

**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: <u>Yes</u>
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.

- 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

- 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.

- 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.

- 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.

- Intended Change(s)

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

- 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):
 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
 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 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).

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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:

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COURSE ASSESSMENT REPORT

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?

Please return completed form to the Office of Curriculum & Assessment, SC 257.

COURSE ASSESSMENT REPORT

All Selected _____
If "All", provide the report date for the next full review: _____
If "Selected", provide the report date for remaining outcomes: _____

x

Submitted by:

Print: Amir N. Fayaz Signature Amir N. Fayaz Date: 01/08/13
Faculty/Preparer
Print: Kathleen Butcher Signature Kathleen Butcher Date: 1/14/13
Department Chair
Print: M. Shura 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.**

COURSE ASSESSMENT REPORT

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.

Please return completed form to the Office of Curriculum & Assessment, SC 247.

Approved by the Assessment Committee 11/08

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 Faculty/Preparer Signature [Signature] Date: 4/28/09
Print: Kathleen Butcher Department Chair Signature [Signature] Date: 2/3/09
Print: Martha Showalter Dean/Administrator Signature [Signature] Date: FEB - 5 2009