# **Course Assessment Report Washtenaw Community College**

Discipline	Course Number	Title
Biology	11()7	BIO 102 11/21/2016- Human Biology
Division	Department	Faculty Preparer
Math, Science and Engineering Tech	Life Sciences	Anne Heise
Date of Last Filed Assessment Report		

## I. Assessment Results per Student Learning Outcome

Outcome 1: Identify parts of the human cells and their function, and explain cell chemistry, cellular energetics and homeostasis.

- Assessment Plan
  - o Assessment Tool: Set of common questions used on exams in all sections
  - o Assessment Date: Winter 2016
  - o Course section(s)/other population: All sections
  - o Number students to be assessed: all
  - How the assessment will be scored: item analysis of questions from unit exams
  - Standard of success to be used for this assessment: 70% of students will score at least 70%.
  - o Who will score and analyze the data: department 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)
2016		

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

# of students enrolled	# of students assessed
67	60

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.

Not all students may have been present on the day the outcome was 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 sections are on the main campus. Day and evening sections were assessed.

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

Five multiple-choice questions were embedded on unit exams. Data were compiled by instructors and sent to Anne Heise for analysis.

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 standard of success was met for all questions in all 3 sections, with %-correct ranging from 70% to 94% for different questions and sections. Combined over all 3 sections, the % correct ranged from 72% to 87%.

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

Chemistry and cell biology are always challenging to students and perhaps especially so in a class with no pre-requisites.

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.

I am satisfied with the performance of these students.

Outcome 2: Recognize the main parts of each of the 11 human organ-systems, the main function(s) of each part and the main disorders that affect each organ-system. Explain how these diseases change normal function, current means of diagnosis and treatment.

- Assessment Plan
  - Assessment Tool: Set of common questions used on exams in all sections
  - Assessment Date: Winter 2016
  - o Course section(s)/other population: All sections
  - Number students to be assessed: all
  - How the assessment will be scored: item analysis of questions from unit exams
  - Standard of success to be used for this assessment: 70% of students will score at least 70%.
  - o Who will score and analyze the data: department 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)
2016		

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

# of students enrolled	# of students assessed
67	58

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.

Not all students were present during the assessment. Additionally with this outcome, Anne Heise did not receive data for all questions. Specifically, I am missing 5 out of 15 total section-question results.

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 sections were assessed. The class meets only on the main campus.

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

Five questions for the outcome were embedded in unit exams. Instructors compiled results and sent them to Anne Heise for analysis.

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

For the 10 section-question results that I have, the standard of success was met in 9 of them. In the 10th, only 65% of students got the question right. In the other 9 cells, % correct ranged from 75 to 100%.

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

There were missing data for this outcome but for the results that I do have, performance was very good. I think organ-level knowledge is easier for students than chemistry or cell biology.

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.

I am satisfied with student performance.

Outcome 3: Recognize specific healthy lifestyle choices that can affect the normal functioning of the human body, and how these choices relate to the presence of specific diseases.

- Assessment Plan
  - Assessment Tool: Set of common questions used on exams in all sections
  - Assessment Date: Winter 2016
  - o Course section(s)/other population: All sections
  - o Number students to be assessed: all
  - O How the assessment will be scored: item analysis of questions from unit exams
  - Standard of success to be used for this assessment: 70% of students will score at least 70%.
  - o Who will score and analyze the data: department 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)
2016		

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

# of students enrolled	# of students assessed
67	38

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.

Lots of missing data for this outcome. It works out that for each of the 5 questions, there are just 2 sections reporting, although which 2 sections those are varies for different questions!

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 were assessed. The class is taught only on the main campus, in day and evening times.

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

Five questions were embedded in unit exams. Instructors compiled information and sent it to Anne Heise for analysis.

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

There were 10 question-section results and 5 question-section missing results. Of the 10 results, the standard of success was met in 8. The standard of success was not met in 2 cases, and as it turns out both of these cases were the same embedded question.

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

There were missing data for this outcome. Students did well on 4 questions but were clearly stumped by the 5th question. It asked for which of the following

conditions can regular exercise lower ones risk. The conditions were: some type of cancer, type 1 diabetes, Down syndrome, and sickle-cell anemia. This is a pretty hard question because people may have heard of the importance of exercise in the management of diabetes or in the prevention of type 2 diabetes. That would thus be a tempting answer. The correct answer is cancer.

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.

Either more emphasis on exercise, and/or more emphasis on diabetes, might improve performance on this outcome.

Outcome 4: Solve simple human genetic problems and apply to current research in human genetics as well as family history.

- Assessment Plan
  - Assessment Tool: Set of common questions used on exams in all sections
  - Assessment Date: Winter 2016
  - o Course section(s)/other population: All sections
  - Number students to be assessed: all
  - How the assessment will be scored: item analysis of questions from unit exams
  - Standard of success to be used for this assessment: 70% of students will score at least 70%.
  - o Who will score and analyze the data: department 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)
2016		

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

# of students enrolled	# of students assessed
67	58

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.

Students may have been absent on the day of the assessment, or may have dropped the class by the time the assessment was administered.

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 sections of Bio 102 are on the main campus and are taught face-to-face.

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

Five questions related to this outcome were embedded in unit exams. Instructors compiled results and sent them to Anne Heise for analysis.

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

In 12 of 15, or 80% of, question-section results the standard of success was met with % correct ranging from 70 to 100%. In the 3 cases where the standard of success was not met, by chance the % correct in each case was 65%.

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

Students did very well on this outcome. Two of the five questions used to assess this outcome were Punnett Square problems, which students often enjoy once they figure out how to do them.

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.

I am satisfied with student performance on this outcome.

Outcome 5: Apply the principles of classical evolution to the modern molecular understanding of human evolution.

- Assessment Plan
  - o Assessment Tool: Set of common questions used on exams in all sections
  - Assessment Date: Winter 2016

- o Course section(s)/other population: All sections
- Number students to be assessed: all
- How the assessment will be scored: item analysis of questions from unit exams
- Standard of success to be used for this assessment: 70% of students will score at least 70%.
- Who will score and analyze the data: department 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)
2016		

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

# of students enrolled	# of students assessed
67	58

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.

All students in all sections were assessed. Students may have dropped or been absent on testing days.

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 sections are on main campus. Sections include day and evening.

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

Five standardized questions were used to assess this outcome. The questions were embedded in instructors' unit exams. Instructors sent Anne Heise item analyses for all questions.

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 standard of success was met overall, with overall success on the five questions ranging from 71 to 93%. For students in 1 section, only 47% of the students answered correctly on f 2 of the questions. If you consider the 3 sections and 5 questions per section, there are 15 section-question results. For this outcome, 6/15, or 40% of these results were below 70%.

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

Overall performance on this outcome was very good.

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.

More attention could be paid to the geographic origin of humans.

Outcome 6: Analyze current advances in human reproductive technology with respect to human health and human evolution.

- Assessment Plan
  - Assessment Tool: Set of common questions used on exams in all sections
  - Assessment Date: Fall 2013
  - o Course section(s)/other population: All sections
  - Number students to be assessed: Random sample of 10 students from each section
  - How the assessment will be scored: item analysis of questions from unit exams
  - o Standard of success to be used for this assessment: 75% of answers correct for each outcome.
  - o Who will score and analyze the data: department 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)
2016		

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

# of students enrolled	# of students assessed
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67	56
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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.

Students may have dropped or been absent on test day.

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 sections of Bio 102 are on the main campus and include day and p.m. sections.

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

Five standardized questions were used to assess this outcome. The questions were embedded in instructors' unit exams. Instructors sent Anne Heise item analyses for all questions.

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 standard of success was met for 4 of the 5 questions used to assess the outcome, with percent correct ranging from 86 to 100%. For the 5th question only 55% of students overall answered the question correctly. In two of the three Bio 102 sections the standard of success was not met for this question, with 24% answering correctly in 1 section, and 63% answering correctly in the other. (In the third section, 75% answered correctly.) With 5 questions and 3 instructors, there are 15 measurements of success. The standard was met in 13/15, or 87% of the measurements.

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

Overall performance on this outcome was excellent. In one section, the standard of success was not met for one question. The questions used to assess this outcome focused on pre-natal testing and genetic counseling. I'm pleased that students have a good grasp of this very important information.

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.

More attention might be paid to In-Vitro Fertilization as the question related to IVF had lower success than other questions.

Outcome 7: Recognize proper use of laboratory equipment such as the microscope. Recognize laboratory practices such as dissection, measurement, careful observation and analysis of experiments and the use of the scientific method.

#### • Assessment Plan

- Assessment Tool: Lab worksheets which include short answer, matching, diagram labeling and multiple choice questions
- Assessment Date: Winter 2016
- Course section(s)/other population: All
- Number students to be assessed: All
- How the assessment will be scored: item analysis
- Standard of success to be used for this assessment: 70% of students will score at least 70%.
- o Who will score and analyze the data: department 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)
2016		

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

# of students enrolled	# of students assessed
67	40

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.

I received no data from one of the 3 instructors.	
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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.

Bio 102 is taught face-to-face only, and only on the main campus. All sections were included in the assessment population.

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

Five questions were embedded in a multiple-choice lab quiz. Instructors compiled results and sent them to Anne Heise for analysis.

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

Out of 10 question-section results, the standard of success was met in 9, or 90%. In the 10th only 45% of students answered the question correctly.

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

Overall there was good performance on this outcome; however I did not receive any data from 1 section of Bio 102. The one question that was challenging was about whether the size of a specimen observed in a microscope will change if the magnification changes. This is kind of a trick question that will definitely stump some students unless it has been explicitly discussed in 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.

It can never hurt to emphasize microscope use and what is actually happening when you change the magnification you are observing with.

#### 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?

Overall it appears to me that the course is meeting the stated objectives of the class. I do plan to take a closer look at the master syllabus to see whether there is a way to update some of the reproductive technology info and perhaps add some information about gender identity.

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

I will share the results by email with the part-time faculty who teach the class, and I will share the results with full-time faculty at a department meeting.

# 3. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Objectives	I would like to update info on reproductive technology, look carefully at the amount of time spent on human evolution, and see whether we can add info on gender identity. Additionally I plan to consider how the course addresses lifestyle choices in human health and disease.	The class is a non-majors class intended to interest students in biology generally and human biology in particular. The course should look for opportunities to explore health and disease and ones choices in	2017
		gender identity.	

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

Three part-time instructors did all the data collection. They also helped choose the questions that were used for the assessment. They are: Wanda Gunderson, Anne

Kozal, and Mark Foret. Anne Heise crunched the numbers and filed the assessment report but the work could not have been done if Wanda, Anne K, and Mark had not worked with me.

## **III. Attached Files**

<u>Data analysis</u> Assessment questions

Faculty/Preparer: Anne Heise Date: 01/04/2017
Department Chair: Anne Heise Date: 01/04/2017
Dean: Kristin Good Date: 01/06/2017
Assessment Committee Chair: Ruth Walsh Date: 01/31/2017

I. I 1.	Course assessed: Course Discipline Code and Number: BIO 102 Course Title: Human Biology Division/Department Codes: LIFD/BIO
2.	Semester assessment was conducted (check one):    Fall 20_10
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.  All students from sections 05 and 06 were assessed. The number assessed on 4 unit exams varied from 33 to 39.
	Total enrolled in Bio 102 during Fall 2010 was 141 in 6 sections. Thus between 23 and 28% of the students were assessed.

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

We intended to take a sample from each section but the logistics were too much for me. There were 6 sections, all taught by part-time instructors with no lead instructor coordinating the crew. Some instructors used paper tests while others used Blackboard tests. I was too distracted to learn how to do an item analysis for the Bb tests, so I did not attempt to retrieve those data at the end of the term. I never received data from 2 of the sections.

#### II. Results

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.

None that I know of, really. The course has been taught by a revolving cast of part-time instructors and there has not been a full-time or long-term faculty person to monitor the course.

- 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.)
  - 1. Identify the parts and their function in human cells, and explain cell chemistry, cellular energetics and homeostasis.

Appropried by the Assessment Committee July 2011

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- 2. Identify the main parts of each of the 11 human organ-systems, the main function(s) of each part and the main disorders that affect each organ-system. Explain how these diseases change normal function, current means of diagnosis and treatment.
- 3. Recognize specific healthy lifestyle choices that can affect the normal functioning of the human body, and how these choices relate to the presence of specific diseases.
- 4. Solve simple human genetic problems and apply this skill to understand current research in human genetics as well as family history.
- 5. Apply the principles of classical evolution to the modern molecular understanding of human evolution.
- 6. Analyze current advances in human reproductive technology with respect to human health and human evolution.
- 7. Recognize proper use of laboratory equipment such as the microscope. Recognize laboratory practices such as dissection, measurement, careful observation and analysis of experiments and the use of the scientific method. NOTE: This is an outcome for Bio 102 but was not assessed. I do not know why.
- 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.)
  - Standard of success to be used for this assessment: 75% of answers correct for each outcome. (This is the standard of success for all outcomes.)
- 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.

Learning outcome	# questions used to assess	Average % answered correctly	Standard of success met?
"parts and their function in human cells"	4	78%	Yes
"human organ systems"	4	89%	Yes
"healthy lifestyle choices"	4	83%	Yes
"solve genetics problems"	5	82%	Yes
"human evolution"	4	80%	Yes
"reproductive technology"	3	77%	Yes

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: The students demonstrated broad knowledge over all of the assessed outcomes for Bio 102.

Weaknesses: The weakest performance was on a question concerning the part of the neuron that is affected in multiple sclerosis. Only 36% of students knew the right answer. The next weakest performance was on a question about In Vitro Fertilization: only 42% of students answered this question correctly.

#### 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.)

I will communicate these findings with our part-time instructors with success rates for each question used in the assessment. I expect they will spend a little more time in lecture and in lab on the questions with the lowest percent answered correctly. I do think the questions themselves are well worded and do not need to be re-written for greater clarity.

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.
e. Course assignments Change/rationale:
f. Course materials (check all that apply) Textbook Handouts Other:
g.  Instructional methods Change/rationale:
h. X Individual lessons & activities Change/rationale:

- Spend more time on reproductive technology in lecture and in lab. Rationale: most students did not know
  what In-vitro fertilization is. IVF is not a cutting-edge technology it is a core procedure to help certain
  couples conceive a child.
- Spend more time in lecture and lab on the anatomy and pathology of the nervous system. Rationale: well
  under half of students could answer a question about the part of a neuron that is affected in multiple
  sclerosis.
- Spend a little less time (maybe) covering the basics of some common human diseases such as diabetes and Down syndrome. Rationale: 100% of students answered questions on these topics correctly. I suspect that is because they either already knew the material, or they knew enough that they could master the basics very easily. Thus, an instructor could either use the time to cover these topics at greater depth or to cover topics students did not do well on such as IVF or nervous system pathologies.
- 3. What is the timeline for implementing these actions? Changes can begin in Winter 2012.

#### 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.

It's hard to say. Performance was generally quite high, and that could be because the questions were too easy. However, it could be because the students are learning just what we expect them to. I have not taught this class myself so I don't have any intuition as to whether the tool is measuring what we hope it measures.

## **WASHTENAW COMMUNITY COLLEGE**

## **COURSE ASSESSMENT REPORT**

2.	If the assessment tools were not effective, describe the changes that will be made for future assessments.
	Which outcomes from the master syllabus have been addressed in this report?  All SelectedX  If "All", provide the report date for the next full review:
	If "Selected", provide the report date for remaining outcomes:Summer 2012
Sub	mitted by:
Prin	nt: Anne Heise Signature Date: 11/23/11 Faculty/Preparer
Prin	nt: Marvin Boluyt Signature / Boluyt Date: 1/23/11
Prin	nt: Marty Showalter Signature M. Angle Date: 11/30/11

**I. Background Information** 

1.	Course assessed: Course Discipline Code and Number: Bio. 102 Course Title: Human Human Biology Division/Department Codes: MNBS/LIF
2.	Semester assessment was conducted (check one):  X Fall 2006 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): X Other (specify): Unit exams and Lab performance
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. Unit exams modified every semester
5.	Indicate the number of students assessed/total number of students enrolled in the course.  48 originally enrolled; as semester progressed, fewer students took unit exams since some has dropped the course. Since the questions on a given outcome often came from different exams, an average of the number of students answering the 5 questions for each outcome was taken.
6.	Describe how students were selected for the assessment. All taking the exam were assessed.
	Results  Briefly describe the changes that were implemented in the course as a result of the previous assessment.  Changes each semester based on exams and student feedback
2.	State each outcome (verbatim) from the master syllabus for the course that was assessed. All were assessed. ( $\leq$
<i>3</i> .	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. <i>Please attach a summary of the data collected.</i> Please see attached data summary. The results show that all outcomes were met at the 70% or above level.
4.	For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success. <i>Please attach the rubric/scoring guide used for the assessment.</i> Please see the attached data summary.
5.	Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in

assessment results.

### WASHTENAW COMMUNITY COLLEGE

## COURSE ASSESSMENT REPORT

Strengths: Students scored higher on questions requiring identification of terms or straight memorization.

Weaknesses: Students had more difficulty with conceptual questions, and those requiring the application of memorized material.

<b>III.</b>	Changes influenced by assessment results If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses. Case studies and more examples of the application of the material will be presented in lecture, to familiarize and stress the importance of critical thinking.
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. x Objectives/Evaluation on the Master Syllabus Change/rationale: Restate some objectives to stress critical thinking and to require students to explain and apply course concepts more in line with assessment questions.
	c. Course pre-requisites on the Master Syllabus Change/rationale:
	d.
	e. x Course assignments Change/rationale: Give more study questions dealing with case studies and applications of the facts they have learned.
	f. Course materials (check all that apply)  Textbook  Handouts Modify objectives as stated above.  Other:
	g. Instructional methods Change/rationale: Do more step-by-step analyses of real-life situations with students.
	h. Individual lessons & activities Change/rationale:
3.	What is the timeline for implementing these actions? Winter, 2007 semester
<b>IV</b> .	Future plans  Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this course.  The assessment results suggested putting more emphasis on critical thinking, an important component of all the outcomes for this course.
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: _Assess Fall term, 2009
	If "Selected", provide the report date for remaining outcomes:

## WASHTENAW COMMUNITY COLLEGE

## COURSE ASSESSMENT REPORT

Subm	itted by:					
Name:	Esta	Grossman	Esta Lus	ma_	Date: 1/8/06	5
	Print/Signature		/		/	
Depart	tment Chair:	Esta Gross	man Esta	Tresmai	Date: 1/8/0	6
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