**Course Prefix, Number, and Title: NRES 432 - Introduction to Environmental Toxicology**

**Section Number(s): 1001 LEC - 29184**

**Department: Biology**

**Instructor: Dr. Rita Pujari**

**Academic Year: 2020**

**Semester:Spring**

**Is this a GenEd class? No**

**Complete and submit your assessment report electronically to your department chair. As needed, please attach supporting documents and/or a narrative description of the assessment activities. You may use as many or as few outcomes as necessary.**

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| **Class/Course Outcomes** | **Assessment Measures** | **Assessment Results** | **Outcome Results Analysis** |
| In the boxes below, summarize the outcomes assessed in your class or course during the last year*.* If this is a GenEd class, include the appropriate GenEd objectives. | In the boxes below, summarize the methods used to assess course outcomes during the last year. Include the criterion you’ll use to judge whether or not students have achieved the expected outcome. | In the boxes below, summarize the results of your assessment activities during the last year. Include your judgement as to whether or not the criterion for student achievement has been met. | In the boxes below, please reflect on this outcome’s results and summarize how you plan to use the results to improve student learning. |
| Outcome #1:  1. Students will be able to demonstrate Lecture exam, quizzes, presentation  understanding of the concepts of toxicology  of organic and inorganic chemicals, and have  a basic understanding of the risk of these  substances to humans and other organisms. | Assessment Measure: Lecture exam, quizzes, presentation (spread throughout the semester)  Criterion for achievement: 60% and above | Results:  For Exam # 1  Avg Score - 81%  Highest score - 92%  Lowest score - 51.5%  Avg time - 2.00.00 hours  Criterion Met: Yes | 1. Results Analysis: There was just one student who scored 51.5% followed by 70% who was the second lowest score in the class.This one student needed help and accommodations which were provided to her and she did work hard within her capacity to increase her scores.The average scores were good and all the students in the class turned in their assignments/homeworks on time.  This class was restructured after the feedback I got last time I taught it and I have worked on the presentation material to make it easier and tried to link it to examples and I think it has worked very well.  Students were given a structure for presentation and all of them followed it earning them high scores in their presentations.  2. Action Plan: Continue doing it. |
| Outcome #2:  2. Students will be able to demonstrate  understanding of the mechanisms of exposure  of humans and other living systems to those  chemicals and ultimately to understand how  we can estimate risks associated with that  exposure. | Assessment Measure:  Lecture exam - 2 , quizzes, Essay  Criterion for achievement:60% and above | Results:  For Exam # 2  Avg Score - 81%  Highest score - 96%  Lowest score - 64%  SD - 7.99%  Avg time - 1.09.75 Minutes  Criterion Met: Yes | 1. Results Analysis: Students did well in all their Quizzes and exams - 2. Essays on Dose & CYP 450 were well written as expected from students in upper division classes and it demonstrated that they understood the concept of underlying mechanisms of dose concept and role of CYP 450 in Toxicology.  2. Action Plan: No changes are required as it has worked out very well. |
| Outcome #3:  3. Students will be able to demonstrate  understanding of the quantitative natures in  these assessments and be able to make  independent assessments of relative risk to  the different chemical threats in the  environment. | Assessment Measure:Lecture exam- 3 , quizzes, essays (Best  Toxicology paper of the semester)  Assignment: Select a narrowly focused topic of environmental interest which involves chemical  contamination and poses some degree of health risk to humans or the environment. In a short paper  (5 pages) discuss the following points.  1. Describe the problem  2. Discuss the toxicology and environmental chemistry of the chemical as it relates to the  problem.  3. Discuss methods for resolving the problem and the future outlook.  Criterion for achievement:60% and above | Results:  For Exam # 3  Avg Score - 81%  Highest score - 98%  Lowest score - 63%  SD - 4.8%  Avg time - 34.07 Minutes  Criterion Met: Yes | 1. Results Analysis:  All the students wrote excellent essays with proper in text citations and references. The topics were well chosen and very effectively documented the role of toxicants in the environment and the various mechanism or policies which can mitigate the toxic ant problems.  2. Action Plan: Continue without any changes as it has worked out very well. |

**Notes:**

The students in this class were better prepared for an upper division class like NRES 432. I am surprised that the average of the class remained consistent at 81% which is pretty high for any upper division class. The students worked very hard and diligently submitted all their work on time in spite of disruption of their daily schedules due to COVID 19.Transition of this class from “live” to “Blue Jeans” did not affect it too much because it only had lectures and had no labs associated with it. Overall I am happy with the way the topics/chapters that were finally chosen made a great story to tell throughout the semester. I enjoyed teaching them and hopefully they too enjoyed learning about different toxicants and their mechanisms.

I have reviewed this report:

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Department Chair Dean

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Vice President of Academic Affairs and Student Services

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_