	**92.3%**	**88.9%**	**90.0%**	**96.9%**	**88.5%**	**90.5%**	**91.3%**
PLNU First-Year Retention	*84.2%*	*84.1%*	*81.1%*	*82.9%*	*89.3%*	*84.5%*	*84.5%*
	Matriculation Term						
	Fall 2005	**Fall 2006**	**Fall 2007**	**Fall 2008**	**Fall 2009**	**Fall 2010**	**Fall 2011**
Four-Year Graduation Rate	**81.0%**	**61.9%**	**40.0%**	**61.5%**	**72.7%**	**71.4%**	**56.5%**
PLNU Four-Year Graduation Rate	*62.0%*	*65.2%*	*61.7%*	*59.1%*	*63.4%*	*62.2%*	*63.2%*
	Matriculation Term						
	Fall 2003	**Fall 2004**	**Fall 2005**	**Fall 2006**	**Fall 2007**	**Fall 2008**	**Fall 2009**
Six-Year Graduation Rate	**47.8%**	**100.0%**	**81.0%**	**61.9%**	**60.0%**	**69.2%**	**81.8%**
PLNU Six-Year Graduation Rate	*72.4%*	*73.2%*	*73.0%*	*74.9%*	*72.2%*	*73.6%*	*75.0%*
Degree Completions							
Majors	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
Biology-Chemistry	**18**	**14**	**4**	**10**	**11**	**15**	**16**
Share of PLNU Bachelor's Degrees	*3.0%*	*2.7%*	*0.7%*	*1.8%*	*1.9%*	*2.5%*	*2.9%*
Minors	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
No minors in this program							
FTF Time to Degree *(in semesters)*	**8.0**	**8.0**	**sm**	**8.4**	**8.7**	**8.4**	**8.4**
PLNU FTF Time to Degree	*8.2*	*8.2*	*8.3*	*8.2*	*8.3*	*8.3*	*8.3*
Study Abroad Participants	3	3	1	2	1	1	1
sm = cell size too small							

1. Based on comparing the quality marker data for your program with the PLNU averages:
   a. What does this tell you about your program?

Click here to enter text.

   b. If your values are below the PLNU averages, what changes could you make to address any areas of concern?

Click here to enter text.

   c. If your values are above the PLNU averages, what do you believe contributes to this success?

Click here to enter text.

2. Describe regular opportunities for students to apply their knowledge (internships, practicums, research projects, senior projects, etc.). Estimate what percentage of your students in this program participates in these kinds of opportunities.

Click here to enter text.

3. Describe any public scholarship of your undergraduate and graduate students in this program (conference presentations, publications, performances, etc.). What percentage of your undergraduate students are involved in these kinds of activities?

Click here to enter text.

4. How many of your students participate in study abroad opportunities in general? Describe any study abroad opportunities specifically organized by your program. What percentage of your majors are involved annually (annualize the number)? How many students outside of your department participate in this departmentally organized program (Annualize the number)?

Click here to enter text.

5. What are any other distinctives of your program? Describe how they contribute to the program's success.

Click here to enter text.

6. Does your program have an advisory board? If so, describe how it has influenced the quality of your program? If not, could it benefit from creating one?

Click here to enter text.

7. Describe any current joint interdisciplinary degrees (majors or minors) offered by your department. Are there additional areas where interdisciplinary programs should be considered?

Click here to enter text.

8. Describe your success with students acquiring jobs related to their discipline.

Click here to enter text.

9. Describe your undergraduate and graduate student success rate for passing licensure or credentialing exams (if they exist in your discipline).

Click here to enter text.

10. Describe your success with undergraduate student acceptance into post-baccalaureate education.

Click here to enter text.

11. What kind of support does your program provide for students encountering academic difficulties? How do you intentionally facilitate these students' connection with institutional support services?

Click here to enter text.

BCHM-F6) Infrastructure and Staffing

Full-Time Faculty Program Contribution Department of Chemistry (duplicated in other program-level sections)			
	2012-13	**2013-14**	**2014-15**
Percentage of UG classes taught by FT faculty	68.8%	71.6%	65.5%
PLNU percentage of UG classes taught by FT Faculty	*TBD*	*TBD*	*TBD*
Includes: regular lectures, labs, seminars Excludes: independent studies, private lessons, internships			

1. Are your program's current technological resources and support adequate? If not, what is needed? Do you foresee any additional needs in this area?

   Click here to enter text.

2. Are your program's current facilities adequate? If not, what is needed? Do you foresee any additional needs in this area?

   Click here to enter text.

3. Is your program's current staffing (administrative, clerical, technical and instructional) adequate? If not, what is needed? Do you foresee any additional needs in this area?

   Click here to enter text.

BCHM-F7) Challenges and Opportunities

1. Are there any particular challenges regarding this program that have not been addressed through the analysis and reflection on data or questions in sections F1-F6 that you would like to include here?

   Click here to enter text.

2. Are there any particular opportunities regarding this program that have not been addressed through the analysis and reflection on data or questions in sections F1-F6 that you would like to include here?

   Click here to enter text.

BCHM-F8) Recommendations for Program Improvement

List the recommendations you are making regarding this program analysis with a brief rationale for each recommendation.

Click here to enter text.

Program Level Analysis (Env Sci)

Bachelor of Science in Environmental Science

ENVS-F1) Trend and Financial Analysis

First-Time Freshman Admissions Funnel							
Environmental Science	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Inquiries	**22**	**68**	**82**	**97**	**106**	**133**	**118**
Share of PLNU inquiries	*0.2%*	*0.4%*	*0.5%*	*0.5%*	*0.6%*	*0.6%*	*0.7%*
Completed Applications	**13**	**21**	**17**	**14**	**29**	**25**	**24**
Share of PLNU Applications	*0.6%*	*0.8%*	*0.6%*	*0.5%*	*1.0%*	*0.9%*	*1.0%*
Applicant Conversion Rate	**59.1%**	**30.9%**	**20.7%**	**14.4%**	**27.4%**	**18.8%**	**20.3%**
PLNU Applicant Conversion Rate	*18.6%*	*17.3%*	*17.0%*	*15.7%*	*16.1%*	*12.1%*	*15.0%*
Admits	**12**	**15**	**8**	**11**	**23**	**22**	**20**
Share of PLNU Admits	*0.7%*	*0.8%*	*0.4%*	*0.6%*	*1.1%*	*1.0%*	*1.0%*
Selection Rate	**92.3%**	**71.4%**	**47.1%**	**78.6%**	**79.3%**	**88.0%**	**83.3%**
PLNU Selection Rate	*87.4%*	*72.9%*	*68.9%*	*69.0%*	*70.5%*	*79.5%*	*79.8%*
New Transfer Admissions Funnel							
Environmental Science	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Inquiries	**2**	**0**	**1**	**8**	**13**	**14**	**16**
Share of PLNU inquiries	*0.2%*	*0.0%*	*0.1%*	*0.5%*	*0.9%*	*0.8%*	*0.8%*
Completed Applications	**1**	**--**	**1**	**4**	**3**	**3**	**3**
Share of PLNU Applications	*0.2%*	*--*	*0.2%*	*0.9%*	*0.6%*	*0.4%*	*0.7%*
Applicant Conversion Rate	**sm**	**--**	**sm**	**50.0%**	**23.1%**	**21.4%**	**18.8%**
PLNU Applicant Conversion Rate	*50.2%*	*55.5%*	*56.2%*	*28.4%*	*33.2%*	*36.9%*	*21.7%*
Admits	**1**	**--**	**1**	**2**	**3**	**2**	**3**
Share of PLNU Admits	*0.3%*	*--*	*0.4%*	*0.7%*	*0.9%*	*0.5%*	*0.8%*
Selection Rate	**sm**	**--**	**sm**	**sm**	**sm**	**sm**	**sm**
PLNU Selection Rate	*79.3%*	*57.9%*	*54.8%*	*60.5%*	*65.4%*	*64.1%*	*79.2%*
sm = cell sizes too small							

1. What does this data tell you about the external demand for your program? What does this say about the future viability of your program?

Click here to enter text.

First-Time Freshman Admissions Yield							
Environmental Science	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Admits	12	15	8	11	23	22	20
Matriculants	**5**	**3**	**1**	**4**	**4**	**6**	**5**
Share of PLNU Matriculants	*0.9%*	*0.5%*	*0.2%*	*0.7%*	*0.6%*	*1.0%*	*0.8%*
Yield Rate	**41.7%**	**20.0%**	**12.5%**	**36.4%**	**17.4%**	**27.3%**	**25.0%**
PLNU Yield Rate	*29.3%*	*30.5%*	*27.7%*	*30.3%*	*31.0%*	*27.9%*	*29.9%*
New Transfer Admissions Yield							
Environmental Science	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Admits	1	--	1	2	3	2	3
Matriculants	**1**	**--**	**1**	**1**	**2**	**0**	**1**
Share of PLNU Matriculants	*0.6%*		*0.7%*	*0.7%*	*1.4%*	*0.0%*	*0.6%*
Yield Rate	**sm**	**--**	**sm**	**sm**	**sm**	**sm**	**sm**
PLNU Yield Rate	*51.1%*	*60.2%*	*54.7%*	*47.3%*	*44.6%*	*46.0%*	*48.0%*
sm = cell sizes too small							

2. How does your yield rate (percentage of students who enroll at PLNU after being admitted) compare to the PLNU average? If your rate is more than 8 percentage points above the PLNU average, what factors do you believe are contributing to this positive outcome? If your rate is more than 8 percentage points below the PLNU average for more than one year, what factors do you believe are contributing to this difference?

Click here to enter text.

Enrollment							
Majors	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
Environmental Science	**21**	**22**	**18**	**19**	**22**	**22**	**19**
Share of PLNU Undergraduates	*0.9%*	*0.9%*	*0.8%*	*0.8%*	*0.9%*	*0.9%*	*0.7%*
Minors	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**	**Fall 2015**
No minors in this program							
Major Migration of Completers*							
Top Importing Programs:	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**6-yr Total**
Undeclared			2			2	4
Biology-Chemistry			1		2		3
Biology (BA)		1	1				2
Chemistry				1	1		2
Top Export Destinations:	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**6-yr Total**
Biology (BA)					1		1
Biology-Chemistry				1			1
Exercise Science				1			1
Philosophy				1			1
* Based on degree completions of students who either started or finished within the program and who originally matriculated as first-time freshmen							

3. What does this data tell you about the internal demand for your program? Does this raise any questions about the viability and/or sustainability of your program as it is currently configured? Explain why or why not. Are there any actionable strategies that you can do that might make a difference if your trends are in the wrong direction?

Click here to enter text.

General Education and Service Credit Hour Production Department of Chemistry (duplicated in other program-level sections)				
	2011/12	**2012/13**	**2013/14**	**2014/15**
Total Dept UG student credit hours	3,247	3,071	3,479	3,445
Number of GE sections taught	7	7	9	9
% of SCH that are GE	47.7%	48.9%	54.3%	51.8%
Share of PLNU GE SCH	*4.5%*	*4.2%*	*5.2%*	*5.0%*
Number of service course sections taught	No service courses in this program			
% of SCH that are service				
Share of PLNU service SCH				

4. What does this data tell you about how your program is impacted by the needs of GE and other academic disciplines? Does this raise any questions about the viability and/or sustainability of your program if these non-programmatic trends continue? Explain why or why not.

Click here to enter text.

Delaware Study Data Department of Chemistry (duplicated in other program-level sections)												
	2010/11			**2011/12**			**2012/13**			**2013/14**		
Program Cost per SCH	**$268**			**$284**			**$279**			**$258**		
Benchmark Percentiles	$194	$240	$271	$177	$242	$293	$183	$233	$292	$191	$247	$306
Ranking	Medium			Medium			Medium			Medium		

5. We know that the following factors influence the Delaware cost per credit hour:
   - Large amount of GE and service classes taught by the program
   - The career stage of the program faculty (early career faculty are less expensive)
   - The number of elective courses in the program
   - The amount of unfunded load (faculty receiving more credit for a course than the number of units received by a student – e.g. 4 units of faculty load for teaching a 3 unit class)
   - The amount of release time associated with the program
   - Faculty members on sabbatical
   - The size of the department budget and the cost of specialized equipment

   Please reflect on your program's Delaware data in light of this information. In particular, what factors contribute to your program having a high (above 75th percentile), medium (50th-75th percentile), or low (below 50th percentile) ranking?

Click here to enter text.

6. Recognizing that not all factors above are under departmental control, what kinds of adjustments might be made to reduce the cost per student credit hour?

Click here to enter text.

***** Future *****
Financial Data: (possibly delayed to the future)
Extra Revenue Generated by Program (lab fees, studio fees, etc.)
Extra Revenue per student credit hour
Extra Costs for the program (equipment not purchased outside of department budget, etc.)
Extra costs per student credit hour
Modified Delaware values: Delaware – extra revenue per SCH + extra costs per SCH

7. Do these modified Delaware values tell you anything new about the future viability and/or sustainability of your program as it is currently configured? Please explain.

Click here to enter text.

ENVS-F2) Findings from Assessment

Links to the department's assessment wheel
• Student Learning Outcomes • Curriculum Maps • Assessment Plan • Evidence of Student Learning • Use of the Evidence of Student Learning

Reflection on longitudinal assessment of student learning data:

1. What have you learned from this program's student learning assessment data?

Click here to enter text.

2. What changes (curricular and others) have you made based on the student learning assessment data?

Click here to enter text.

3. What additional changes are you recommending based on your review of the student learning assessment data?

Click here to enter text.

DQP Outcomes with Scores
***** TBD *****
DQP Definitions
Intellectual Skills Intellectual Skills define proficiencies that transcend the boundaries of particular fields of study: analytic inquiry, use of information resources, engaging diverse perspectives, ethical reasoning, quantitative fluency, and communicative fluency.
Specialized Knowledge What students in any specialization should demonstrate with respect to the specialization, often called the major field. All fields call more or less explicitly for proficiencies involving terminology, theory, methods, tools, literature, complex problems or applications and cognizance of limits.
Applied and Collaborative Learning Applied learning suggests what graduates can do with what they know. This area focuses on the interaction of academic and non-academic settings and the corresponding integration of theory and practice, along with the ideal of learning with others in the course of application projects.
Broad and Integrative Knowledge Students integrate their broad learning by exploring, connecting and applying concepts and methods across multiple fields of study to complex questions—in the student's areas of specialization, in work or other field-based settings and in the wider society.
Civic and Global Learning Civic and Global Learning proficiencies rely principally on the types of cognitive activities (describing, examining, elucidating, justifying) that are within the direct purview of the university, but they also include evidence of civic activities and learning beyond collegiate settings. These proficiencies reflect the need for analytic inquiry and engagement with diverse perspectives.

Reflection on DQP related data:

Understanding that the DQP framework provides one particular lens on the meaning, quality and integrity of your curriculum, reflect on the DQP data and framework provided for your program.

4. What have you learned from this program's DQP comparison?

   Click here to enter text.

5. What changes (curricular and others) have you made based on the DQP comparison?

   Click here to enter text.

6. What additional changes are you recommending based on your review of the DQP comparison?

   Click here to enter text.

Links to stakeholder assessment data (if present this will be department housed data)
• Surveys • Focus Groups • Market Analysis • Etc…

Reflection on stakeholder feedback data:

7. What have you learned from this program's stakeholder assessment data? If you do not have stakeholder data, please provide a plan for how you will regularly collect this in the future.

Click here to enter text.

8. What changes (curricular and others) have you made based on the stakeholder assessment data?

Click here to enter text.

9. What additional changes are you recommending based on your review of the stakeholder assessment data?

Click here to enter text.

ENVS-F3) Curriculum Analysis

In looking at your curriculum, the program review process is asking you to analyze it through three different lenses. The first lens is looking at your content and structure from the perspective of guild standards or standards gleaned from looking at programs at comparator institutions. The second lens that of employability and is asking you to look at your curriculum and educational experiences from the perspective of skills and professional qualities that you are developing in your students that will serve them will in their future work and vocational callings. The third lens is that of pedagogy and is asking you to look at the delivery of your curriculum to ensure a high quality student learning experience.

Menu and Elective Unit Analysis Environmental Science	
Number of menu and elective units required by the program	14
Number of menu and elective units offered by the program	0
Menu/Elective Ratio	0.00
Longitudinal Class Section Enrollment Data	
• Link to Class Section Enrollment Report	

Comparison of current curriculum to guild standards and/or comparator institutions.

If your guild standards are associated with a specialized accreditation that your program has, these should be the basis of your analysis. If your guild standards are associated with specialized accreditation that we do not have, then you should primarily use comparator institutions as the basis for your analysis.

If your guild has standards that are not associated with specialized accreditation, then you may choose to use those standards and/or comparator institutions.

After consultation with your Dean, provide the set of guild standards or a list of the comparator institutions that you are using in your analysis.

If using guild standards:

1. Please provide a list of the guild standards that you are using to evaluate your curriculum.

   Click here to enter text.

2. Indicate if and how your curriculum satisfies the standards (this can be done in a table or narrative form). If applicable, indicate areas where your curriculum falls short of the standards.

   Click here to enter text.

Based on the analysis of standard and reflection on the menu and elective ratio above, consider and discuss the following questions:

3. Are there courses in your program that should be modified? Why or why not.

   Click here to enter text.

4. Are there courses that should be eliminated? Why or why not.

   Click here to enter text.

5. Are there courses that could be merged? Why or why not.

   Click here to enter text.

6. Are there courses that should be added? Why or why not. Note that in general, in order to create the space to add a new course, another course will need to be eliminated or taught less frequently.

   Click here to enter text.

7. What did you learn about your overall curricular structure in terms of its complexity, breadth and depth in light of the guild standards and our institutional size and scope? Are there any structural changes that need to be made in light of your analysis (e.g. sequencing of courses, % and or grouping of electives, overall units required, use of concentrations, etc…)?

   Click here to enter text.

If using comparator institutions:

1. Begin by working with your Dean to identify a list of 5-8 comparator schools to use. In selecting schools, consideration should be given to type of institution, mission of the institution and the number of students majoring in the program.

Institution 1 Institution 2 Institution 3 Institution 4 Institution 5 Institution 6

Gather the curricular requirements for the program in question at each of the comparator institutions.

2. Use this collection of curricular requirements to develop a list of curricular features that are essential for programs of this type. In addition, make note of any innovative or creative curricular feature that may be useful in enhancing the quality of you program.

Click here to enter text.

Review this list with your Dean before using it to analyze your own curriculum.

3. Indicate how your curriculum compares to the list of curricular features from your analysis (this can be done in a table or narrative form).

Click here to enter text.

Based on the analysis of comparator programs and reflection on the menu and elective ratio above:

4. Are there courses in your program that should be modified? Why or why not.

Click here to enter text.

5. Are there courses that should be eliminated? Why or why not.

Click here to enter text.

6. Are there courses that could be merged? Why or why not.

Click here to enter text.

7. Are there courses that should be added? Why or why not. Note that in general, in order to create the space to add a new course, another course will need to be eliminated or taught less frequently.

Click here to enter text.

8. What did you learn about your overall curricular structure in terms of its complexity, breadth and depth in light of the comparator schools and our institutional size and scope? Are there any structural changes that need to be made in light of your analysis (e.g. sequencing of courses, % and or grouping of electives, overall units required, use of concentrations, etc…)?

Click here to enter text.

Burning Glass Skills Data Environmental Science		
1. Communication Skills	5. Project Management	9. Quality Assurance and Control
2. Writing	6. Leadership	10. Supervisory Skills
3. Organizational Skills	7. Research	11. Budgeting
4. Planning	8. Management	12. Problem Solving

Analysis of the curriculum against preparation for employment

9. The Burning Glass data provides a list of skills for students entering common professions that are often linked to your major. Indicate in the table if and where each skill is being taught in your program. Based on reflecting on this data, are there changes you would recommend making to your curriculum?

Click here to enter text.

10. Some programs may serve to prepare students with professional qualities and skills that can serve them well in a great variety of professions that may not show up in data sets like Burning Glass. If this is indicative of your program, please identify the unique skills and/or professional qualities that your program develops in your students and indicate where in the curriculum this is being taught or developed.

Click here to enter text.

Analysis of the teaching of your curriculum

11. How do the pedagogical features of your program compare with the best practices for teaching in your discipline?

Click here to enter text.

12. What new pedagogical practices have been tried by members of your department in the last few years? What has your department learned from these experiments?

Click here to enter text.

13. Are there new developments in pedagogy in your discipline? What would be required to implement these changes in pedagogy in your department?

Click here to enter text.

ENVS-F4) Potential Impact of National Trends

Top Burning Glass Occupations for the Program Environmental Science		
Occupation	**Hiring Demand**	**Salary Range**
Project Manager	Very High	$84K - $87K
Environmental Scientist / Specialist	Medium	$54K - $57K
Geographer / GIS Specialist	Medium	$61K - $67K
Alternative Energy Manager	Low	$67K - $86K
Environmental Compliance Specialist	Low	$42K - $65K
Environmental Engineering Technician	Low	$41K - $59K
Environmental Planner	Low	$64K - $72K
Fish / Game Warden	Low	$31K - $41K
Fish Hatchery Manager / Technician	Low	$30K - $33K
Meteorologist	Low	$39K - $60K
Park Ranger / Naturalist	Low	$35K - $38K
Research Manager	Low	$59K - $69K
Sustainability Specialist	Low	$51K - $83K
Water Resource Specialist	Low	$88K - $156K
Wildlife Biologist	Low	$48K - $54K

Note that some programs do not have as many professions listed in the Burning Glass data as others do. In these cases we will want to get a list of professions from the chair/school dean to supplement the Burning Glass data.

1. Which professions in the Burning Glass data were you already aware of and for which are you already intentionally preparing students and does the hiring demand in these professions signal anything about the future that you need to be aware of regarding the design and structure of your program ?

   Click here to enter text.

2. Are there additional professions in the Burning Glass list or from your knowledge of occupations your alumni have entered, for which you should be preparing students?

   Click here to enter text.

3. What changes in your program would be necessary in order to prepare students for the skills and professional qualities needed to succeed in these additional professions?

   Click here to enter text.

4. Are there national trends in higher education or industry that are particularly important to your discipline? If yes, how is your program reacting to those trends?

   Click here to enter text.

ENVS-F5) Quality Markers

Retention/Graduation Rates (First-Time Freshmen)							
	Matriculation Term						
Environmental Science	**Fall 2008**	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**	**Fall 2013**	**Fall 2014**
First-Year Retention	**75.0%**	**sm**	**80.0%**	**sm**	**100.0%**	**80.0%**	**60.0%**
PLNU First-Year Retention	*84.2%*	*84.1%*	*81.1%*	*82.9%*	*89.3%*	*84.5%*	*84.5%*
	Matriculation Term						
Environmental Science	**Fall 2005**	**Fall 2006**	**Fall 2007**	**Fall 2008**	**Fall 2009**	**Fall 2010**	**Fall 2011**
Four-Year Graduation Rate	**sm**	**sm**	**sm**	**54.5%**	**sm**	**57.1%**	**--**
PLNU Four-Year Graduation Rate	*62.0%*	*65.2%*	*61.7%*	*59.1%*	*63.4%*	*62.2%*	*63.2%*
	Matriculation Term						
Environmental Science	**Fall 2003**	**Fall 2004**	**Fall 2005**	**Fall 2006**	**Fall 2007**	**Fall 2008**	**Fall 2009**
Six-Year Graduation Rate	**--**	**--**	**sm**	**sm**	**sm**	**77.8%**	**sm**
PLNU Six-Year Graduation Rate	*72.4%*	*73.2%*	*73.0%*	*74.9%*	*72.2%*	*73.6%*	*75.0%*
Degree Completions							
Majors	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
Environmental Science	**1**	**3**	**4**	**7**	**4**	**5**	**3**
Share of PLNU Bachelor's Degrees	*0.2%*	*0.6%*	*0.7%*	*1.3%*	*0.7%*	*0.8%*	*0.5%*
Minors	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
No minors in this program							
FTF Time to Degree *(in semesters)*	**sm**	**sm**	**sm**	**8.7**	**sm**	**sm**	**sm**
PLNU FTF Time to Degree	*8.2*	*8.2*	*8.3*	*8.2*	*8.3*	*8.3*	*8.3*
Study Abroad Participants	1	3	4	6	3	4	2
sm = cell size too small							

1. Based on comparing the quality marker data for your program with the PLNU averages:
   a. What does this tell you about your program?

Click here to enter text.

   b. If your values are below the PLNU averages, what changes could you make to address any areas of concern?

Click here to enter text.

   c. If your values are above the PLNU averages, what do you believe contributes to this success?

Click here to enter text.

2. Describe regular opportunities for students to apply their knowledge (internships, practicums, research projects, senior projects, etc.). Estimate what percentage of your students in this program participates in these kinds of opportunities.

Click here to enter text.

3. Describe any public scholarship of your undergraduate and graduate students in this program (conference presentations, publications, performances, etc.). What percentage of your undergraduate students are involved in these kinds of activities?

Click here to enter text.

4. How many of your students participate in study abroad opportunities in general? Describe any study abroad opportunities specifically organized by your program. What percentage of your majors are involved annually (annualize the number)? How many students outside of your department participate in this departmentally organized program (Annualize the number)?

Click here to enter text.

5. What are any other distinctives of your program? Describe how they contribute to the program's success.

Click here to enter text.

6. Does your program have an advisory board? If so, describe how it has influenced the quality of your program? If not, could it benefit from creating one?

Click here to enter text.

7. Describe any current joint interdisciplinary degrees (majors or minors) offered by your department. Are there additional areas where interdisciplinary programs should be considered?

Click here to enter text.

8. Describe your success with students acquiring jobs related to their discipline.

Click here to enter text.

9. Describe your undergraduate and graduate student success rate for passing licensure or credentialing exams (if they exist in your discipline).

Click here to enter text.

10. Describe your success with undergraduate student acceptance into post-baccalaureate education.

Click here to enter text.

11. What kind of support does your program provide for students encountering academic difficulties? How do you intentionally facilitate these students' connection with institutional support services?

Click here to enter text.

ENVS-F6) Infrastructure and Staffing

Full-Time Faculty Program Contribution Department of Chemistry (duplicated in other program-level sections)			
	2012-13	**2013-14**	**2014-15**
Percentage of UG classes taught by FT faculty	68.8%	71.6%	65.5%
PLNU percentage of UG classes taught by FT Faculty	*TBD*	*TBD*	*TBD*
Includes: regular lectures, labs, seminars Excludes: independent studies, private lessons, internships			

1. Are your program's current technological resources and support adequate? If not, what is needed? Do you foresee any additional needs in this area?

   Click here to enter text.

2. Are your program's current facilities adequate? If not, what is needed? Do you foresee any additional needs in this area?

   Click here to enter text.

3. Is your program's current staffing (administrative, clerical, technical and instructional) adequate? If not, what is needed? Do you foresee any additional needs in this area?

   Click here to enter text.

ENVS-F7) Challenges and Opportunities

1. Are there any particular challenges regarding this program that have not been addressed through the analysis and reflection on data or questions in sections F1-F6 that you would like to include here?

   Click here to enter text.

2. Are there any particular opportunities regarding this program that have not been addressed through the analysis and reflection on data or questions in sections F1-F6 that you would like to include here?

   Click here to enter text.

ENVS-F8) Recommendations for Program Improvement

List the recommendations you are making regarding this program analysis with a brief rationale for each recommendation.

Click here to enter text.

Departmental Level Synthesis

G) Synthesis of Program Recommendations

Please create a combined list of program recommendations and rank order that list according to the department's priorities. Please provide a brief rationale for the ranking.

Click here to enter text.

H) Action Plan Considerations for MOU

Review your prioritized recommendation list with the Dean and in partnership with the Dean develop a draft action plan and timeline to be considered as part of the MOU.

Click here to enter text.

Dean Level

I) **Compliance Checklist**

In addition to the Dean roles above, The Dean will be responsible to evaluate and generate a brief report on the following areas to be included with the self-study that is sent to the PR committee and external reviewers.

Check the Academic Unit's Assessment Wheel for each program:

1. Do they have learning outcomes? Are they adequate? Are they up to date?
2. Are their syllabi posted? Are they up to date?
3. Do they have course learning outcomes? Are they adequate? Are they up to date?
4. Do they have a curriculum map? Is it adequate? Is it up to date?
5. Do they have a multi-year assessment plan? Is it adequate? Is it up to date?
6. Do they have methods of assessment? Are they adequate? Are they up to date?
7. Do they have direct methods of assessment? Are they adequate? Are they up to date?
8. Do they have evidence of student learning? Are they adequate? Are they up to date?
9. Have they established the criteria of success? Are they adequate? Are they up to date?
10. Have they analyzed their findings? Are they adequate? Are they up to date?
11. Have they made changes based on evidence? Are they adequate? Are they up to date?
12. Credit Hour: Are the courses in the program in compliance with credit hour expectations?
13. Does the department have evidence posted on the assessment wheel for the Core Competencies?

When complete, the Dean signs off on the self-study as being ready to submit to the Program Review Committee and external reviewers (if no outside accreditation exists)

Program Review Committee and External Review

Once the Self-Study is ready, send it to the chair of the Program Review Committee and the Dean approved External Reviewers for their consideration. The Program Review Committee will incorporate the external reviewer feedback into a combined report that will go back to the Dean and Academic unit for their response. The academic unit leader, the Dean and the Provost will finalize an MOU with action plan for cabinet approval. The self-study, the compliance checklist, the PR committee report, the departmental response and the cabinet-approved MOU will comprise a completed program review.