UNIT REPORT

Forensic DNA and Serology - 01.Reviewer's Report - Academic Data

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Forensic DNA and Serology

Forensic DNA and Serology Mission

Mission:

The College’s mission includes the promotion and fostering of graduate education in pharmaceutical, clinical, administrative and psychosocial sciences. Students are educated to become distinguished contributors to pharmacy and related disciplines. These programs support that mission. The Forensic DNA and Serology certificate program enables the university to fulfill one of its fundamental purposes, teaching, on a far greater scale. The online format provides an opportunity to obtain a high quality, rigorous graduate certificate for students constrained by work and family commitments. Enrollment in the program provides resources for faculty development, seeding of research and program growth and graduate student support. Graduates can apply concepts and skills learned through the program to improve scientific and business operations and outcomes within their organizations. This strengthens the state economy, thereby increasing access to jobs and opportunities for others throughout the state.

Program Type and Level: Certificate – Graduate

Start: 07/01/2022

End: 06/30/2023

Program: Forensic DNA and Serology

Program CIP: 51.2099

Site Information: Online

If Other Site: :

Responsible Roles:

Oliver Grundmann (grundman@UFL.EDU), Jatinder Lamba (jatinderklamba@ufl.edu), Emely McKitrick (eelugard@ufl.edu)

PG 1 Broad Training in Forensic DNA and Serology

Goal: To provide students with a broad training in forensic and pharmaceutical science covering forensic DNA and serology.

Program: Forensic DNA and Serology

Evaluation Method:

80% or higher successful completion (grade B or higher) of all required courses. Content of curriculum evaluated yearly to ensure coverage of new concepts.

Results:

Of the **98** course completions toward the certificate, **71 were passing (87%).** Successful course completion is an effective measurement of this program goal because assignments evaluate the knowledge gained and applied to relevant case scenarios that allow students to transfer what they learned into their work setting.

Program Director and faculty reviewed content of curriculum and made appropriate updates as described in the Programmatic Use of Results

Attached Files

SLO 1 Knowledge

Outcome: Identify, explain, describe, and apply comprehensive knowledge related to forensic dna and serology.

SLO Area (select one): Knowledge (Grad)

Assessment Methods Checklist: Non-exam Course assignment(s)

Assessment Method Narrative:

Student performance on **Module 2 assignment in PHA6853 Biological Evidence and Serology**. The assignment embodies a cumulation of knowledge in the field of forensic DNA and Serology by using case scenarios to ask the students to review evidence and discuss how to properly work with it; this assignment is relative as it looks at all types of possible evidence including DNA swabs and other biological types of evidence. A score of 15 (out of 20) or above meets the criteria.

Student performance on **Module 9 assignment in VME6766 Laboratory QA/QC**. The assignment embodies critical piece of knowledge of individuals working in the field of forensic drug chemistry by asking students to produce a final report. Students have to complete a project involves the testing and comparison of quantitative results produced by two labs using two different analytical methods. A final report will need to be created following the completion of this project. A score of 15 (out of 20) or above meets the criteria.

Attached Files

SLO Not Assessed This Year:

Threshold of Acceptability: 80

How many students did you assess for this outcome?: 415

How many students met the outcome?: 384

What percentage of students met the outcome?: 93

Does this meet your threshold of acceptability?: Yes

Results:

384 of 415 students (92.5%) were evaluated by faculty as competent or higher on criterion-referenced assessments incorporated into the graduate certificate coursework. The assessment evaluates overall competency by incorporating core concepts of the Forensic DNA and Serology certificate.

Attached Files

Programmatic Use of Results Forensic DNA & Serology Certificate

Improvement Types Checklist: Modified one or more courses.

Use of Results for Improvement Narrative - Required:

Course materials, case studies and student performance were reviewed by the Program Director and Associate Dean for Research and Graduate Studies. Based on this review, the following improvements were made:

- New instructors that were hired last year continued in their respective courses, providing added expertise to the courses. This assists in offering students added knowledge and real-life experience by having instructors who are currently employed in the field and are up to date on new technologies. All instructors updated their respective courses to reflect updated technology in the field.
- Laboratory QAQC: course content went through a major update and assignments were also updated; quizzes were updated as well.
- The following course content was reviewed and updated to ensure it is up to date with industry standards and trends.
  - Biological Evidence and Serology
  - Blood Distribution and Spatter
  - Forensic Analysis of DNA
  - Mammalian Molecular Biology

Each of the graduate certificate programs consists of 15 graduate level course hours delivered online through four or five courses. Each 15-week course is divided into modules and each module has an assignment that is graded every 1-2 weeks. These assignments test the students' knowledge of the material and incorporate case studies and exercises designed to test the student's critical thinking abilities. This data is collected throughout the course and collated at the end of each semester. On completion of the certificate program, the student will have been evaluated through around 45 assignments and several case studies. This information enables us to determine each student's learning outcomes, and modify lessons as needed.

Program Results Not Reported This Year:

Program Results Reporting Complete: true

Forensic DNA and Serology

Providing Department: Forensic DNA and Serology

Assessment Cycle:

Program: Forensic DNA and Serology Graduate Certificate

College: Pharmacy

Analysis and Interpretation: End of Spring, Summer and Fall Semester

Improvement Actions: Completed by Start of Fall Semester

Dissemination: Completed by Start of Fall Semester

Year / SLOs	22-23	23-24	24-25	25-26	26-27
Knowledge					
SLO 1	X	X	X	X	X

SLO Assessment Rubric:

See **Assessment Method Narrative** for grading rubrics and course assignments. See **Results** for final course grades for the academic year.

Assessment Oversight:

Name	Department Affiliation	Email Address	Phone Number
Jatinder Lamba	Associate Dean Grad Ed	jatinderklamba@ufl.edu	(352) 273-6425
Oliver Grundmann	Assistant Dean of Lifelong Learning	grundman@UFL.EDU	(352) 246-4994
Nancy Toffolo	Medicinal Chemistry	ntoffolo@ufl.edu	(607) 227-6484

Methods and Procedures - Undergraduate and All Certificate Programs:

Each of the graduate certificates consists of 15 credits of graduate education delivered online through four or five courses. Each 15-week course is divided into modules and each module has an assignment that is graded every 1-2 weeks. These assignments test the students' knowledge of the material and incorporate case studies and exercises designed to test the student's critical thinking abilities. This data is collected throughout the course and collated at the end of each semester. On completion of the certificate program, the student will have been evaluated through around 45 assignments and several case studies. This information enables us to determine each student's learning outcomes, and modify lessons as needed.

PHA6853 Biological Evidence and Serology (Module 2) embodies a cumulation of knowledge in the field of forensic DNA and Serology by using case scenarios to ask the students to review evidence and discuss how to properly work with it; this assignment is relative as it looks at all types of possible evidence including DNA swabs and other biological types of evidence. A score of 15 (out of 20) or above meets the criteria.

Additionally, **VME6766 Laboratory QA/QC (Module 9)** also incorporated and addresses many concepts discussed in the Forensic DNA and Serology program. The assignment embodies critical piece of knowledge of individuals working in the field of forensic DNA and Serology by asking students to produce a final report. Students have to complete a project involves the testing and comparison of quantitative results produced by two labs using two different analytical methods. A final report will need to be created following the completion of this project. A score of 15 or higher (out of 20 points) meets the criteria.

See **Assessment Method Narrative** for grading rubrics and course assignments. See **Results** for final grades for the academic year.

Curriculum Map - Undergraduate Degree Programs:

n/a

Research :

n/a

SLO Measures - Graduate and Professional Programs:

Students are assessed by means of course embedded assignment.

Assessment Timeline - Graduate and Professional Programs:

SLO	Assessment 1	Assessment 2
SLO1: Knowledge	PHA 6853, module 2, spring and fall	VME 6766 module 9, spring, summer and fall