Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Physics	122	PHY 122 10/06/2022- General Physics II
College	Division	Department
	Math, Science and Engineering Tech	Physical Sciences
Faculty Preparer		Weishu Bu
Date of Last Filed Assessment Report		03/03/2020

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

   Yes

   Fall 2019

2. Briefly describe the results of previous assessment report(s).

   Students met the standard for success with more than 70% students scoring 75% or higher in both outcomes:

   Outcome 1: average score 86.4%

   Outcome 2: average score 85.2%

3. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

   No major changes were implemented since the last assessment since the success rate met or exceeded the desired standard.

II. Assessment Results per Student Learning Outcome

Outcome 1: Apply the appropriate principles to solve problems pertaining to electricity, magnetism, light and modern physics.

- Assessment Plan
  - Assessment Tool: Written exam

- Assessment Date: Fall 2022
- Course section(s)/other population: All sections
- Number students to be assessed: A random sample of approximately 20% of all students
- How the assessment will be scored: Departmentally-developed rubric
- Standard of success to be used for this assessment: 70% of students will score 75% or higher.
- Who will score and analyze the data: Full-time Physics faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2022	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
50	39

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

11 students dropped or withdrew from the course or didn't take the assessments. The total number of students present was 39 and all 39 students were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students present in three sections were assessed including two virtual sections and one face-to-face section.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

There were 10 multiple-choice questions given on an assessment test dealing with the topics of electricity, magnetism, light, and modern physics. Questions were scored using the key.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this

learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
19/23 students (82%) scored 75% or higher on the test, meeting the standard of success. The number of students who met the standard of success for each unit of the test were as follows: Electricity: 34/39 students (87%) Magnetism: 31/39 students (79%) Light: 30/39 students (77%) Modern Physics: 32/39 students (82%) More than 70% of the students achieved 75% or higher for each unit.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students generally performed well and met the standard of success for outcome #1 since overall, 82% of assessed students scored 75% and higher on the assessment test. Students did especially well on the conceptual questions involving electric fields and potential, and Faraday's law (EM induction). They also did well on the questions involving calculations of capacitance and light refraction. It is clear from the data that most students understood these concepts and how to set up the calculations.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Although the standard of success was met for outcome #1, students had the most difficulty with concepts involving finding the direction of magnetic field and force using the right hand rule. Students also had difficulty on calculating focal length using the lens maker's equation. These important concepts will be continued to be stressed in both lectures and in labs.

Outcome 2: Solve problems pertaining to electricity, magnetism, light and modern physic[s].

- Assessment Plan
    - Assessment Tool: Laboratory reports
    - Assessment Date: Fall 2022
    - Course section(s)/other population: All sections
    - Number students to be assessed: A random sample of approximately 20% of all students
    - How the assessment will be scored: Departmentally-developed rubric
    - Standard of success to be used for this assessment: 70% of students will score 75% or higher.
    - Who will score and analyze the data: Full-time Physics faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2022	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
50	44

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Six students dropped or withdrew from the course. The total number of students present was 44 and all 44 students were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students present in three sections were assessed including two virtual sections and one face-to-face section.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Multiple-choice questions were scored using the key and short answer questions were scored using a departmentally developed rubric.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
39/44 student (89%) scored 75% or higher on the lab quiz and report, meeting the standard of success. The number of students who met the standard of success for each unit were as follows: Electricity: 41/44 students (93%) Magnetism: 35/44 students (80%) Light: 42/44 students (95%)

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

For outcome #2, 89% of the lab quiz and reports scored 75% or higher. Therefore, the standard of success was met. Students did especially well in electricity and light labs after analyzing the data by unit. These lab quizzes and reports revealed that students understood the concepts and were able to apply these to the calculations performed after the lab.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Although all the standard of success was met for outcome #2, some students had difficulty with the magnetism labs, especially in finding the direction of the magnetic field and force using the right hand rule. Instructors should continue to emphasize this concept and application in the associated lectures and labs.

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

No changes were implemented at that time.

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

The assessment data indicates that we are meeting the needs of students since all standards of success were met. Having reviewed the data from different sections, it is clear that students scored very similarly across each section regardless of the instructor. Some students continue to struggle with problems involving math, which is very typical for many students taking PHY122. It is not surprising that students struggled with the math calculations involving the quantities of both magnitude and sign on the assessment test.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

This information will be shared at the next department meeting.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	Continue to emphasize difficult concepts in lectures and labs as identified in this assessment: finding the direction of magnetic field and force using the right hand rule; calculating focal length using the lens maker's equation.	Continuous improvement.	2023

5. Is there anything that you would like to mention that was not already captured?

Thank Zeeshan for helping me collect and share the data, Rob and Amir for preparing the assessment test, and a big thanks to Suzanne for walking me through the whole assessment process.

III. Attached Files

PHY122 assessment result data
PHY122 assessment lab rubric
PHY122 assessment test

Faculty/Preparer:	Weishu Bu	**Date:** 10/24/2022
Department Chair:	Suzanne Albach	**Date:** 10/25/2022
Dean:	Tracy Schwab	**Date:** 10/26/2022
Assessment Committee Chair:	Shawn Deron	**Date:** 11/28/2022

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Physics	122	PHY 122 12/17/2019-General Physics II
Division	Department	Faculty Preparer
Math, Science and Engineering Tech	Physical Sciences	Amir Fayaz
Date of Last Filed Assessment Report		

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

   Yes

   The last assessment for PHY122 was 01/22/2016.

2. Briefly describe the results of previous assessment report(s).

   The average score for the assessed outcomes was 3.00 out of 4.00 for an overall success rate of 83.5%.

3. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

   No changes were implemented since the last assessment since the success rate met or exceeded the desired standard.

II. Assessment Results per Student Learning Outcome

Outcome 1: Apply the appropriate principles to solve problems pertaining to electricity, magnetism, light and modern physics.

- Assessment Plan
  - Assessment Tool: Outcome-related questions on cumulative assessment exam
  - Assessment Date: Fall 2019
  - Course section(s)/other population: All sections

- Number students to be assessed: A random sample of approximately 20% of all students
- How the assessment will be scored: Departmentally-developed rubric
- Standard of success to be used for this assessment: 70% of students will score 75% or higher.
- Who will score and analyze the data: Full-time Physics faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2019		

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
31	27

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Four students dropped or withdrew from the course. The total number of students present was 27 and all 27 students were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students present in both sections were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

There were 10 problems dealing with the topics of Electricity, Magnetism, Light and Modern Physics. The problems were scored on a scale of 0-4 which is the rubric for the department. The Rubric is as follows:

0 - Student showed no work.

1 - Student showed some work but no understanding of material.

2 - Student showed work and some understanding of material.

3 - Student showed understanding of the material but did not complete all the work properly. 4 - Student showed all the proper work and answered correctly.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
The average score for the assessment test was 86.4% The average scores for each section of the test were as follows: Electricity: 3.59 (89%) Magnetism: 3.11 (78%) Light: 3.49 (87%) Modern Physics: 3.63 (90%) More than 70% of the students achieved the 75% or higher for each section.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students were strong in all areas. The final lab report was not used to assess this outcome.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The standard of success was met and no weaknesses were identified. The final lab report was not used to assess this outcome.

Outcome 2: Apply the physical principles related to electricity, magnetism, light and modern physical.

- Assessment Plan

- Assessment Tool: Outcome-related questions on cumulative assessment exam
- Assessment Date: Fall 2019
- Course section(s)/other population: All sections
- Number students to be assessed: A random sample of approximately 20% of all students
- How the assessment will be scored: Departmentally-developed rubric
- Standard of success to be used for this assessment: 70% of students will score 75% or higher.
- Who will score and analyze the data: Full-time Physics faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2019		

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
31	27

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Four students dropped or withdrew from the course. The total number of students present was 27 and all 27 students were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students present in both sections were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

As indicated previously, the rubric is as follows: 0 - Student showed no work.

1 - Student showed some work but no understanding of material. 2 - Student showed work and some understanding of material. 3 - Student showed understanding of the material but did not complete all the work properly. 4 - Student showed all the proper work and answered correctly.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
The average score for the lab reports done by all 27 students throughout the semester was 3.5 out of 4.00. 85.2% of the students scored 3.0 or better.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students were strong in all areas.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

No weaknesses were identified.

Outcome 1: Apply the appropriate principles to solve problems pertaining to electricity, magnetism, light and modern physics.

- Assessment Plan
    - Assessment Tool: Final lab report
    - Assessment Date: Fall 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: A random sample of approximately 20% of all students
    - How the assessment will be scored: Departmentally-developed rubric

- Standard of success to be used for this assessment: 70% of students will score 75% or higher.
- Who will score and analyze the data: Full-time Physics faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2019		

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
31	27

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

This tool does not apply to this outcome.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

This tool does not apply to this outcome.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

This tool does not apply to this outcome.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No
This tool does not apply to this outcome.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students were strong in all areas. The final lab report was not used to assess this outcome.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The standard of success was met and no weaknesses were identified. The final lab report was not used to assess this outcome.

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

They were effective. More problem solving techniques should be demonstrated.

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

I believe this course definitely meets the needs of the students.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

This information will be shared at the next department meeting.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
No changes intended.			

5. Is there anything that you would like to mention that was not already captured?

6.

III. Attached Files

PHY122 Assessment data2
PHY122 Assessment rubric
PHY122 Assessment Data1

Faculty/Preparer:	Amir Fayaz	**Date:** 12/23/2019
Department Chair:	Suzanne Albach	**Date:** 01/03/2020
Dean:	Victor Vega	**Date:** 01/13/2020
Assessment Committee Chair:	Shawn Deron	**Date:** 03/03/2020

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Physics	122	PHY 122 01/22/2016-General Physics II
Division	Department	Faculty Preparer
Math, Science and Engineering Tech	Physical Sciences	Amir Fayaz
Date of Last Filed Assessment Report		

I. Assessment Results per Student Learning Outcome

Outcome 1: Apply the appropriate principles to solve problems pertaining to electricity, magnetism, light and modern physics.

- Assessment Plan
  - Assessment Tool: Departmental Final Exam
  - Assessment Date: Fall 2015
  - Course section(s)/other population: random sample of all sections
  - Number students to be assessed: 20% of all students with a minimum of one full section
  - How the assessment will be scored: Departmentally-developed rubric
  - Standard of success to be used for this assessment: 70% of students should score a 2.5 of 4 or higher.
  - Who will score and analyze the data: Full-time Physics faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2015		

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
43	37

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

The total number of students present was 37 and all 37 were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students present in both sections were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

There were 10 problems dealing with the topics of electricity, magnetism, light and modern physics. The problems were scored on a scale of 0 - 4 which is the rubric for the department (see attached).

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
The average scores for each section of the test were as follows: Electricity: 3.01 (86%) Magnetism: 2.82 (78%) Light: 2.99 (81%) Modern Physics: 3.19 (89%)

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students were strong in all areas.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

No weaknesses were identified.

II. Course Summary and Action Plans Based on Assessment Results

1. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

I believe this course definitely meets the needs of the students.

2. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

This information will be shared at the next department meeting.

3. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
No changes intended.			

4. Is there anything that you would like to mention that was not already captured?

5.

III. Attached Files

Assessment rubric
Assessment outcomes

Faculty/Preparer:	Amir Fayaz	**Date:** 01/23/2016
Department Chair:	Kathleen Butcher	**Date:** 01/23/2016
Dean:	Kristin Good	**Date:** 01/23/2016
Assessment Committee Chair:	Michelle Garey	**Date:** 02/01/2016

COURSE ASSESSMENT REPORT

I. Background Information

1. Course assessed:
   Course Discipline Code and Number: PHY122
   Course Title: general Physics II
   Division/Department Codes: MSH/PHY

2. Semester assessment was conducted (check one):
   X☐ Fall 2012_
   ☐ Winter 20__
   ☐ Spring/Summer 20__

3. Assessment tool(s) used: check all that apply.
   ☐ Portfolio
   ☐ Standardized test
   ☐ Other external certification/licensure exam (specify):
   ☐ Survey
   ☐ Prompt
   X☐ Departmental exam
   ☐ Capstone experience (specify):
   ☐ Other (specify):

4. Have these tools been used before?
   X☐ Yes
   ☐ No

   If yes, have the tools been altered since its last administration? If so, briefly describe changes made.

5. Indicate the number of students assessed and the total number of students enrolled in the course.
   The total number of students enrolled in one section of the course was 25 and 19 students were present at the time of assessment. All 19 were assessed.

6. If all students were not assessed, describe how students were selected for the assessment. *(Include your sampling method and rationale.)*

II. Results

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.
   There were no changes.

2. List each outcome that was assessed for this report exactly as it is stated on the course master syllabus. *(You can copy and paste these from CurricUNET's WR report.)*
   Apply the appropriate physical principles to solving problems pertaining to the physical principles such as Electrostatics, D.C Circuits, Magnetism, A.C. Circuits, Properties of Light, Optical instruments, Special theory of Relativity (Modern Physics).
   doesn't match CurricUNet
3. For each outcome that was assessed, indicate the standard of success exactly as it is stated on the course master syllabus. *(You can copy and paste these from CurricUNET's WR report.)*
   20% of all students with a minimum of one full section should achieve a score of 2.5 or better.

4. Briefly describe assessment results based on data collected during the course assessment. Indicate the extent to which students are achieving each of the learning outcomes listed above and state whether the standard of success was met for each outcome. ***In a separate document, include a summary of the data collected and any rubrics or scoring guides used for the assessment.***
   See attached spreadsheet.
   There were 10 problems dealing with the topics of electricity, magnetism, light and special theory of relativity (Modern Physics).
   The problems were scored on a scale of 0 – 4 which is the rubric for the department. The average scores for each section of the test were as follows:

logged 1/22/13 sf

Electricity: 3.62
Magnetism: 3.43
Light: 3.71
Modern Physics: 3.58

5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in the assessment results. *(This should be an interpretation of the assessment results described above and a thoughtful analysis of student performance.)*
   Strengths: All areas.

   Weaknesses: None.

III. Changes influenced by assessment results

1. If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses. *(If students met all expectations, describe your plan for continuous improvement.)*

2. Identify intended changes that will be instituted based on results of this assessment activity (check all that apply). Please describe changes and give rationale for change.
   a. ☐ Outcomes/Assessments on the Master Syllabus
      Change/rationale:

   b. ☐ Objectives/Evaluation on the Master Syllabus
      Change/rationale:

   c. ☐ Course pre-requisites on the Master Syllabus
      Change/rationale:

   d. ☐ 1st Day Handouts
      Change/rationale:

   e. ☐ Course assignments
      Change/rationale:

   f. ☐ Course materials (check all that apply)
      ☐ Textbook
      ☐ Handouts
      ☐ Other:

   g. ☐ Instructional methods
      Change/rationale:

   h. ☐ Individual lessons & activities
      Change/rationale:

3. What is the timeline for implementing these actions?

IV. Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this course.
   They were extremely useful in assessing the students' mastery of the subject matter.

2. If the assessment tools were not effective, describe the changes that will be made for future assessments.

3. Which outcomes from the master syllabus have been addressed in this report?

COURSE ASSESSMENT REPORT

All __X___ Selected _____

If "All", provide the report date for the next full review: _____.

If "Selected", provide the report date for remaining outcomes: _____.

Submitted by:

Print: Amir N. Fayaz **Signature** Amir N. Fayaz **Date:** 01/08/13
Faculty/Preparer

Print: Katalin Butcher **Signature** Kathy Butcher **Date:** 1/14/13
Department Chair

Print: M Shuraa **Signature** _____ **Date:** 1/16/13
Dean/Administrator

COURSE ASSESSMENT REPORT

I. Background Information

1. Course assessed:
   Course Discipline Code and Number: PHY 122
   Course Title: General Physics II and Lab
   Division/Department Codes: PHY

2. Semester assessment was conducted (check one):
   - ☒ Fall **2008**
   - ☐ Winter 20__
   - ☐ Spring/Summer 20__

3. Assessment tool(s) used: check all that apply.
   - ☐ Portfolio
   - ☐ Standardized test
   - ☐ Other external certification/licensure exam (specify):
   - ☐ Survey
   - ☐ Prompt
   - ☒ Departmental exam
   - ☐ Capstone experience (specify):
   - ☐ Other (specify):

4. Have these tools been used before?
   - ☐ Yes
   - ☒ No

   If yes, have the tools been altered since its last administration? If so, briefly describe changes made.

5. Indicate the number of students assessed/total number of students enrolled in the course.
   21 students were assessed and these were all the students who finished the course this semester.

6. Describe how students were selected for the assessment.
   All students were selected

II. Results

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.
   The students performed very well on the assessment and the students were able to show that they reach the outcomes which were stated in the syllabus.

2. List each outcome that was assessed for this report exactly as it is stated on the course master syllabus.

   Recognize the concepts and principles of Electrostatic, D.C. Circuits, Magnetism, A.C. Circuits, Properties of Light, Optical Instruments, Special Theory of Relativity.

   Apply the appropriate physical principles to solving problems pertaining to Electrostatic, D.C. Circuits, Magnetism, A.C. Circuits, Properties of Light, Optical Instruments, Special Theory of Relativity.

3. Briefly describe assessment results based on data collected during the course assessment, demonstrating the extent to which students are achieving each of the learning outcomes listed above. ***Please attach a summary of the data collected.***
   The students performed within the boundaries of the assessment results as specified in the Master Syllabus. See attached spreadsheet.

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success. ***Please attach the rubric/scoring guide used for the assessment.***

For the first part, students either recognized the concept and principle of physics or did not. Each correct answer was given a score of 1, and incorrect answers were given a score of 0. For all recognition questions the class scored about 75% correct, indicating that the students understood the concepts and principle, which were taught in the class.

For the second aspect, solving problems, the students received a score between 1 and 4, based on the work they did and the scoring rubric. The standard was set that at 75% of the students would receive a score of 3 or higher. For each outcome, the students were able to exceed the 75% level.

5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.
   Strengths: All areas were strengths for the students

   Weaknesses: None

III. Changes influenced by assessment results

1. If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses.

2. Identify intended changes that will be instituted based on results of this assessment activity (check all that apply). Please describe changes and give rationale for change.
   a. Outcomes/Assessments on the Master Syllabus
      Change/rationale: The outcomes were listed improperly, the outcomes will be re-worked and the master syllabus will be resubmitted.

   b. ☐ Objectives/Evaluation on the Master Syllabus
      Change/rationale:

   c. ☐ Course pre-requisites on the Master Syllabus
      Change/rationale:

   d. ☐ 1st Day Handouts
      Change/rationale:

   e. ☐ Course assignments
      Change/rationale:

   f. ☐ Course materials (check all that apply)
      ☐ Textbook
      ☐ Handouts
      ☐ Other:

   g. ☐ Instructional methods
      Change/rationale:

   h. ☐ Individual lessons & activities
      Change/rationale:

3. What is the timeline for implementing these actions? Fall 2009

IV. Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this course.

   Completely useful in assessing the students mastery of the subject matter.

COURSE ASSESSMENT REPORT

2. If the assessment tools were not effective, describe the changes that will be made for future assessments.

3. Which outcomes from the master syllabus have been addressed in this report?
   All _X_ Selected _____
   If "All", provide the report date for the next full review: _Fall 2011_____.
   If "Selected", provide the report date for remaining outcomes: _____.

Submitted by:

Print:_Robert M. Hagood__ **Signature**_____ **Date:**_1/28/09_
Faculty/Preparer

Print:_Kathleen Butcher___ **Signature**_____ **Date:**_2/3/09_
Department Chair

Print:_Martha Showalter __ **Signature**_____ **Date:** FEB - 5 2009
Dean/Administrator

logged 2/9/09 sjv