December 5, 2014

To: Executive Committee
   Faculty Senate

From: Valerie Balester, Chair
       W and C Course Advisory Committee

RE: Request for course additions to the W Course graduation requirement

The W and C Course Advisory Committee voted to approve the following courses. The W and C Course Advisory Committee reviewed each course and agreed that all aspects of the courses were consistent with guidelines for the W and C Course status requirement. Therefore, these courses should be included in the “W Designated Course” or “C Designated Course” category to meet the writing/communication requirement for graduation.

Course submitted for W certification:

PHYS 327/489 Experimental Physics I

Courses submitted for C certification:

PETE 435 Technical Presentations II
PHYS 328/489 Experimental Physics II
TO: Faculty Senate Executive Committee
FROM: Valerie Balester, Chair, W and C Course Advisory Committee
CC: Rupak Mahapatra, Department of Physics and Astronomy
    George Welch, Head, Department of Physics and Astronomy
    Timothy Scott, AOC Dean, College of Science
DATE: December 5, 2014
SUBJECT: REPORT ON CERTIFICATION OF W COURSE: PHYS 327/489

We recommend that PHYS 327/489 Experimental Physics be certified as a writing (W) course for four academic years (9/14 to 9/18). We have reviewed a representative syllabus and have determined that the course meets or exceeds the following criteria:

1. Percentage of final grade based on writing quality: 51%
2. Course content appropriate to the major
3. Total number of words: 5000
4. Instructor to student ratio for one section: 1:18

PHYS 327/489 is a two-credit course. Students complete seven lab reports, each of which receives timely instructor feedback so that students can develop an understanding of the genre over the semester. They also write a final paper and submit a draft for formative feedback from the instructor; this paper will be revised and resubmitted in the next semester version of the course. Instruction includes explanations and examples of writing assignments, templates, and general instruction on technical writing issues, including guidelines for APS PRL format.
TEXAS A&M UNIVERSITY W & C COURSE ADVISORY COMMITTEE
Request for W or C Course Status
Submitted to the Chair, W & C Course Advisory Committee
University Writing Center, MS 5000

1. This request is submitted to Valerie Balester, Chair, W & C Course Advisory Committee, and concerns
(enter prefix, number, and complete course title):

___ PHYS 489 Experimental Physics______________________________________________________________

2. Have this form signed by both the department head and the college dean. Provide a copy of the
syllabus to the college dean.

3. Once signed, please submit this form to the University Writing Center, MS 5000.

Instructor / Coordinator: ___________________________ 10/24/2014
Printed name and signature  Rupak Mahapatra Date

Received: ____________________________________________
(W Course Coordinator, University Writing Center) Date

Approvals:

College Dean: ___________________________ 10/30/14
Printed name and signature

Department Head: ___________________________ 10/28/14
Printed name and signature George R. Welch Date

RECEIVED
NOV 05 2014
By

1.214 Sterling C. Evans Library
5000 TAMU
College Station, TX 77843-5000
Tel. 979.458.1455 Fax 979.458.1466
writingcenter.tamu.edu
TEXAS A&M UNIVERSITY W & C COURSE ADVISORY COMMITTEE
Request for W or C Course Status
Submitted to the Chair, W & C Course Advisory Committee
University Writing Center, MS 5000

1. This request is submitted to Valerie Balester, Chair, W & C Course Advisory Committee, and concerns (enter prefix, number, and complete course title):

__ PHYS 327 Experimental Physics______________________________________

2. Have this form signed by both the department head and the college dean. Provide a copy of the syllabus to the college dean.

3. Once signed, please submit this form to the University Writing Center, MS 5000.

Instructor / Coordinator: ___________________________ Date: 10/24/2015
Printed name and signature: Rupak Mahapatra

Received: ___________________________ Date: 11/5/14
(W Course Coordinator, University Writing Center)

Approvals:

College Dean: ___________________________ Date: 10/30/14
Printed name and signature

Department Head: ___________________________ Date: 10/28/14
Printed name and signature: George R. Welch
Course description: Laboratory experiments in modern physics and physical optics with an introduction to current, state-of-the-art recording techniques.

Prerequisites: PHYS 225; PHYS 309.

Learning outcome: Students will be able apply tools and techniques learned in the advanced laboratory. Students will be able to perform statistical analysis. Students will be able to present their results in writing and oral formats. Each student will choose one of the experiments to produce a formal paper written in the style of a PRL paper, as well as a presentation in the style of an APS talk. Students will be provided with example papers and talks and given feedback on initial drafts.

Instructor: Dr. Rupak Mahaputra, MIST 417, Phone: 229-4196. Email: mahapatra@physics.tamu.edu

Office Hours: TBA

Text: Experiments in Modern Physics, by Melissinos and Napolitano (optional).

Laboratory Notebook: Computation Book, Ampad #22-157. This exact model is absolutely required. No substitutions.

Grade Assignment:
A: 90% ≤ total < 100%
B: 80% ≤ total < 90%
C: 70% ≤ total < 80%
D: 60% ≤ total < 70%
F: total < 60%

Course Topics and Calendar:
There will be 6 labs to be completed. Students will rotate through the labs, doing one each week. Lab notebooks will be due two days after the lab. Monday labs will be due on Wednesday, and Wednesday labs will be due on Friday. Notebooks will be returned before the next lab, with written feedback and grades.

Oral presentations will be done in class, towards the end of the course, over multiple weeks. The formal written paper draft will be due the last week of the class.

Approximate schedule:
We will be grading the percent grade for each activity, as follows:

<table>
<thead>
<tr>
<th>Week of</th>
<th>Activity</th>
<th>Percent Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 19</td>
<td>Overview, lab notebook, discuss experiments</td>
<td></td>
</tr>
<tr>
<td>Jan 26</td>
<td>Lab 1</td>
<td>3%</td>
</tr>
<tr>
<td>Feb 2</td>
<td>Lab 2</td>
<td>3%</td>
</tr>
<tr>
<td>Feb 9</td>
<td>Lab 3</td>
<td>3%</td>
</tr>
<tr>
<td>Feb 16</td>
<td>Lab 4</td>
<td>3%</td>
</tr>
<tr>
<td>Feb 23</td>
<td>Lab 5</td>
<td>3%</td>
</tr>
<tr>
<td>Mar 2</td>
<td>Lab 6</td>
<td>3%</td>
</tr>
<tr>
<td>Mar 9</td>
<td>Oral Presentations</td>
<td>30%</td>
</tr>
<tr>
<td>Mar 16</td>
<td>Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Mar 23</td>
<td>first draft of paper</td>
<td>32%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>*<em>100%</em></td>
</tr>
</tbody>
</table>

* Failure to earn a passing grade on the writing requirements precludes the assignment of W credit, irrespective of the student’s making a passing grade for the entire course on a straight calculation basis. Students cannot receive W credit for this course without earning a passing grade on the writing component, no matter how the points are distributed.

**Attendance and Make-up Policy** Students will need to have an attendance of at least 70% of the classes to pass the course. Students will be allowed to make up labs, for university approved excuses (http://student-rules.tamu.edu/rule07).

**ADA statement:**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room B118 of Cain Hall, 979-845-1637.

**Academic integrity statement:**

The Aggie Honor Code is “An Aggie does not lie, cheat, or steal or tolerate those who do.” For more information, refer to the Honor Council Rules and Procedures on the web at http://aggiehonor.tamu.edu/.

The Executive Committee of the Faculty Senate recommends that instructors, particularly of lectures and labs at the freshman and sophomore levels, should include the following paragraphs in their first-day handout materials:
The handouts used in this course are copyrighted. By “handouts,” I mean all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission.

As commonly defined, plagiarism consists of passing off as one’s own the ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated.

If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, under the section “Scholastic Dishonesty.”
TO: Faculty Senate Executive Committee

FROM: Valerie Balester, Chair, W and C Course Advisory Committee

CC: Stacy Aschenbeck, Department of Petroleum Engineering
    Dan Hill, Head, Department of Petroleum Engineering
    Prasad Enjeti, AOC Dean, Dwight Look College of Engineering

DATE: December 5, 2014

SUBJECT: REPORT ON CERTIFICATION OF C COURSE: PETE 435

We recommend that PETE 435 Technical Presentations II be certified as a communications (C) course for four academic years (9/14 to 9/18). We have reviewed a representative syllabus and have determined that the course meets or exceeds the following criteria:

1. Percentage of final grade based on writing quality: 90%
2. Course content appropriate to the major
3. Total number of words: 1650
4. Total minutes of oral performance: 12 minutes
5. Instructor to student ratio for one section: 1:25

PETE 435 is a one-credit course. One instructor and one graduate student work with this course per section. Students spend the entire semester working toward a presentation they will deliver at the end of the semester. They practice oral interviews and give two technical oral presentations. They also write an introduction to one presentation describing a problem in petroleum engineering, a status of the question report on six technical articles related to their presentations, and an abstract of one presentation, and they write slides for two presentations and give two presentations. On the introduction, they have peer review for formative feedback. They receive formative feedback on their slides, their graphs and tables, their speaking skills, and their ability to communicate in writing on a consistent basis throughout the semester. For instruction, they hear lectures, see modeling videos of high-quality presentations, and practice speaking with peers. It is expected that the students will also give their presentations from this course during the department’s annual student paper contest in January. The contest is judged by industry representatives. However, the contest is a separate graduation requirement, and their participation in the paper contest does not impact their grade in PETE 435.
TEXAS A&M UNIVERSITY W & C COURSE ADVISORY COMMITTEE
Request for W or C Course Status
Submitted to the Chair, W & C Course Advisory Committee
University Writing Center, MS 5000

1. This request is submitted to Valerie Balester, Chair, W & C Course Advisory Committee, and concerns (enter prefix, number, and complete course title):

___PETE 435: Technical Presentations II

2. Have this form signed by both the department head and the college dean. Provide a copy of the syllabus to the college dean.

3. Once signed, please submit this form to the University Writing Center, MS 5000.

Instructor / Coordinator: ____________________________
Printed name and signature ____________________
(Date)

Received: ____________________________
(W Course Coordinator, University Writing Center)
(Date)

Approvals:

College Dean: ____________________________
Printed name and signature ____________________
(Date)

Department Head: ____________________________
Printed name and signature ____________________
(Date)

1.214 Sterling C. Evans Library
5000 TAMU
College Station, TX 77843-5000

Tel. 979.458.1455 Fax 979.458.1466
writingcenter.tamu.edu
Course Description
Preparation of a written technical paper on a subject related to petroleum technology and an oral presentation of the paper in a formal technical conference format; oral presentations are judged by petroleum industry professionals at the departmental student paper contest held during the same academic year.

Prerequisites
PETE 335, satisfactory performance in PETE 335 student paper contest

Topics Covered
1. Selecting a study topic
2. Analyzing literature and identifying a problem to address
3. Reviewing and summarizing technical literature
4. Setting study objectives
5. Applying the engineering method vs. the scientific method
6. Conducting an independent study of an engineering problem
7. Analysis/interpretation of results and drawing conclusions
8. Designing graphs and tables to display findings
9. Preparing effective slides for a technical presentation
10. Delivering an oral technical presentation
11. Answering questions from a panel
12. Analyzing and critiquing peer oral presentations
13. Analyzing and critiquing peer writing samples

Grading
The course grade will be calculated from these assignments and weights.

Class Quizzes: 10%
Written Assignments: 40%
Oral Presentation 1: 15%
Oral Presentation 2: 30%
Presentation Q&A: 5%

The final course grade will be computed using the following scale:
A= 89.5-100+  B= 79.5-89.4  C=69.5-79.4
D=59.5-69.4  F=0-59.4

Students may rest assured that this scale will be applied uniformly. Please do not request that the scale be applied to your grade in a different manner.
Extra credit is never offered on an individual basis. If extra credit is offered, it will be offered to the entire course and only by the Course Director.

Course Learning Outcomes and Relationship to Program Outcomes:

<table>
<thead>
<tr>
<th>At the end of the course, students will be able to…</th>
<th>Program Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gather information, make calculations and/or analyze data to achieve the specific objectives of an independent study of a petroleum engineering problem</td>
<td>2, 3, 5, 9, 11</td>
</tr>
<tr>
<td>2. Outline in detail an introduction for your presentation consisting of problem statements, review of previous work presented in the literature, need for further study, and study objectives</td>
<td>5, 7, 9, 11</td>
</tr>
<tr>
<td>3. Outline in detail a methodology section for your presentation including tasks, data and methods you used and assumptions you made in the study</td>
<td>3, 5, 7, 9, 11</td>
</tr>
<tr>
<td>4. Prepare a references section, consistent with the SPE style guide, listing all literature cited in the introduction and methodology sections</td>
<td>5, 6, 7, 9</td>
</tr>
<tr>
<td>5. Summarize the results of your independent study in appropriate tabular and graphical forms, consistent with engineering and Society of Petroleum Engineers (SPE) presentation standards</td>
<td>2, 7, 11</td>
</tr>
<tr>
<td>6. Outline in detail a discussion section for your presentation including your analysis and interpretation of study results</td>
<td>2, 5, 7, 9, 11</td>
</tr>
<tr>
<td>7. Draw appropriate conclusions from your study consistent with your project objectives and properly supported by data, calculations and/or analysis</td>
<td>2, 3, 5, 7, 9</td>
</tr>
<tr>
<td>8. Identify limitations of your work and prepare recommendations for further work, if appropriate, supported by evidence presented in the results and discussion of your study</td>
<td>2, 3, 5, 7, 9</td>
</tr>
<tr>
<td>9. Identify the significance, potential benefits, and possible applications of the results and conclusions of an independent study</td>
<td>3, 5, 7, 8, 9</td>
</tr>
<tr>
<td>10. Prepare Microsoft PowerPoint slides for your independent study that can be used in an oral presentation to persuade others that the study results, conclusions and recommendations are correct and useful</td>
<td>7, 11</td>
</tr>
<tr>
<td>11. Present the study orally to a panel of practicing engineers from the petroleum industry and faculty members in 10 to 15 minutes, using PowerPoint slides</td>
<td>7</td>
</tr>
</tbody>
</table>

Related Program Outcomes:

<table>
<thead>
<tr>
<th>No.</th>
<th>PETE graduates must have…</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>An ability to design and conduct experiments, as well as to analyze and interpret data.</td>
</tr>
<tr>
<td>3</td>
<td>An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability</td>
</tr>
<tr>
<td>5</td>
<td>An ability to identify, formulate, and solve engineering problems</td>
</tr>
<tr>
<td>6</td>
<td>An understanding of professional and ethical responsibility</td>
</tr>
<tr>
<td>7</td>
<td>An ability to communicate effectively</td>
</tr>
<tr>
<td>8</td>
<td>The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context</td>
</tr>
<tr>
<td>9</td>
<td>A recognition of the need for, and an ability to engage in life-long learning</td>
</tr>
</tbody>
</table>
An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

**Americans with Disabilities Act (ADA) Policy Statement**
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu.

**Academic Integrity Statement and Policy**
Do not cheat in this course. Do not commit scholastic dishonesty of any kind. Students who commit scholastic dishonesty will earn an F* on the transcript for this course. See the Aggie Honor System website for additional information on Scholastic Dishonesty and the Honor Council Rules and Procedures, http://aggiehonor.tamu.edu/

“An Aggie does not lie, cheat or steal, or tolerate those who do.”
TO: Faculty Senate Executive Committee
FROM: Valerie Balester, Chair, W and C Course Advisory Committee
CC: Rupak Mahapatra, Department of Physics and Astronomy
    George Welch, Head, Department of Physics and Astronomy
    Timothy Scott, AOC Dean, College of Science
DATE: December 5, 2014
SUBJECT: REPORT ON PROPOSED C COURSE: PHYS 328/489

We recommend that PHYS 328/489 Experimental Physics II be certified as a Communications (C) course for four academic years (9/14 to 9/18). We have reviewed a representative syllabus and have determined that the course meets or exceeds the following criteria:

1. Percentage of final grade based on writing quality: 80%
2. Course content appropriate to the major
3. Total number of words: 3500
4. Total minutes of oral presentation: 10
5. Instructor to student ratio for one section: 1:18

PHYS 328 is a one-credit course. Students write up four lab reports, a final paper, and a take-home essay exam, and a poster, which they also present. Students receive instructor feedback on a draft of the final paper and instructor feedback on a draft of the slides used for the poster presentation. Instruction includes explanations and examples of writing assignments, templates, and general instruction on technical writing issues, including guidelines for APS PRL format.
TEXAS A&M UNIVERSITY W & C COURSE ADVISORY COMMITTEE
Request for W or C Course Status
Submitted to the Chair, W & C Course Advisory Committee
University Writing Center, MS 5000

1. This request is submitted to Valerie Balester, Chair, W & C Course Advisory Committee, and concerns

(enter prefix, number, and complete course title):

___PHYS 328 Experimental Physics II

2. Have this form signed by both the department head and the college dean. Provide a copy of the syllabus to the college dean.

3. Once signed, please submit this form to the University Writing Center, MS 5000.

Instructor / Coordinator: ___________________________  Date: 10/21/2014
Printed name and signature  Rupak Mahapatra  Date

Received: ___________________________  Date: 11/5/14
(W Course Coordinator, University Writing Center)

Approvals:

College Dean: ___________________________  Date: 10/30/14
Printed name and signature

Department Head: ___________________________  Date: 10/3/14
Printed name and signature  George R. Welch  Date

1.214 Sterling C. Evans Library
5000 TAMU
College Station, TX 77843-5000
Tel. 979.458.1455 Fax 979.458.1466
writingcenter.tamu.edu

RECEIVED
NOV 6 2014
By: BQ
1. This request is submitted to Valerie Balester, Chair, W & C Course Advisory Committee, and concerns (enter prefix, number, and complete course title):

__PHYS 489 Experimental Physics II ________________________________

2. Have this form signed by both the department head and the college dean. Provide a copy of the syllabus to the college dean.

3. Once signed, please submit this form to the University Writing Center, MS 5000.

Instructor / Coordinator: __________________________ 10/24/2014
Printed name and signature: Rupak Mahapatra  Date

Received: __________________________ Date
(W Course Coordinator, University Writing Center)

Approvals:

College Dean: __________________________ 10/30/14
Printed name and signature: __________________________ Date

Department Head: __________________________ 10/28/14
Printed name and signature: George R. Welch Date
Physics 328: Experimental Physics 2 — Spring 2015

Course description: Laboratory experiments in modern physics and physical optics with an introduction to current, state-of-the-art recording techniques.

Prerequisites: PHYS 225; PHYS 309; PHYS 327.

Learning outcomes: Students will be able apply tools and techniques learned in the advanced laboratory. Students will be able to perform statistical analysis. Students will be able to present their results in writing and oral formats. Each student will choose one of the experiments to produce a formal paper written in the style of a PRL paper, as well as a presentation in the style of an APS talk. Students will be provided with example papers and talks and given feedback on initial drafts.

Instructor: Dr. Rupak Mahapatra, MIST 417, Phone: 229-4196. Email: mahapatra@physics.tamu.edu

Office Hours: TBA

Text: Experiments in Modern Physics, by Melissinos and Napolitano (optional).

Laboratory Notebook: Computation Book, Ampad #22-157. This exact model is absolutely required. No substitutions.

Grade Assignment:

A: 90% ≤ total < 100%
B: 80% ≤ total < 90%
C: 70% ≤ total < 80%
D: 60% ≤ total < 70%
F: total < 60%

Course Topics and Calendar:

There will be 4 labs to be completed. Students will rotate through the labs, doing one each week. Lab notebooks will be due two days after the lab. Monday labs will be due on Wednesday, and Wednesday labs will be due on Friday. Notebooks will be returned before the next lab, with written feedback and grades.

Poster presentations will be done, as a group, towards the end of the semester. The final draft of the formal written paper will be due the last week of the class.

Approximate schedule:

<table>
<thead>
<tr>
<th>Week of</th>
<th>Activity</th>
<th>Percent Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 30</td>
<td>Overview and Lab 1</td>
<td>3%</td>
</tr>
<tr>
<td>April 6</td>
<td>Lab 2</td>
<td>3%</td>
</tr>
<tr>
<td>April 13</td>
<td>Lab 3</td>
<td>3%</td>
</tr>
<tr>
<td>April 20</td>
<td>Lab 4</td>
<td>3%</td>
</tr>
<tr>
<td>April 27</td>
<td>Poster Presentation</td>
<td>33%</td>
</tr>
<tr>
<td>May 4</td>
<td>Final Paper Due</td>
<td>35%</td>
</tr>
<tr>
<td>May 4</td>
<td>Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>
Attendance and Make-up Policy Students will need to have an attendance of at least 70% of the classes to pass the course. Students will be allowed to make up labs, for university approved excuses (http://student-rules.tamu.edu/rule07).

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