DEPARTMENT  Natural Science / PE (Allied Health Support Courses)  

COURSES INCLUDED IN ASSESSMENT  BIO 240 , BIO 250, BIO 251  

Contact Faculty: Larry Crump, Ann Smith  

DIRECTIONS: Identify 3-5 skills or competencies for each program/program area. Complete and submit columns, A-E by October 15, 2003. By April 26, 2004, complete and submit columns, F-G and any modifications to columns, A-E. Submit all materials including the Assessment Schedule to the assessment representative in your department.  

MISSION STATEMENT: Joliet Junior College is committed to providing a quality education that is affordable and accessible to the diverse student population it serves. J.J.C. prepares its students for success in higher education and employment. It also provides a broad spectrum of transitional, extension, adult, continuing and work force education.  

DEPARTMENT GOAL(S)  __To prepare students to enter the nursing program__  

<table>
<thead>
<tr>
<th>A.) Student Competencies /Skills (related to program)</th>
<th>B.) What is the anticipated student outcome (desired level of competency)</th>
<th>C.) Assessment Instruments /Measures (can have more than one)</th>
<th>D.) Target Population</th>
<th>E.) Who is involved and identify their responsibilities?</th>
<th>F.) What were the results of the assessment? (Attach any relevant data or assessment instruments).</th>
<th>G.) How will the results be used to improve/modify the course or program? (delivery, content, sequencing, text, objectives, assessment, etc)</th>
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</table>
| Competency/Skill 1  
Students will understand and practice basic micro techniques and lab safety  
100% of students will practice basic safety procedures  
Lab Quiz #1 and Lab Practical #1  
Allied health students (pre-nursing, pre-vet tech)  
Microbiology faculty are all expected to teach, practice, and reinforce recommended techniques  
Lab Practical 1 – average 86.4%  
Lab Quiz – not applied universally  
Use lab quizzes more frequently to verify students’ understanding of exercises and activities  |
| Competency/Skill 2  
Students will acquire understanding of the relationships between microbes and human disease  
All students will earn 60% or more of the possible points for the semester – 70% for a “C”  
Unit Exams 1,3 and 4 as well as Lab Practicals #2 and #3  
Same  
Faculty will construct exams to test comprehension and critical thinking abilities  
Unit 1 average 70.5%  
Unit 3 average 68.45%  
Unit 4 average 63.5%  
Lab Practical 2 - average 85.7%  
Lab Practical 3 – average 88.5%  
Shift lecture emphasis to areas in which student performance has slipped below the 70% level; i.e., spend less time on metabolism and molecular genetics and more time on immunology and host-microbe interactions  |
| Competency/Skill 3  
Students will acquire an understanding of the basic biology of microorganisms  
100% of students  
Unit Exams 2 and 3 Lab Practicals #2 and #3  
Same  
Microbiology faculty  
Unit 2 average 69%  
Unit 3 average 68.4%  
Lab Practical 2 – average 85.7%  
Lab Practical 3 – average 86.2%  
Shift lecture emphasis to areas in which student performance has slipped below the 70% level; i.e., spend less time on metabolism and molecular genetics and more time on immunology and host-microbe interactions  |
### Competency/Skill 4
**Students who have completed BIO 240, 250, and 251 will have adequate knowledge and skills to succeed in the nursing program**

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<th>90% of students who receive a “C” or above in BIO 240, 250, and 251 will be adequately prepared for the nursing program</th>
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<tbody>
<tr>
<td>(1) Survey of nursing students</td>
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<tr>
<td>(2) Survey of nursing faculty</td>
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<tr>
<td>(3) Focus group with nursing faculty</td>
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**Nursing students**
- Microbiology faculty
- A&P faculty

**Results of (1) and (2) indicated desired level of competency is achieved**

**Focus group provided input on topics to cover in more detail to maintain 90% competency level or better**

We are awaiting additional input from the nursing faculty. They are reviewing our course outlines, objective lists, lab packets, etc., in order to provide feedback on which areas we could devote less time to, which areas need additional coverage, which muscles/bones should be/need not be on our lab packet lists, from their perspective.

### Competency/Skill 5
**Students will understand and apply the principles of cardiovascular regulation**

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<th>90% of students will correctly answer 80% of the questions on cardiovascular regulation on exam(s)</th>
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<tbody>
<tr>
<td>Unit Exam 2 and Final Exam</td>
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<td>BIO 251 students</td>
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</table>

**A&P faculty**

**Percentages of students who correctly answered 80% or more of the questions on cardiovascular regulation on Unit Exam 2 (randomized by instructor and semester):**
- 68%, 54%, 78%, 71%, 55%, 66%

**Final Exam was not included because it includes only a small number of applicable questions.**

We clearly need to increase our emphasis on this topic. Perhaps we can spend less time on heart and blood vessel structure and additional time on physiology, especially regulation and regulatory mechanisms. Additional software and group worksheets will also be incorporated into some sections.