Request for Graduate Addition, Deletion, or Change of a Major or Degree

NOTE: Before you submit a request for a new Major or Degree, you must submit an INTENT TO PLAN form. Only after the INTENT TO PLAN goes through the approval process are you ready to submit this request for a new Major or Degree. For detailed information on new programs please see: http://wvhepcdoc.wvnet.edu/resources/133-11.pdf.

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one PDF copy without signatures to the Graduate Council Chair.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine/Graduate

Dept/Division: Clinical and Translational Science

Contact Person: Todd L. Green, Ph.D.

Phone: 6-3531

Degree Program: M.S. in Clinical and Translational Science

Check action requested: ☒ Addition ☐ Deletion ☐ Change

Effective Term/Year: Fall 20 16 Spring 20 ☐ Summer 20 ☐

Information on the following pages must be completed before signatures are obtained.

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/9/15
College Curriculum Chair	Date 9/9/15
College Dean	Date 9/9/15
Graduate Council Chair T Christofero	Date 10-11-15
Provost/VP Academic Affairs	Date
Presidential Approval	Date
Board of Governors Approval	Date

Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 2

Please provide a rationale for addition, deletion, change: (May attach separate page if needed)

ATTACHED

Please describe any changes in curriculum:
List course number, title, credit hours. Note whether each course is required or optional. Enter NONE if no change. (May attach separate page if needed)
ATTACHED

1. ADDITIONAL RESOURCE REQUIREMENTS: If your program requires additional faculty, equipment or specialized materials to ADD or CHANGE this major or degree, attach an estimate of the time and money required to secure these items.
NOTE: Approval of this form does not imply approval for additional resources. Enter NONE if not applicable.

NONE

2. NON-DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the request and any response received from them. Enter NONE if not applicable.

NONE

For catalog changes as a result of the above actions, please fill in the following pages.

Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 3

3. *Current* Catalog Description

Insert the *Current* Catalog Description and page number from the latest catalog for entries you would like to change. (May attach separate page if needed)

NOT APPLICABLE

4. *Edits* to the Current Description

Attach a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 4

5. *New* Catalog Description

Insert a 'clean' copy of your proposed description, i.e., no strikethroughs or highlighting included. This should be what you are proposing for the new description. (May attach separate page if needed)

ATTACHED

Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 5

Please insert in the text box below your change summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Major or Degree:
Type of Change: *(addition, deletion, change)*
Rationale:

Department: Clinical and Translational Science
Major or Degree: MS in Clinical and Translational Science
Type of Change: Addition
Rationale:
Rapid advances in technology, genomics and translational science will change the way medical care is given such that prevention and treatment of disease is specific to each individual patient. Much of personalized medicine is dependent on clinical and translational science (CTS). Translational science is the application of the results from the basic research on cells and animals to the treatment of patients - "bench to bedside". There is a need for scientists and clinicians who can direct teams in CTS and can establish collaboration among basic and clinical scientists from different disciplines. The goal of this program is to equip physicians in training and other biomedical scientists with the information and training they need to translate basic advances into improved patient care that will enhance the quality of life for patients in the Appalachian region, particularly southern West Virginia. Additionally, an MS degree in clinical and translational science is an absolute requirement for obtaining a National Institutes of Health Clinical and Translational Science Award (CTSA) or an Institutional Development Award. The latter award is restricted to certain qualifying states including West Virginia. Both awards range between $16-20 million over the five years of the program.

Graduates of this program will be able to lead clinical trials of new drugs and procedures in West Virginia, particularly in the rural regions of the state. The graduates of this program will also be strong applicants for positions in schools of medicine and medical centers that have Clinical and Translational Science Awards. Additionally, since 2007 there are 11 new LCME-accredited allopathic medical schools in the US, with several more in the applicant or candidate phase of accreditation. Due to the emphasis on translational and personalized medicine, these new schools will need faculty to teach and perform some research in this new discipline.

Although WVU and the University of Kentucky have an MS program in Clinical Research, they are over three hours and two hours driving distance respectively from the Marshall campus. This distance makes it unlikely that our medical students or residents would choose to apply for these degree programs. And their programs are not focused on our rural population.

RATIONALE

Rapid advances in technology, genomics and translational science will change the way medical care is given such that prevention and treatment of disease is specific to each individual patient. Much of personalized medicine is dependent on clinical and translational science (CTS). Translational science is the application of the results from the basic research on cells and animals to the treatment of patients - "bench to bedside". There is a need for scientists and clinicians who can direct teams in CTS and can establish collaboration among basic and clinical scientists from different disciplines. The goal of this program is to equip physicians in training and other biomedical scientists with the information and training they need to translate basic advances into improved patient care that will enhance the quality of life for patients in the Appalachian region, particularly southern West Virginia. Additionally, an MS degree in clinical and translational science is an absolute requirement for obtaining a National Institutes of Health Clinical and Translational Science Award (CTSA) or an Institutional Development Award. The latter award is restricted to certain qualifying states including West Virginia. Both awards range between $16-20 million over the five years of the program.

Graduates of the MS in CTS program will be able to lead clinical trials of new drugs and procedures in West Virginia, particularly in the rural regions of the state. The graduates of this program will also be strong applicants for positions in schools of medicine and medical centers that have Clinical and Translational Science Awards. Additionally, since 2007 there are 11 new LCME-accredited allopathic medical schools in the US, with several more in the applicant or candidate phase of accreditation. Due to the emphasis on translational and personalized medicine, these new schools will need faculty to teach and perform some research in this new discipline.

Although WVU and the University of Kentucky have an MS program in Clinical Research, they are over three hours and two hours driving distance respectively from the Marshall campus. This distance makes it unlikely that our medical students or residents would choose to apply for these degree programs. And their programs are not focused on our rural population.

No new faculty will have to be hired to teach in this program.

MS IN CLINICAL AND TRANSLATIONAL SCIENCE
PROPOSED CURRICULUM
(All courses are required.)

Fall Semester 1		
BMS 660	Communication Skills I	1 CR
BMS 680	Seminar	1 CR
CTS 600	Epidemiology and Biostatistics Used in Medical Research*	3 CR
CTS 620	Basic Clinical Research Operations*	3 CR
CTS 635	Writing and Peer Review of Scientific Publications*	1 CR
CTS 640	Clinical Trials Journal Club*	1 CR
Spring Semester 1		
BMS 661	Communication Skills II	1 CR
BMS 680	Seminar	1 CR
CTS 610	Study Design and Applied Statistics in Medical Research*	3 CR
CTS 614	Online Survey Tools, Relational and Data Warehousing, and Data Manipulation*	3 CR
CTS 630	Fundamentals of Team Science*	2 CR
CTS 640	Clinical Trials Journal Club*	1 CR
Summer Semester		
CTS 650	Rural Clinic Experience*	5 CR
Fall Semester 2		
BMS 680	Seminar	1 CR
CTS 625	Clinical Research Operations Lab*	5 CR
CTS 640	Clinical Trials Journal Club*	1 CR
CTS 660	Molecular Phenotype of Appalachian Disorders*	3 CR
Spring Semester 2		
BMS 680	Seminar	1 CR
CTS 625	Clinical Research Operations*	5 CR
CTS 640	Clinical Trials Journal Club*	1 CR
TOTAL HOURS		**43**

*New Course

MS IN CLINICAL AND TRANSLATIONAL SCIENCE
Course Titles, Course Directors, and Catalog Descriptions

NEW COURSES

CTS 600 - Epidemiology and Biostatistics in Medical Research (3 hours) - Todd Gress, MD
Fall
This is the practical application of epidemiology and biostatistics used in medical research. The course will primarily focus on the design and analysis of translational studies.

CTS 610 - Research Design and Biostatistics (3 hours) - Todd Gress, MD
Spring
Students will participate in an internship with faculty in providing consultation services in study design and statistics for medical research projects.

CTS 614 - Online Survey Tools, Relational and Data Warehousing, and Data Manipulation (3 hours) – Alfred Cecchetti, PhD
Spring
This course will introduce Redcap, explore relational DB terms, I2B2, a research data warehouse counting tool, and data manipulation using MS SQL queries, functions, procedures along with C# using LINQ.

CTS 620 - Basic Clinical Research Operations (3 hours) - Todd Davies, PhD
Fall
This course will focus on the operation of clinical research trials, providing an overview of the critical aspects involved in all stages of clinical trials.

CTS 625 - Clinical Research Operations Lab (5 hours) – Todd Davies, PhD
Fall, Spring
This course is a hands-on experience in Clinical Research trial operation. The course provides an opportunity for students to work with clinical research professionals on FDA-directed clinical trials.

CTS 630 - Fundamentals of Team Science (2 hours) - Darshana Shah, PhD
Spring
This course offers practical guidance about how best to engage in team science to pursue complex science questions and work effectively with team members.

CTS 635 - Writing and Peer Review of Scientific Publication (1 hour) - Darshana Shah, PhD
Fall
This course teaches students to become more effective writers of scientific publications.

CTS 640 - Clinical Trials Journal Club (1 hour) - Todd Green, PhD
Fall, Spring
This course will be presentations and discussions of the recent literature in the area of clinical trials. Fundamental principles and new discoveries will be emphasized.

CTS 650 - Rural Clinic Experience (5 hours) - Todd Gress, MD and Uma Sundaram, MD
Summer I
This course will acquaint students with the issues of rural community health and wellness, which will allow them to participate in clinical studies in a rural environment.

CTS 660 - Molecular Phenotype of the Appalachian Disorders (3 hours) - Richard Egleton, PhD
Fall
The course will describe the clinical presentations, epidemiology and molecular phenotype of disorders common in the Appalachian region.

EXISTING COURSES

BMS 660 - Communication Skills for the Biomedical Sciences I (1 hour) - Beverly Delidow, PhD
This course trains students to plan, prepare and deliver effective scientific presentations. Students are evaluated by attendance and participation.

BMS 661 - Communication Skills for the Biomedical Sciences II (1 hour) - Beverly Delidow, PhD
This course trains students to plan, prepare and deliver effective scientific presentations. Students are evaluated by attendance and participation.

BMS 680 - Seminar (1 hour) - Todd Green, PhD
This course teaches students how to prepare and deliver different types of scientific presentations. Students are evaluated by attendance.

NEW CATALOG DESCRIPTION

CLINICAL AND TRANSLATIONAL SCIENCE, M.S.

PROGRAM DESCRIPTION

The Clinical and Translational Science (CTS) Department in the Marshall University Joan C. Edwards School of Medicine offers a Master of Science (M.S.) degree in Clinical and Translational Science. The goal of this program is to equip physicians in-training and other biomedical scientists with the information and training they need to translate basic clinical advances into improved patient care that will enhance the quality of life for patients in the Appalachian region, particularly southern West Virginia.

Students will receive education in clinical trial design, epidemiology, statistics, informatics, and translational research. Graduates of this program will be able to lead clinical trials of new drugs and procedures in West Virginia, particularly in its rural regions. CTS graduates also will be strong applicants for positions in schools of medicine and medical centers that have Clinical and Translational Science Centers.

CLINICAL AND TRANSLATIONAL SCIENCE, M.S. ADMISSION POLICY

Applicants must meet both the requirements of Graduate Admissions and the Marshall University Joan C. Edwards School of Medicine Clinical and Translational Science Department Admissions Committee. Interested persons may contact the Office of Research and Graduate Education via e-mail at mubiomed@marshall.edu or learn more at *www.marshall.edu/bms/future-students/application-information*.

Entrance into the Clinical and Translational Science, M.S. program is restricted to fall semester only. Applicant materials should be received by March 1 in the Graduate Admissions Office to have the best chance for admission.

The complete application process includes:

1. Submission of the Marshall University Graduate College Application available online at www.marshall.edu/graduate. Select "Degree Seeking."
2. Receipt of the application fee (submitted online at the time of application).
3. Receipt of official transcript(s) from every institution attended documenting that the applicant has:
    a. Completed a bachelor's degree from an accredited institution of higher learning. The degree must be completed prior to matriculation.
    b. Achieved an overall Grade Point Average of 3.0 or better.
    c. Successfully completed one academic year of biology and its associated labs.

d. Successfully completed one academic year of general chemistry and its associated labs.
e. Successfully completed one academic year of organic chemistry and its associated labs.
f. Successfully completed one academic year of physics and its associated labs.
g. It should be noted that successful completion of undergraduate courses in biochemistry and cell biology are highly recommended, but not required.

4. Official letters
    a. Three letters of recommendation signed and on formal letterhead from individuals familiar with the applicant's relevant academic/professional performance (May be e-mailed as attachments)
    b. Written statement describing the applicant's educational and career goals, and why he or she should be admitted to the CTS, M.S. program. (May be e-mailed as an attachment)

Completed applications received in the Graduate Admissions Office by March 1 will be considered for admission. The CTS Admissions Committee will review completed applications then interview the top applicants.

WHO SHOULD APPLY

- Undergraduates.
- Medical students at an LCME-accredited U.S. medical school with a current GPA of at least a 3.0.
- Postgraduate medical residents or fellows who have an M.D. or D.O. with a graduating GPA of 3.0 or better (equivalent GPA for foreign medical graduates).
- Ph.D.'s in biomedical sciences or Pharm.D.'s with graduating GPAs of 3.0 or better.

Medical students will apply to the program during their third year of training. After completing the requirements for the MS degree, students will finish the fourth year of medical school.
Medical residents and fellows who are admitted into this program will need to integrate coursework into a reduced clinical workload, thus extending their postgraduate medical education by two years.

Duration of the Program

Students will attend full-time and complete the requirements for the Master of Science degree in two years. This includes attending during the summer between years one and two.

Degree Requirements

All students are required to meet the general requirements of the Graduate College for receipt of a master's degree. A minimum of 36 credit hours is required for a non-thesis degree. In addition, all students must pass a written and/or oral comprehensive exam.

All students will take the following courses.

<u>Fall Semester 1</u>	
BMS 660	Communication Skills I
BMS 680	Biomedical Sciences Seminar
CTS 600	Epidemiology and Biostatistics Used in Medical Research
CTS 620	Basic Clinical Research Operations
CTS 635	Writing and Peer Review of Scientific Publications
CTS 640	Clinical Trials Journal Club

<u>Spring Semester 1</u>	
BMS 661	Communication Skills II
BMS 680	Biomedical Sciences Seminar
CTS 610	Study Design and Applied Statistics in Medical Research
CTS 614	Online Survey Tools, Relational and Data Warehousing, and Data Manipulation
CTS 630	Fundamentals of Team Science
CTS 640	Clinical Trials Journal Club

<u>Summer Semester</u>	
CTS 650	Rural Clinic Experience

<u>Fall Semester 2</u>	
BMS 680	Biomedical Sciences Seminar
CTS 625	Clinical Research Operations Lab
CTS 640	Clinical Trials Journal Club
CTS 660	Molecular Phenotype of Appalachian Disorders

<u>Spring Semester 2</u>	
BMS 680	Biomedical Sciences Seminar
CTS 625	Clinical Research Operations
CTS 640	Clinical Trials Journal Club

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine | Dept/Division: Clinical and Translati | Alpha Designator/Number: CTS 600 | (•) Graded ( ) CR/NC

Contact Person: Todd W. Gress, MD, MPH | Phone: 304-691-8648

NEW COURSE DATA:

New Course Title: Epidemiology and Biostatistics in Medical Research

Alpha Designator/Number: C T S 6 0 0

Title Abbreviation: Epi&Biostat Med Research

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)
Practical application of epidemiology and biostatistics used in medical research. The course will primarily focus on the design and analysis of translational studies.

Co-requisite(s): | First Term to be Offered: Fall 2016

Prerequisite(s): Consent of instructor | Credit Hours: 3

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/9/15
Registrar 511401	Date 9/10/15
College Curriculum Chair Todd L. Gress	Date 9/9/15
Graduate Council Chair TChristofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: Medicine | Department/Division: Clinical and Translational Sci | Alpha Designator/Number:

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Todd Gress, Sutoidem Akpanudo, James Denvir

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

Listed on course syllabus (attached)

7. COURSE OUTLINE (May be submitted as a separate document)

Listed on course syllabus (attached)

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

Listed on course syllabus (attached)

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Lecture, Large and small group discussions

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Exams - multiple choice, essay, fill-in-the-blank, matching, short answer
Homework - problem-solving

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

1. Gordis, Leon, Epidemiology, 5th Edition, Elsevier
2. Altman, Douglas, Practical Statistics for Medical Research, 1st Edition, Chapman & Hall/CRC

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Clinical and Translational Sciences
Course Number and Title: CTS 600, Epidemiology and Biostatistics in Medical Research
Catalog Description: Practical application of epidemiology and biostatistics used in medical research. The course will primarily focus on the design and analysis of translational studies.
Prerequisites: Consent of instructor
First Term: Fall 2016
Credit Hours: 3

Epidemiology and Biostatistics used in Medical Research
CTS 600
Fall 2016 Course Syllabus

Course Director

Todd W. Gress, MD, MPH
Office: TGRI 256
Phone: 304-691-8648
Email: gress@marshall.edu

Required Textbooks

1. Altman DG. Practical statistics for medical research. 1st ed. London ; New York: Chapman and Hall; 1991.
2. Gordis L. Epidemiology. Fifth edition. ed. Philadelphia, PA: Elsevier/Saunders; 2014.

Classes

CTS 600 is a 3 credit hour course. Classes will be held from 1:00 - 2:50 PM on Tuesday and 1:00 – 1:50 PM on Thursday each week in the TGRI Conference Room. While not required, attendance at all classes is strongly recommended. There is a possibility that there will be changes in the course schedule. You will be notified in advance if any changes occur.

Examinations

Three examinations and a final examination will be given in this course, each during regularly scheduled class time. Only under **truly exceptional circumstances** will a student be permitted to take an examination at a time other than during the scheduled examination period. Exceptional circumstances include: death or serious illness in the immediate family, childbirth, illness requiring hospitalization and illness serious enough to warrant a written dispensation from a physician. Minor illnesses are **NOT** exceptional circumstances. A written doctor's excuse stating the nature of the illness will be required. If arrangements have not been made beforehand, the student **MUST** contact the course director within 24 hours after the scheduled exam period to discuss rescheduling the exam.

The format of each exam will consist of 75% multiple-choice and 25% of one or more of the following – essay, fill-in-the-blank, matching and short answer.

Homework

There will homework assignments throughout the course for a total of **40 points**.

Grades

Student performance is based on the scores achieved on three block exams, a final exam, and the homework. The exams will be based on 10 points/lecture except for the final exam. There are 35 session hours in the course. The point totals for each exam are as follows.

Exam 1	12 sessions	120 points
Exam 2	7 sessions lectures	70 points
Exam 3	7 sessions	70 points
Final Exam (Comprehensive)	9 sessions	100 points

Grades are calculated on a straight percentage scale, based on a total of **400 points (exams = 360 points, homework = 40 points)**. Final letter grades will be assigned as follows based upon the average percentage obtained on the three exams and the homework assignments. Grades will be posted to MUOnline as soon as reasonably possible after each exam.

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	Below 60%

Class Policies

By enrolling in this course, you agree to abide by the University policies listed below. Please read the full text of each policy by going to http://www.marshall.edu/academic- affairs and clicking on "Marshall University Policies".

Academic Dishonesty

Academic dishonesty will not be tolerated. Policy AA-12 defines academic dishonesty and describes the sanctions associated with it.

Inclement Weather

Policy GA-9 describes the policy on weather-related and/or emergency closings and delays. As this is an afternoon class, we will not be affected by delays. To find out if the University is closed, please call Audix at 696-6245.

Students with Disabilities Policy

Students with disabilities are required to prepare a notice either from the Help Center, Myers Hall, or Sandra Clements, PH 117, before a special accommodation can be honored. The link describing this policy is http://www.marshall.edu/disabled.

University Computing Services Acceptable Use Policy

MUBOG Policy IT-1 explains this policy (http://www.marshall.edu/president/board/policies.html).

Cell Phone Use

Cell phone use, including texting, will not be tolerated in the class, unless authorized by the instructor. If special circumstances exist such that a student needs to be in communication with family members or friends during a class, please inform the instructor before the class begins. Permission will be granted on a case-by-case basis and at the sole discretion of the instructor. If a student persists in using cell phones, including texting, after they have been asked to stop, the student will be removed from the class.

Course Objectives

After completing this course, students should have a thorough understanding of basic study design and biostatistics used in medical research. The student should be able to demonstrate their knowledge of:

1. The principles of epidemiology
2. Basic biostatistics
2. Measures of disease and statistics
3. Measures of test performance and statistics
4. Case control study design and statistics
5. Cohort study design and statistics
6. Clinical trials study design and statistics

Student Learning Outcomes	**How Outcome Will Be Practiced**	**How Outcome Will Be Assessed**
Demonstrate the principles of epidemiology	In-class discussion and problem-solving	Exam questions, Homework
Demonstrate use of basic biostatistics	In-class discussion and problem-solving	Exam questions, Homework
Demonstrate how to measure disease in populations	In-class discussion and problem-solving	Exam questions, Homework
Demonstrate how to medical tests are utilized in clinical practice	In-class discussion and problem-solving	Exam questions, Homework
Demonstrate the design of a case control study and the statistical expression of study results	In-class discussion and problem-solving	Exam questions, Homework
Demonstrate the design of a cohort study and the statistical expression of study results	In-class discussion and problem-solving	Exam questions, Homework
Demonstrate the design of a clinical trials study and the statistical expression of study results	In-class discussion and problem-solving	Exam questions, Homework

CTS 600 2016 SCHEDULE
Tues 1:00 – 2:50 PM
Thurs 1:00 – 1:50 PM

Session	Day	Date	Subject
1-2	Tuesday	August 23	Introduction to Epidemiology
3	Thursday	August 25	Problem-Solving in Epidemiology
4-5	Tuesday	August 30	Basic Biostatistics
6	Thursday	September 1	Problem-Solving in Biostatistics
7-8	Tuesday	September 6	Measures of Disease
9	Thursday	September 8	Biostatistics utilized in Measuring Disease
10-11	Tuesday	September 13	Measures of Test Performance
12	Thursday	September 15	Clinical Cases in Test Performance
	Tuesday	September 20	Exam 1
13	Thursday	September 22	Study Design: Case Control
14	Tuesday	September 27	Study Design: Case Control
15			Statistics used in Case Control Studies
16	Thursday	September 29	Statistics used in Case Control Studies
17-18	Tuesday	October 4	Journal Club: Case Control Studies
19	Thursday	October 6	Designing a Case Control Study
	Tuesday	October 11	Exam 2
20	Thursday	October 13	Study Design: Cohort Studies
21	Tuesday	October 18	Study Design: Cohort Studies
22			Statistics used in Cohort Studies
23	Thursday	October 20	Statistics used in Cohort Studies
24-25	Tuesday	October 25	Journal Club: Cohort Studies

Session	Day	Date	Subject
26	Thursday	October 27	Designing a Cohort Study
	Tuesday	November 1	Exam 3
27	Thursday	November 3	Study Design: Clinical Trials
28	Tuesday	November 8	Study Design: Clinical Trials
29			Statistics used in Clinical Trials
30	Thursday	November 10	Statistics used in Clinical Trials
31-32	Tuesday	November 15	Journal Club: Clinical Trials
33	Thursday	November 17	Designing a Clinical Trial
	Tuesday	November 22	Thanksgiving Break
	Thursday	November 24	Thanksgiving Break
34	Tuesday	November 29	Study Design: Other Study Designs
35	Thursday	December 1	Review
	Tuesday	December 6	Final Exam

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine | Dept/Division: Clinical and Translati | Alpha Designator/Number: CTS 610 | (•) Graded ( ) CR/NC

Contact Person: Todd W. Gress, MD, MPH | Phone: 304-691-8648

NEW COURSE DATA:

New Course Title: Study Design and Applied Statistics in Medical Research

Alpha Designator/Number: C T S 6 1 0

Title Abbreviation: S t u d y D e s i g n & S t a t s

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)
Students will participate in an internship with faculty in providing consultation services in study design and statistics for medical research projects.

Co-requisite(s): | First Term to be Offered: Spring 2017

Prerequisite(s): Consent of instructor | Credit Hours: 3

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/9/15
Registrar 511401	Date 9/10/15
College Curriculum Chair Todd L. Gress	Date 9/9/15
Graduate Council Chair T Christofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: Medicine | Department/Division: Clinical and Translational Sci | Alpha Designator/Number:

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Todd Gress, Sutoidem Akpanudo, James Denvir

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

Listed on course syllabus (attached)

7. COURSE OUTLINE (May be submitted as a separate document)

Listed on course syllabus (attached)

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

Listed on course syllabus (attached)

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Internship

The student will work with faculty of the Department of Clinical and Translational Sciences in the Study Design and Biostatistics Clinic that provides consultation services in study design and biostatistics to faculty and trainee performing medical research.

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Summative evaluation at midpoint and end of internship based on 9 point Likert Scale graded on 1) knowledge 2) problem solving 3) communication skills 4) professionalism

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

1. Gordis, Leon, Epidemiology, 5th Edition, Elsevier
2. Altman, Douglas, Practical Statistics for Medical Research, 1st Edition, Chapman & Hall/CRC
3. SPSS Statistics, IBM Corp.

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Clinical and Translational Sciences
Course Number and Title: CTS 610, Study Design and Applied Statistics in Medical Research
Catalog Description: Students will participate in an internship with faculty in providing consultation services in study design and statistics for medical research projects.
Prerequisites: Consent of instructor
First Term: Spring 2017
Credit Hours: 3

Epidemiology and Biostatistics used in Medical Research
CTS 610
Spring 2017 Course Syllabus

Course Director

Todd W. Gress, MD, MPH
Office: TGRI 256
Phone: 304-691-8648
Email: gress@marshall.edu

Required Textbooks

1. Altman DG. Practical statistics for medical research. 1st ed. London; New York: Chapman and Hall; 1991.
2. Gordis L. Epidemiology. Fifth edition. ed. Philadelphia, PA: Elsevier/Saunders; 2014.

Required Software

SPSS Statistics, IBM Corp.

Classes

CTS 610 is a 3 credit hour course. Classes will be held for 4 hours each week of the spring semester. This is an internship experience. Scheduling will be based on student availability each week. Attendance at all sessions is required. There is a possibility that there will be changes in the course schedule. You will be notified in advance if any changes occur.

Evaluations

No examinations are given during this internship experience. Students will receive both formative and summative evaluations by faculty at the midpoint and end of the internship.

Grading

This course is offered on a pass/fail basis, which is based on summative faculty evaluations. Summative evaluations will be based on a 9 point Likert scale (1-3 Unsatisfactory, 4-6 Satisfactory, and 7-9 Exceptional) and graded on knowledge, problem solving, communication, and professionalism. The student must achieve an overall rating of 4 or above to pass the course and receive credit hours.

Class Policies

By enrolling in this course, you agree to abide by the University policies listed below. Please read the full text of each policy by going to http://www.marshall.edu/academic- affairs and clicking on "Marshall University Policies".

Academic Dishonesty

Academic dishonesty will not be tolerated. Policy AA-12 defines academic dishonesty and describes the sanctions associated with it.

Inclement Weather

Policy GA-9 describes the policy on weather-related and/or emergency closings and delays. As this is an afternoon class, we will not be affected by delays. To find out if the University is closed, please call Audix at 696-6245.

Students with Disabilities Policy

Students with disabilities are required to prepare a notice either from the Help Center, Myers Hall, or Sandra Clements, PH 117, before a special accommodation can be honored. The link describing this policy is http://www.marshall.edu/disabled.

University Computing Services Acceptable Use Policy

MUBOG Policy IT-1 explains this policy (http://www.marshall.edu/president/board/policies.html).

Cell Phone Use

Cell phone use, including texting, will not be tolerated in the class, unless authorized by the instructor. If special circumstances exist such that a student needs to be in communication with family members or friends during a class, please inform the instructor before the class begins. Permission will be granted on a case-by-case basis and at the sole discretion of the instructor. If a student persists in using cell phones, including texting, after they have been asked to stop, the student will be removed from the class.

Course Objectives

Students will participate in a hands-on internship in providing consultation services in study design and statistics to faculty and trainees performing medical research. The students will work with a faculty member that staffs the Study Design and Biostatistics Clinic in the Department of Clinical and Translational Sciences. After completion of the course, the student should be able to demonstrate a working knowledge and practical application of the following:

1. Study Design, primarily Case control, cohort, and clinical trials
2. Biostatistics applied to each study design
3. Use statistical software in real time

Student Learning Outcomes	How Outcome Will Be Practiced	How Outcome Will Be Assessed
Demonstrate the design of a case control study and the statistical expression of study results	Hands-on application	Direct Observation
Demonstrate the design of a cohort study and the statistical expression of study results	Hands-on application	Direct Observation
Demonstrate the design of a clinical trials study and the statistical expression of study results	Hands-on application	Direct Observation

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine | Dept/Division: Clinical Translational | Alpha Designator/Number: CTS 614 | (•) Graded ( ) CR/NC

Contact Person: Alfred A Cecchetti, PhD | Phone: 304-691-1834

NEW COURSE DATA:

New Course Title: Online Survey Tools, Relational and Data Warehousing, and Data Manipulation

Alpha Designator/Number: C T S 6 1 4

Title Abbreviation: O n l i n e S u r v e y T o o l s

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)

This course will introduce Redcap, explore relational DB terms, I2B2, a research data warehouse counting tool, and data manipulation using MS SQL queries, functions, procedures along with C# using LINQ.

Co-requisite(s): None | First Term to be Offered: Spring 2017

Prerequisite(s): Consent of instructor | Credit Hours: 3

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/9/15
Registrar 511401	Date 9/10/15
College Curriculum Chair Todd L. Green	Date 9/9/15
Graduate Council Chair T Christofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: Medicine | Department/Division: Clinical Translational Science | Alpha Designator/Number: CTS 614

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Alfred A Cecchetti, PhD

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

listed on course syllabus (attached)

7. COURSE OUTLINE (May be submitted as a separate document)

listed on course syllabus (attached)

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

listed on course syllabus (attached)

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Web based self learning modules, lecture, large group discussion, small group instruction

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Build small survey tool projects (Redcap), Problem solving exercise using I2B2, develop small C# application using LINQ to access the database

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not Applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

CTS 614 Health Informatics

Course Title/Number	Online Survey Tools, Relational and Data Warehousing, and Data Manipulation/ CTS 614
SEMESTER/YEAR	Spring 2017
Days hours/week	Monday, Wednesday, Thursday 1-2 PM
Credit Hours	3
Location	Appalachian Clinical & Translation Science Institute (ACTSI)
Instructor	Alfred A Cecchetti, PhD
Office Phone	304-691-1834
email	cecchetti@marshall.edu
Office Hours	Wednesday 4-5:30 and by appointment
CFE/University Policies	By enrolling in this course, you agree to the Marshall University Policies and thus it is essential that you understand them. Please review these at the Academic Affairs website: http://muwww-new.marshall.edu/academic-affairs/policies/

Course Description from Catalog

This course will introduce Redcap, an online survey tool used by researchers to capture clinical and research data. The student will also explore relational database terms such as queries, functions and procedures that provide for the student methods that can be used to clean and manipulate data. The student will be introduced to I2B2, a NIH sponsored research data warehouse counting tool that enable clinical researchers to use existing clinical data for discovery research. **To use I2B2 the student must take this course.** Finally, the course will present C#, a tool that can be used to manipulate data outside of the database using LINQ to connect the application to the database. Those that are interested in using smartphone application technology to view data will find this of value.

Student Learning Outcomes identified in the course

(1) The student will be able to build an online survey sample tool using REDCAP, a free survey tool offered to the NIH research community.
(2) The student will be introduced to SQL queries, functions and procedures. These command tools used within the relational database will provide the student with the ability to clean and manipulate research data.
(3) The student will understand the fundamentals of a data warehouse, how it differs from a relational data warehouse, how both can be used in clinical as well as research applications
(4) The student will learn how to use I2B2, an NIH sponsored counting tool that enable clinical researchers to use existing de-identified clinical data for discovery research
(5) The student will be able to create a simple program in C# and connect that program to a data warehouse or relational table, which would allow the student to manipulate data using both client and web-based applications.

Evaluation

Exam I, Development of a survey tool using REDCap: 30%

Exam II, Understanding the fundamentals of relational and data warehouse concepts 10%

Exam III, Using SQL queries and I2B2 to extract data, 20%

Exam IV, Development of a C# application using LINQ 30%

Homework, 10%

Required Texts, Additional Reading, and other Course Materials

Visual Studio (students should have access by Microsoft's University site license)

MS SQL 2012 ((students should have access by Microsoft's University site license)

Readings as assigned

The following Scale will determine grades

- 90-100 A
- 80-89 B
- 70-79 C
- 60-69 D
- < 60 F

Course Resources

Since the students are not expected to become Database professionals, the focus will be on using online resources

(1) https://redcap.marshall.edu/redcap/index.php?action=training
(2) http://www.lynda.com/SQL-Server-tutorials/Querying-Microsoft-SQL-Server-2012/156769-2.html
(3) http://www.lynda.com/C-sharp-training-tutorials/1022-0.html
(4) http://xamarin.com/

Attendance Policy

The class meets weekly. While attendance is not required, the course is designed for students to interact with each other and thus students are encouraged to maintain regular attendance

Course Student Learning Outcomes	How Practiced in this Course	How Assessed this Course
Goal 1: The student will be able to build an online survey sample tool using REDCAP a free survey tool offered to the NIH research community. Objectives: Understand how to use a modular survey-building tool. How to develop cross-sectional and longitudinal survey forms.	• Lecture on relational and data Warehouse concepts • Videos and reading material at https://redcap.marshall.edu/redcap/index.php?action=training	Exam I, Development of a survey tool using REDCap: 30%
Goal 2: The student will be introduced to SQL queries, functions and procedures. The manipulation of data within the relational database will provide the student with the ability to clean and manipulate research data. Objectives: How to create functions and procedures that perform complex tasks	• Lecture • Homework, prepare and present some simple procedures and functions • Videos from Marshall University Lynda site. http://www.lynda.com/SQL-Server-tutorials/Querying-Microsoft-SQL-Server-2012/156769-2.html	Homework
Goal 3: The student will understand the fundamentals of a data warehouse, how it differs from a relational data warehouse, how both can be used in clinical as well as research applications	• Lecture • Homework: prepare a short paper on the differences between a relational database and a data warehouse. When are each used.	Exam II, Understanding the fundamentals of a relational querying and data warehouse concepts 20% Homework
Goal 4: The student will learn how to use I2B2, and NIH sponsored tool that counting tool that enable clinical researchers to use existing clinical data for discovery research	• Lecture • I2B2 User Guide • Hands on experience	Exam III, Using SQL queries and I2B2 to extract data, 20% Homework
Goal 5: The student will be able to create a simple program in C# and connect that program to a data warehouse, which would allow the student to manipulate data using both client and web-based applications.	• Lecture • http://www.lynda.com/C-sharp-training-tutorials/1022-0.html • We will attempt to create a smartphone application using Xamarin	Exam IV, Development of a C# application using LINQ 30% Homework

ADDITIONAL POLICIES

1. **Accountable material and preparation.** Class sessions are conducted based on the expectation that students complete all appropriate readings and/or assignments as scheduled. This facilitates better questions, discussion, and learning. Exam questions may be based on both out-of-class assignments and material presented in class.
2. **Electronic devices.** Electronic devices (smartphones, PDAs, laptops, etc.) can be a valuable asset in the classroom. However, if used inappropriately, these can be a distraction. Students should utilize these devices in class only for educational purposes, and are requested to be unobtrusive in their use (including silencing cell phone ringers). Please note that social media, "tweeting", and real time chat are not appropriate in the classroom unless part of a classroom exercise.
3. Intellectual property notice: Many materials used in this class are copyrighted, while others represent content and product of the instructor and/or Marshall University. While students may share notes and engage in discussions regarding their work in the course, recording or distribution of course content is not permitted (unless permitted by the instructor). Students should enquire of the instructor for clarification regarding exceptions.
4. Academic integrity: Students should refer to the Student Handbook to ensure understanding of policies concerning academic honesty and integrity, including plagiarism and cheating. Unless specified by the instructor, no electronic devices, notes, or other non-approved assistance is permitted during any exam.
5. Disability accommodation. The instructor will endeavor to accommodate students with a disability. It is requested that the student notify the instructor at the earliest possible time regard anticipated assistance, which may be required.
6. Vigilance. Students are expected to access their MU e-mail address and MU On-line regularly for information related to the course.
7. Missed classes: If you are absent, it is the student's responsibility to find out from a classmate what notes, handouts, assignments, or other course material you missed and to arrange to receive those.
8. Make-up assignments and exams: Students who miss scheduled exams or assignments may make them up in the event of a University-excused absence or medical emergency. In any other situation, a student may request a make-up, but if the request is granted, such may be a different exam or assignment.
9. Office hours: As posted and by appointment.
10. Inclement Weather: If inclement weather results in class cancellation, students are directed to review posted material posted for that session, as we will endeavor to maintain the planned course schedule, including exams, which may include that content.
11. Reasonable change with notice. In order to facilitate unforeseen circumstances, as well as act in the best interest of students and the university, the terms and schedule in this syllabus are subject to prudent change with reasonable notice

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department Clinical Translational Science
Course Number and Title: CTS 614, Online Survey Tools, Relational and Data Warehousing, and Data Manipulation
Catalog Description: This course will introduce Redcap, explore relational DB terms, I2B2, a research data warehouse counting tool, and data manipulation using MS SQL queries, functions, procedures along with C# using LINQ.
Prerequisites: Consent of instructor
First Term Offered: Spring 2017
Credit Hours: 3

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine | Dept/Division: CTS | Alpha Designator/Number: CTS620 | (•) Graded ( ) CR/NC

Contact Person: Todd Davies | Phone: 304 691-1795

NEW COURSE DATA:

New Course Title: Basic Clinical Research Operations

Alpha Designator/Number: C T S 6 2 0

Title Abbreviation: B a s i c R e s e a r c h O p e r a t i o n s

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)
This course will focus on the operation of clinical research trials, providing an overview of the critical aspects involved in all stages of clinical trials.

Co-requisite(s): none | First Term to be Offered: Fall 2016

Prerequisite(s): None | Credit Hours: 3

Course(s) being deleted in place of this addition (*must submit course deletion form*): none

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/9/15
Registrar 5/1401	Date 9/10/15
College Curriculum Chair Todd L. Mann	Date 9/9/15
Graduate Council Chair TChristofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: Medicine | Department/Division: CTS | Alpha Designator/Number: CTS620

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Todd Davies

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See Attached Syllabus

7. COURSE OUTLINE (May be submitted as a separate document)

See Attached Syllabus

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

See Attached Syllabus

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Lecture: Faculty will present instruction/verbal discourse covering the basics of epidemiology, clinical aspects and molecular aspects of each disorder.
Self-Directed Learning/Independent learning: Selected topics will be introduced by independent learning through faculty-assigned guided reading. Students are expected to use these up-front readings to prepare for subsequent small group discussions.
Small Group Discussion: A learning format in which the students are provided the opportunity to exchange opinions, observations, or ideas among the group to analyze, clarify, or reach conclusions about issues, questions or problems.

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

The course will be split into three sections each of 5 weeks duration for a total of 15 weeks (see attached schedule). An exam will be held at the end of each block, there are also several homework assignments that contribute to the grade, as well as class participation.

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not Applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

see attached

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Clinical and Translational Sciences
Course Number and Title: CTS 620 Basic Clinical Research Operations
Catalog Description: This course will focus on the operation of clinical research trial, providing an overview of the critical aspects involved in all stages of clinical trials.
Prerequisites: none
First Term Offered: Fall 2016
Credit Hours: 3

Syllabus
CTS620
Fall Semester
Basic Clinical Research Operations
3 Credit Hours

Course Description
This course will focus on the operation of clinical research trials. The course will provide an overview of the critical aspects of operating a clinical research trial including: contracting, budgeting, patient recruitment, source documentation, data entry and recovery, trial coordination in a clinical setting and the ethics of research on human subjects.

Course Director
Todd Davies, PhD (daviest@marshall.edu) 304.691.1795

Course Objectives
The goal of this course will be to provide an introduction to clinical research trial operation. By the end of the course the student will be able to:

1. Identify the critical aspects of a sponsor contract and budget
2. Articulate the critical aspects of the Belmont Report and ethical ramifications of research on human subjects
3. Create trial logs and screening materials
4. Develop source documentation for use in trial coordination
5. Complete clinical research documentation in accordance with FDA regulation CFR 21 part 11

Assessment of Objectives

Objective	Practice of Objective	Assessment Method
Identify the critical aspects of a sponsor contract and budget	Lecture, Reading Assignment	Exam, homework
Articulate the critical aspects of the Belmont Report and ethical ramifications of research on human subjects	Lecture, Reading Assignment, On-line CITI course	Exam, CITI certification
Create trial logs and screening materials	Discussion, Homework	Exams, homework
Develop source documentation for use in trial coordination	Lecture, Reading Assignment, Discussion	Exam, homework
Complete clinical research documentation in accordance with FDA regulation CFR 21 part 11	Lecture, Reading Assignment, Discussion	Exam, Homework, Group discussion

Time and Location
Unless otherwise indicated in the Curriculum Schedule, class meets for lectures and discussions in the TGRI Conference Room on Tuesdays and Thursdays from 10:00 – 11:30.

Required Textbooks
There are no required textbooks for this class. The instructor will supply required reading material from regulatory documentation and current scientific literature.

Teaching Methods
A number of teaching approaches will be employed in this course.
Lecture: Faculty will present instruction/verbal discourse covering the basics of epidemiology, clinical aspects

and molecular aspects of each disorder.
Self-Directed Learning/Independent learning: Selected topics will be introduced by independent learning through faculty-assigned guided reading. Students are expected to use these up-front readings to prepare for subsequent small group discussions.
Small Group Discussion: A learning format in which the students are provided the opportunity to exchange opinions, observations, or ideas among the group to analyze, clarify, or reach conclusions about issues, questions or problems.

Duration
The course will be split into three sections each of 5 weeks duration for a total of 15 weeks (see attached schedule). An exam will be held at the end of each block.

Assessment
Performance will be assessed via four primary methods, exam, homework and CITI certification and class participation (see schedule table for breakdown). Examinations will cover lecture material, and self-guided and independent learning activities.

Grading

Final course grades will be assigned using the following percentages:
A: 90 and above
B: 80 to 89.99
C: 70 to 79.99
F: 69.99 and below

Attendance
Attendance at all scheduled course activities is expected. **Attendance at discussions is required and no makeup will be available for any missed quizzes**.

Class Policies
University policies can be viewed at http://www.marshall.edu/president/board/policies.html.

Academic Dishonesty
Academic dishonesty will not be tolerated. Policy AA-12 defines academic dishonesty and describes the sanctions associated with it.

Inclement Weather
Policy GA-9 describes the policy on weather-related and/or emergency closings and delays. As this is an afternoon class, we will not be affected by delays. To find out if the University is closed, please call Audix at (304) 696-6245.

Students with Disabilities Policy
Students with disabilities are required to prepare a notice either from the Help Center, Myers Hall, or Sandra Clements, PH 117, before a special accommodation can be honored. The link describing this policy is http://www.marshall.edu/disabled.

University Computing Services Acceptable Use Policy
MUBOG Policy IT-1 explains this policy (http://www.marshall.edu/president/board/policies.html).

Cell Phone Use
Cell phone use, including texting, will not be tolerated in the class, unless authorized by the instructor. If special circumstances exist such that a student needs to be in communication with family members or friends during a class, please inform the instructor before the class begins. Permission will be granted on a case-by-case basis and at the sole discretion of the instructor. If a student persists in using cell phones, including texting, after they have been asked to stop, the student will be removed from the class.

Proposed Schedule

Week	Topic	Assignment
	Block One	
1	Introduction to Course and Overview of the Components of Clinical Research Trials	
2	Critical Contract Elements	
3	Clinic Trial Budgets	
4	NIH Contracts	Take Home Exam 1
5	Patient Screening and Recruitment	**Exam 1 due [20%]**
	Block Two	
6	Vulnerable Populations	
7	Ethics of Clinical Trials I	
8	Ethics of Clinical Trials II	
9	GCP Training	CITI Certification
10	**EXAM 2 [20%]**	**Certification Due [10%]**
	Block Three	
11	Source Documentation I	
12	Source Documentation II	
13	Data Collection	
14	HIPAA Training	**Homework Due [15%]**
15	**EXAM 3 [20%]**	

Grade Percentage indicated in [brackets]
Class Participation [15%].

Bibliography:

- Nuremberg Code (1948)
  - *"Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No. 10"*, Vol. 2, pp. 181-182. Washington, D.C.: U.S. Government Printing Office, 1949.
- Declaration of Helsinki (1964, 2013)
  - *World Medical Association Declaration of HelsinkiEthical Principles for Medical Research Involving Human Subjects*. World Medical Association. *JAMA*. 2013;310 (20):2191-2194. doi:10.1001/jama.2013.281053
- Belmont Report (1979)
- ICH E6 Guideline for GCP
- DHHS Regulations (45 CFR 46)
- FDA Regulations (21 CFR 50, 56, 312, 812 ...) CFR21 part 11

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine | Dept/Division: CTS | Alpha Designator/Number: CTS 625 | ○ Graded ◉ CR/NC

Contact Person: Todd Davies | Phone: (304) 691-1795

NEW COURSE DATA:

New Course Title: Clinical Research Operations Lab

Alpha Designator/Number: C T S 6 2 5

Title Abbreviation: C l i n i c a l o p e r a t i o n s l a b

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)
This course is a hands on experience in Clinical Research trial operation. The course provides an opportunity for students to work with clinical research professionals on FDA- directed clinical trials.

Co-requisite(s): none | First Term to be Offered: Fall 2017

Prerequisite(s): CTS620 | Credit Hours: 5

Course(s) being deleted in place of this addition (*must submit course deletion form*): none

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/5/15
Registrar 511401	Date 9/10/15
College Curriculum Chair Todd L. Thran	Date 9/9/15
Graduate Council Chair J Christofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: Medicine | Department/Division: CTS | Alpha Designator/Number: CTS625

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Todd Davies

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See Attached Syllabus

7. COURSE OUTLINE (May be submitted as a separate document)

See Attached Syllabus

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

See Attached Syllabus

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

This course will be taught using a on-on -one mentoring approach and via experiential learning.

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Evaluation is based on the observation of following the appropriate reporting and documentation for clinical trials as outlined by federal law.

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not Applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

see attached

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Clinical and Translational Sciences
Course Number and Title: CTS 625 Clinical Research Operations Lab
Catalog Description: This course is a hands on experience in Clinical Research trial operation. The course provides an opportunity for students to work with clinical research professionals on FDA-directed clinical trials.
Prerequisites: CTS620
First Term Offered: Fall 2017
Credit Hours: 5

Syllabus
CTS625
Fall Semester
Clinical Research Operations Lab
5 Credit Hours

Course Description
This course is a hands-on practicum focused on the operation of clinical research trials. The course will - provide opportunity for students to work with clinical and research professionals on real FDA-directed clinical research trials.

.

Course Director
Todd Davies, PhD (daviest@marshall.edu) 304.691.1795

Course Objectives
The goal of this course will be to provide hands-on experience in clinical research trial operation. By the end of the course the student will:

1. Shadow Clinical Research Coordinators during enrollment and consenting
2. Utilize informatics and Electronic Medical Records to screen patients for specific trials
3. Complete all necessary trial logs
4. Assist in completion of regulatory documentation
5. Conduct data entry protocols

Assessment of Objectives

Objective	Practice of Objective	Assessment Method
Shadow Clinical Research Coordinators during enrollment and consenting	Shadowing of Clinical Research Coordinators during trial specific enrollment. Followed by student performing supervised trial enrollments and consenting	Performance assessment of student conducting enrollment and consenting procedures within HIPAA guidelines
Utilize informatics and Electronic Medical Records to screen patients for specific trials	Using informatics to screen for appropriate patients for a trial under Clinical Research Coordinators supervision	Assessment of proper identification of trial specific patients
Complete all necessary trial logs	Maintaining of appropriate trial logs, daily assessment by Clinical Research Coordinators	Students will be assessed on completeness, accuracy and neatness of trial logs
Assist in completion of regulatory documentation	Filling out of appropriate regulatory paperwork associated with a clinical trial	Students will be assessed on completeness, accuracy and neatness of regulatory forms as well as completion of the IRB submission and reporting process.
Conduct data entry protocols	Enter of trial data into computer based repositories.	Students will be assessed on completeness and accuracy of trial data and compliance with HIPAA and HITECH regulations

Time and Location
This class is an active practicum that requires students to spend 10hrs a week developing hands-on skills in clinical trials operations.

Required Textbooks
There are no required textbooks for this class. The instructor will supply required reading material from regulatory documentation and current scientific literature.

Teaching Methods
This class will be taught using a one-on-one mentoring approach.

Duration
The course will be for a total of 15 weeks, the schedule will be agreed by the mentor and student on a weekly basis.

Assessment

The students will be assessed based on their performance of the various tasks during clinical trials. Each student will be assigned to a Clinical Research Coordinator who will observe and supply feedback on all procedures. Students will be under the supervision of the Director for Research Development and Translation, a certified Clinical Research Coordinator, and the Assistant Dean for Clinical Research, and will receive feedback and performance assessment form each of these individuals..

Grading

This class is a credit no credit class.

Attendance
Attendance at all scheduled course activities is expected.

Class Policies
University policies can be viewed at http://www.marshall.edu/president/board/policies.html.

Academic Dishonesty
Academic dishonesty will not be tolerated. Policy AA-12 defines academic dishonesty and describes the sanctions associated with it.

Inclement Weather
Policy GA-9 describes the policy on weather-related and/or emergency closings and delays. As this is an afternoon class, we will not be affected by delays. To find out if the University is closed, please call Audix at (304) 696-6245.

Students with Disabilities Policy
Students with disabilities are required to prepare a notice either from the Help Center, Myers Hall, or Sandra Clements, PH 117, before a special accommodation can be honored. The link describing this policy is http://www.marshall.edu/disabled.

University Computing Services Acceptable Use Policy
MUBOG Policy IT-1 explains this policy (http://www.marshall.edu/president/board/policies.html).

Cell Phone Use
Cell phone use, including texting, will not be tolerated in the class, unless authorized by the instructor. If special circumstances exist such that a student needs to be in communication with family members or friends during a class, please inform the instructor before the class begins. Permission will be granted on a case-by-case basis and at the sole discretion of the instructor. If a student persists in using cell phones, including texting, after they have been asked to stop, the student will be removed from the class.

Bibliography:

- Nuremberg Code (1948)
  - *"Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No. 10"*, Vol. 2, pp. 181-182. Washington, D.C.: U.S. Government Printing Office, 1949.
- Declaration of Helsinki (1964, 2013)
  - *World Medical Association Declaration of HelsinkiEthical Principles for Medical Research Involving Human Subjects*. World Medical Association. *JAMA*. 2013;310 (20):2191-2194. doi:10.1001/jama.2013.281053
- Belmont Report (1979)
- ICH E6 Guideline for GCP
- DHHS Regulations (45 CFR 46)
- FDA Regulations (21 CFR 50, 56, 312, 812 ...) CFR21 part 11

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine | Dept/Division: Clinical Translational | Alpha Designator/Number: CTS-630 | (•) Graded ( ) CR/NC

Contact Person: Darshana Shah, PhD | Phone: 304-691-8639

NEW COURSE DATA:

New Course Title: Fundamentals of Team Science

Alpha Designator/Number: C T S 6 3 0

Title Abbreviation: F U N D A O F T E A M S C I E N C E

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)
This course offers practical guidance about how best to engage in team science to pursue complex science questions and work effectively with team members.

Co-requisite(s): None | First Term to be Offered: Spring 2017

Prerequisite(s): Consent of instructor | Credit Hours: 2

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/9/15
Registrar 5/14/01	Date 9/10/15
College Curriculum Chair Todd L. Green	Date 9/9/15
Graduate Council Chair J Christofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: Medicine | Department/Division: Clinical Translation Science | Alpha Designator/Number: CTS 630

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Darshana Shah, PhD

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

Listed on course syllabus (attached).

7. COURSE OUTLINE (May be submitted as a separate document)

Listed on course syllabus (attached).

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

Listed on course syllabus (attached).

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Web based self learning modules, large group discussion, small group discussion

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Homework-readings, and/or written assignments,
Exam- Problem solving exercise, Team Project

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

1. Salas, E. & Lacerenza, C. (2013, July 1). Team training for team science: Improving interdisciplinary collaboration. In H. Valantine (Chair), Workshop on science team dynamics and effectiveness/Education and training for team science. Washington, DC: Institute of Medicine/ National Academy of Sciences. Available at http://nationalacademies.org/teamscience.
2. Hall K, Vogel A., Stipelman B., Stokols D., Morgan G., Gehlert S.. A Four-Phase Model of Transdisciplinary Research: Goals, Team Processes, and Strategies. Translational Behavioral Medicine. 2012 Dec;2(4).
3. Hall K, Stokols D, Stipelman BA, Vogel AL, Feng A, Masimore B, Morgan G, Moser RP, Marcus SE, and Berrigan D.Assessing the Value of Team Science: A Study Comparing Center- and Investigator-Initiated Grants. American Journal of Preventive Medicine. 2012 Feb;42 (2):157-163.
4. Falk-Krzesinski H, Contractor, N., Fiore, S.M., Hall, K.L., Kane, C., Keyton, J., Klein, J.T., Spring, B.,Stokols, D., Trochim, W.. Mapping a Research Agenda for the Science of Team Science. Research Evaluation. 2011;20:143-156.
5. Falk-Krzesinski, H.J., Börner, K., Contractor, N., Fiore, S.M., Hall, K.L., Keyton, J., Spring, B., Stokols, D., Trochim, W., and Uzzi, B. (2010). Advancing the Science of Team Science. Clinical and Translational Sciences 3, 263-266.
6. Börner, K., Contractor, N., Falk-Krzesinski, H.J., Fiore, S.M., Hall, K.L., Keyton, J., Spring, B., Stokols, D., Trochim, W., and Uzzi, B. (2010). A Multi-Level Systems Perspective for the Science of Team Science. Science Translational Medicine 2, cm24.

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Clinical and Translational Science
Course Number and Title: CTS 630, Fundamentals of Team Science
Catalog Description: This course offers practical guidance about how best to engage in team science to pursue complex science questions and work effectively with team members.
Prerequisites: Consent of instructor
First Term Offered: Spring 2017
Credit Hours: 2

COURSE TITLE/NUMBER	Fundamentals of Team Science CTS-630
SEMESTER/YEAR	Spring 2017
DAYS/TIME	Two hours /week- Thursday 1-3PM
CREDIT HOURS	2
LOCATION	Appalachian Clinical & Translation Science Institute (ACTSI)
INSTRUCTOR	Darshana Shah, PhD
OFFICE/PHONE	691-8639
E-MAIL	Shah@marshall.edu (email preferred)
OFFICE HOURS	Wednesday 4- 5:30 and by appointment
CFE/UNIVERSITY POLICIES	By enrolling in this course, you agree to the *Marshall University Policies*, and thus it is essential that you understand them. Please review these at the Academic Affairs website: http://muwww-new.marshall.edu/academic-affairs/policies/

COURSE DESCRIPTION: FROM CATALOG

Addressing complex problems in science requires the high degree of cross-disciplinary collaboration, referred to as "Team Science". This course offers practical guidance about how best to engage in team science to: pursue complex science questions, work effectively with team members, and produce high impact research outcomes that help meet society's needs.

STUDENT LEARNING OUTCOMES IDENTIFIED IN THIS COURSE:

Upon completion of the course, students will:

(1) Understand the Science of Team Science
(2) Able to assemble an effective research Team
(3) Able to launch and lead a functional research Team
(4) Able to evaluate a Team

COURSE STUDENT LEARNING OUTCOMES	HOW PRACTICED IN THIS COURSE	HOW ASSESSED IN THIS COURSE
Goal 1: Understand the Science of Team Science Objectives: *History, Definitions, Evidence* • Differentiate between multidisciplinary, interdisciplinary, and transdisciplinary research	Lecture Reading Assignment	Individual Knowledge Tests/ Team knowledge Test- Exam-1 Homework

Goal 2: Assemble an effective Research Team Objectives: • Describe factors that contribute to the success of a scientific team • Discuss factors to consider and steps to take when evaluating others as potential collaborators • Describe factors to consider when deciding whether to join an interdisciplinary research team	Large & Small group discussion	Online Modules – pre- and post-tests Exam-1
Goal 3: Able to launch and lead a functional Research Team Objectives • Learning how to communicate effectively in the sciences and technology • Demonstrate an understanding of how meta-cognitive processes are important for team functioning • Assessing and building personal leadership capabilities	Lecture Small group exercise	Individual Knowledge Tests/ Team Knowledge Test Exam-2 Homework

Goal 4: Able to evaluate a Team Objectives; • Discuss outcome method and tools for team evaluation	• Lecture • Presentation and discussion of interviews with science teams	Written assignment • Formulate a plan to evaluate a scientific team

REQUIRED TEXTS, ADDITIONAL READING, AND OTHER MATERIALS

No Required Text Readings as assigned

RECOMMENDED MATERIALS

Additional recommended readings/sources:

1. Salas, E. & Lacerenza, C. (2013, July 1). Team training for team science: Improving interdisciplinary collaboration. In H. Valantine (Chair), Workshop on science team dynamics and effectiveness/Education and training for team science. Washington, DC: Institute of Medicine/National Academy of Sciences.
   http://nationalacademies.org/teamscience

2. Hall K, Vogel A., Stipelman B., Stokols D., Morgan G., Gehlert S.. A Four-Phase Model of Transdisciplinary Research: Goals, Team Processes, and Strategies. Translational Behavioral Medicine. 2012 Dec;2(4).
3. Hall K, Stokols D, Stipelman BA, Vogel AL, Feng A, Masimore B, Morgan G, Moser RP, Marcus SE, and Berrigan D.Assessing the Value of Team Science: A Study Comparing Center- and Investigator-Initiated Grants. American Journal of Preventive Medicine. 2012 Feb;42(2):157-163.
4. Falk-Krzesinski H, Contractor, N., Fiore, S.M., Hall, K.L., Kane, C., Keyton, J., Klein, J.T., Spring, B.,Stokols, D., Trochim, W.. Mapping a Research Agenda for the Science of Team Science. Research Evaluation. 2011;20:143-156.
5. Falk-Krzesinski, H.J., Börner, K., Contractor, N., Fiore, S.M., Hall, K.L., Keyton, J., Spring, B., Stokols, D., Trochim, W., and Uzzi, B. (2010). Advancing the Science of Team Science. Clinical and Translational Sciences 3, 263-266.

6. Börner, K., Contractor, N., Falk-Krzesinski, H.J., Fiore, S.M., Hall, K.L., Keyton, J., Spring, B., Stokols, D., Trochim, W., and Uzzi, B. (2010). A Multi-Level Systems Perspective for the Science of Team Science. Science Translational Medicine 2, cm24.

EVALUATION:

Exam-I	**30%**
Exam-II	**30%**
Writing Assignment(s)	**15%**
Team Project	**15%**

Grades will be determined by the following scale:

90-100 A
80-89 B
70-79 C
60-69 D
<60 F

ATTENDANCE POLICY

This class meets weekly. While attendance is not required, the course is designed for students to work in teams, thus students are encouraged to maintain regular attendance.

ADDITIONAL POLICIES

1. **Accountable material and preparation.** Class sessions are conducted based on the expectation that students complete all appropriate readings and/or assignments as scheduled. This facilitates better questions, discussion, and learning. Exam and quiz questions may be based on both out-of-class assignments and material presented in class.
2. **Electronic devices.** Electronic devices (smartphones, PDAs, laptops, etc.) can be a valuable asset in the classroom. However, if used inappropriately, these can be a distraction. Students should utilize these devices in class only for educational purposes, and are requested to be unobtrusive in their use (including silencing cell phone ringers). Please note that social media, "tweeting", and real time chat are not appropriate *in the classroom unless part of a classroom exercise.*
3. **Intellectual property notice:** Many materials used in this class are copyrighted, while others represent content and product of the instructor and/or Marshall University. While students may share notes and engage in discussions regarding their work in the course, recording or distribution of course content is not permitted. Students should enquire of the instructor for clarification regarding exceptions.
4. **Academic integrity:** Students should refer to the Student Handbook to ensure understanding of policies concerning academic honesty and integrity, including plagiarism and cheating. Unless specified by the instructor, no electronic devices, notes, or other non-approved assistance is permitted during any exam.
5. **Disability accommodation.** The instructor will endeavor to accommodate students with a disability. It is requested that the student notify the instructor at the earliest possible time regard anticipated assistance which may be required.
6. **Vigilance.** Students are expected to access their MU e-mail address and MU On-line regularly for information related to the course.
7. **Missed classes:** If you are absent, it is the student's responsibility to find out from a classmate what notes, handouts, assignments, or other course material you missed and to make arrangements to receive those.
8. **Make-up assignments and exams:** Students who miss scheduled exams or assignments may make them up in the event of a University-excused absence or medical emergency. In any other situation, a student may request a make-up, but if the request is granted, such may be a different exam or assignment.
9. **Office hours:** As posted and by appointment.
10. **Inclement Weather:** If inclement weather results in class cancellation, students are directed to carefully review posted material posted for that session, as we will endeavor to maintain the planned course schedule, including exams which may include that content.
11. **Reasonable change with notice.** In order to facilitate unforeseen circumstances, as well as act in the best interest of students and the university, the terms and schedule in this syllabus are subject to prudent change with reasonable notice

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine | Dept/Division: Clinical Translational | Alpha Designator/Number: CTS 635 | (•) Graded ( ) CR/NC

Contact Person: Darshana Shah, PhD | Phone: 304-691-8639

NEW COURSE DATA:

New Course Title: Writing and Peer Review Of Scientific Publications

Alpha Designator/Number: C T S 6 3 5

Title Abbreviation: W R I T I N G A N D P E E R R E V I E W

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)
This course teaches students to become more effective writers of scientific publications.

Co-requisite(s): None | First Term to be Offered: Fall 2016

Prerequisite(s): Consent of instructor | Credit Hours: 1

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/5/15
Registrar S11401	Date 9/10/15
College Curriculum Chair Todd L. Mueller	Date 9/9/15
Graduate Council Chair J Christofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: Medicine | Department/Division: Clinical Translation Science | Alpha Designator/Number: CTS 635

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Darshana Shah, PhD

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

Listed on course syllabus (attached).

7. COURSE OUTLINE (May be submitted as a separate document)

Listed on course syllabus (attached).

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

Listed on course syllabus (attached).

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Web based self learning modules, Lecture, large group discussion, small group discussion

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Homework-readings, and/or written assignments,

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

No Required Text;

All assignments will be provided as library references or PDFs and are primarily journal articles
Additional recommended readings/sources:
Writing and Publishing in Medicine, by Edward J. Huth, published 1998

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Clinical and Translational Science
Course Number and Title: CTS 635, Writing and Peer Review Of Scientific Publications
Catalog Description: This course teaches students to become more effective writers of scientific publications.
Prerequisites: Consent of instructor
First Term Offered: Fall 2016
Credit Hours:1

COURSE TITLE/NUMBER	**Writing and Peer Review Of Scientific Publication** CTS 635
SEMESTER/YEAR	Fall 2016
DAYS/TIME	One hour /week- Thursday 1-2
CREDIT HOURS	1
LOCATION	Appalachian Clinical & Translation Science Institute (ACTSI)
INSTRUCTOR	Darshana Shah, PhD
OFFICE/PHONE	691-8639
E-MAIL	Shah@marshall.edu (email preferred)
OFFICE HOURS	Wednesday 4- 5:30 and by appointment
CFE/UNIVERSITY POLICIES	By enrolling in this course, you agree to the *Marshall University Policies*, and thus it is essential that you understand them. Please review these at the Academic Affairs website: http://muwww-new.marshall.edu/academic-affairs/policies/

COURSE STUDENT LEARNING OUTCOMES	HOW PRACTICED IN THIS COURSE	HOW ASSESSED IN THIS COURSE
Goal 1. Principles of effective scientific writing Objectives:	Lecture Reading Assignment	Home work- Reading assignment Midterm -exam
Goal 2. Learn how to conduct effective literature searches	Online module - Endnote training	Home work; Conduct Literature search for a research topic -
Goal 3. Understand peer review process & thoughtfully respond to peer review	Large group discussion	Homework assignment Writing Project
Goal 4. Understand ethical issues facing writers of medical and scientific research	Lecture	Mid Term
Goal 5. Learn to prepare submission for peer-review at an academic journal	Large and small group exercise Abstract – Research topic Group discussion	Home work Writing Project

COURSE DESCRIPTION: FROM CATALOG

Writing is the most common form of scientific communication, within the scientific community, improved communication leads to improved collaboration, easier access to cross-disciplinary knowledge, and faster, less painful training. This course teaches students to become more effective writers. It will entail lectures and hands on exercise in which students will review and discuss the steps involved in preparing, peer reviewing, and revising manuscripts for publication

STUDENT LEARNING OUTCOMES IDENTIFIED IN THIS COURSE:

Upon completion of the course, students will:

- understand principles of effective scientific writing.
- learn how to conduct effective literature searches
- understand peer review process & thoughtfully respond to peer review
- understand ethical issues facing writers of medical and scientific research
- learn to prepare submission for peer-review at an academic journal

REQUIRED TEXTS, ADDITIONAL READING, AND OTHER MATERIALS

No Required Text;

All assignments will be provided as library references or PDFs and are primarily journal articles

RECOMMENDEDMATERIALS

Additional recommended readings/sources:
Writing and Publishing in Medicine, by Edward J. Huth, published 1998

EVALUATION:

Mid Term Exam	**20%**
Homework Assignment(s)	**30%**
Writing Project	**70%**

Grades will be determined by the following scale:
90-100 A
80-89 B
70-79 C
60-69 D
<60 F

ATTENDANCE POLICY

This class meets weekly. While attendance is not required, the course is designed for students to work in teams, thus students are encouraged to maintain regular attendance.

ADDITIONAL POLICIES

1. **Accountable material and preparation.** Class sessions are conducted based on the expectation that students complete all appropriate readings and/or assignments as scheduled. This facilitates better questions, discussion, and learning. Exam and quiz questions may be based on both out-of-class assignments and material presented in class.
2. **Electronic devices.** Electronic devices (smartphones, PDAs, laptops, etc.) can be a valuable asset in the classroom. However, if used inappropriately, these can be a distraction. Students should utilize these devices in class only for educational purposes, and are requested to be unobtrusive in their use (including silencing cell phone ringers). Please note that social media, "tweeting", and real time chat are not appropriate in the classroom unless part of a classroom exercise.
3. **Intellectual property notice:** Many materials used in this class are copyrighted, while others represent content and product of the instructor and/or Marshall University. While students may share notes and engage in discussions regarding their work in the course, recording or distribution of course content is not permitted. Students should enquire of the instructor for clarification regarding exceptions.
4. **Academic integrity:** Students should refer to the Student Handbook to ensure understanding of policies concerning academic honesty and integrity, including plagiarism and cheating. Unless specified by the instructor, no electronic devices, notes, or other non-approved assistance is permitted during any exam.
5. **Disability accommodation.** The instructor will endeavor to accommodate students with a disability. It is requested that the student notify the instructor at the earliest possible time regard anticipated assistance which may be required.
6. **Vigilance.** Students are expected to access their MU e-mail address and MU On-line regularly for information related to the course.
7. **Missed classes:** If you are absent, it is the student's responsibility to find out from a classmate what notes, handouts, assignments, or other course material you missed and to make arrangements to receive those.
8. **Make-up assignments and exams:** Students who miss scheduled exams or assignments may make them up in the event of a University-excused absence or medical emergency. In any other situation, a student may request a make-up, but if the request is granted, such may be a different exam or assignment.
9. **Office hours:** As posted and by appointment.
10. **Inclement Weather:** If inclement weather results in class cancellation, students are directed to carefully review posted material posted for that session, as we will endeavor to maintain the planned course schedule, including exams which may include that content.
11. **Reasonable change with notice.** In order to facilitate unforeseen circumstances, as well as act in the best interest of students and the university, the terms and schedule in this syllabus are subject to prudent change with reasonable notice

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine | Dept/Division: CTS | Alpha Designator/Number: CTS 640 | ○ Graded ◉ CR/NC

Contact Person: Todd L. Green, Ph.D. | Phone: 6-3531

NEW COURSE DATA:

New Course Title: Clinical Trials Journal Club

Alpha Designator/Number: C T S 6 4 0

Title Abbreviation: C L I N I C A L T R I A L S J O U R C L U B

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)
This course will be presentations and discussions of the recent literature in the area of clinical trials. Fundamental principles and new discoveries will be emphasized.

Co-requisite(s): | First Term to be Offered: Fall 2016

Prerequisite(s): Consent of instructor | Credit Hours: 1

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/9/15
Registrar 511401	Date 9/10/15
College Curriculum Chair Todd L. Green	Date 9/9/15
Graduate Council Chair T Christofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: Medicine | Department/Division: Clinical & Translational Scien | Alpha Designator/Number: CTS 640

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Todd L. Green
Richard Egleton
Uma Sundaram
Todd Davies

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

Included on syllabus (attached)

7. COURSE OUTLINE (May be submitted as a separate document)

Included on syllabus (attached)

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

Included on syllabus (attached)

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Journal discussion

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Attendance, evaluation of presentations

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

Applied Clinical Trials
Clinical Trials
Cochrane Review
Contemporary Clinical Trials
International Journal of Clinical Trials
Trials

American Journal of Hypertension
BioMed Central Medicine
British Medical Journal
Circulation
Journal of Clinical Epidemiology
Journal of the National Cancer Institute
Journal of Translational Medicine
Lancet
New England Journal of Medicine
PLoS Medicine
PLoS One

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Clinical and Translational Science
Course Number and Title: CTS 640, Clinical Trials Journal Club
Catalog Description: This course will be presentations and discussions of the recent literature in the area of clinical trials. Fundamental principles and new discoveries will be emphasized.
Prerequisites: Consent of instructor
First Term Offered: Fall 2016
Credit Hours: 1

CLINICAL TRIALS JOURNAL CLUB
CTS 640
Fall 2016

COURSE POLICY

Course Director:
Todd L. Green, Ph.D.
Office: BSC 301C
Phone: 696-3531
Fax: 696-7272
E-mail: green@marshall.edu
Office hours by request.

Required Textbooks
There are no required textbooks for this class.

Classes
CTS 640 is a 1 credit hour course. The course will be presentation and discussion of the recent literature in the area of clinical trials. Fundamental principles and new discoveries will be emphasized.

Classes will be held from 12:00 N - 12:50 PM on Thursdays in the McKown Translational Genomics Research Institute Conference Room.

Examinations
There are no examinations in this course.

Grades
This is a credit/no credit course.

Student performance is based on attendance and presentations. **Attendance is mandatory.** Active participation in presentation analysis is an integral part of developing presentation skills.

Only one unexcused absence will be allowed each semester. Should a situation arise where a student will miss a second class, the course director must be notified **in advance**. Acceptance of the excuse is at the course director's discretion and only legitimate (see official University policy), documented excuses will be accepted. **Documentation must be received within 2 weeks of the absence. More than one unexcused absence will result in a no credit grade.**

Course Objectives

After completing this course, students should have a thorough understanding of the how clinical trials are done and know how to give a presentation of a scientific journal article.

Student Learning Outcomes	How Outcome Will Be Practiced	How Outcome Will Be Assessed
Describe how clinical trials are done	In-class discussion	Presentation
Give a presentation of a scientific journal article	In-class discussion	Presentation

Students are required to give at least one presentation each semester. Presentations will be graded using the attached evaluation form. A score of 80 or greater is required for successful completion of the presentation.

Class Policies

University policies can be viewed at http://www.marshall.edu/president/board/policies.html.

Academic Dishonesty

Academic dishonesty will not be tolerated. Policy AA-12 defines academic dishonesty and describes the sanctions associated with it.

Inclement Weather

Policy GA-9 describes the policy on weather-related and/or emergency closings and delays. As this is an afternoon class, we will not be affected by delays. To find out if the University is closed, please call Audix at 696-6245.

Students with Disabilities Policy

Students with disabilities are required to prepare a notice either from the Help Center, Myers Hall, or Sandra Clements, PH 117, before a special accommodation can be honored. The link describing this policy is http://www.marshall.edu/disabled.

University Computing Services Acceptable Use Policy

MUBOG Policy IT-1 explains this policy (http://www.marshall.edu/president/board/policies.html).

Cell Phone Use

Cell phone use, including texting, will not be tolerated in the class, unless authorized by the instructor. If special circumstances exist such that a student needs to be in communication with family members or friends during a class, please inform the instructor before the class begins. Permission will be granted on a case-by-case basis and at the sole discretion of the instructor. If a student persists in using cell phones, including texting, after they have been asked to stop, the student will be removed from the class.

COMMENTS:

Presenter _____

CLINICAL TRIALS JOURNAL CLUB

Faculty and students in attendance will evaluate the presentation. They will assign a point value for each portion of the presentation. The number of points possible will be 100 for each presentation. A minimum score of 80 is required to successfully complete a presentation. If the average score for a presentation is below 80, the student will be required to present an additional paper.

Segment of Presentation	Points	Description of requirements
INTRODUCTION	18-20	Clearly identified purpose and goals of the research. The rational for selection of the paper was given in a clear and concise manner.
	16	Either (a) the purpose or goals of the research were presented but must be identified by the audience, or (b) the rationale for selection of the paper was not identified.
	14	Presenter failed to identify both (a) the purpose and goals of the paper, and (b) the rationale for selection of the paper.
METHODS & RESULTS	18-20	Clearly identified procedures to test hypothesis. Presented results to support or reject hypothesis.
	16	Overview of methods and/or results was given. However, the audience had to identify the rationale of studies or whether the results supported the overall hypothesis.
	14	Presenter failed to describe methods and had a lack of knowledge regarding methods. Failed to present results in a clear manner. Audience had difficulty understanding whether results proved experimental goals.
SUMMARY	18-20	The presenter summarized the results and stated if the goals of the research were accomplished. The presenter clearly identified the importance of the research and the strengths and weaknesses of the paper(s).
	16	The presenter summarized the results and stated if the goals of the research were accomplished. The presenter should have given a clearer statement of the importance of the research or the strengths and weaknesses of the paper(s).
	14	The presenter needed to improve the summary of the results. The presenter failed to identify the strengths and weaknesses of the paper(s) and the importance of the research.
PRESENTATION SKILLS	18-20	Good use of visual aids of tables, figures, or schemes to present all aspects of the paper. Good use of eye contact. Presentation stimulated interest and kept audience attentive. Presentation fitted allotted time.
	16	Good use of visual aids. Presentation fitted allotted time. Presenter read excessively from notes or needed to improve eye contact with audience. Audience as kept attentive and interested for most of the presentation.
	14	The presentation was either too short or too long. Visual aids were poorly used to emphasize points. The presentation did not keep the audience interested.
Presentation points		**Maximum of 80**
Paper selection		**Maximum of 20**
TOTAL POINTS		**Maximum of 100**

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine | Dept/Division: CTS | Alpha Designator/Number: CTS 650 | ○ Graded ◉ CR/NC

Contact Person: Uma Sundaram, MD | Phone: 304-691-1841

NEW COURSE DATA:

New Course Title: Rural Clinic Experience

Alpha Designator/Number: C T S 6 5 0

Title Abbreviation: R u r a l C l i n i c E x p e r i e n c e

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)
This course will acquaint students with the issues of rural community health and wellness, which will allow them to participate in clinical studies in a rural environment.

Co-requisite(s): none | First Term to be Offered: Summer I 2017

Prerequisite(s): CTS 620 | Credit Hours: 5

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/9/15
Registrar 5/1401	Date 9/10/15
College Curriculum Chair Todd L. Mann	Date 9/9/15
Graduate Council Chair JChristofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: Medicine | Department/Division: CTS | Alpha Designator/Number: CTS 650

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Uma Sundaram, MD
Todd Gress, MD

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

Attached

7. COURSE OUTLINE (May be submitted as a separate document)

Attached

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

Attached

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Internship

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Attendance, written summary

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

Canadian Journal of Rural Medicine
Journal of Rural Health
Marshall Journal of Medicine

Exploring Rural Medicine
Rural Populations and Health
Textbook of Rural Medicine

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Clinical and Translational Science
Course Number and Title: CTS 650, Rural Clinic Experience
Catalog Description: This course will acquaint students with the issues of rural community health and wellness, which will allow them to participate in clinical studies in a rural environment.
Prerequisites: CTS 620
First Term Offered: Summer I 2017
Credit Hours: 5

Rural Clinic Experience
CTS 650
Summer I 2017

COURSE POLICY

Course Directors:

Uma Sundaram, MD
Office: TGRI
Phone: 691-1841
E-mail: sundaramu@marshall.edu
Office hours by request.

Todd Gress, MD
Office: TGRI
Phone: 691-8648
Email: gress@marshall.edu
Office hours by request.

Required Textbooks

There are no required textbooks for this class.

Classes

CTS 650 is a 5 credit hour course. The course will be observation of how medicine is performed in a rural clinic.

Classes will be held each day (M-F) at different Marshall Health rural clinics. Students will be assigned to clinics at the beginning of the course.

Examinations

There are no examinations in this course.

Grades

This is a credit/no credit course.

Student performance is based on attendance (75%) and a written summary of the experience (25%). **Attendance is mandatory.**

Only one unexcused absence will be allowed each semester. Should a situation arise where a student will miss a second class, the course director must be notified **in advance**. Acceptance of the excuse is at the course director's discretion and only legitimate (see official University policy), documented excuses will be accepted. **Documentation must be received within 2 weeks of the absence. More than one unexcused absence will result in a no credit grade.**

Class Policies

University policies can be viewed at
http://www.marshall.edu/president/board/policies.html.

Academic Dishonesty

Academic dishonesty will not be tolerated. Policy AA-12 defines academic dishonesty and describes the sanctions associated with it.

Inclement Weather

Policy GA-9 describes the policy on weather-related and/or emergency closings and delays. As this is an afternoon class, we will not be affected by delays. To find out if the University is closed, please call Audix at 696-6245.

Students with Disabilities Policy

Students with disabilities are required to prepare a notice either from the Help Center, Myers Hall, or Sandra Clements, PH 117, before a special accommodation can be honored. The link describing this policy is http://www.marshall.edu/disabled.

University Computing Services Acceptable Use Policy

MUBOG Policy IT-1 explains this policy
(http://www.marshall.edu/president/board/policies.html).

Course Objectives

After completing this course, students should have a thorough understanding of how rural medicine is done and how to run clinical trials in a rural environment.

Student Learning Outcomes	How Outcome Will Be Practiced	How Outcome Will Be Assessed
Describe how rural medicine is done	In-class discussion	Written summary
Run a clinical trial in a rural environment	In-class discussion	Written summary

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: Medicine | Dept/Division: CTS | Alpha Designator/Number: CTS 660 | (•) Graded ( ) CR/NC

Contact Person: Richard D. Egleton | Phone: (304) 696-3523

NEW COURSE DATA:

New Course Title: Molecular Phenotype of Appalachian Disorders

Alpha Designator/Number: C T S 6 6 0

Title Abbreviation: A p p a l a c h i a n P h e n o t y p e

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)

The course will describe the clinical presentations, epidemiology and molecular phenotype of disorders common in the Appalachian region.

Co-requisite(s): none | First Term to be Offered: fall 2017

Prerequisite(s): Consent of Instructor | Credit Hours: 3

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/9/15
Registrar S11401	Date 9/10/15
College Curriculum Chair Todd L. Green	Date 9/9/15
Graduate Council Chair JChristofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: Medicine | Department/Division: CTS | Alpha Designator/Number: CTS 660

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Richard D. Egleton

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See Attached Syllabus.

7. COURSE OUTLINE (May be submitted as a separate document)

See Attached Syllabus.

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

See Attached Syllabus.

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Lecture, independent learning, small group discussion

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Exams - Multiple choice, short answer taken every 5 weeks of course
Quizzes - In class multiple choice quizzes based on reading assignments
Homework - Short essays / problem solving

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not Applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

See Attached

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Clinical and Translational Sciences
Course Number and Title: CTS660 Molecular Phenotype of Appalachian Phenotype
Catalog Description: This Course will describe the clinical presentations, epidemiology and molecular phenotype of disorders common in the Appalachian region.
Prerequisites: None
First Term Offered: Fall 2017
Credit Hours: 3

Syllabus
CTS660
Fall Semester
Molecular Phenotype of Appalachian Disorders
3 Credit Hours

Course Description
This course will focus on three core health problems in the Appalachian region: diabetes, cancers (related to obesity) and substance use disorders. The course will describe the clinical presentations and epidemiology of the disorders and then explore the molecular phenotype and pathways with which they are associated. The current targets for pharmacological treatment within the pathways will be discussed as well as the treatment options that are currently under investigation by Pharmaceutical companies.

Course Director
Richard D. Egleton, PhD (egleton@marshall.edu), (304) 696-3523

Course Objectives
The goal of this course is to provide an introduction to three of the core health problems of the Appalachian region. By the end of the course the student will be able to:

1. Review the regional health disparity for treatment of these disorders.
2. Identify the major risk factors associated with diabetes, obesity associated cancers and substance abuse.
3. Describe the patient population for each of these disorders and the problems associated with clinical trials for each patient group.
4. Understand how molecular phenotype can be associated with the clinical symptoms.
5. Discuss the current therapeutic targets and some of the potential future targets for each disorder.

Assessment of Objectives

Objective	Practice of Objective	Assessment Method
Review the regional health disparity for treatment of these disorders	Lecture, Reading Assignment	Exams, quizzes, homework
Identify the major risk factors associated with diabetes, obesity associated cancers and substance abuse	Lecture, Reading Assignment, Discussion	Exams, quizzes, homework
Describe the patient population for each of these disorders and the problems associated with clinical trials for each patient group	Discussion, Homework	Exams, quizzes, homework
Understand how molecular phenotype can be associated with the clinical symptoms	Lecture, Reading Assignment, Discussion	Exams, quizzes, homework
Discuss the current therapeutic targets and some of the potential future targets for each disorder	Small Group	Quizzes and questions during small group discussion

Time and Location
Unless otherwise indicated by the instructor, the class meets for lectures and discussions in the TGRI conference room on Tuesdays and Thursdays from 13:00 – 14:30.

Required Textbooks
There are no required text books for this class the instructor will supply required reading from the current scientific literature.

Teaching Methods
A number of teaching approaches will be employed in this course.
Lecture: Faculty will present instruction/verbal discourse covering the basics of epidemiology, clinical aspects and molecular aspects of each disorder.
Self-Directed Learning/Independent learning: Selected topics will be introduced by independent learning through faculty-assigned guided reading. Students are expected to use these up-front readings to prepare for subsequent small group discussions.
Small Group Discussion: A learning format in which the students are provided the opportunity to exchange opinions, observations, or ideas among the group to analyze, clarify, or reach conclusions about issues, questions or problems.

Duration
The course will be split into three sections each of 5 weeks duration for a total of 15 weeks (see attached schedule). An exam will be held at the end of each block.

Assessment
Performance will be assessed via three primary methods, exam, homework and quizzes (see table for breakdown). Examinations will cover lecture material, and self-guided and independent learning activities. Questions will in in either multiple-choice or short answer format. Multiple-choice questions will be worth one point per correct answer and short answer questions three points per correct answer. Homework assignments will be worth 10 points. Quizzes will be worth 5 points and will be based on the reading assignment for the group discussion

Block	Exam Points	Homework Points	Quiz points	Total
1	40	10	5	55
2	40	10	5	55
3	40	10	5	55
Total	**120**	**30**	**15**	**165**

Grading

Final course grades will be assigned using the following percentages:
A: 90 and above
B: 80 to 89.99
C: 70 to 79.99
F: 69.99 and below

Attendance
Attendance at all scheduled course activities is expected. **Attendance at discussions is required and no makeup will be available for any missed quizzes**.

Class Policies
University policies can be viewed at http://www.marshall.edu/president/board/policies.html.

Academic Dishonesty
Academic dishonesty will not be tolerated. Policy AA-12 defines academic dishonesty and describes the sanctions associated with it.

Inclement Weather
Policy GA-9 describes the policy on weather-related and/or emergency closings and delays. As this is an afternoon class, we will not be affected by delays. To find out if the University is closed, please call Audix at (304) 696-6245.

Students with Disabilities Policy
Students with disabilities are required to prepare a notice either from the Help Center, Myers Hall, or Sandra Clements, PH 117, before a special accommodation can be honored. The link describing this policy is http://www.marshall.edu/disabled.

University Computing Services Acceptable Use Policy
MUBOG Policy IT-1 explains this policy (http://www.marshall.edu/president/board/policies.html).

Cell Phone Use
Cell phone use, including texting, will not be tolerated in the class, unless authorized by the instructor. If special circumstances exist such that a student needs to be in communication with family members or friends during a class, please inform the instructor before the class begins. Permission will be granted on a case-by-case basis and at the sole discretion of the instructor. If a student persists in using cell phones, including texting, after they have been asked to stop, the student will be removed from the class.

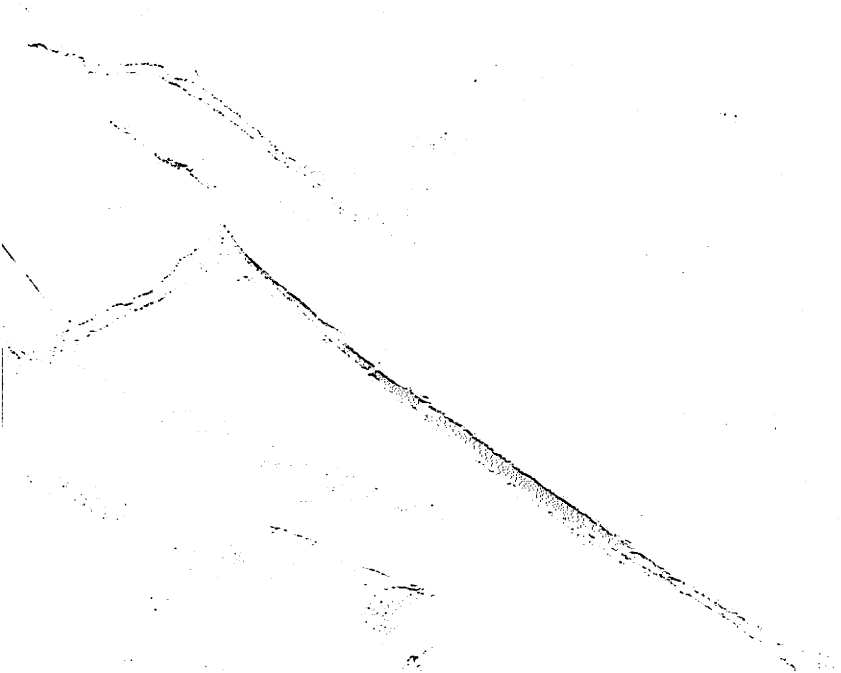
Proposed Schedule

Week	Topic	Assignment
	Block One	
1	Introduction to Course Epidemiology of Diabetes	
2	Clinical Aspects of Diabetes Current Therapies	
3	Molecular Aspects of Diabetes	
4	New Targets	Reading Assignment and quiz
5	**Exam 1**	**Homework 1 due**
	Block Two	
6	Epidemiology of Obesity and the link to Cancer	
7	Clinical Aspects of Obesity and the link to Cancer Current Therapies	
8	Molecular Aspects of Obesity and the link to Cancer	
9	New Targets	Reading Assignment and quiz
10	**Exam 2**	**Homework 2 due**
	Block Three	
11	Epidemiology of Substance Use Disorders	
12	Clinical Aspects of Substance Use Disorders Special Patient Populations	
13	Molecular Aspects of Substance Use Disorders	
14	New Targets	Reading Assignment and quiz
15	**Exam 3**	**Homework 3 due**

Each block accounts for 1/3 of the grade.

Bibliography:

Appalachian Health and Well-Being. Eds Robert L. Ludke and Phillip J. Obermiller. University of Kentucky Press 2012. (ISBN 978-0-8131-4042-1).



Chair: Tracy Christofero | **GC#7: Course Change**

Request for Graduate Course Change

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: COEPD Dept/Division: Counseling Current Alpha Designator/Number: COUN 684

Contact Person: Carol M. Smith, PhD Phone: 304-746-1921

CURRENT COURSE DATA:

Course Title: Advanced Techniques in Treatment of Trauma and Loss

Alpha Designator/Number: C O U N 6 8 4

Title Abbreviation: Adv Tech Trauma and Loss

1. Complete this **five** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator, course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet as well as the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form).*
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head Robert L. Robinson	Date 8/3/15
Registrar Roberta Ferguson	Date 8/26/15
College Curriculum Chair	Date 8/24/15
Graduate Council Chair T Christofero	Date 10-12-15

Request for Graduate Course Change - Page 2

College: COEPD | Department/Division: Counseling | Alpha Designator/Number: COUN 684

Provide complete information regarding the course change for each topic listed below.

Change in CATALOG TITLE: ☒ YES ☐ NO

From: Advanced Techniques in Treatme (limited to 30 characters and spaces)

To: Treating Complex Trauma & Loss

If Yes, Rationale: The focus of the course is less about distinguishing basic from advanced techniques than it is about treating the conditions needing advanced techniques. The title change more accurately reflects the course content.

Change in COURSE ALPHA DESIGNATOR:

From: ____ To: ____ ☐ YES ☒ NO

If Yes, Rationale:

Change in COURSE NUMBER: ☐ YES ☒ NO

From: ____ To: ____

If Yes, Rationale:

Change in COURSE GRADING

From ☐ Grade To ☐ Credit/No Credit

Rationale:

Change in CATALOG DESCRIPTION: ☒ YES ☐ NO IF YES, fill in below:

From: This course focuses on advanced treatment of trauma and loss through investigation of trauma theory, evidence-based treatment and interventions, and applied practice. (PR: COUN 556 and COUN 682)

To: This course focuses on the treatment of complex trauma and loss, through investigation of trauma theory, phases of post-traumatic recovery, evidence-based treatment, and practice implications for complex cases. (PR: COUN 556 and COUN 682)

If Yes Rationale: The slight modification of the catalog description emphasizes phasic treatment (the current best practice for complex trauma), and implications for complex cases.

Change in COURSE CREDIT HOURS: ☐ YES ☒ NO If YES, fill in below:

NOTE: If credit hours increase/decrease, please provide documentation that specifies the adjusted work requirements.

From

To

Change in COURSE CONTENT: ☐ YES ☒ NO

From

To

Rationale

Request for Graduate Course Change-Page 4

College: COEPD

Department: Counseling

Course Number/Title COUN 684 Treating Complex Trauma and Loss (formerly: Advanced Techniques in Treatment of Trau

1. REQUIRED COURSE: If this course is required by another department(s), identify it/them by name and attach the written notification you sent to them announcing to them the proposed change and any response received. Enter NOT APPLICABLE if not applicable.

NOT APPLICABLE

2. COURSE DELETION: List any courses that will be deleted because of this change. A *Course Deletion* form is also required. Enter NOT APPLICABLE if not applicable.

NOT APPLICABLE

3. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials as a result of this change, attach an estimate of the time and cost etc. required to secure these items. (NOTE: approval of this form does not imply approval for additional resources. Enter NOT APPLICABLE if not applicable.

NOT APPLICABLE

Request for Graduate Course Change - Page 5

Please insert in the text box below your course change summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings) based on the appropriate change:

COURSE DESCRIPTION CHANGE	COURSE NUMBER CHANGE	COURSE TITLE CHANGE
Department:	Department:	Department:
Course Number and Title:	Current Course Number/Title:	Current Course Number/Title:
Rationale:	New Course Number:	New Course Title:
Course Description (old)	Rationale:	Rationale:
Course Description: (new)	Catalog Description:	Catalog Description:
Catalog Description:	Credit hours:	

COURSE TITLE CHANGE:
Department: Counseling
Current Course Number/Title: COUN 684 Advanced Techniques in Treatment of Trauma and Loss
New Course Title: COUN 684 Treating Complex Trauma & Loss
Rationale: The focus of the course is less about distinguishing basic from advanced techniques than it is about treating the conditions needing advanced techniques. The title change more accurately reflects the course content.
Catalog Description: This course focuses on advanced treatment of trauma and loss through investigation of trauma theory, evidence-based treatment and interventions, and applied practice. (PR: COUN 556 and COUN 682)

COURSE DESCRIPTION CHANGE:
Department: Counseling
Course Number and Title: COUN 684 Treating Complex Trauma & Loss
Rationale: The slight modification of the catalog description emphasizes phasic treatment (the current best practice for complex trauma), and implications for complex cases.
Course Description (old): This course focuses on advanced treatment of trauma and loss through investigation of trauma theory, evidence-based treatment and interventions, and applied practice. (PR: COUN 556 and COUN 682)
Course Description (new): This course focuses on the treatment of complex trauma and loss, through investigation of trauma theory, phases of post-traumatic recovery, evidence-based treatment, and practice implications for complex cases. (PR: COUN 556 and COUN 682)
Catalog Description (new): This course focuses on the treatment of complex trauma and loss, through investigation of trauma theory, phases of post-traumatic recovery, evidence-based treatment, and practice implications for complex cases. (PR: COUN 556 and COUN 682)

Chair: Tracy Christofero | **GC#9: Non-Curricular**

Request for Graduate Non-Curricular Changes

PLEASE USE THIS FORM FOR ALL NON-CURRICULAR CHANGE REQUESTS (changes in admission requirements or requirements for graduation, changes in or new policies/procedures, changes in program descriptions in catalog, general language changes in catalog.)

SIGNATURES may not be required, depending on the nature of the request and from where it originates. Consult Graduate Council chair.

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one PDF copy without signatures to the Graduate Council Chair.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: COEPD

Dept/Division: Counseling

Contact Person: Lori Ellison

Phone: 304-746-2086

Rationale for Request

(May attach separate page if needed)

Our department is working on a self-study process for national accreditation for the Council for Accreditation of Counseling and Related Education Programs (CACREP). In reviewing the standards we must meet for this accreditation, we are aware of the need to make a few adjustments in our policies and procedures that currently are not met. Making the following changes to our department policies will help us to meet the CACREP standards for accredited programs. In particular:
CACREP Standard Section 1 L: "Entry-level admissions decision recommendations are made by the academic unit's selection committee and include consideration of each applicant's (1) relevance of career goals, (2) aptitude for graduate-level study, (3) potential success in forming effective counseling relationships, and (4) respect for cultural differences."

[See Also Attached Rationale]

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.
NOTE: all requests may not require all signatures.

Department/Division Chair Robert Z. Robertson	Date 8/7/15
Registrar Roberta Ferguson	Date 8/26/15
College Curriculum Committee Chair (or Dean if no college curriculum committee)	Date 8/24/15
Graduate Council Chair T Christofero	Date 10-12-15

NOTE: please complete information required on the following pages before obtaining signatures above.

Rationale for Program changes:

The Counseling Program is preparing a self-study process for national accreditation from the Council for Accreditation of Counseling and Related Education Programs (CACREP). In light of the accreditation's standards, we are adjusting our policies and procedures that currently are not met. Making the following changes to our department policies reflect the CACREP standards for accredited programs. These will need to be placed in the department's catalog description to inform students and prospective students of these updated requirements.

In particular:

CACREP Standard Section 1 L: "Entry-level admissions decision recommendations are made by the academic unit's selection committee and include consideration of each applicant's (1) relevance of career goals, (2) aptitude for graduate-level study, (3) potential success in forming effective counseling relationships, and (4) respect for cultural differences."

We are revising our admission procedures to align with the criteria in this standard.

CACREP Standard Section 4 F: "The counselor education program faculty systematically assess each student's progress throughout the program by examining student learning in relation to a combination of knowledge and skills. The assessment process includes the following: (1) Identification of key performance indicators of student learning in each of the eight core areas and in each student's respective specialty area...."

We are adding a nationally normed comprehensive exam as a key assessment point.

1. **Current Catalog Description (if applicable):** Please insert the catalog description from the current catalog for entries you would like to change. (May attach separate page if needed)

Admission Requirements
Admission to the Counseling Program is selective and competitive. Admission decisions for all program applicants are rooted in the specific standards of the Marshall University Graduate College and the minimum standards of the Counseling program. Students are admitted to an area of emphasis and must indicate their preferences during the admission application process.
Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website at www.marshall.edu/graduate/admissions/how-to-apply-for-admission.
Multiple criteria are used in making decisions to admit students to the degree program. Each applicant is evaluated using the following criteria (all material should be submitted directly to Graduate Admissions):
1. GRE score of 286 (quantitative & verbal combined) or MAT scale score of 395 (Raw score 40).
2. Undergraduate Grade Point Average (GPA) of 2.75 or higher on a 4.0 scale for all previously completed undergraduate university work.
3. Three written references (two from current or former professors)
4. Writing sample expressing the applicant's interest in the counseling profession.
Flexibility is maintained in applying the criteria to individual cases. For example, an applicant who does not meet the minimum criteria may be granted provisional admission and be directed to complete a prescribed set of courses. A provisionally admitted student can be reclassified as a fully admitted student no later than completion of the 12th credit hour by maintaining a 3.50 GPA in these courses.

Request for Graduate Non-Curricular Changes-Page 3

2. **Edits to current description:** Attach a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

[EDITS TO CURRENT DESCRIPTION – COUNSELING PROGRAM]

Admission Requirements

Admission to the Counseling Program is selective and competitive. Admission decisions for all program applicants are rooted in the specific standards of the Marshall University Graduate College and the minimum standards of the Counseling program. Students are admitted to an area of emphasis and must indicate their preferences during the admission application process.

Graduate School

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website at *www.marshall.edu/graduate/admissions/how-to-apply-for-admission.*

Department

Multiple criteria are used in making decisions to admit students to the degree program. Each applicant is evaluated using the following criteria (all material should be submitted directly to Graduate Admissions):

1) A Bachelor's degree from a regionally accredited institution.
2) Evidence of academic aptitude for graduate-level study that includes at least one of the following:
    a) A 2.75 overall Undergraduate GPA or higher on a 4.0 scale for all previously completed undergraduate courses.
    b) A Graduate GPA of 3.0 on any previously completed advanced degree.
    c) GRE scores (no more than five years old) of 286 (quantitative & verbal combined) OR MAT score of 395.
3) (International Students) Evidence of English Language Proficiency. Proof of your proficiency in English may be certified by submitting one of the following:
    a) (TOEFL) Test of English as a Foreign Language (Internet based) minimum score of 80 for graduate study. ETS code for Marshall University is #5396.
    b) (MELAB) Michigan English Language Assessment Battery minimum score of 82 for graduate study.
    c) (IELTS) the International English Language Testing System minimum score of 6.5 for graduate study.
    d) Completion of Level 6 of Marshall's Academic English program, with minimum *Bs* in all courses.
    e) Completion of Marshall Pathway course ENG 160 or ENG 101A with minimum *C* grade.
    f) Diploma or degree from an English speaking school – a degree or diploma from an accredited secondary school, college, or university in which the primary language of instruction is English.
    g) You have graduated from a regionally accredited college or university in the United States.
    h) NOTE: English test results that were taken more than two (2) years prior to the date of the application submission cannot be accepted.
4) A writing sample expressing career goals and estimation of personal suitability for the profession of counseling. This one-page narrative includes the applicant's motivation and

rationale for seeking admission to the Counseling Program, as well as personal background, goals related to professional studies, and goals for working in the counseling field.
5) Résumé: A focused, one-to-three page summary of program-relevant educational, career and/or life experiences.
6) Three written references (two from current or former professors). These should be completed by professionals with knowledge of the applicant's suitability for graduate work (e.g., supervisors, undergraduate professors) in helping professions.
7) Satisfactory report on a State sponsored background check. (Applicants are responsible for related fee.)

~~1. GRE score of 286 (quantitative & verbal combined) or MAT scale score of 395 (Raw score 40).~~
~~2. Undergraduate Grade Point Average (GPA) of 2.75 or higher on a 4.0 scale for all previously completed undergraduate university work.~~
~~3. Three written references (two from current or former professors)~~
~~4. Satisfactory report on a State sponsored background check.~~
~~5. Writing sample expressing the applicant's interest in the counseling profession.~~

~~Flexibility is maintained in applying the criteria to individual cases. For example, an applicant who does not meet the minimum criteria may be granted provisional admission and be directed to complete a prescribed set of courses. A provisionally admitted student can be reclassified as a fully admitted student no later than completion of the 12th credit hour by maintaining a 3.50 GPA in these courses.~~
Completed applications will be reviewed by the faculty admissions committee. Upon satisfactory review the highest ranking applicants for admission will be invited to complete an interview with one or two faculty representatives. The interviews will be conducted individually and/or in small groups, in person and on-campus. For international or long-distance students, arrangements can be made—at program discretion—for phone or internet-supported interviews. The interview will be scored using a rubric. Applicants scoring well on the interview rubric will be admitted to the program. Following admission, students will have access to an on-line Orientation to the Program to obtain important information, matriculation requirements, a Plan of Study, and introduction to their assigned Academic Advisor.

Program Requirements
It is the responsibility of all admitted students to meet with their advisors prior to the beginning of coursework. Each student must complete an advisor-approved Plan of Study prior to registering for courses. A minimum Grade Point Average of 3.0 in all degree courses is required prior to enrollment in the practicum, internship, and for graduation.

CORE COURSES
All 45 hours of core courses are offered on both the South Charleston and Huntington campuses. Please note that internship courses are specific to emphasis areas.

CORE CURRICULUM

The Master of Arts degree in Counseling is a 60 hour planned program of study designed to meet the necessary competencies of professional counselors. The curricular elements consist of core courses required of all counseling students and emphasis courses specific to Clinical Mental Health Counseling and School Counseling.

The following 45 semester hours of core courses are required of all students:

COUN 574	Social & Cultural Foundations
COUN 575	Prevention and Treatment of Addictions
COUN 600	Professional Orientation
COUN 602	Human Development & Psychopathology
EDF 621	Educational Research and Writing
COUN 603	Counseling Theories
COUN 604	Group Counseling
COUN 605	Theory & Practice of Human Appraisal
COUN 607	Counseling Techniques in Human Relationships
COUN 631	Diagnosis & Treatment Planning in Mental Health Counseling
COUN 632	Introduction to Marriage, Couple & Family Counseling
COUN 606	Career & Lifestyle Development
COUN 608	Practicum
COUN 691	Internship in Clinical Mental Health
COUN 698	Internship in School Counseling

Total Core Hour Requirement.....45

Please check course prerequisites prior to registration.

*All emphases (60 hours) satisfy the curricular requirements for professional counselor licensure in the State of West Virginia.

Comprehensive Exam

All students will take and pass the Counselor Preparation Comprehensive Examination (CPCE) prior to admission to candidacy for Practicum and Internship. Students must apply for and take the exam no later than the semester prior to taking their Practicum course.

Graduate Council
Request for Non-Curricular Changes-Page 4

3. **New Catalog Description:** Provide a "clean" copy of your proposed description without strikethroughs or highlighting. This should be what you are proposing for the new description. (May attach separate page if needed)

Admission Requirements
Admission to the Counseling Program is selective and competitive. Admission decisions for all program applicants are rooted in the specific standards of the Marshall University Graduate College and the minimum standards of the Counseling program. Students are admitted to an area of emphasis and must indicate their preferences during the admission application process.
Graduate School
Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website at www.marshall.edu/graduate/admissions/how-to-apply-for-admission.
Counseling Program
Multiple criteria are used in making decisions to admit students to the degree program. Each applicant is evaluated using the following criteria (all material should be submitted directly to Graduate Admissions):
1) A Bachelor's degree from a regionally accredited institution.
2) Evidence of academic aptitude for graduate-level study that includes at least one of the following:
a) A 2.75 overall Undergraduate GPA or higher on a 4.0 scale for all previously completed undergraduate courses.
b) A Graduate GPA of 3.0 on any previously completed advanced degree.
c) GRE scores (no more than five years old) of 286 (quantitative & verbal combined) OR MAT score of 395.
3) (International Students) Evidence of English Language Proficiency. Proof of your proficiency in English may be certified by submitting one of the following:
a) (TOEFL) Test of English as a Foreign Language (Internet based) minimum score of 80 for graduate study. ETS code for Marshall University is #5396.
b) (MELAB) Michigan English Language Assessment Battery minimum score of 82 for graduate study.
c) (IELTS) the International English Language Testing System minimum score of 6.5 for graduate study.
d) Completion of Level 6 of Marshall's Academic English program, with minimum Bs in all courses.
e) Completion of Marshall Pathway course ENG 160 or ENG 101A with minimum C grade.
f) Diploma or degree from an English speaking school – a degree or diploma from an accredited secondary school, college, or university in which the primary language of instruction is English.
g) You have graduated from a regionally accredited college or university in the United States.
h) NOTE: English test results that were taken more than two (2) years prior to the date of the application submission cannot be accepted.
4) A writing sample expressing career goals and estimation of personal suitability for the profession of counseling. This one-page narrative includes the applicant's motivation and rationale for seeking admission to the Counseling Program, as well as personal background, goals related to professional studies, and goals for working in the counseling field.
5) Résumé: A focused, one-to-three page summary of program-relevant educational, career and/or life experiences.
6) Three written references (two from current or former professors). These should be completed by professionals with knowledge of the applicant's suitability for graduate work (e.g., supervisors, undergraduate professors) in helping professions.
7) Satisfactory report on a State sponsored background check. (Students are responsible for related fee.)

Completed applications will be reviewed by the faculty admissions committee. Upon satisfactory review the highest ranking applicants for admission will be invited to complete an interview with one or two faculty representatives. The interviews will be conducted individually and/or in small groups, in person and on-campus. For international or long-distance students, arrangements can be made—at program discretion—for phone or internet-supported interviews. The interview will be scored using a rubric. Applicants scoring well on the interview rubric will be admitted to the program. Following admission, students will have access to an on-line Orientation to the Program to obtain important information, matriculation requirements, a Plan of Study, and introduction to their assigned Academic Advisor.

Program Requirements
It is the responsibility of all admitted students to meet with their advisors prior to the beginning of coursework. Each student must complete an advisor-approved Plan of Study prior to registering for courses. A minimum Grade Point Average of 3.0 in all degree courses is required prior to enrollment in the practicum, internship, and for graduation.

[SEE ALSO ATTACHED DOCUMENT FOR THE REMAINDER OF THE CLEAN CHANGES TO CATALOG]

Admission Requirements

Admission to the Counseling Program is selective and competitive. Admission decisions for all program applicants are rooted in the specific standards of the Marshall University Graduate College and the minimum standards of the Counseling program. Students are admitted to an area of emphasis and must indicate their preferences during the admission application process.

Graduate School

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website at *www.marshall.edu/graduate/admissions/how-to-apply-for-admission.*

Counseling Program

Multiple criteria are used in making decisions to admit students to the degree program. Each applicant is evaluated using the following criteria (all material should be submitted directly to Graduate Admissions):

1) A Bachelor's degree from a regionally accredited institution.

2) Evidence of academic aptitude for graduate-level study that includes at least one of the following:

   a) A 2.75 overall Undergraduate GPA or higher on a 4.0 scale for all previously completed undergraduate courses.

   b) A Graduate GPA of 3.0 on any previously completed advanced degree.

   c) GRE scores (no more than five years old) of 286 (quantitative & verbal combined) OR MAT score of 395.

3) (International Students) Evidence of English Language Proficiency. Proof of your proficiency in English may be certified by submitting one of the following:

   a) (TOEFL) Test of English as a Foreign Language (Internet based) minimum score of 80 for graduate study. ETS code for Marshall University is #5396.

   b) (MELAB) Michigan English Language Assessment Battery minimum score of 82 for graduate study.

   c) (IELTS) the International English Language Testing System minimum score of 6.5 for graduate study.

   d) Completion of Level 6 of Marshall's Academic English program, with minimum *Bs* in all courses.

   e) Completion of Marshall Pathway course ENG 160 or ENG 101A with minimum *C* grade.

   f) Diploma or degree from an English speaking school – a degree or diploma from an accredited secondary school, college, or university in which the primary language of instruction is English.

   g) You have graduated from a regionally accredited college or university in the United States.

   h) NOTE: English test results that were taken more than two (2) years prior to the date of the application submission cannot be accepted.

4) A writing sample expressing career goals and estimation of personal suitability for the profession of counseling. This one-page narrative includes the applicant's motivation and rationale for seeking admission to the Counseling Program, as well as

personal background, goals related to professional studies, and goals for working in the counseling field.

5) Résumé: A focused, one-to-three page summary of program-relevant educational, career and/or life experiences.

6) Three written references (two from current or former professors). These should be completed by professionals with knowledge of the applicant's suitability for graduate work (e.g., supervisors, undergraduate professors) in helping professions.

7) Satisfactory report on a State sponsored background check. (Applicants are responsible for related fee.)

Completed applications will be reviewed by the faculty admissions committee. Upon satisfactory review the highest ranking applicants for admission will be invited to complete an interview with one or two faculty representatives. The interviews will be conducted individually and/or in small groups, in person and on-campus. For international or long-distance students, arrangements can be made—at program discretion—for phone or internet-supported interviews. The interview will be scored using a rubric. Applicants scoring well on the interview rubric will be admitted to the program. Following admission, students will have access to an on-line Orientation to the Program to obtain important information, matriculation requirements, a Plan of Study, and introduction to their assigned Academic Advisor.

Program Requirements

It is the responsibility of all admitted students to meet with their advisors prior to the beginning of coursework. Each student must complete an advisor-approved Plan of Study prior to registering for courses. A minimum Grade Point Average of 3.0 in all degree courses is required prior to enrollment in the practicum, internship, and for graduation.

CORE COURESE

All 45 hours of core courses are offered on both the South Charleston and Huntington campuses. Please note that internship courses are specific to emphasis areas.

CORE CURRICULUM

The Master of Arts degree in Counseling is a 60-hour planned program of study designed to meet the necessary competencies of professional counselors. The curricular elements consist of core courses required of all counseling students and emphasis courses specific to Clinical Mental Health Counseling and School Counseling.

The following 45 semester hours of core courses are required of all students:

COUN 574 Social & Cultural Foundations
COUN 575 Prevention and Treatment of Addictions
COUN 600 Professional Orientation
COUN 602 Human Development & Psychopathology
EDF 621 Educational Research and Writing
COUN 603 Counseling Theories
COUN 604 Group Counseling

COUN 605 Theory & Practice of Human Appraisal
COUN 607 Counseling Techniques in Human Relationships
COUN 631 Diagnosis & Treatment Planning in Mental Health Counseling
COUN 632 Introduction to Marriage, Couple & Family Counseling
COUN 606 Career & Lifestyle Development
COUN 608 Practicum
COUN 691 Internship in Clinical Mental Health
COUN 698 Internship in School Counseling

Total Core Hour Requirement.....45

Please check course prerequisites prior to registration.

*All emphases (60 hours) satisfy the curricular requirements for professional counselor licensure in the State of West Virginia.

COMPREHENSIVE EXAM

All students will take and pass the Counselor Preparation Comprehensive Examination (CPCE) prior to admission to candidacy for Practicum and Internship. Students must apply for and take the exam no later than the semester prior to taking their Practicum course.

Graduate Council
Request for Non-Curricular Changes-Page 5

Please insert in the text box below your proposed change information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Type of change request:
Department:
Degree program:
Effective date *(Fall/Spring/Summer, Year)*

Type of change request: Changes to catalog description Department: Counseling Degree Program: MA Effective date: Fall 2015

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: MUSOM | Dept/Division: Forensic Science | Alpha Designator/Number: FSC | (•) Graded ( ) CR/NC

Contact Person: Dr. Pamela Staton | Phone: 304-691-8962

NEW COURSE DATA:

New Course Title: Mobile Phone Forensics

Alpha Designator/Number: F S C 6 3 6

Title Abbreviation: Mobile Phone Forensics

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)

This course addresses the complexity and structure of modern smart phones and focuses on data evidence storage and extraction for criminal case investigations.

Co-requisite(s):

First Term to be Offered: Spring 2016

Prerequisite(s):

Credit Hours: 2

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head: Pamela Staton	Date: 4-9-2015
Registrar: Roberta Ferguson 269999	Date: 4/27/15
College Curriculum Chair: Pamela Staton	Date: 4-23-2015
Graduate Council Chair: TChristofero	Date: 10-12-15

Request for Graduate Course Addition - Page 2

College: MUSOM | Department/Division: Forensic Science | Alpha Designator/Number: FSC 636

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Dr. Terry Fenger

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See attached

7. COURSE OUTLINE (May be submitted as a separate document)

See attached

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Lecture

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Written exams, hands-on practicals, report writing

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Not Applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

See attached CV/Resume

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Forensic Science
Course Number and Title: FSC 636 Mobile Phone Forensics
Catalog Description: This course addresses the complexity and structure of modern smart phones and focuses on data evidence storage and extraction for criminal case investigations.
Prerequisities: Not Applicable
First Term Offered: Spring 2016
Credit Hours: 2

Course Description: The course, Smart Phone Forensics, addresses the complexity and structure of modern smart phones and focuses on data evidence storage and extraction for criminal case investigations. The students build upon subject matters offered in the core course in the Digital Forensics Area of Emphasis to expand their understanding and conceptual appreciation of the roles smart phones play in a myriad of crimes conducted on a global scale. The presence of a working crime investigation on the MU Forensic Science Campus enables students to observe how cell phone investigations are conducted.

Learning Outcomes: Students learn about and can identify the structural electronic components of a smart phone and their importance in crimes involving smart phones and other hand held devices.

Students conceptualize the process of protecting and preventing change of data stored in evidence smart phones

Students learn about data storage in flash memory, SIM cards and microSD cards

Students learn about data extraction techniques, including logical, physical and JTAG approaches

Students and the instructor engage in discussions about cellular communications and sites wire digital evidence can be found within a networked system

Student learn about search and seizure laws as they related to smart phones and cell phone service providers

Outline:

Legal Issues in Smart Phone Forensics including legal case studies of Riley v. California and US Supreme court decision on search and seizure of smart phones

Structural components of a smart phone relative to the various functionalities associated with smart phones

Smart phone communication modalities and the principles of radiofrequency based communications

Concepts of bandwidth and data transfer modes

General discussion of types of ROM based memory and, specifically, EEPROM and flash memory (NOR and NAND)

Concepts of wear leveling, bad blocks, garbage collection and TRIM technologies

Data storage in flash memory, SIM and micro SD card components

General discussion of GSM and CDMA smart phones

UICC Functionalities and Identification Numbers and Designation, their location and significance

PIN and PUK and smart phone security

UICC Structure and Functions

SIM (UICC) Clone and forensic investigations of smart phone

Decision tree for examining smart phones, field analysis and laboratory investigations

Forensic tools for smart phone examinations, flasher box, third part tools and commercial forensic tool suites

Methods for examining smart phones based on status of the smart phone and the overall investigation

Detail discussion with demonstrations of JTAG examination of flash memory

Jail breaking I phones, an overview

Cellular networks how they operate and enable communications with smart phones

Examination and data analysis of smart phones

Report writing

TERRY W. FENGER, PhD *CURRICULUM VITAE*

Marshall University Forensic Science Center, 1401 Forensic Science Dr., Huntington, WV 25701 304-691-8960
fenger@marshall.edu

Higher Education

- Employment At Marshall University, 1979 -Present
- Postdoctoral Fellow, Louisiana State University Medical Center, 1976-1979
- PhD, Southern Illinois University, Carbondale, Ill, 1976
- B.A., Southern Illinois University, Carbondale, Ill, 1970
- A.A., Kendall Junior College, Evanston, Ill 1966

Professional Positions

- Director of Marshall University Forensic Science Center, 1994 -Present
  - WV CODIS Laboratory, FQS-I (ISO17025 Compliant)
  - Parentage Testing Laboratory, FQS-I (ISO 17025 Compliant)
  - Criminal Casework Laboratory, FQS-I (ISO 17025 Compliant)

- Director and Instructor of Master's Degree Program in Forensic Science Academic Program, 1994-Present

  - FEPAC Accredited Master's Degree Program in Forensic Science
  - FEPAC Accredited Digital Forensics Area of Emphasis

- Professor, Department of Microbiology, Immunology and Molecular Genetics, 1991- Present
  - Associate Professor, 1984-1991
  - Assistant Professor, Marshall University School of Medicine, 1979-1984

- Chairman, Department of Microbiology, 1995-2006; Acting Chairman, Department of Microbiology, 1993-1995

Teaching Responsibilities:

- **Forensic Science Program**:

  - Foundation and Fundamentals of Digital Forensics, Semester Course, Current
  - Search and Seizure of Digital Forensics; Semester Course, Current
  - Crime Scene and Death Investigations, Semester Course, Current
  - Bioterrorism, Semester Course, 50% Responsibility, Current
  - Previously Taught Courses; Forensic DNA Technologies, Laboratory Management, Comparative Forensic Sciences, Legal Issues

- **Marshall University School of Medicine:** Medical Virology 22 hr./yr., Current

Working Group Membership/Participation

- Technical Working Group for Higher Education in Forensic Science (TWGED), Develop Guidelines and Recommendations for the Development and Implementation of Forensic Science Academic Programs at Graduate and Undergraduate Levels , Report June 2004
- Forensic Resource Network (FRN), Program of the National Institute of Justice. Served the National Forensic Community Through Technology, Research, Training and Service
- National Governor's Association Working Group ,2009
- NIJ Social Science Research on Forensic Science Topical Working Group, Jan. 23-34, 2013

Congressional Testimony

- Provided Testimony Before US Senate, Committee on Commerce, Science and Transportation (Rockefeller (D-WV) Chair), "Turning the Investigation on the Science of Forensics December 7, 2011,

Current and Previous National Institute of Justice Awards

- Terry W. Fenger, National Institute of Justice Award 2007-MU-BX-K008 "Forensic Technology Center of Excellence", 11/1/07 – 10/31/08, $401,606
- Terry W. Fenger, National Institute of Justice Award 2007-IJ-CX-K232 "Specialized Training for State and Local Forensic Investigators: Training Partnership", 01/01/08 – 12/31/09, $510,974
- Terry W. Fenger, National Institute of Justice Award 2007-MU-MU-K007 "Advanced DNA Technologies Training in Support of State and Local Crime Laboratories, 01/01/08 – 12/31/09, $1,519,363
- Terry W. Fenger, National Institute of Justice Award 2005-MU-BX-K020 "MUFSC & FRN Initiatives to Improve Forensic Crime Laboratories", 1/1/07 - 6/30/09, $4,692,526. Includes President's DNA Initiative Award FY06.
- Terry W. Fenger, National Institute of Justice Award 2005-MU-BX-K020 "MUFSC & FRN Initiatives to Improve Forensic Crime Laboratories", 7/1/06 – 6/30/09, $4,520,121. Includes President's DNA Initiative Award FY05.
- Terry W. Fenger, National Institute of Justice Award 2001-RC-CX-K002 "MUFSC & FRN Initiatives to Improve Forensic Crime Laboratories" (most recent title), 7/1/01 - 12/31/07, $10,761,376. Includes President's DNA Initiative Award FY04. Originally "Improve Capabilities of Crime Labs through Service, Research, and Technology-Based Training".

- Terry W. Fenger, National Institute of Justice Award 98-DN-VX-K001 "Development and Implementation of WV STR CODIS Database", Phases I and II, 7/1/98 - 4/30/02, $4,000,000

Current and Previous Bureau of Justice Assistance Awards (Supporting Computer Forensics)

- Terry W. Fenger, Bureau of Justice Assistance Award 2006-RG-CX-0018 "Research, Training & Technical Assistance for Criminal Justice Systems Engaged in Computer Forensics Activities", 1/1/07 - 12/31/08, $701,022

- Terry W. Fenger, 2005-RG-CX-1164 "Research, Training & Technical Assistance for Criminal Justice Systems Engaged in Computer Forensics Activities", 7/1/05 – 12/31/06, $517,988

Current and Previous US Department of Agriculture Awards (Bacterial Source Tracking)

- Terry W. Fenger, US Department of Agriculture Award 2006-38885-03563 "WV Water Quality: Fecal Source Tracking and Pathogen Profiling", 09/15/06-09/14/08, $555,984.00

- Terry W. Fenger, US Department of Agriculture Award 2003-38885-02090; AMEND NO 1 "Assessment of WV Water Quality: Bacteria Source Tracking Database Development and Method Validation", 09/15/03-09/14/05. $502,457.00

- Terry W. Fenger, US Department of Agriculture Award 2003-38885-02090; AMEND NO 2 "Assessment of WV Water Quality: Bacteria Source Tracking Database Development and Method Validation", 09/15/05-09/14/06. $528,323.00

CSREES Award

- Terry W. Fenger, CSREEDS Award 2008-38885-19242 " Water Pollutants, WV Project at Marshall University", 09/01/08-08/31/09, $383,862.00

National Training Workshops Presented By MUFSC (Most Workshops, Week Long)

- Presented To Forensic Science Community:
    - Advance DNA Technologies Training, April 2005- Dec. 2011, 619 Trainees
    - Relationship/Parentage Training, Oct. 2009 – March 2012, 324 Trainees
    - Y-STR Analysis Training, June 2009- August 2011, 262 Trainees
    - Crime Scene Investigation Training (FBI) Dec. 2006- May 2011,322 Trainees

- Expert System Test Bed, Oct. 2006 – 2009, 96 participant from CODIS laboratories

- Crime Labs Receiving Master Degree Summer Interns, May 2008- August 2011, 35 Interns For 18 States

- Adult and Pediatric SANE Training, May 2004- June 2012, 412 Trainees

State and Regional Training

- Public Defender Conference, Forensic DNA Technologies, November 2002
- Sexual Assault Response Training For Health Care and Law Enforcement on HIPAA, 2003
- Regional Computer Forensics Group Meeting, Offered in Conjunction With George Mason University, 2007

Prosecutors
Chief Justices
In-Service WV State Police

Host Site for MAAFS Annual Meeting, May 2008

Criminal Case Work Sexual Assault Kit Projects, NIJ Funded*

- Los Angeles Sexual Assault Kits 280 SA Cases
- New Orleans Sexual Assault Kits 833 SA Cases
- Detroit Sexual Assaults Kits (In Progress) 800 SA Cases

Criminal Parentage/Relationship Case Work Assistance In Support of State Crime Laboratories*

- North Carolina, Tennessee, Kentucky, Illinois, Ohio, Pennsylvania, Nebraska, Oregon and West Virginia, Maryland, Rohde Island; 264 Cases
- Human Remains Identification Office of the WV Medical Examiner

Property Crime Case Projects*

- Miami-Dade Police Department Property Crimes Project, 1227 Cases
- Charleston South Carolina, Low Country Property Crimes Project 382 Cases
- Huntington, WV Property Crimes Project 220 Cases

WV CODIS

- Authorized Under WV CODE to conduct DNA Testing for WV CODID under the authority of the WV State Police,

Digital Forensics Unit at MU Forensic Science Center

- Partnership with WV State Police To Examine Digital Evidence in Criminal Cases

MU Forensic Science Center Awards And Recognition

- Recognition of Sponsorship, 34th ASCLD Annual Workshop and Symposium, Oct 5, 2006
- Presidential Citation, International Association for Identification, The Twins Study, August 2009
- Recognition for Customized DNA Training for Government of DC, Metropolitan Police Department Crime Laboratory Examiners, September 21, 2010
- US Department of Justice (NIJ), Certificate of Appreciation, "For Exceptional Assistance With Screening and Conducting DNA Analysis on over 800 Sexual Assault Kits...", April 4, 2012
- Innovation in Justice Award, US Department of Justice, US Attorney Southern District of WV, Oct. 15, 2012

Meetings Attended and Presentation Given

- 10/93 Future Technologies for DNA Analysis, Rockville, MD
- 06/95 Life Codes training in RFLP using chemiluminescent probes, Stamford, CT
- 10/95 International Symposia on Human Identification, Scottsdale, AZ
- 10/96 International Symposia on Human Identification, Scottsdale, AZ
- 10/96 7th International Symposium on Human Identification, Statistics Workshop, Phoenix, AZ
- 10/97 International Symposia on Human Identification, Scottsdale, AZ
- 2000 American Academy for Forensic Science (Presenter), Seattle, WA
- 2000 NIH Conference on Mitochondrial Diseases
- 03/00 DNA Grantee's Workshop, Washington, DC
- 05/00 Frenzie (Annual Conference)
- 05/00 NIJ 5th Annual Conference on the Future of DNA, (Presenter)
- 06/00 Cambridge Healthtech Institutes 4th Annual Conference
- 06/01 2nd Annual DNA Grantee's Workshop
- 06/01 Frenzie (Annual Conference)
- 11/01 NFSTC Training Workshop, Performance Level Auditing
- 2002 American Academy for Forensic Science, Atlanta, GA
- 12/01 12th International Symposium on Human Identification, Parentage Minisymposium, Biloxi, MS
- 05/02 DNA Microarrays and T-RFLP Profiling (7.0) Contact Hours, ASM Annual Meeting, Salt Lake City
- 05/02 Microorganisms in Food. 7.0 Contact Hours, ASM Annual Meeting, Salt Lake City
- 05/02 FBI Training Workshop
- 08/02 87th International Education Conference, International Association for Identification
- 08/02 NWC3 Basic Data Recovery and Analysis Training
- 10/02 AABB Annual Meeting and TXPO, Parentage Testing SIG, Standards for Parentage Testing Laboratories, 5th Edition, Orlando, FL
- 10/02 13th International Symposium on Human Identification, Parentage Testing Laboratories Minisymposium Phoenix, AZ

- 06/03 "New DNA Technology Expedition", Promega, Columbus, OH
- 12/03 FRN Meeting Orlando, FL
- 01/04 National Law Enforcement Technology Center Director's Meeting Washington, DC
- 02/04 American Academy for Forensic Science, Dallas, TX
- 03/04 Multi-Regional Advisory Council Conference San Diego, CA
- 10/04 Attend 15th International Symposium on Human Identity, Phoenix, AZ
- 11/04 DNA Databanks and Repositories, Saint Paul, MO
- 12/04 Workshop on Digital Evidence Laboratory America Society Crime Directors, Alexandria, VA
- 04/05 DNA TWG Meeting, Washington, DC
- 05/05 Mid-Atlantic Association of Forensic Scientist, Pittsburgh, PA
- 06/05 DNA Grantee's Meeting, Washington, DC
- 07/05 Expert Systems Training, Cybergenetics, Pittsburgh, PA
- 06/06 DNA Grantee's Workshop, Washington, DC
- 08/06 FRN Meeting, Washington, DC
- 10/06 ASCLD, (Presenter), San Francisco, CA
- 12/06 FRN Meeting Washington, DC
- 02/07 American Academy of Forensic Science National Meeting, San Antonio, TX
- 04/07 National Institute for Justice Applied Technologies Conference (Presenter), Anaheim, Ca
- 06/07 Cold Case Conference, Clearwater, FL
- 07/07 National Institute for Justice Conference, Washington, DC
- 08/07 Y-STR Meeting, Orlando, FL
- 08/07 Cold Cases Homicide Investigations Conference, Annapolis, MD
- 12/07 National Institute for Justice Forensics Policy Summit, Washington, DC
- 03/08 National Institute for Justice Applied Technologies Conference, Point Clear, FL
- 06/08 National Institute for Justice "Workshop for Laboratories Embarking on Validation of an Expert System". (Presenter) Tampa, Fl
- 07/08 National Institute for Justice Conference for 2008 (Presenter), Washington, DC
- 09/08 ASCLD (Presenter), Salt Lake City, UT
- 02/09 American Academy of Forensic Science National Meeting, Denver, CO
- 03/09 Forensic Science training Grantees Meeting, Indian Rocks Beach, FL
- 04/09 National Institute for Justice Applied Technologies Conference (Presenter), Kansas City, MO
- 05/09 Circuit Judge Education Conference (Presenter), Bridgeport, WV
- 06/09 National Institute for Justice Conference 2009 Washington, DC
- 09/09 National Governor's Association, Working Group On Forensic Science, Wash DC (Presenter)
- 11/09 Prosecuting Attorneys Institute, Cell Phone Forensics (Presenter)
- 11/09 Prosecuting Attorneys Institute, NAS Report Focusing on Digital Forensics (Presenter)
- 02/10 American Academy of Forensic Science National Meeting, Seattle, WA
- 07/10 Appalachian Institute of Digital Evidence, GPS and Location Technologies (Presenter)
- 09/10 ASCLD, Baltimore, MD
- 02/11 American Academy of Forensic Science National Meeting, Chicago, IL
- 04/11 Tri-State Fire Academy, Geolocation On Mobile Devices (Presenter)
- 05/11 SANE Training, Digital Device Evidence (Presenter)
- 06/11 WV Summit and Expo, Homeland Security (Panelist)
- 07/11 Appalachian Institute of Digital Evidence (Presenter)
- 08/11 WV Prosecuting Attorneys Institute, Collection and Transport of Digital Evidence (Presenter)
- 09/11 SANE Training, Digital Device Evidence (Presenter)
- 10/11 IAAI: WV Chapter, Identification of Digital Evidence, Data Recovery (3 Presentations)
- 12/11 National Prosecuting Attorney Coordinators, Future Trends in Digital Forensics (Presenter)

- 12/11 US Senate Committee on Science, Commerce and Transportation (Testified on Forensic Science), Senator Rockefeller Chair (D/WV)
- 01/12 NIJ SAK Action Research Team Meeting , Wash., DC (Presenter)
- 02/12 American Academy of Forensic Science National Meeting, Atlanta
- 06/12 SANE Training, Digital Device Evidence (Presenter)
- 06/12 Identity Technologies: Biometrics and Beyond (Presenter)
- 9/12 ASQ Southern Ohio Region, hosted by MUFSC (Presenter)
- 01/13 NIJ Social Science Research on Forensic Science Topical Working Group (Panelist)
- 2/14 Attended AAFS Meeting, Seattle Washington, Completed Workshop, Multimedia Authentication: Searching for Truth in the Digital World

Oversight: Research Presented By MUFSC Faculty and Staff

National and Regional Meetings; Student Research Posters and Research Presentations

Abstracts

Abstracts

Tsuchiya, Y., T.W. Fenger, and H. Rouhandeh. 1971. Inhibition of the Synthesis of Antigens by SV40 in Cells Pre-infected with Yaba Tumor Poxvirus. Bact. Proc., p. 85 Minneapolis.

Fenger, T., and H. Rouhandeh. 1972. Structural Polypeptides of Yaba Monkey Tumor Virus. Abst. Ann Meet. ASM., p. 225, Philadelphia.

Fenger, T., and H. Rouhandeh. 1976. Characterization of Yaba Monkey Virus Infected Cell Proteins. Abst. Ann. Meet. ASM., p. 242, Atlantic City.

Fenger, T., and C. Howe. 1977. Isolation of Measles Virus Receptor. J. Cell Biol. 75:401.

Fenger, T., and C. Howe. 1978. Characterization of Measles Virus Receptors from Rhesus Monkey Erythrocytes. Ann. Meet. ASM. Las Vegas.

Fenger, T., and C. Howe. 1978. Analysis of Antigens Expressed on Membranes of Cells Productively or Persistently Infected with Measles Virus. ASBC/AAI. Atlanta.

Centifanto, Y. M., H. E. Kaufman, and T. W. Fenger. 1979. Strain Specificity of Clinical Isolates of Herpes Simplex Virus. Abst. Ann. Meet. ASM., p. 240, Los Angeles.

Fenger, T. W. and C. Howe. 1979. Analysis of Measles Viral Proteins on Membranes of Infected Cells. Abst. Ann. Meet. ASM., p. 245, Los Angeles.

Fenger, T. W. and C. Howe. 1981. Characterization of Viral Glycoproteins Expressed on Measles Virus-Infected Cells. Abst. Ann. Meet. ASM., p. 260, Dallas.

Fenger, T. W. 1982. Characterization of Membrane-Associated Hemagglutinin from Measles Virus Infected Cells. FASEB. p. 1277. New Orleans.

Fenger, T. W. 1983. Proteins Associated With Nonreduced Hemagglutinin from Measles Virus Infected Cells. Abst. Ann. Meet. ASM. p. 304. New Orleans.

Fenger, T. W., E. Bingham, A. Sugar, and J. Smith. 1984. Luminol dependent chemiluminescence in neutrophils from normal and HSV infected rabbits. International Symp. in Bio. Sci., Viruses, Immunity and Immunodeficiency, Tampa.

Sugar, A., E. Bingham, T. W. Fenger, and J. Smith, 1985, Antibody Dependent PMN Chemiluminescence Induction by HSV. ARVO National Meetings, Sarasota, FL.

McCumbee, J., T. W. Fenger and R. Wang, 1985. A morphological study of the cornea infected by Herpes simplex. Southern Society of Anatomists, Huntington.

Foster, J.W., Y.K. Park, T.W. Fenger and M. Spector, 1989, Molecular analysis of NAD biosynthetic, regulatory and transport of **Salmonella typhimurium**. Abst. Ann. Meet. ASM, New Orleans, LA.

Fenger, T., T. Seaman, and R. Belshe, 1989, Plaque Reduction Assay to Detect HIV Neutralizing Antibodies in Sera from Human Vaccinees. V. International Conference on AIDS, Montreal.

Seaman, T., T. Fenger, 1989, Insertion of HIV env gene into a Eukaryotic Plasmid for Expression in Mammalian Cells. Regional ASM Meeting, Pittsburgh, PA.

Moore, M. R., D. Primerano, T. W. Fenger, and J. S. Strobl. 1992, A Progesterone Responsive Element In the c-myc Protooncogene. Research Symposium. Marshall University.

Seaman, W. T., R. Belshe, and T. W. Fenger, Functional Expression of HIV env Gene. Product in CD 4^+ HeLa Cells. 1991, International Conference On Advances In Aids Vaccine Development, Marco Island, Florida.

Seaman, W. T., R. Belshe, and T. W. Fenger, Contribution of Hydrophobic Residues in the Functional Expression of HIV env Gene. 1992, American Society for Microbiology, Annual Meeting, New Orleans.

Seaman, W. T. and T. W. Fenger, Mutations within the Leucine Zipper of the Transmembrane Protein (gp41) of HIV Interfere with Wild-Type Mediated Membrane Fusion. 1993, American Society for Microbiology, Annual Meeting, Atlanta.

O'Brien, T.L., A. McDonald, D. Bailey and T. Fenger. Bacterial Source Tracking In the Headquarters of the Potomac River. The Ohio River Basin Consortium for Research and Education 18 th Annual Scientific Symposium, 2002.

O'Brien, T.L., A. McDonald, D. Bailey and T. Fenger. Bacterial Source Tracking Methods Comparison, The Ohio River Basin Consortium for Research and Education, 18 th Annual Scientific Symposium, 2002.

O'Brien, T.L., A.K. McDonald, D.E. Bailey, K.M. Strickler, T. W. Fenger, Bacterial Source Tracking of E.coli By Pulsed Field Gel Electrophoresis Analysis, ASM Annual Meeting, Wash DC, 2003

Tincher, B.M., S. Rogers, A. Della Manna, T. Fenger, R. Roby. Joint Validation of a High Throughput Multi-Capillary Electrophoretic System Using Fluroescent Multiplex Short Tandem Repeats, AAFS, New Orleans, 2005

Rogers, S., B. Tincher, A. Della Manna, T. Fenger, R. Roby, A Concordance Study Comparing Different Amplification Chemistries and Electrophoretic Platforms For Databasing Program, AAFS, New Orleans, 2005

Helenek, K., J. Brunty, C. Vance, T. Fenger, A Forensic Analysis of Facebook Artifacts, AAFS, Atlanta, 2012

Corcoran, K., A. Read, J. Brunty, T. Fenger, Messaging Application Analysis for Android and iOS Platforms, AAFS, Washington DC, 2013

Friedman, R., J. Brunty, T. Fenger, A Digital Forensic Analysis on the iCloud and its Synchronization to Apple Devices, AAFS, Washington DC, 2013

Rusbarsky, K., C. Smith, J. Brunty, T. Fenger, A Forensic Comparison of NTFS and FAT32 File Systems, AAFS, Washington DC, 2013

Wu, C. C. Vance, R. Boggs, T. Fenger, Forensic Analysis of Data Transience Applications in iOS and Android, American Academy of Forensic Science, Seattle 2014

Full Papers

Fenger, T. and H. Rouhandeh. 1976. Proteins of Yaba Monkey Tumor Virus. I. Structural Proteins. J. Virol. 18:757-764.

Glorioso, J. C., and L. A. Wilson, T. W. Fenger and J. W. Smith. 1978. Complement mediated Cytolysis of HSV-1 and HSV-2 Infected Cells: Plasma membrane antigens reactive with type-specific and cross-reactive antibody. J. Gen. Virol. 40:443-454.

Fenger, T. W., J. W. Smith and C. Howe. 1978. Analysis of immunopreciated surface glycoproteins in measles virus and in membranes of infected cells. J. Virol. 38:292-299.

Fenger, T. W. and C. Howe. 1979. Isolation and Characterization of Erythrocyte Receptors for Measles Virus. Proc. Soc. Exp. Biol. Med. 162:299-303.

Adler, K. A., T. W. Fenger and L. A. Wilson. 1980. Blocking Induction of Human Cytotoxic T1 Lymphocytes with Anti-Ia Xenoantiserum. Transplantation 29:267-273.

Centifanto-Fitzgerald, Y., T. W. Fenger, and H. E. Kaufman 1982. Virus Protein in Herpetic Keratitits. Exp. Eye Research. 35:425-441.

Bingham, E., T. W. Fenger, A. Sugar and J. Smith 1985. Dependence on antibody for induction of chemiluminescence in PMN by herpes simplex virus. Invest. Ophthal. Vis. Sci. 26:1236-1242.

Fenger, T. W. 1993. Enzymatic Cleavage of Isolated and Membrane Bound Glycoproteins of Measles Virus Infected Cells. In revision.

Foster, J. W., Y. K. Park, T. Penfound, T. W. Fenger, M. P. Spector, 1990. Regulation of NAD metabolism in ***Salmonella typhimurium*** molecular sequence analysis of the bifunctional nadR regulator and the nadA-pnuC operon. J.Bact 172:4187-96.

Kahle, E. B., K. G. Butz, S. C. Chua, E. E. Kershaw, R. L. Leibel, T. W. Fenger, C. T. Hansen, O. E. Michaelis. The Rat Corpulent (cp) Mutation Maps to the Same Interval on (Pgm 1-Glut1) Rat Chromosome 5 as the Fatty (fa) Mutation. Obesity Research 5:2 March 1997.

Withrow, A. G., J. Sikorsky, J. C. U Downs, and T. Fenger. Extraction and Analysis of Human Nuclear and Mitochondrial DNA from Electron Beam Irradiated Envelopes, J. Forensic Science, 48: 6. 1-9. (2003)

Sikorsky, J., D. Primerano, T. Fenger and J. Denvir, . Effect of DNA Damage on PCR Amplification Efficiency with the Relative Threshold Cycle Method, BBRC 323: 823-830 (2004)

Stoeckel, D.M, M.M Mathes, K. Hyer, H. Kator, J. Lukasik, T. O'Brien, T. Fenger, S. Samadpour, K. Strickler and B.Wiggins. Comparison of Seven Protocols To Identify Fecal Contamination Sources Using *Escherichia coli,* Environmental Science and Technology, 38: 22. 6109-6117. (2004)

Instructional learning for SANE nurses focusing on Forensic Photography for SANEs, Posted on Foundation for Rape Information and Services training web site

Book Chapters

Fenger, TW. ***In***, Weeden,V.(ed), Microbial Forensics, 2005 (Chapter In Development)

Fenger, T. W. 1990. Replication of RNA Viruses. ***In*** R. Belshe (ed.), Textbook of Human Virology, pp. 79-102. Yearbook Medical Pub. Chicago.

Fenger, T. W. 1990. Replication DNA Viruses. ***In*** R. Belshe (ed.), Textbook of Human Virology, pp. 49-78. Yearbook Medical Pub. Chicago.

Fenger, T. W. 1984. Replication of RNA Viruses. ***In*** R. Belshe (ed.), Textbook of Human Virology, pp. 79-102. Wright PSG Pub. Company, Boston.

Fenger, T. W. 1984. Replication DNA Viruses. In R. Belshe (ed.), Textbook of Human Virology, pp. 49-78. Wright PSG Pub. Company, London, Boston.

Howe, C., J. E. Coward and T. W. Fenger. 1980. Viral invasions. Morphological biochemical, and biophysical aspects. ***In*** H. Fraenkel-Conrat and R. W. Wagner (eds.), Comprehensive Virology, vol. 16, pp. 1-71. Plenum Press, NY.

Smith, J. W. and T. W. Fenger. 1980. Autoradiography and gels: measurement of radioactivity association with absorbance tracings and individual gel bands. ***In*** Liquid Scintillation Counting: Recent Applications and Developments. Vol. II, pp. 77-86. Academic Press.

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: MUSOM | Dept/Division: Forensic Science | Alpha Designator/Number: FSC | (•) Graded ( ) CR/NC

Contact Person: Dr. Pamela Staton | Phone: 304-691-8962

NEW COURSE DATA:

New Course Title: Firearms & Toolmarks Technical Assistance Program (TAP)

Alpha Designator/Number: F S C 6 4 0

Title Abbreviation: Firearms Toolmarks I

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)

This course provides an enhanced learning experience designed to reduce the time to competency typical of the knowledge required component of a firearms examiner training program. FSC 640 is the first of two firearms and toolmarks examiner training courses.

Co-requisite(s):

First Term to be Offered: Fall 2015

Prerequisite(s):

Credit Hours: 1

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head: Pamela Staton	Date: 4-9-2015
Registrar: Roberta Ferguson 269999	Date: 4/27/15
College Curriculum Chair: Pamela Staton	Date: 4-23-2015
Graduate Council Chair: TChristofero	Date: 10-12-15

Request for Graduate Course Addition - Page 2

College: MUSOM | Department/Division: Forensic Science | Alpha Designator/Number: FSC

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Season E. Seferyn, MSFS et al
Pamela Staton

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See Attached Document

7. COURSE OUTLINE (May be submitted as a separate document)

See Attached Document

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

N/A; NIJ firearms training

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Online modules and in class quizzes; semester final exams

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

In class quizzes; semester final exams

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

www.nij.gov/training/firearms-training

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Forensic Science
Course Number and Title: FSC 640 Firearms & Toolmarks Technical Assistance Program I TAP
Catalog Description: This course provides an enhanced learning experience designed to reduce the time to competency typical of the knowledge required component of a firearms examiner training program. FSC 640 is the first of two firearms and toolmarks examiner training courses.
Prerequisites: N/A
First Term Offered: Fall 2015
Credit Hours: 1

FORENSIC SCIENCE

MARSHALL UNIVERSITY
Forensic Science Program

1401 Forensic Science Drive
Huntington, WV 25701
Phone: 304.691.8931
Fax: 304.691.8929
www.marshall.edu/forensics

FSC 650 Firearms and Toolmarks TAP (Technical Assistance Program) Fall 2014

Moderator

Name: Season Seferyn, MSFS
Phone: 304-691-8971
Fax: 304-691-8928
Email: seferyn@marshall.edu
Office Hours: Call/email for appointment

Required eLearning Program

www.nij.gov/training/firearms-training

Required Reading

AFTE Code of Ethics:
http://www.afte.org/AssociationInfo/a_codeofethics.htm

Course Description

This course will give you an enhanced learning experience designed to reduce the time to competency typical of the knowledge component of a firearms examiner training program. (1 hour)
LOCATION: Wednesday 12:00-1:00pm in West Wing 2

Objectives

By the end of this course, students should successfully be able to:

1. Identify benefits for having access to a nationally recognized on-line training, as well as completing this firearms examiner training program. (Module 1: Introduction)
2. Discuss safety rules and procedures essential to the firearms examiner trainee. (Safety Module)
3. Explain how today's technology is connected to the past while tracing significant milestones in the areas of propellants, firearms, and ammunition development. (Module 3: Propellant, Firearms, and Ammunition Development)
4. Describe fabrication of metal components of firearms using common manufacturing technologies; methods used for making barrels, rifling processes, effect rifling has on bullets, the contouring and crowning process; main components of a firearm, parts known to produce identifiable marks used in firearms identification; and firearm finishing and testing process. (Module 4: Modern Firearms Manufacture)
5. Describe the historical development of propellants (both single and double based); components of ammunition; bullet jacket types and materials; steps in the ammunition assembly process; steps in ballistic testing; steps in the shotshell assembly process; reloading process and how it can be used for firearm identification. (Module 5: Small Arms Ammunition)
6. Identify the following manufacturing methods:
    a) Projectile manufacture methods
    b) Jacket manufacture technologies
    c) Cartridge case manufacture
    d) Shotshell manufacture process
    e) Primer manufacture process including rimfire and centerfire cartridges

    (Module 5: Small Arms Ammunition)
7. Define and give 3 examples:
    a) Physical evidence
    b) Biological evidence
    c) Drug evidence

d) Other evidence not listed above
e) Class characteristics
f) Individual characteristics
g) Associative evidence
h) Corroborative evidence
i) Circumstantial evidence

(Module 6: Evidence Handling Procedures)

8. Describe:
   a) Elements of a letter of transmittal
   b) Chain-of-custody procedures for evidence handling within labs
   c) Two methods of case assignment
   d) Basic requirements of limited and controlled evidence access
   e) Lab procedures for handling trace evidence commonly associated with firearm/toolmark-related evidence

   (Module 6: Evidence Handling Procedures)
9. Describe:
   a) Lab safety concerns as they relate to evidence handling
   b) Process of evidence receipt in labs
   c) Benefits of computer-based lab information management systems (LIMS)
   d) Options for centralized versus decentralized evidence storage in forensic labs
   e) Additional considerations for types of evidence having high intrinsic value

   (Module 6: Evidence Handling Procedures)
10. Define:
    a) Standards
    b) Accuracy
    c) NIST traceability
    d) Measurements
    e) Laboratory accreditation
    f) Laboratory protocols
    g) Quality Assurance Guidelines set by AFTE and SWGGUN
    h) AFTE
    i) SWGGUN
    j) Measurement equipment for weight and force
    k) Various types of equipment for measuring dimensions
    l) Requirements for an indoor range, bullet recovery system, outdoor range
    m) Ethics and professional responsibilities of a firearms/toolmarks analyst

    (Module 7: Equipment and Instrumentation)
11. Describe:
    a) Use of a chronograph
    b) Stereo microscope
    c) Comparison microscope
    d) Tools and supplies at the laboratory bench
    e) Imaging systems
    f) Equipment for lab field support in crime scenes
    g) Integrated Ballistics Identification System (IBIS)
    h) MatchPoint Plus
    i) BulletTRAX-3d System

    (Module 7: Equipment and Instrumentation)
12. Explain:
    a) Cycle of fire for manufactured firearms
    b) Evidence documentation required prior to the examination
    c) Type, caliber, action, and safety features of firearms based on visual examination
    d) How to conduct a safety and functionality examination of a firearm

e) How a firearm functions, its capabilities and limitations
f) Safety features of firearms, how they function
g) How safety features of firearms are determined to be nonfunctional
h) Methods of test firing a firearm including full automatic, single-action, and double-action type firearms
i) How to perform a drop test

(Module 8: Examination of Firearms)

Evaluation/Assessment of Learner Objectives

There will be one final exam.

Grading Policy

Final Exam 1 is worth 15% of final grade.

Attendance is worth 40% of the final grade.

Quizzes are worth 45% of the final grade. **

**Students who earn less than 80% of possible points on a quiz should be encouraged to retake the quiz within one week of date of the original quiz. Highest possible score is then 80%.

Grading Scale:

90-100%	A
80-89%	B
70-79%	C
60-69%	D
59% and below	F

Attendance Policy

Attendance is mandatory. If you are sick or are not able to make it to class, a phone call or e-mail is required BEFORE class time. If you are unable to take an exam on the selected day, arrangements must be made BEFORE the scheduled date to take the exam. Failure to do so will result in a failing grade. http://www.marshall.edu/wpmu/student-affairs/files/2011/08/Medical-Withdrawal-Policy.pdf .

Make-up Policy

The program coordinator and instructor must be notified of absences. Doctor's excuse may be required if more than one absence occurs.

Academic Dishonesty

Academic dishonesty in any form will not be tolerated. Plagiarism is defined as "submitting as one's own work or creation any material or an idea wholly or in part created by another. This includes oral, written, and graphical material, and both published and unpublished work. It is the student's responsibility to clearly distinguish his/her own work from that created by others. This includes the proper use of quotation marks, paraphrase, and the citation of the original source" (2008-2009, Graduate Catalog, p. 61). Refer to Marshall University Board of Governors Policy No. AA-12 Academic Dishonesty - http://www.marshall.edu/president/Board/Policies/MUBOG%20AA-12%20Academic%20Dishonesty.pdf – for complete details.

Policy for Student's with Disabilities

Marshall University is committed to equal opportunity education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117 (304.696.2271) to provide documentation of their disability. Following this, the DSS Coordinator will send a letter to each of the student's instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing, and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, access the website for the Office of Disabled Student Services: http://www.marshall.edu/disabled /

Affirmative Action Policy

It is the policy of Marshall University to provide equal opportunities to all prospective and current members of the student body, faculty, and staff on the basis of individual qualifications and merit without regard to race, color, sex, religion, age, disability, national origin, or sexual orientation. To obtain information on the implementation of the policy regarding nondiscrimination, contact the Director of Equity Programs, Old Main, Marshall University, Huntington, WV 24755 (304.696.2592)

Acceptable Use Policy
Access to Marshall University's resources is a privilege and is provided with an expectation of responsible and acceptable use. To read the principles and guidelines as well as federal, state, and local regulations, please go to http://www.marshall.edu/ucs/cs/accptuse.asp.
Inclement Weather Policy
In the case of inclement weather, please follow Marshall's procedures if any cancellations/delays occur. http://www.marshall.edu/ucomm/weather.html.
Miscellaneous
Recommended websites: www.nra.org www.firearmsid.com www.swggun.org www.afte.org
Disclaimer
Fair Use of Copyrighted Works: Please note that the instructor may use some works that are copyrighted by the publisher or original author. These works are provided to students under the Educational Fair Use provision of Title 17 of the US Code and are not to be shared with individuals who are not enrolled in this course.

Week	Date	Topic
Week 1	Aug 27	Module 1: Introduction / Code of Ethics Safety
Week 2	Sept 3	Quiz on Safety Module
Week 3	Sept 10	Module 3: Propellant, Firearms and Ammunition Development
Week 4	Sept 17	Quiz on Module 3: Propellant, Firearms and Ammunition Development
Week 5	Sept 24	Module 4: Modern Firearms Manufacture
Week 6	Oct 1	Quiz on Module 4: Modern Firearms Manufacture
Week 7	Oct 8	Module 5: Small Arms Ammunition
Week 8	Oct 15	Quiz on Module 5: Small Arms Ammunition
Week 9	Oct 22	Module 6: Evidence Handling Procedures
Week 10	Oct 29	Quiz on Module 6: Evidence Handling Procedures
Week 11	Nov 5	Module 7: Equipment and Instrumentation
Week 12	Nov 12	Quiz on Module 7: Equipment and Instrumentation
Week 13	Nov 19	Module 8: Examination of Firearms Take Home Quiz 8 Given
Week 14	Nov 26*	Take Home Quiz on Module 8 due: Examination of Firearms
Week 15	Dec 3	Final Option 1
Week 16	Dec 10	Final Option 2

SEASON ELIZABETH SEFERYN

Marshall University Forensic Science Center
1401 Forensic Science Drive, Huntington, WV 25701
Phone: (304) 691-8971
Fax: (304) 691-8928
seferyn@marshall.edu

POSITION TITLE & DESCRIPTION (JULY 2010 – PRESENT)

The Marshall University Forensic Science Center employs me as a ***Parentage DNA Analyst II*** in the DNA Laboratory.

All DNA Analysts report to and receive administrative direction from the Technical Leader of the DNA Laboratory. As a Parentage DNA Analyst II, I conduct complex analysis on: civil relationship cases involving immigration, inheritance, and other relatedness issues, and criminal relationship cases involving body identification, incest, and other criminal relatedness issues. In addition, as the ***DNA Training Officer***, I am responsible for maintaining the laboratory's training curriculum and overseeing the technical training of all new and/or current MUFSC DNA laboratory employees.

Marshall University employs me as an ***Associate Graduate Faculty Member*** since January 2013.
Courses taught - FSC 607: Bloodstain Pattern Analysis, FSC 650: Firearms and Toolmarks Technical Assistance Program, and FSC 603: Genetics DNA Laboratory

PREVIOUS POSITION TITLE & DESCRIPTION (MAY 2009 – JUNE 2010)

Genetic Technologies, Inc. employed me as a Forensic Scientist. I conducted analysis on reference and forensic samples for relatedness, civil, and criminal casework. Tasks also included accessioning casework to include preparation of evidence receipts, entering samples into LIMS, and storage of evidentiary samples to ensure integrity of all casework samples. In addition, I performed preliminary reviews of case review for the Senior Forensic Scientist including organizing discovery information and contacting attorneys regarding each case. As a result of working at GTI, I have gained experience and utilized an AB310, Identifiler, Y-Filer, Mini-Filer, AB 7500, AB GeneMapper software and AB Genotyper software.

PREVIOUS POSITION TITLE & DESCRIPTION (AUGUST 2004 – JUNE 2007)

Western Harnett Middle School employed me as a seventh grade science teacher. I was able to develop hands-on lesson plans to compensate for the lack of textbooks. In addition, I integrated technology and hands-on learning into my daily lesson plans.

QUALIFICATIONS, TRAINING & PROFESSIONAL MEMBERSHIPS

- Bachelor of Science in Biology, The Pennsylvania State University, University Park, PA, 2004.
- Bachelor of Science in Crime Law and Justice, The Pennsylvania State University, University Park, PA, 2004.
- Master of Science in Forensic Science, Arcadia University, Glencoe, PA, 2009.
- Attended various workshops and professional meetings to continue my education in the field of Forensic Biology.
- Associate Member Criminalistics, American Academy of Forensic Sciences, 2012- Present.
- Trainee Affiliate Criminalistics, American Academy of Forensic Sciences, 2010- 2012.
- Student Affiliate Criminalistics, American Academy of Forensic Sciences, 2008-2010.
- Member of the Council of Forensic Science Educators, 2014-Present.
- Member of the Delta Delta Epsilon Honor Society - Zeta Chapter, 2013-Present.
- Primary Parentage DNA Analyst on 85-95 non-criminal and criminal relationship cases.
- Qualified as an expert witness, 3 trials, in West Virginia.
- Qualified as an expert witness, 2 trials, in North Carolina.
- Qualified as an expert witness, 2 trials, in Pennsylvania.
- Qualified as an expert witness, 1 trial, in Kentucky.

SEASON ELIZABETH SEFERYN
seferyn@marshall.edu

PROFICIENCY TEST RECORDS

I have successfully completed proficiency testing since 2009. The following are dates and proficiency tests I have completed:

IQAS 60-999107-2902 (Forensic), CAPPARF-B 2009 (Paternity), CAPPARF-C 2009 (Paternity), IQAS 60-999107-2904 (Forensic), NYSDOH Fall 2009 (Paternity- NYS), CAPPARF-A 2010 (Paternity), CAPPARF-A 2011 (Paternity), CAPPARF-B-2011 (Paternity), CAPPARF-C-2011 (Paternity), CAP12A-3 (Paternity), CAP12B-3 (Paternity), CAP12C-3 (Paternity), CAP13A-3 (Paternity), CAP13B-1 (Paternity), CAP13C-1 (Paternity), CAP14A-1 (Paternity) , CAP14B-1 (Paternity), CAP14C-1 (Paternity)

PRESENTATIONS, DEMONSTRATIONS, & WORKSHOPS

2014

- "Internal Validation of the Applied Biosystems® GlobalFiler™ Express PCR Amplification Kit, *Shanna Saunders, Kyra Groeblinghoff, Season Seferyn, Dr. Pamela Staton*", Assisted student Author, Poster Presentation
  - MUFS Research Day, Huntington, WV, 2014

- "Internal Validation of FSS-i3™ 4.2.2 Expert Software System for use with Single Source PowerPlex® 16HS Multiplex DNA Samples, *Dijana Coric, BS; Cyndi Cunnington, MS; Season Seferyn, MSFS; Dr. Pamela Staton, PhD*", Assisted student Author, Poster Presentation
  - MUFS Research Day, Huntington, WV, 2014

- "Internal Validation of the Qiagen® QIAgility® Robotic Liquid Handler, *Lisa Burgee BS, Alice Hilker MFS, Season Seferyn MSFS, Pamela Staton PhD*", Assisted student Author, Poster Presentation
  - MUFS Research Day, Huntington, WV, 2014

2013

- "An In-Depth Look: 412 Property Crime Cases from Lowcountry Region, South Carolina", Author & Presenter, Poster Presentation
  - AAFS Conference, Washington, D.C., 2013

- "Validation and Comparison of the AmpFℓSTR® Identifiler® Plus PCR Amplification Kit to Identifiler®, MiniFiler™, and YFiler® *Sarah Barr, BS, Chad Summerfield, MSFS, Season Seferyn, MSFS, and Dr. Pamela Staton, PhD"*, Assisted student Author, Poster Presentation
  - AAFS Conference, Washington, D.C., 2013

- "Evaluation of Digestion Buffers and Extraction Techniques for the Recovery of DNA from Teeth, *Tifani Rae Parker, BS, Carly Fannin, MS, Season Seferyn, MSFS and Dr. Pamela Staton, PhD*", Assisted student Author, Poster Presentation
  - MUFS Research Day, Huntington, WV, 2013

- "A Crime Scene Snapshot: A Look into Property Crime Cases from Miami, Florida", Author, Oral Presentation
  - IAI Conference, Providence, RI, 2013

- "A Comparison of 1,600 Property Crime Cases from Miami, Florida and Charleston, South Carolina", Author & Presenter, Poster Presentation
  - IACP Conference, Philadelphia, PA 2013

2012

- "Expedited DNA Analysis and Demographic Comparison of Evidentiary Samples from ~1,800 Property Crime Cases", Author & Presenter, Poster Presentation
  - ISHI Conference, Nashville, TN, 2012

SEASON ELIZABETH SEFERYN
seferyn@marshall.edu

2011

- "Internal Validation of Yfiler® for Casework at the St. Louis Metropolitan Police Department (SLMPD), *Anthony W. Eiler, BS, Samantha K. Webb, MA, Season Seferyn, MSFS, Sarah Bowen MS"*, Assisted student Author, Poster Presentation
  - AAFS Conference, Chicago, IL, 2011

2008

- "Determination of Bisphenol-A Concentrations in Bottled Water Using Gas Chromatography/Mass Spectrometry (GC/MS)", Author & Presenter, Poster Presentation
  - NEAFs Conference, New York, 2008

- "Determination of Bisphenol-A Concentrations in Bottled Water Using Gas Chromatography/Mass Spectrometry (GC/MS)", Author, Poster Presentation
  - ACS Conference, Philadelphia, PA, 2008

CONTINUED EDUCATION

2015

- January 20-21, 2015- Grant Writing USA Training at West Virginia State Police Academy: Grant Writing USA, Andy Anderson.

2014

- January 30, 2014- Webinar: Enhancing the Sexual Assault Workflow; Allison Holt and Jack Ballantyne, Webinar.
- February 17-22, 2014- American Academy of Forensic Sciences (AAFS) 66th Anniversary Meeting, Seattle, Washington.
- April 4, 2014- Webinar: Qiagen EZ1 Webinar- Getting the Most Out of Your EZ1; Dr. Mark Guilliano, Webinar.
- May 12, 2014- Applications of Next Generation Sequencing in Clinical Genomics, Forensic Science and Micro Biome Studies, Dr. Donald Primerano.
- May 29, 2014- Familial DNA Searching: Current Approaches- Session One; Bruce Budowle, Webinar.
- June 3, 2014- Fostering the Discipline to Disseminate: A Workshop on Writing Productively for Publication; Dr. Weber-Main; Marshall University Medical School, Huntington, West Virginia.
- June 26, 2014- Familial DNA Searching: Current Approaches- Session Two; Bruce Budowle, Webinar.
- August 6, 2014- NIST DNA Analyst Webinar Series: Validation Concepts and Resources-Part 1; Webinar.

2013

- February 18-23, 2013- American Academy of Forensic Sciences (AAFS) 65th Anniversary Meeting, Washington, D.C.
- April 11, 2013- Webinar: Rapid DNA Analysis: Understanding How it Can Expedite Forensic Investigations; Dr. Bruce Budowle and Melissa May, Webinar.
- April 12, 2013- NIST DNA Mixture Interpretation Workshop and Webcast, Webinar.
- July 22, 2013- Qiagen® EZ1 Webinar: Forensic DNA Analysis Efficiency Improvements with the EZ1 Advanced DNA Technology; Charles S. Hardy, Webinar.
- August 4-10, 2013- International Association for Identification (IAI) 98th Anniversary Meeting, Providence, RI
- September 12, 2013- DNAscan Rapid DNA Analysis System: GE Healthcare Life Sciences, Len Goren.
- October 15, 2013- GlobalFiler Testing and GeneMapper ID-X: Life Technologies, Melissa Kotkin.
- October 16, 2013- RapidHIT 200 Human Identification System: IntegenX, Kevin Bebak.
- October 17, 2013- RapidHIT 200 Human Identification System Demo at Kentucky State Police Central Laboratory: IntegenX, Kevin Bebak.

2012

- January 11, 2012- Armed Xpert- Complete Case Management DNA Analysis Software: NicheVision Forensics, LLC.
- February 20, 2012- Breakfast Seminar: Postmortem Examination and Personal Identification of Victims of the Great East Japan Earthquake; Yasuhiro Aoki, AAFS, Atlanta, GA
- February 21, 2012- Workshop: Flawed Forensics: Recognizing and Challenging Misleading Forensic Evidence and Disingenuous Expert Testimony; Andrew Sulner, et al, AAFS, Atlanta, GA

SEASON ELIZABETH SEFERYN
seferyn@marshall.edu

- May 24, 2012- Promega Genetic Identity Webinar: Simplifying Databasing and Paternity Workflows without Compromising PowerPlex® Results; Benjamin Krenke, Webinar.
- September 25, 2012- IntegenX Webinar: Rapid DNA- The Evolution of Forensic DNA Analysis; Dr. Joseph DiZinno, Webinar.
- September 26, 2012- Qiagen Webinar: Successfully Overcoming Challenges in Forensic Sample Preparation- QiaSymphony; Dr. Mario Scherer and Dr. Marion Nagy, Webinar.
- October 16-18, 2012- Promega's 23rd International Symposium on Human Identification (ISHI), Nashville, TN.

2011

- February 20, 2011- Courtroom Testimony for DNA Analysts: Raymond J. Davis (CourtSkills Instructor) and Keith Jolliff (Qiagen), Hyatt Regency, Chicago, IL
- February 21, 2011- Workshop: Method Validation and Estimating the Uncertainty of Measurements in the Modern Forensic Laboratory for Compliance with ISO/IEC 17025:2005; Terry Mills and Robert J. Ollis, AAFS, Chicago, IL
- February 22, 2011- Workshop: DNA Mixture Analysis: Principles and Practice of Mixture Interpretation and Statistical Analysis Using the SWGDAM STR Interpretation Guidelines; John M. Butler, et al, AAFS, Chicago, IL
- February 23, 2011- Breakfast Seminar: Lightning Strikes Twice: The Case of a Femme Fatale; Robert J. Morton, AAFS, Chicago, IL
- February 25, 2011- Breakfast Seminar: Thomas Krauss Memorial Bite Mark Breakfast: Criminal Profiling- With a Little Help From My Friends; Dayle L. Hinman, AAFS, Chicago, IL
- June 30, 2011- Promega Genetic Identity Webinar- Expedited DNA Extraction Methods for Disaster Victim Identification; Jeff Hickey- AFDIL, Webinar.
- September 15, 2011- US DOT Hazardous Materials- Regulated Medical Waste Training; Nathan Douglas- Chemical and Biological Safety Officer.
- October 7, 2011- Safety Training – Blood Borne Pathogen and Chemical Safety; Nathan Douglas- Chemical and Biological Safety Officer.

2010

- President's DNA Initiative- online course, "Non-STR DNA Markers: SNPs, Y-STRs, LCN and mtDNA" completed 05/26/2010
- September 13-17, 2010- Forensic Y-STR Training: MUFSC, Huntington, WV
- October 4-7, 2010- Forensic Relationship Training: MUFSC, Huntington, WV
- December 6-10, 2010- President's DNA Initiative Advanced DNA Training: MUFSC, Huntington, WV

2009

- 2009 American Academy of Forensic Sciences- Denver, Colorado
- The Real Mason Verger: The Man Who Fed His Face to the Dogs", Vernon Geberth, AAFS 2009
- 2009 American Academy of Forensic Sciences Plenary Session
- 2009 American Academy of Forensic Sciences Criminalistics Poster Session
- New York State- online course, "HIPAA Basics", completed 12/4/2009

2008

- "Genetics", Arcadia University, 2008
- "Statistical Analysis and Biostatistics", Arcadia University, 2008
- "Law, Evidence and Procedure", Arcadia University, 2008
- Northeastern Association of Forensic Scientists Annual Meeting, New York, October 2008

2007

- "Biochemistry", Arcadia University, 2007

2002

- "Biology of Molecular Cells", The Pennsylvania State University, 2002

2001

- "Elementary Statistics", The Pennsylvania State University, 2001

PAMELA J. STATON, Ph.D.

Marshall University Forensic Science Center: 1401 Forensic Science Drive, Huntington, WV 25701
staton1@marshall.edu |304-691-8962 (Office) 304-691-8929 (Fax) 304-634-5263 (Mobile) |
www.marshall.edu/forensics

EDUCATION

Ph.D. **Biomedical Sciences**, 2001. Marshall University School of Medicine, Huntington, WV
M.S. **Medical Technology**, 1978. West Virginia University, Morgantown, WV
B.S. **Medical Technology**, 1975. Morehead State University, Morehead, KY

NATIONAL CERTIFICATION

- **Medical Technologist, MT(ASCP) #104280**, American Society of Clinical Pathologists
- **Specialist in Microbiology, SM(ASCP) # 1920**, American Society of Clinical Pathologists

PROFESSIONAL MEMBERSHIPS

- American Academy of Forensic Sciences (AAFS)
- American Society of Crime Laboratory Directors (ASCLD)
- American Society of Clinical Pathologists (ASCP)
- Delta Delta Epsilon Forensic Science Honorary Society
- Council of Forensic Science Educators (COFSE)

EMPLOYMENT HISTORY

- **Graduate Program Coordinator, Researcher & Associate Professor**, *January 2003 to present.* Tenured 2007. Day-to-day administrator; research & teaching. Marshall University Forensic Science, Graduate College, Joan C. Edwards School of Medicine, Huntington, WV.
- **Faculty**, *July 1998 to December 2002.* Tenured 2001. Shawnee State University, Department of Medical Laboratory Science, Portsmouth, OH. Teaching: Microbiology, Blood Banking/Transfusion Medicine, Hemostasis, Clinical Correlation
- **Department Chair & Faculty** *October 1988 to July 1998.* Shawnee State University, Department of Medical Laboratory Science, Portsmouth, OH. Microbiology, Orientation to Clinical Laboratory Sciences, Clinical Correlation
- **Graduate Assistant & Ph.D. Candidate**, *January 1998 to August 2001.* Marshall University School of Medicine Department of Microbiology, Immunology, Molecular Genetics, Huntington, WV.
- **Microbiology Departmental Supervisor**, *September 1984 to October 1988.* King's Daughters' Medical Center, Ashland, KY; Pharmacy & Therapeutics Committee Member; College of American Pathologist Auditor; Infection Control Committee Member
- **Clinical Education Coordinator & Assistant Professor**, *June 1981 to August 1983.* Florida International University, Department of Medical Laboratory Sciences, Miami, FL. Teaching: Hematology, Microbiology, Laboratory Management

- **Laboratory Manager & Adjunct Professor,** *September 1979 to June 1981.* Florida International University, Department of Medical Laboratory Sciences, Miami, FL. Teaching: Hematology, Clinical Chemistry, Blood Banking/Transfusion Medicine, Microbiology
- **Chemist, Division of Toxicology,** *January 1979 to September 1979.* Smith Kline & French Laboratories, Toxicology Division, Miami, FL; Drug, toxicology, and therapeutic drug monitoring
- **Graduate Teaching Assistant,** *August 1976 to December 1978.* West Virginia University, Department of Medical Technology. Morgantown, WV.
- **Medical Technologist,** *July 1975 to July 1976.* Beckley Appalachian Regional Hospital & School of Medical Technology. Beckley, WV. Clinical microbiology, hematology, chemistry, blood banking technologist.

TEACHING & COURSE DEVELOPMENT

- **Seminar** – FSC 680 Fall: Course Director; student research presentations; resume, CV, and cover letter development; PowerPoint tools; research design; career development of internship and job seekers; portfolio development and use; interview preparation and tools; evaluation and self-evaluation; research paper rubric; research poster rubric; accrediting agency [FEPAC] seminar requirement. 1 credit hr
- **Seminar** – FSC 680 Spring: Course Director; student lay audience presentations; student poster presentations; MUFS Research Day organization; student HR interviews; student technical specialty interviews; creating interview panels of working professional; national testing and certification; preparation for AAFS presentations and national meeting participation; accrediting agency [FEPAC] seminar requirements. 1 credit hr
- **Internship** – FSC 630 Summer: Course Administrator; Internship identification, conference calls, and placements; internship agreement approvals; internship oversight; internship requirements such as research paper, research paper rubric, intern evaluation of internship experience, host laboratory evaluation of intern, attendance and punctuality, research slide presentation development, research poster development; accrediting agency [FEPAC] research requirements. 5 credit hrs
- **Biochemistry** – FSC 624 Fall: Course Director; teaching: nucleic acid section; key developer of forensic biochemistry section; recruitment, assignment and coordination of faculty; compiling and administering testing; grading; syllabus design and schedule. 4 credit hrs
- **Bioterrorism** – FSC 610 Spring: Course Coordinator: syllabus & schedule; teaching: laboratory techniques section. 3 credit hrs
- **Laboratory Management** – FSC 650 Spring: Course Instructor; essentials of laboratory management for students aspiring to attain positions as laboratory directors, managers, technical leaders, supervisors or other leadership roles. 2 credit hrs
- **DNA Technical Assistance** – FSC 650 Fall & Spring: Program developer and administrator. Fall 2 credits; Spring 2 credits
- **Firearms Technical Assistance** – FSC 650 Fall & Spring: Program developer and administrator. Fall 1 credit; Spring 1 credit
- **Other Course Oversight for FEPAC Purposes**: FSC 604, FSC 619, FSC 665, FSC 603, FSC 627, FSC 629

GRANTS- FUNDED

- **Staton, Pamela, PI**: 2010 to 2011 **Funded $468,000;** WV Water Quality: Bacterial Source Tracking, Pathogen Profiling and Assay Development; USDA-NIFA-FADM
- **Staton, Pamela, PI:** 2009 to 2010 **Funded $360,360**; West Virginia Water Quality: Bacterial Source Tracking and Pathogen Profiling; USDA-CSREES_FADM
- **Staton, Pamela, PI**: 2008 **Funded $875,000** Y-STR Analysis Training in Support of State and Local Law Enforcement; National Institute of Justice
- **Staton, Pamela, PI:** 2008 to 2009 **Funded 383,862;** West Virginia Water Quality: Bacterial Source Tracking & Pathogen Profiling; USDA-CSREES-FADM
- **Staton, Pamela, PI:** 2006 to 2008 **Funded $555,985** West Virginia Water Quality: Fecal Source Tracking and Pathogen Profiling; USDA_CSREES_FADM
- **Staton, Pamela, PI**: 2005 to 2006 **Funded $528,323;** Assessment of West Virginia Water Quality: Bacterial Source Tracking Database Development and Method Validation; USDA_CSREES_FADM
- **Staton, Pamela, PI**: 2004 to 2005 **Funded $502,457.** West Virginia Water Quality: Bacterial Source Tracking USDA_CSREES_FADM
- **Staton, Pamela, PI:** 2003 to 2004 **Funded $577,590.** West Virginia Water Quality: Bacterial Source Tracking; USDA_CSREES_FADM
- **Staton, Pamela, PI:** 2003 to 2004 **Funded $152,000.** Bacterial Source Tracking: WV Department of Agriculture

---

PROPOSALS – PENDING

2013 - Crime Scene Investigation Continuing Education Program submitted to the Battlefield Vehicle Forensics Training Manager Combat Incident Analysis Division (CIAD) National Ground Intelligence Center (NGIC)

GRANTS - UNFUNDED

- **Staton, Pamela.** 2012 Forensic Soil Analysis: Evaluation and Standardization of Soil Sample Storage, DNA Extraction Methods & Validation of Automated Ribosomal Intergenic Spacer Analysis Microbial Community Profiling; National Institute of Justice
- **Staton, Pamela.** 2011 Multidisciplinary Approach to Forensic Soil Analysis: A same source comparison of DNA-based microbial community profiling (MCP), scanning electron microscopy, and inductively coupled plasma atomic emission spectroscopy (IPC-AES); National Institute of Justice.

DIRECT SUPERVISION

- **Academic Program Administrative Assistant** – 2012 to present. Primary supervisor of a full-time Administrative Assistant whose role includes website and publication design and maintenance, accreditation materials management and follow-up, scheduling and organizing.

- **Academic Program Manager** – 2006 to present. Primary supervisor of a full-time Program Manager whose primary role includes academic program accounting and financial recordkeeping; assists me in areas related to Academic Affairs, Student Affairs including Admissions.
- **Research Technicians (1 to 4/year)** – 2003 to 2012. Primary PI and daily supervisor of anywhere from one to four full-time research technicians in any given year.
- **Students (~36/semester)** - Primary supervisor regarding program-wide, required activities including academic advising, Plan of Study, registration, selection of area of emphasis, adding and dropping courses, satisfactory academic progress reports, letters of recommendation for internships and employment purposes, intern and employee reference for background checks, resume/cover/CV assistance, interview preparation, assistance in finding jobs and internships, recruiting supervisors for student GA assignments per semester, assessment of GA activities, academic probation, seminar presentation reviewer, research reviewer, research committee member; approve student absence and travel; approve student admissions, academic common market, expenditures such as student/class supplies, class-related lab supplies, instructors, utilities, maintenance, computer access; student organization advisor; honorary society advisor, and other items academic program-related.

PROFESSIONAL SERVICE OUTSIDE MARSHALL UNIVERSITY

- 2014 Workshop Presenter, American Academy of Forensic Sciences, Annual Meeting, Seattle, WA, February 2014 Topic: Effective Curricular Design and Improvement for Forensic Science Educational Programs
- 2013- Secretary, Council on Forensic Science Education (COFSE)
- 2010 – to present: Graduate Program Representative, American Academy of Forensic Sciences (AAFS) College & University Fair Washington, DC
- 2012- Graduate Program Representative, Council of Forensic Science Educators (COFSE).
- 2008 and 2009- Grant Reviewer, Great Lakes WATER Institute. University of Wisconsin, Milwaukee, WI.
- 2007- Coordinated Management of Water Quality Protection and Food and Safety. California Vegetable Production Conference, San Luis Obispo, CA
- 2005- Science Advisory Board, Environmental Pathogens Information Network (EPI-Net).
- 2005- Grant Reviewer, National Oceanic and Atmospheric Administration (NOAA) Oceans and Human Health Initiative (OHHI). Silver Spring, MD
- 2005- Exhibitor, BIO[tech] 2005, Philadelphia, PA
- 2004- Exhibitor, BIO[tech] 2004, San Francisco, CA

MARSHALL UNIVERSITY SERVICE

- 2013-2014 – Marshall University School of Medicine Promotion & Tenure Committee
  - 2003 to present – Program Coordinator, MU Forensic Science MS Program
- 2013 – Advisory Committee, MU Integrated Science & Technology, Digital Forensics and Information Assurance Departments
- 2003 to present MU Annual Review Reporting, MU Office of Assessment
- 2003 to present MU Program Review and Resource Development Reporting, MU Office of Assessment
- 2003 to present- Chair, Forensic Science Faculty Committee

- 2003 to present- Chair, Forensic Science Admissions Subcommittee
- 2003 to present- Chair, Forensic Science Accreditation & Program Review
- 2003 to present- Chair, Forensic Science Graduate Studies Committee (Curriculum Committee)
- 2006 to present- Chair, Forensic Science Advisory Committee
- 2007 to present –DNA Technical Assistance Program (TAP) Director
- 2007 to present – Biological Safety Advisor to MUFSC Safety Committee;
- 2013 to present – Marshall Collateral Duty Officer for Forensic Science Center
- 2013 (new) – Firearms and Toolmarks Technical Assistance Program (TAP) Director
- 2007 to 2008- Marshall University Faculty Senate
- 2007 to 2008- Marshall University Budget and Academic Policy Committee

PUBLICATIONS AND POSTERS

- **Staton, Pamela;** Carpenter, A. Betts, Jackman, Susan H. IL-7 is a Critical Factor in Modulating Lesion Development in Skn-Directed Autoimmunity. J. Immunology, p3978-3986. 2006.
  ADD 2014
- Dembia, Emilie; Chenoweth, Sarah; Hayden, Jennifer; **Staton, Pamela**. "Validation of the Applied Biosystems 3500 Genetic Analyzer with a Comparison of the Identifiler Plus and PowerPlex 16 HS Amplification Kits", AAFS Conference, February 2013.
- Jacque, Kathleen; Redhead, Lynnet; Bowen, Sarah; **Staton, Pamela.** "Internal Validation of the AmpFlSTR Yfiler Amplification Kit on a Life Technologies 3130 Genetic Analyzer," AAFS Conference, February 2013
- Thatch, Christopher; Imes, Danielle; Bostwick, Valerie; **Staton, Pamela**. "Validation of the Applied Biosystems 3500XL with PowerPlex 16 HS," AAFS Conference, February 2013
- Barr, Sarah; Summerfield, Chad; Seferyn, Season; **Staton, Pamela.** "Validation and Comparison of the AmpFlSTR Identifiler Plus PCR Amplification Kit to Identifiler, MiniFiler, and Yfiler for the Pinellas County, Florida Forensic Laboratory," AAFS Conference, February 2013
- Gapinski, Allison; James, Julie; Marra, Misty; **Staton, Pamela.** "Internal Validation of the AmpFlSTR Identifiler Plus PCR Amplification Kit and Comparison to Identifiler for the Boston Police Department Crime Laboratory," AAFS Conference, February 2013
- Tokarz, Jessica; Milne, Scott; Hardy, Sarah; **Staton, Pamela**; Mayntz-Press, Kathleen. "Internal Validation of the PowerPlex Y23 Amplification Kit for Use in Forensic Casework," AAFS Conference, February 2013.
- Vickman, Tiffany; **Staton, Pamela J.** "Spectrophotometric Comparison of Storage and Preservation Methods on Trace Soil." AAFS Conference, 2012
- Quirindongo, Dana; Rushton, Catherine; Rankin, J. Graham; **Staton, Pamela J.** "The effect that storage condition, drying method, and length of time soil sample is stored on FTIR results." Marshall University Forensic Science Research Day, 2012.
- Fete, Emily; **Staton, Pamela J.** "Internal Validation of GeneMapper® *ID-X* for use in Forensic Casework." AAFS Conference, 2012
- Bard, Tiffany; Lupino, Cara; Bostwick, Valerie; Godby, Justin; **Staton, Pamela J.** "Internal Validation of AmpFLSTR® Plus on Applied Biosystems PRISM® 310 Genetic Analyzer." AAFS Conference, 2012

- Kramer, Kevin; Myers, Brent; Harrah-Lea, Heather; and **Staton, Pamela J.** "Comparison of Room Temperature Forensic DNA Extract Sample Preservation Methods". AAFS Annual Meeting, 2011.
- Sawin, Andrew; Chute, Jason; Harrah-Lea, Heather; and **Staton, Pamela.** "Comparative Analysis of Quantifiler® Duo, Plexor® HY, and MavenQST™ DNA Quantification Systems". AAFS Annual Meeting, 2011.
- Rommel, Megan; Bas, Jennifer; Murga, Kimberly; and **Staton, Pamela.** "Comparative Evaluation of Manual Extraction Methods of the Biology/DNA Unit of the Las Vegas Metropolitan Police Department Forensic Laboratory." AAFS Annual Meeting, 2011.
- Runyan, Melissa N.; Myers, Brent; and **Staton, Pamela J.,** "Validation of Applied Biosystem's Quantifiler ® Duo DNA Quantification Kit". Marshall University Forensic Science Research Day, 2010.
- Mest, Mallory; McGuckian, Amy; Crouse, Crouse; Cecelia A.; and **Staton; Pamela J.** "The Evaluation of Multiple Commercially-Available Extraction Chemistries for Forensic Laboratory". Marshall University Forensic Science Research Day, 2010.
- Keaton, Rachel; Pranger, Natasha; Staton, Pamela J. "Internal Validation of GeneMapper®ID-X v.1.0.1 as an Expert System for use in a Databasing Laboratory". Marshall University Forensic Science Research Day, 2010.
- Hoffman, Amanda J.; McWilliams, Scott; Gartside, Bill; **Staton, Pamela J.** "Internal Validation of the AmpFℓSTR® Identifiler® Kit on the Applied Biosystems 3130 Instrument". Marshall University Forensic Science Research Day, 2010.
- Hayden, Jennifer; Carradine, Cassie; **Staton, Pamela J.,** "Internal Validation of a Florescent Labeling System: A New Spermatozoa Identification Method". Marshall University Forensic Science Research Day, 2010.
- Hayden, Jennifer; Carradine, Cassie; **Staton, Pamela J.** "Internal Validation of a Robotic Liquid Handler for Real-time PCR Set Up". Marshall University Forensic Science Research Day, 2010.
- Edwards, Sally; Sanger, Margaret; **Staton, Pamela J.** "Internal Validation of Y-STRs for Casework at the Kentucky State Police Central Laboratory ". Marshall University Forensic Science Research Day, 2010.
- Asfar, Mohammed; Ammann, Monica; **Staton, Pamela J.;** " Internal Validation of AmpFlSTR® MiniFiler™ PCR Amplification kit for Forensic Casework". Marshall University Forensic Science Research Day, 2010.
- Pilon, Dana M.; Fiorucci, Kimberly D.; and **Staton, Pamela J.** "Internal Validation of the AmpF/STR® MiniFiler™ Amplification Kit for Use in Forensic Casework". Marshall University Forensic Science Research Day, 2009.
- Lovelace, Rachel; Hahn, Jeff; Harmon, Rachel; Schueler, Sindey; and **Staton, Pamela J.** "Streamlining and Optimizing the Procedures of a State Databank Lab". Marshall University Forensic Science Research Day, 2009.
- Brown, Tarah R.; Brewer, Lisa M.; **Staton, Pamela J.** "Internal Validation of AmpF/STR® MiniFiler™ Amplification Kit for Metropolitan Police Department". Marshall University Forensic Science Research Day, 2009.

RECENT CONTINUING EDUCATION (Last 5 years)

- *Quality Matters for Higher Education. Quality Matters Program: A National Benchmark for Online Course Design,* Marshall University. February 2013
- *The Ethics of Stewardship and the Stewardship of Ethics (Ethics I); Answering the NAS: The Ethics of Leadership and the Leadership of Ethics (Ethics II);* RTI International; nij.org on-line training; February 2013
- *Policy Forum- Crime Laboratory Backlogs: The Impact on Justice,* RTI International Forum, www.nij.gov; May 2013
- *Interdisciplinary Symposium – A National Forensic Science Enterprise and Transparency in Forensic Science: Legal and Practitioner Views on our Path Forward,* AAFS, February 2013. Washington, DC
- *Grant Funding Opportunities in the Forensic Sciences for Academic Programs,* AAFS, February 2013. Washington, DC
- *Multidisciplinary Approaches to Effective Communication and Report Writing*, AAFS, February 2013. Washington, DC
- American Academy of Forensic Science (AAFS), Annual Meeting attendance, Washington, DC, February 2013
- *Working in Forensics: From the Streets, to the Battlefield, to the Boardroom,* AIDE, May 2012, Huntington, WV.
- *Anti-Forensics: Occult Computing,* AIDE, May 2012, Huntington, WV.
- *ImageScan,* AIDE, May 2012, Huntington, WV.
- *Mobile Device Security and the Impact on Digital Investigations,* AIDE, May 2012, Huntington, WV.
- *Putting Forensics Back into Digital Forensics,* AIDE, May 2012, Huntington, WV.
- *A Forensic Analysis of Social Media Artifacts in Windows 7 and Windows 8,* AIDE, May 2012, Huntington, WV.
- *Future Sources of Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Applied Behavior Analysis: Its Role in the Digital Investigation,* AIDE, May 2012, Huntington, WV.
- *The Evolving Role of Cyber,* AIDE, May 2012, Huntington, WV.
- *Windows 8 Forensic Analysis- A Forensic First Look,* AIDE, May 2012, Huntington, WV.
- *Surviving the Witness Stand: A Basic Guide to Preparation for the Courthouse and Testifying,* AIDE, May 2012, Huntington, WV.
- *Search and Seizure of Digital Evidence- Legal Considerations II,* AIDE, May 2012, Huntington, WV.
- *Field Analysis & Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Proper Collection, Handling and Documentation of Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Types of Digital Evidence and Digital Crimes,* AIDE, May 2012. Huntington, WV.
- *Introduction/Foundations of Digital Forensics,* AIDE, May 2012, Huntington, WV.
- *Appalachian Institute of Digital Evidence (AIDE)* attendance. May 21, 2012. Marshall University. Huntington, WV
- *What Did You Just Step In? Use Forensic Soil Examinations to Find Out,* American Academy of Forensic Science, February 2012. Atlanta, GA

- *Introduction to Expert Witness Testimony*, American Academy of Forensic Science (AAFS), February 2011. Chicago, IL
- *FEPAC On-Site Evaluator Training Session*, AAFS, February 2011. Chicago, IL
- *Introduction to Expert Witness Testimony*, AAFS, February 2011. Chicago, IL
- *Internationalization of Forensic Sciences*, AAFS, February 2011. Chicago, IL
- MFRC Forensic Science Education Forum, invited participant, Indianapolis, IN, June 2010
- *American Academy of Forensic Science, Annual Meeting attendance,* Seattle, WA, February 2010
- *Seven Deadly Sins of Forensic Science.* American Academy of Forensic Science Conference. Denver, CO. February 2009. Session.
- *Ethics in Forensic Practice.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Integrated Microfluidics.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Ethics and Forensic Science.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Body Fluid Identification from Sexual Assault Evidence.* Mid-Atlantic Association of Forensic Science (MAAFS) Annual Meeting. Huntington, WV. April 30, 2008. Workshop.
- *Expert Witness Testimony.* MAAFS Annual Meeting. Huntington, WV. April 30, 2008. Workshop.
- *Daubert Admissibility Issues and Preparation Elements for the Forensic Scientist.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Automating Your Lab: Run Biomek Run!.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Managing in the Forensic Sciences.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Human DNA Quantification.* AAFS Conference. Washington, DC. February 2008. Workshop.

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: MUSOM | Dept/Division: Forensic Science | Alpha Designator/Number: FSC | (•) Graded ( ) CR/NC

Contact Person: Dr. Pamela Staton | Phone: 304-691-8962

NEW COURSE DATA:

New Course Title: Firearms & Toolmarks Technical Assistance Program II (TAP)

Alpha Designator/Number: F S C 6 4 1

Title Abbreviation: F i r e a r m s T o o l m a r k s I I

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)

This course provides an enhanced learning experience designed to reduce the time to competency typical of the knowledge required component of a firearms examiner training program. FSC 641 is the second of two firearms and toolmarks examiner training courses.

Co-requisite(s):

First Term to be Offered: Spring 2016

Prerequisite(s): FSC 640

Credit Hours: 1

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head Pamela Staton	Date 4-9-2015
Registrar Roberta Ferguson 269999	Date 4/27/15
College Curriculum Chair Pamela Staton	Date 4-23-2015
Graduate Council Chair TChristofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: MUSOM | Department/Division: Forensic Science | Alpha Designator/Number: FSC

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Season E. Seferyn, MSFS et al
Pamela Staton

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See Attached Document

7. COURSE OUTLINE (May be submitted as a separate document)

See Attached Document

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

N/A; NIJ firearms training

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Online modules and in class quizzes; semester final exams

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

In class quizzes; semester final exams

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

www.nij.gov/training/firearms-training

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Forensic Science
Course Number and Title: FSC 641 Firearms & Toolmarks Technical Assistance Program II (TAP)
Catalog Description: This course provides an enhanced learning experience designed to reduce the time to competency typical of the knowledge required component of a firearms examiner training program. FSC 641 is the second of two firearms and toolmarks examiner training courses.
Prerequisites: N/A
First Term Offered: Spring 2016
Credit Hours: 1

FORENSIC SCIENCE

MARSHALL UNIVERSITY
Forensic Science Program

1401 Forensic Science Drive
Huntington, WV 25701
Phone: 304.691.8931
Fax: 304.691.8929
www.marshall.edu/forensics

FSC 650 Firearms and Toolmarks TAP (Technical Assistance Program) Spring 2015

Moderator

Name: Season Seferyn, MSFS
Phone: 304-691-8971
Fax: 304-691-8928
Email: seferyn@marshall.edu
Office Hours: Call/email for appointment

Required eLearning Program

www.nij.gov/training/firearms-training

Required Reading

AFTE Code of Ethics:
http://www.afte.org/AssociationInfo/a_codeofethics.htm

Course Description

This course will give you an enhanced learning experience designed to reduce the time to competency typical of the knowledge component of a firearms examiner training program. (1 hour)
LOCATION: Wednesday 11:00-12:00pm in West Wing 2

Objectives

By the end of this course, students should successfully be able to:

1. Describe the potential evidentiary value of reproducible striations and/or impressions produced during the normal functioning of a firearm; procedure and equipment necessary for microscopic comparison of class and individual characteristics on fired and unfired cartridge cases/shotshell cases; describe the marks that may be present on cartridges and shotshells as a result of being cycled through the action of a firearm and being fired in a firearm (Module 9: Cartridge and Shotshell Examination)
2. Articulate how the following concepts relate to the formulation of examination conclusions of fired and unfired cartridge cases and shotshell cases:
   - Class characteristics
   - Individual characteristics
   - Subclass characteristics
   - Pattern identification
   - AFTE Theory of Identification
   - Sufficient agreement
   - Best known non-match
   - Consecutive matching striae (CMS)
   - Impressed marks
   - Quality Assurance Guidelines
   - AFTE Range of Conclusions (Module 9: Cartridge and Shotshell Examination)
3. Explain the differences between the following terms in regard to comparisons of fired and unfired cartridge/shotshell cases
   - Identification
   - Inconclusive
   - Elimination
   - Unsuitable (Module 9: Cartridge and Shotshell Examination)

4. Discuss the preliminary considerations that must be addressed prior to performing examinations of fired bullets; describe physical features of fired and unfired bullets resulting from design specifications and the manufacturing process; explain the use of bullet physical features in searching a standard ammunition file (SAF); describe potential challenges/equipment necessary in determination of general rifling characteristics; ability to write reports and draw conclusions; discuss potential forensic and probative value of fired shotshell wadding, pellets, buckshot, slugs and buffer (Module 10: Characterization and Evaluation of Fired Projectiles)
5. Describe the concepts related to general rifling characteristics, including:
   - What they are and where they are located
   - Defining the dimensions to be measured
   - Techniques for taking measurements
   - The FBI General Rifling Characteristics File
   - Calculation of caliber from damaged bullets
   - The evidentiary potential of fired bullets (Module 10: Characterization and Evaluation of Fired Projectiles)
6. Discuss in general terms the Integrated Ballistics Identification System (IBIS) in regard to preliminary remote comparisons (computer correlations) and case linkage. (Module 11: Bullet Comparison and Identification)
7. Describe the chemical reaction that takes place when propellant powder burns; the visual/microscopic examination of evidence for the presence of visible gunshot residues; physical effects caused by the discharge of a firearm and the passage of a bullet; techniques for preparation of test media and chemical reagents needed and reactions that take place for the Modified Griess Test, Dithiooxamide Test, and Sodium Rhodizonate Test. (Module 12: Gunshot Residue and Distance Determination)
8. Identify the common metal shaping operations used in the manufacture of tools, including:
   a) Common cutting operations based on the formation of metal chips
   b) Common metal forming operations not involving cutting
   c) Modern metal machining techniques (Module 13: Toolmark Identification)
9. Itemize the essential items of equipment necessary to carry out the comparison microscopy of toolmarks; summarize the prerequisite that must be addressed prior to initiating any examination or comparison of toolmarked evidence; describe the examination protocol for the examination and comparison of fracture marks as well as following Quality Assurance guidelines in reporting (Module: 13 Toolmark Identification)
10. Choose the ideal modality for message delivery considering the purpose location and audience; describe how to effectively present technical information verbally; write a forensic report; define the general rules of evidence, discovery and admissibility (Module 14: Communicating Results)
11. Describe the major scientific and technological events, as well as major agency and organizational developments in the history of firearm and toolmark identification and examination; discuss the major legal precedents in the field of firearm and toolmark identification and examination (Module 2: History)
12. To highlight ethical and professional responsibilities of persons in the field of Firearm and Toolmark Analysis as outlined the AFTE Code of Ethics.

Evaluation/Assessment of Learner Objectives

There will be one final exam. Quizzes will occur every other week. These quizzes may not be photocopied, scanned, and/or photographed at any time. Only handwritten note-taking is permitted.

Grading Policy

Final Exam - 15%

Attendance - 35%

Quizzes - 50%**

**Students who earn less than 80% of possible points on a quiz should be encouraged to retake the quiz within one week of date of the original quiz. Highest new score possible will be an 80%.

Grading Scale:

90-100%	A
80-89%	B
70-79%	C
60-69%	D
59% and below	F

Attendance Policy
Attendance is mandatory. If you are sick or are not able to make it to class, a phone call or e-mail is required BEFORE class time. If you are unable to take an exam on the selected day, arrangements must be made BEFORE the scheduled date to take the exam. Failure to do so will result in a failing grade. http://www.marshall.edu/wpmu/student-affairs/files/2011/08/Medical-Withdrawal-Policy.pdf .
Make-up Policy
The program coordinator and instructor must be notified of absences. Doctor's excuse may be required if more than one absence occurs.
Academic Dishonesty
Academic dishonesty in any form will not be tolerated. Plagiarism is defined as "submitting as one's own work or creation any material or an idea wholly or in part created by another. This includes oral, written, and graphical material, and both published and unpublished work. It is the student's responsibility to clearly distinguish his/her own work from that created by others. This includes the proper use of quotation marks, paraphrase, and the citation of the original source" (2008-2009, Graduate Catalog, p. 61). Refer to Marshall University Board of Governors Policy No. AA-12 Academic Dishonesty - http://www.marshall.edu/president/Board/Policies/MUBOG%20AA-12%20Academic%20Dishonesty.pdf – for complete details.
Policy for Student's with Disabilities
Marshall University is committed to equal opportunity education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117 (304.696.2271) to provide documentation of their disability. Following this, the DSS Coordinator will send a letter to each of the student's instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing, and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, access the website for the Office of Disabled Student Services: http://www.marshall.edu/disabled /
Affirmative Action Policy
It is the policy of Marshall University to provide equal opportunities to all prospective and current members of the student body, faculty, and staff on the basis of individual qualifications and merit without regard to race, color, sex, religion, age, disability, national origin, or sexual orientation. To obtain information on the implementation of the policy regarding nondiscrimination, contact the Director of Equity Programs, Old Main, Marshall University, Huntington, WV 24755 (304.696.2592)
Acceptable Use Policy
Access to Marshall University's resources is a privilege and is provided with an expectation of responsible and acceptable use. To read the principles and guidelines as well as federal, state, and local regulations, please go to http://www.marshall.edu/ucs/cs/accptuse.asp.
Inclement Weather Policy
In the case of inclement weather, please follow Marshall's procedures if any cancellations/delays occur. http://www.marshall.edu/ucomm/weather.html.
Miscellaneous
Recommended websites: www.nra.org www.firearmsid.com www.swggun.org www.afte.org www.nist.gov/forensics/osac/sub-firearms.cfm

Week	Date	Topic
Week 1	Jan 14	Module 9: Cartridge and Shotshell Examination
Week 2	Jan 21	Quiz on Module 9: Cartridge and Shotshell Examination
Week 3	Jan 28	Module 10: Characterization and Evaluation of Fired Projectiles
Week 4	Feb 4	Quiz on Module 10: Characterization and Evaluation of Fired Projectiles
Week 5	Feb 11	Module 11: Bullet Comparison and Identification
Week 6	Feb 18	AAFS- No Class
Week 7	Feb 25	Quiz on Module 11: Bullet Comparison and Identification
Week 8	March 4	Module 12: Gunshot Residue and Distance Determination
Week 9	March 11	Quiz on Module 12: Gunshot Residue and Distance Determination
Week 10	March 18	Spring Break- No Class
Week 11	March 25	Module 13: Toolmark Identification
Week 12	April 1	Quiz on Module 13: Toolmark Identification
Week 13	April 8	Module 14: Communicating Results
Week 14	April 15	Quiz on Module 14: Communicating Results Module 2: History (Take Home Quiz Given)
Week 15	April 22	Take Home Quiz on Module 2: History Due (AIDE Conference in Classrooms)
Week 16	April 29	Final

SEASON ELIZABETH SEFERYN
Marshall University Forensic Science Center
1401 Forensic Science Drive, Huntington, WV 25701
Phone: (304) 691-8971
Fax: (304) 691-8928
seferyn@marshall.edu

POSITION TITLE & DESCRIPTION (JULY 2010 – PRESENT)

The Marshall University Forensic Science Center employs me as a ***Parentage DNA Analyst II*** in the DNA Laboratory.

All DNA Analysts report to and receive administrative direction from the Technical Leader of the DNA Laboratory. As a Parentage DNA Analyst II, I conduct complex analysis on: civil relationship cases involving immigration, inheritance, and other relatedness issues, and criminal relationship cases involving body identification, incest, and other criminal relatedness issues. In addition, as the ***DNA Training Officer***, I am responsible for maintaining the laboratory's training curriculum and overseeing the technical training of all new and/or current MUFSC DNA laboratory employees.

Marshall University employs me as an ***Associate Graduate Faculty Member*** since January 2013.
Courses taught - FSC 607: Bloodstain Pattern Analysis, FSC 650: Firearms and Toolmarks Technical Assistance Program, and FSC 603: Genetics DNA Laboratory

PREVIOUS POSITION TITLE & DESCRIPTION (MAY 2009 – JUNE 2010)

Genetic Technologies, Inc. employed me as a Forensic Scientist. I conducted analysis on reference and forensic samples for relatedness, civil, and criminal casework. Tasks also included accessioning casework to include preparation of evidence receipts, entering samples into LIMS, and storage of evidentiary samples to ensure integrity of all casework samples. In addition, I performed preliminary reviews of case review for the Senior Forensic Scientist including organizing discovery information and contacting attorneys regarding each case. As a result of working at GTI, I have gained experience and utilized an AB310, Identifiler, Y-Filer, Mini-Filer, AB 7500, AB GeneMapper software and AB Genotyper software.

PREVIOUS POSITION TITLE & DESCRIPTION (AUGUST 2004 – JUNE 2007)

Western Harnett Middle School employed me as a seventh grade science teacher. I was able to develop hands-on lesson plans to compensate for the lack of textbooks. In addition, I integrated technology and hands-on learning into my daily lesson plans.

QUALIFICATIONS, TRAINING & PROFESSIONAL MEMBERSHIPS

- Bachelor of Science in Biology, The Pennsylvania State University, University Park, PA, 2004.
- Bachelor of Science in Crime Law and Justice, The Pennsylvania State University, University Park, PA, 2004.
- Master of Science in Forensic Science, Arcadia University, Glencoe, PA, 2009.
- Attended various workshops and professional meetings to continue my education in the field of Forensic Biology.
- Associate Member Criminalistics, American Academy of Forensic Sciences, 2012- Present.
- Trainee Affiliate Criminalistics, American Academy of Forensic Sciences, 2010- 2012.
- Student Affiliate Criminalistics, American Academy of Forensic Sciences, 2008-2010.
- Member of the Council of Forensic Science Educators, 2014-Present.
- Member of the Delta Delta Epsilon Honor Society - Zeta Chapter, 2013-Present.
- Primary Parentage DNA Analyst on 85-95 non-criminal and criminal relationship cases.
- Qualified as an expert witness, 3 trials, in West Virginia.
- Qualified as an expert witness, 2 trials, in North Carolina.
- Qualified as an expert witness, 2 trials, in Pennsylvania.
- Qualified as an expert witness, 1 trial, in Kentucky.

SEASON ELIZABETH SEFERYN
seferyn@marshall.edu

PROFICIENCY TEST RECORDS

I have successfully completed proficiency testing since 2009. The following are dates and proficiency tests I have completed:

IQAS 60-999107-2902 (Forensic), CAPPARF-B 2009 (Paternity), CAPPARF-C 2009 (Paternity), IQAS 60-999107-2904 (Forensic), NYSDOH Fall 2009 (Paternity- NYS), CAPPARF-A 2010 (Paternity), CAPPARF-A 2011 (Paternity), CAPPARF-B-2011 (Paternity), CAPPARF-C-2011 (Paternity), CAP12A-3 (Paternity), CAP12B-3 (Paternity), CAP12C-3 (Paternity), CAP13A-3 (Paternity), CAP13B-1 (Paternity), CAP13C-1 (Paternity), CAP14A-1 (Paternity) , CAP14B-1 (Paternity), CAP14C-1 (Paternity)

PRESENTATIONS, DEMONSTRATIONS, & WORKSHOPS

2014

- "Internal Validation of the Applied Biosystems® GlobalFiler™ Express PCR Amplification Kit, *Shanna Saunders, Kyra Groeblinghoff, Season Seferyn, Dr. Pamela Staton*", Assisted student Author, Poster Presentation
  - MUFS Research Day, Huntington, WV, 2014

- "Internal Validation of FSS-i3™ 4.2.2 Expert Software System for use with Single Source PowerPlex® 16HS Multiplex DNA Samples, *Dijana Coric, BS; Cyndi Cunnington, MS; Season Seferyn, MSFS; Dr. Pamela Staton, PhD*", Assisted student Author, Poster Presentation
  - MUFS Research Day, Huntington, WV, 2014

- "Internal Validation of the Qiagen® QIAgility® Robotic Liquid Handler, *Lisa Burgee BS, Alice Hilker MFS, Season Seferyn MSFS, Pamela Staton PhD*", Assisted student Author, Poster Presentation
  - MUFS Research Day, Huntington, WV, 2014

2013

- "An In-Depth Look: 412 Property Crime Cases from Lowcountry Region, South Carolina", Author & Presenter, Poster Presentation
  - AAFS Conference, Washington, D.C., 2013

- "Validation and Comparison of the AmpFℓSTR® Identifiler® Plus PCR Amplification Kit to Identifiler®, MiniFiler™, and YFiler® *Sarah Barr, BS, Chad Summerfield, MSFS, Season Seferyn, MSFS, and Dr. Pamela Staton, PhD*", Assisted student Author, Poster Presentation
  - AAFS Conference, Washington, D.C., 2013

- "Evaluation of Digestion Buffers and Extraction Techniques for the Recovery of DNA from Teeth, *Tifani Rae Parker, BS, Carly Fannin, MS, Season Seferyn, MSFS and Dr. Pamela Staton, PhD*", Assisted student Author, Poster Presentation
  - MUFS Research Day, Huntington, WV, 2013

- "A Crime Scene Snapshot: A Look into Property Crime Cases from Miami, Florida", Author, Oral Presentation
  - IAI Conference, Providence, RI, 2013

- "A Comparison of 1,600 Property Crime Cases from Miami, Florida and Charleston, South Carolina", Author & Presenter, Poster Presentation
  - IACP Conference, Philadelphia, PA 2013

2012

- "Expedited DNA Analysis and Demographic Comparison of Evidentiary Samples from ~1,800 Property Crime Cases", Author & Presenter, Poster Presentation
  - ISHI Conference, Nashville, TN, 2012

SEASON ELIZABETH SEFERYN
seferyn@marshall.edu

2011

- "Internal Validation of Yfiler® for Casework at the St. Louis Metropolitan Police Department (SLMPD), *Anthony W. Eiler, BS, Samantha K. Webb, MA, Season Seferyn, MSFS, Sarah Bowen MS"*, Assisted student Author, Poster Presentation
  - AAFS Conference, Chicago, IL, 2011

2008

- "Determination of Bisphenol-A Concentrations in Bottled Water Using Gas Chromatography/Mass Spectrometry (GC/MS)", Author & Presenter, Poster Presentation
  - NEAFs Conference, New York, 2008

- "Determination of Bisphenol-A Concentrations in Bottled Water Using Gas Chromatography/Mass Spectrometry (GC/MS)", Author, Poster Presentation
  - ACS Conference, Philadelphia, PA, 2008

CONTINUED EDUCATION

2015

- January 20-21, 2015- Grant Writing USA Training at West Virginia State Police Academy: Grant Writing USA, Andy Anderson.

2014

- January 30, 2014- Webinar: Enhancing the Sexual Assault Workflow; Allison Holt and Jack Ballantyne, Webinar.
- February 17-22, 2014- American Academy of Forensic Sciences (AAFS) 66th Anniversary Meeting, Seattle, Washington.
- April 4, 2014- Webinar: Qiagen EZ1 Webinar- Getting the Most Out of Your EZ1; Dr. Mark Guilliano, Webinar.
- May 12, 2014- Applications of Next Generation Sequencing in Clinical Genomics, Forensic Science and Micro Biome Studies, Dr. Donald Primerano.
- May 29, 2014- Familial DNA Searching: Current Approaches- Session One; Bruce Budowle, Webinar.
- June 3, 2014- Fostering the Discipline to Disseminate: A Workshop on Writing Productively for Publication; Dr. Weber-Main; Marshall University Medical School, Huntington, West Virginia.
- June 26, 2014- Familial DNA Searching: Current Approaches- Session Two; Bruce Budowle, Webinar.
- August 6, 2014- NIST DNA Analyst Webinar Series: Validation Concepts and Resources-Part 1; Webinar.

2013

- February 18-23, 2013- American Academy of Forensic Sciences (AAFS) 65th Anniversary Meeting, Washington, D.C.
- April 11, 2013- Webinar: Rapid DNA Analysis: Understanding How it Can Expedite Forensic Investigations; Dr. Bruce Budowle and Melissa May, Webinar.
- April 12, 2013- NIST DNA Mixture Interpretation Workshop and Webcast, Webinar.
- July 22, 2013- Qiagen® EZ1 Webinar: Forensic DNA Analysis Efficiency Improvements with the EZ1 Advanced DNA Technology; Charles S. Hardy, Webinar.
- August 4-10, 2013- International Association for Identification (IAI) 98th Anniversary Meeting, Providence, RI
- September 12, 2013- DNAscan Rapid DNA Analysis System: GE Healthcare Life Sciences, Len Goren.
- October 15, 2013- GlobalFiler Testing and GeneMapper ID-X: Life Technologies, Melissa Kotkin.
- October 16, 2013- RapidHIT 200 Human Identification System: IntegenX, Kevin Bebak.
- October 17, 2013- RapidHIT 200 Human Identification System Demo at Kentucky State Police Central Laboratory: IntegenX, Kevin Bebak.

2012

- January 11, 2012- Armed Xpert- Complete Case Management DNA Analysis Software: NicheVision Forensics, LLC.
- February 20, 2012- Breakfast Seminar: Postmortem Examination and Personal Identification of Victims of the Great East Japan Earthquake; Yasuhiro Aoki, AAFS, Atlanta, GA
- February 21, 2012- Workshop: Flawed Forensics: Recognizing and Challenging Misleading Forensic Evidence and Disingenuous Expert Testimony; Andrew Sulner, et al, AAFS, Atlanta, GA

- May 24, 2012- Promega Genetic Identity Webinar: Simplifying Databasing and Paternity Workflows without Compromising PowerPlex® Results; Benjamin Krenke, Webinar.
- September 25, 2012- IntegenX Webinar: Rapid DNA- The Evolution of Forensic DNA Analysis; Dr. Joseph DiZinno, Webinar.
- September 26, 2012- Qiagen Webinar: Successfully Overcoming Challenges in Forensic Sample Preparation- QiaSymphony; Dr. Mario Scherer and Dr. Marion Nagy, Webinar.
- October 16-18, 2012- Promega's 23rd International Symposium on Human Identification (ISHI), Nashville, TN.

2011

- February 20, 2011- Courtroom Testimony for DNA Analysts: Raymond J. Davis (CourtSkills Instructor) and Keith Jolliff (Qiagen), Hyatt Regency, Chicago, IL
- February 21, 2011- Workshop: Method Validation and Estimating the Uncertainty of Measurements in the Modern Forensic Laboratory for Compliance with ISO/IEC 17025:2005; Terry Mills and Robert J. Ollis, AAFS, Chicago, IL
- February 22, 2011- Workshop: DNA Mixture Analysis: Principles and Practice of Mixture Interpretation and Statistical Analysis Using the SWGDAM STR Interpretation Guidelines; John M. Butler, et al, AAFS, Chicago, IL
- February 23, 2011- Breakfast Seminar: Lightning Strikes Twice: The Case of a Femme Fatale; Robert J. Morton, AAFS, Chicago, IL
- February 25, 2011- Breakfast Seminar: Thomas Krauss Memorial Bite Mark Breakfast: Criminal Profiling- With a Little Help From My Friends; Dayle L. Hinman, AAFS, Chicago, IL
- June 30, 2011- Promega Genetic Identity Webinar- Expedited DNA Extraction Methods for Disaster Victim Identification; Jeff Hickey- AFDIL, Webinar.
- September 15, 2011- US DOT Hazardous Materials- Regulated Medical Waste Training; Nathan Douglas- Chemical and Biological Safety Officer.
- October 7, 2011- Safety Training – Blood Borne Pathogen and Chemical Safety; Nathan Douglas- Chemical and Biological Safety Officer.

2010

- President's DNA Initiative- online course, "Non-STR DNA Markers: SNPs, Y-STRs, LCN and mtDNA" completed 05/26/2010
- September 13-17, 2010- Forensic Y-STR Training: MUFSC, Huntington, WV
- October 4-7, 2010- Forensic Relationship Training: MUFSC, Huntington, WV
- December 6-10, 2010- President's DNA Initiative Advanced DNA Training: MUFSC, Huntington, WV

2009

- 2009 American Academy of Forensic Sciences- Denver, Colorado
- The Real Mason Verger: The Man Who Fed His Face to the Dogs", Vernon Geberth, AAFS 2009
- 2009 American Academy of Forensic Sciences Plenary Session
- 2009 American Academy of Forensic Sciences Criminalistics Poster Session
- New York State- online course, "HIPAA Basics", completed 12/4/2009

2008

- "Genetics", Arcadia University, 2008
- "Statistical Analysis and Biostatistics", Arcadia University, 2008
- "Law, Evidence and Procedure", Arcadia University, 2008
- Northeastern Association of Forensic Scientists Annual Meeting, New York, October 2008

2007

- "Biochemistry", Arcadia University, 2007

2002

- "Biology of Molecular Cells", The Pennsylvania State University, 2002

2001

- "Elementary Statistics", The Pennsylvania State University, 2001

PAMELA J. STATON, Ph.D.

Marshall University Forensic Science Center: 1401 Forensic Science Drive, Huntington, WV 25701
staton1@marshall.edu |304-691-8962 (Office) 304-691-8929 (Fax) 304-634-5263 (Mobile) |
www.marshall.edu/forensics

EDUCATION

Ph.D. **Biomedical Sciences**, 2001. Marshall University School of Medicine, Huntington, WV
M.S. **Medical Technology**, 1978. West Virginia University, Morgantown, WV
B.S. **Medical Technology**, 1975. Morehead State University, Morehead, KY

NATIONAL CERTIFICATION

- **Medical Technologist, MT(ASCP) #104280**, American Society of Clinical Pathologists
- **Specialist in Microbiology, SM(ASCP) # 1920**, American Society of Clinical Pathologists

PROFESSIONAL MEMBERSHIPS

- American Academy of Forensic Sciences (AAFS)
- American Society of Crime Laboratory Directors (ASCLD)
- American Society of Clinical Pathologists (ASCP)
- Delta Delta Epsilon Forensic Science Honorary Society
- Council of Forensic Science Educators (COFSE)

EMPLOYMENT HISTORY

- **Graduate Program Coordinator, Researcher & Associate Professor**, *January 2003 to present.* Tenured 2007. Day-to-day administrator; research & teaching. Marshall University Forensic Science, Graduate College, Joan C. Edwards School of Medicine, Huntington, WV.
- **Faculty**, *July 1998 to December 2002.* Tenured 2001. Shawnee State University, Department of Medical Laboratory Science, Portsmouth, OH. Teaching: Microbiology, Blood Banking/Transfusion Medicine, Hemostasis, Clinical Correlation
- **Department Chair & Faculty** *October 1988 to July 1998.* Shawnee State University, Department of Medical Laboratory Science, Portsmouth, OH. Microbiology, Orientation to Clinical Laboratory Sciences, Clinical Correlation
- **Graduate Assistant & Ph.D. Candidate**, *January 1998 to August 2001.* Marshall University School of Medicine Department of Microbiology, Immunology, Molecular Genetics, Huntington, WV.
- **Microbiology Departmental Supervisor**, *September 1984 to October 1988.* King's Daughters' Medical Center, Ashland, KY; Pharmacy & Therapeutics Committee Member; College of American Pathologist Auditor; Infection Control Committee Member
- **Clinical Education Coordinator & Assistant Professor**, *June 1981 to August 1983.* Florida International University, Department of Medical Laboratory Sciences, Miami, FL. Teaching: Hematology, Microbiology, Laboratory Management

- **Laboratory Manager & Adjunct Professor,** *September 1979 to June 1981.* Florida International University, Department of Medical Laboratory Sciences, Miami, FL. Teaching: Hematology, Clinical Chemistry, Blood Banking/Transfusion Medicine, Microbiology
- **Chemist, Division of Toxicology,** *January 1979 to September 1979.* Smith Kline & French Laboratories, Toxicology Division, Miami, FL; Drug, toxicology, and therapeutic drug monitoring
- **Graduate Teaching Assistant,** *August 1976 to December 1978.* West Virginia University, Department of Medical Technology. Morgantown, WV.
- **Medical Technologist,** *July 1975 to July 1976.* Beckley Appalachian Regional Hospital & School of Medical Technology. Beckley, WV. Clinical microbiology, hematology, chemistry, blood banking technologist.

TEACHING & COURSE DEVELOPMENT

- **Seminar** – FSC 680 Fall: Course Director; student research presentations; resume, CV, and cover letter development; PowerPoint tools; research design; career development of internship and job seekers; portfolio development and use; interview preparation and tools; evaluation and self-evaluation; research paper rubric; research poster rubric; accrediting agency [FEPAC] seminar requirement. 1 credit hr
- **Seminar** – FSC 680 Spring: Course Director; student lay audience presentations; student poster presentations; MUFS Research Day organization; student HR interviews; student technical specialty interviews; creating interview panels of working professional; national testing and certification; preparation for AAFS presentations and national meeting participation; accrediting agency [FEPAC] seminar requirements. 1 credit hr
- **Internship** – FSC 630 Summer: Course Administrator; Internship identification, conference calls, and placements; internship agreement approvals; internship oversight; internship requirements such as research paper, research paper rubric, intern evaluation of internship experience, host laboratory evaluation of intern, attendance and punctuality, research slide presentation development, research poster development; accrediting agency [FEPAC] research requirements. 5 credit hrs
- **Biochemistry** – FSC 624 Fall: Course Director; teaching: nucleic acid section; key developer of forensic biochemistry section; recruitment, assignment and coordination of faculty; compiling and administering testing; grading; syllabus design and schedule. 4 credit hrs
- **Bioterrorism** – FSC 610 Spring: Course Coordinator: syllabus & schedule; teaching: laboratory techniques section. 3 credit hrs
- **Laboratory Management** – FSC 650 Spring: Course Instructor; essentials of laboratory management for students aspiring to attain positions as laboratory directors, managers, technical leaders, supervisors or other leadership roles. 2 credit hrs
- **DNA Technical Assistance** – FSC 650 Fall & Spring: Program developer and administrator. Fall 2 credits; Spring 2 credits
- **Firearms Technical Assistance** – FSC 650 Fall & Spring: Program developer and administrator. Fall 1 credit; Spring 1 credit
- **Other Course Oversight for FEPAC Purposes**: FSC 604, FSC 619, FSC 665, FSC 603, FSC 627, FSC 629

GRANTS- FUNDED

- **Staton, Pamela, PI**: 2010 to 2011 **Funded $468,000;** WV Water Quality: Bacterial Source Tracking, Pathogen Profiling and Assay Development; USDA-NIFA-FADM
- **Staton, Pamela, PI:** 2009 to 2010 **Funded $360,360**; West Virginia Water Quality: Bacterial Source Tracking and Pathogen Profiling; USDA-CSREES_FADM
- **Staton, Pamela, PI**: 2008 **Funded $875,000** Y-STR Analysis Training in Support of State and Local Law Enforcement; National Institute of Justice
- **Staton, Pamela, PI:** 2008 to 2009 **Funded 383,862;** West Virginia Water Quality: Bacterial Source Tracking & Pathogen Profiling; USDA-CSREES-FADM
- **Staton, Pamela, PI:** 2006 to 2008 **Funded $555,985** West Virginia Water Quality: Fecal Source Tracking and Pathogen Profiling; USDA_CSREES_FADM
- **Staton, Pamela, PI**: 2005 to 2006 **Funded $528,323;** Assessment of West Virginia Water Quality: Bacterial Source Tracking Database Development and Method Validation; USDA_CSREES_FADM
- **Staton, Pamela, PI**: 2004 to 2005 **Funded $502,457.** West Virginia Water Quality: Bacterial Source Tracking USDA_CSREES_FADM
- **Staton, Pamela, PI:** 2003 to 2004 **Funded $577,590.** West Virginia Water Quality: Bacterial Source Tracking; USDA_CSREES_FADM
- **Staton, Pamela, PI:** 2003 to 2004 **Funded $152,000.** Bacterial Source Tracking: WV Department of Agriculture

---

PROPOSALS – PENDING

2013 - Crime Scene Investigation Continuing Education Program submitted to the Battlefield Vehicle Forensics Training Manager Combat Incident Analysis Division (CIAD) National Ground Intelligence Center (NGIC)

GRANTS - UNFUNDED

- **Staton, Pamela.** 2012 Forensic Soil Analysis: Evaluation and Standardization of Soil Sample Storage, DNA Extraction Methods & Validation of Automated Ribosomal Intergenic Spacer Analysis Microbial Community Profiling; National Institute of Justice
- **Staton, Pamela.** 2011 Multidisciplinary Approach to Forensic Soil Analysis: A same source comparison of DNA-based microbial community profiling (MCP), scanning electron microscopy, and inductively coupled plasma atomic emission spectroscopy (IPC-AES); National Institute of Justice.

DIRECT SUPERVISION

- **Academic Program Administrative Assistant** – 2012 to present. Primary supervisor of a full-time Administrative Assistant whose role includes website and publication design and maintenance, accreditation materials management and follow-up, scheduling and organizing.

- **Academic Program Manager** – 2006 to present. Primary supervisor of a full-time Program Manager whose primary role includes academic program accounting and financial recordkeeping; assists me in areas related to Academic Affairs, Student Affairs including Admissions.
- **Research Technicians (1 to 4/year)** – 2003 to 2012. Primary PI and daily supervisor of anywhere from one to four full-time research technicians in any given year.
- **Students (~36/semester)** - Primary supervisor regarding program-wide, required activities including academic advising, Plan of Study, registration, selection of area of emphasis, adding and dropping courses, satisfactory academic progress reports, letters of recommendation for internships and employment purposes, intern and employee reference for background checks, resume/cover/CV assistance, interview preparation, assistance in finding jobs and internships, recruiting supervisors for student GA assignments per semester, assessment of GA activities, academic probation, seminar presentation reviewer, research reviewer, research committee member; approve student absence and travel; approve student admissions, academic common market, expenditures such as student/class supplies, class-related lab supplies, instructors, utilities, maintenance, computer access; student organization advisor; honorary society advisor, and other items academic program-related.

PROFESSIONAL SERVICE OUTSIDE MARSHALL UNIVERSITY

- 2014 Workshop Presenter, American Academy of Forensic Sciences, Annual Meeting, Seattle, WA, February 2014 Topic: Effective Curricular Design and Improvement for Forensic Science Educational Programs
- 2013- Secretary, Council on Forensic Science Education (COFSE)
- 2010 – to present: Graduate Program Representative, American Academy of Forensic Sciences (AAFS) College & University Fair Washington, DC
- 2012- Graduate Program Representative, Council of Forensic Science Educators (COFSE).
- 2008 and 2009- Grant Reviewer, Great Lakes WATER Institute. University of Wisconsin, Milwaukee, WI.
- 2007- Coordinated Management of Water Quality Protection and Food and Safety. California Vegetable Production Conference, San Luis Obispo, CA
- 2005- Science Advisory Board, Environmental Pathogens Information Network (EPI-Net).
- 2005- Grant Reviewer, National Oceanic and Atmospheric Administration (NOAA) Oceans and Human Health Initiative (OHHI). Silver Spring, MD
- 2005- Exhibitor, BIO[tech] 2005, Philadelphia, PA
- 2004- Exhibitor, BIO[tech] 2004, San Francisco, CA

MARSHALL UNIVERSITY SERVICE

- 2013-2014 – Marshall University School of Medicine Promotion & Tenure Committee
    - 2003 to present – Program Coordinator, MU Forensic Science MS Program
- 2013 – Advisory Committee, MU Integrated Science & Technology, Digital Forensics and Information Assurance Departments
- 2003 to present MU Annual Review Reporting, MU Office of Assessment
- 2003 to present MU Program Review and Resource Development Reporting, MU Office of Assessment
- 2003 to present- Chair, Forensic Science Faculty Committee

- 2003 to present- Chair, Forensic Science Admissions Subcommittee
- 2003 to present- Chair, Forensic Science Accreditation & Program Review
- 2003 to present- Chair, Forensic Science Graduate Studies Committee (Curriculum Committee)
- 2006 to present- Chair, Forensic Science Advisory Committee
- 2007 to present –DNA Technical Assistance Program (TAP) Director
- 2007 to present – Biological Safety Advisor to MUFSC Safety Committee;
- 2013 to present – Marshall Collateral Duty Officer for Forensic Science Center
- 2013 (new) – Firearms and Toolmarks Technical Assistance Program (TAP) Director
- 2007 to 2008- Marshall University Faculty Senate
- 2007 to 2008- Marshall University Budget and Academic Policy Committee

PUBLICATIONS AND POSTERS

- **Staton, Pamela;** Carpenter, A. Betts, Jackman, Susan H. IL-7 is a Critical Factor in Modulating Lesion Development in Skn-Directed Autoimmunity. J. Immunology, p3978-3986. 2006.
  ADD 2014
- Dembia, Emilie; Chenoweth, Sarah; Hayden, Jennifer; **Staton, Pamela.** "Validation of the Applied Biosystems 3500 Genetic Analyzer with a Comparison of the Identifiler Plus and PowerPlex 16 HS Amplification Kits", AAFS Conference, February 2013.
- Jacque, Kathleen; Redhead, Lynnet; Bowen, Sarah; **Staton, Pamela.** "Internal Validation of the AmpFlSTR Yfiler Amplification Kit on a Life Technologies 3130 Genetic Analyzer," AAFS Conference, February 2013
- Thatch, Christopher; Imes, Danielle; Bostwick, Valerie; **Staton, Pamela.** "Validation of the Applied Biosystems 3500XL with PowerPlex 16 HS," AAFS Conference, February 2013
- Barr, Sarah; Summerfield, Chad; Seferyn, Season; **Staton, Pamela.** "Validation and Comparison of the AmpFlSTR Identifiler Plus PCR Amplification Kit to Identifiler, MiniFiler, and Yfiler for the Pinellas County, Florida Forensic Laboratory," AAFS Conference, February 2013
- Gapinski, Allison; James, Julie; Marra, Misty; **Staton, Pamela.** "Internal Validation of the AmpFlSTR Identifiler Plus PCR Amplification Kit and Comparison to Identifiler for the Boston Police Department Crime Laboratory," AAFS Conference, February 2013
- Tokarz, Jessica; Milne, Scott; Hardy, Sarah; **Staton, Pamela**; Mayntz-Press, Kathleen. "Internal Validation of the PowerPlex Y23 Amplification Kit for Use in Forensic Casework," AAFS Conference, February 2013.
- Vickman, Tiffany; **Staton, Pamela J.** "Spectrophotometric Comparison of Storage and Preservation Methods on Trace Soil." AAFS Conference, 2012
- Quirindongo, Dana; Rushton, Catherine; Rankin, J. Graham; **Staton, Pamela J.** "The effect that storage condition, drying method, and length of time soil sample is stored on FTIR results." Marshall University Forensic Science Research Day, 2012.
- Fete, Emily; **Staton, Pamela J.** "Internal Validation of GeneMapper® *ID-X* for use in Forensic Casework." AAFS Conference, 2012
- Bard, Tiffany; Lupino, Cara; Bostwick, Valerie; Godby, Justin; **Staton, Pamela J.** "Internal Validation of AmpFLSTR® Plus on Applied Biosystems PRISM® 310 Genetic Analyzer." AAFS Conference, 2012

- Kramer, Kevin; Myers, Brent; Harrah-Lea, Heather; and **Staton, Pamela J.** "Comparison of Room Temperature Forensic DNA Extract Sample Preservation Methods". AAFS Annual Meeting, 2011.
- Sawin, Andrew; Chute, Jason; Harrah-Lea, Heather; and **Staton, Pamela.** "Comparative Analysis of Quantifiler® Duo, Plexor® HY, and MavenQST™ DNA Quantification Systems". AAFS Annual Meeting, 2011.
- Rommel, Megan; Bas, Jennifer; Murga, Kimberly; and **Staton, Pamela.** "Comparative Evaluation of Manual Extraction Methods of the Biology/DNA Unit of the Las Vegas Metropolitan Police Department Forensic Laboratory." AAFS Annual Meeting, 2011.
- Runyan, Melissa N.; Myers, Brent; and **Staton, Pamela J.,** "Validation of Applied Biosystem's Quantifiler ® Duo DNA Quantification Kit". Marshall University Forensic Science Research Day, 2010.
- Mest, Mallory; McGuckian, Amy; Crouse, Crouse; Cecelia A.; and **Staton; Pamela J.** "The Evaluation of Multiple Commercially-Available Extraction Chemistries for Forensic Laboratory". Marshall University Forensic Science Research Day, 2010.
- Keaton, Rachel; Pranger, Natasha; Staton, Pamela J. "Internal Validation of GeneMapper®ID-X v.1.0.1 as an Expert System for use in a Databasing Laboratory". Marshall University Forensic Science Research Day, 2010.
- Hoffman, Amanda J.; McWilliams, Scott; Gartside, Bill; **Staton, Pamela J.** "Internal Validation of the AmpFℓSTR® Identifiler® Kit on the Applied Biosystems 3130 Instrument". Marshall University Forensic Science Research Day, 2010.
- Hayden, Jennifer; Carradine, Cassie; **Staton, Pamela J.,** "Internal Validation of a Florescent Labeling System: A New Spermatozoa Identification Method". Marshall University Forensic Science Research Day, 2010.
- Hayden, Jennifer; Carradine, Cassie; **Staton, Pamela J.** "Internal Validation of a Robotic Liquid Handler for Real-time PCR Set Up". Marshall University Forensic Science Research Day, 2010.
- Edwards, Sally; Sanger, Margaret; **Staton, Pamela J.** "Internal Validation of Y-STRs for Casework at the Kentucky State Police Central Laboratory ". Marshall University Forensic Science Research Day, 2010.
- Asfar, Mohammed; Ammann, Monica; **Staton, Pamela J.;** " Internal Validation of AmpFlSTR® MiniFiler™ PCR Amplification kit for Forensic Casework". Marshall University Forensic Science Research Day, 2010.
- Pilon, Dana M.; Fiorucci, Kimberly D.; and **Staton, Pamela J.** "Internal Validation of the AmpF/STR® MiniFiler™ Amplification Kit for Use in Forensic Casework". Marshall University Forensic Science Research Day, 2009.
- Lovelace, Rachel; Hahn, Jeff; Harmon, Rachel; Schueler, Sindey; and **Staton, Pamela J.** "Streamlining and Optimizing the Procedures of a State Databank Lab". Marshall University Forensic Science Research Day, 2009.
- Brown, Tarah R.; Brewer, Lisa M.; **Staton, Pamela J.** "Internal Validation of AmpF/STR® MiniFiler™ Amplification Kit for Metropolitan Police Department". Marshall University Forensic Science Research Day, 2009.

RECENT CONTINUING EDUCATION (Last 5 years)

- *Quality Matters for Higher Education. Quality Matters Program: A National Benchmark for Online Course Design,* Marshall University. February 2013
- *The Ethics of Stewardship and the Stewardship of Ethics (Ethics I); Answering the NAS: The Ethics of Leadership and the Leadership of Ethics (Ethics II);* RTI International; nij.org on-line training; February 2013
- *Policy Forum- Crime Laboratory Backlogs: The Impact on Justice,* RTI International Forum, www.nij.gov; May 2013
- *Interdisciplinary Symposium – A National Forensic Science Enterprise and Transparency in Forensic Science: Legal and Practitioner Views on our Path Forward,* AAFS, February 2013. Washington, DC
- *Grant Funding Opportunities in the Forensic Sciences for Academic Programs,* AAFS, February 2013. Washington, DC
- *Multidisciplinary Approaches to Effective Communication and Report Writing*, AAFS, February 2013. Washington, DC
- American Academy of Forensic Science (AAFS), Annual Meeting attendance, Washington, DC, February 2013
- *Working in Forensics: From the Streets, to the Battlefield, to the Boardroom,* AIDE, May 2012, Huntington, WV.
- *Anti-Forensics: Occult Computing,* AIDE, May 2012, Huntington, WV.
- *ImageScan,* AIDE, May 2012, Huntington, WV.
- *Mobile Device Security and the Impact on Digital Investigations,* AIDE, May 2012, Huntington, WV.
- *Putting Forensics Back into Digital Forensics,* AIDE, May 2012, Huntington, WV.
- *A Forensic Analysis of Social Media Artifacts in Windows 7 and Windows 8,* AIDE, May 2012, Huntington, WV.
- *Future Sources of Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Applied Behavior Analysis: Its Role in the Digital Investigation,* AIDE, May 2012, Huntington, WV.
- *The Evolving Role of Cyber,* AIDE, May 2012, Huntington, WV.
- *Windows 8 Forensic Analysis- A Forensic First Look,* AIDE, May 2012, Huntington, WV.
- *Surviving the Witness Stand: A Basic Guide to Preparation for the Courthouse and Testifying,* AIDE, May 2012, Huntington, WV.
- *Search and Seizure of Digital Evidence- Legal Considerations II,* AIDE, May 2012, Huntington, WV.
- *Field Analysis & Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Proper Collection, Handling and Documentation of Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Types of Digital Evidence and Digital Crimes,* AIDE, May 2012. Huntington, WV.
- *Introduction/Foundations of Digital Forensics,* AIDE, May 2012, Huntington, WV.
- *Appalachian Institute of Digital Evidence (AIDE)* attendance. May 21, 2012. Marshall University. Huntington, WV
- *What Did You Just Step In? Use Forensic Soil Examinations to Find Out,* American Academy of Forensic Science, February 2012. Atlanta, GA

- *Introduction to Expert Witness Testimony*, American Academy of Forensic Science (AAFS), February 2011. Chicago, IL
- *FEPAC On-Site Evaluator Training Session*, AAFS, February 2011. Chicago, IL
- *Introduction to Expert Witness Testimony*, AAFS, February 2011. Chicago, IL
- *Internationalization of Forensic Sciences*, AAFS, February 2011. Chicago, IL
- MFRC Forensic Science Education Forum, invited participant, Indianapolis, IN, June 2010
- *American Academy of Forensic Science, Annual Meeting attendance,* Seattle, WA, February 2010
- *Seven Deadly Sins of Forensic Science.* American Academy of Forensic Science Conference. Denver, CO. February 2009. Session.
- *Ethics in Forensic Practice.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Integrated Microfluidics.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Ethics and Forensic Science.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Body Fluid Identification from Sexual Assault Evidence.* Mid-Atlantic Association of Forensic Science (MAAFS) Annual Meeting. Huntington, WV. April 30, 2008. Workshop.
- *Expert Witness Testimony.* MAAFS Annual Meeting. Huntington, WV. April 30, 2008. Workshop.
- *Daubert Admissibility Issues and Preparation Elements for the Forensic Scientist.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Automating Your Lab: Run Biomek Run!.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Managing in the Forensic Sciences.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Human DNA Quantification.* AAFS Conference. Washington, DC. February 2008. Workshop.

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: MUSOM | Dept/Division: Forensic Science | Alpha Designator/Number: FSC | (•) Graded ( ) CR/NC

Contact Person: Dr. Pamela Staton | Phone: 304-691-8962

NEW COURSE DATA:

New Course Title: DNA Technical Assistance Program (TAP)

Alpha Designator/Number: FSC 642

Title Abbreviation: DNA Tech Assistance I

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)

The goal of the DNA Technical Assistance Program (DNA TAP) is to prepare select students for placement in host forensic laboratories for validation and evaluation research studies. The student undergoes accelerated lectures and intense hands-on laboratory exercises including analytical procedures, instrument training, and data analysis.

Co-requisite(s):

First Term to be Offered: Fall 2015

Prerequisite(s):

Credit Hours: 2

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head Pamela Staton	Date 4-13-2015
Registrar Roberta Ferguson 269999	Date 4/27/15
College Curriculum Chair Pamela Staton	Date 4-23-2015
Graduate Council Chair J Christofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: MUSOM | Department/Division: Forensic Science | Alpha Designator/Number: FSC

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Laura Kuyper
Pamela Staton

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable
Although the TAP placement of all students enrolled in this course cannot be guaranteed, the course administrators will work diligently with each student to ensure that they are placed as DNA Technical Assistants or in another DNA Internship.

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

To accelerate the understanding and familiarity of forensic DNA technologies through intensive lectures and demonstrations that may include: DNA extraction methods, quantification methods, PCR-based amplification methods, Capillary Electrophoresis, and Data analysis methods.

7. COURSE OUTLINE (May be submitted as a separate document)

Fall Semester:
To accelerate the understanding and familiarity of forensic DNA technologies through intensive lectures.

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

An Introduction to Forensic Genetics, William Goodwin, Adrian Linacre, Sibte Hadi, John Wiley & Sons, Limited, First Edition, 978-0-470-01025-9

Fundamentals of Forensic DNA Typing, John M. Butler, Elsevier, Second Edition, 978-0-12-374999-4

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Fall Semester:
Lecture

Spring Semester:
Demonstration and hands-on lab work

Summer:
Internship

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Fall Semester:
in-class quizzes, mid-term exam, and final exam

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Complete fall semester before spring semester

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Forensic Science
Course Number and Title: FSC 642 DNA Technical Assistance Program I (TAP)
Catalog Description: The goal of the DNA Technical Assistance Program (DNA TAP) is to prepare select students for placement in host forensic laboratories for validation and evaluation research studies. The student undergoes accelerated lectures and intense hands-on laboratory exercises including analytical procedures, instrument training, and data analysis.
Prerequisites: N/A
First Term Offered: Fall 2015
Credit Hours: 2

Marshall University Course Syllabus

Course Name	Technical Assistance Program
College/Department	Graduate/Forensic Science
Semester	Fall 2014
Instructor name and title	Laura Kuyper, MSFS, Forensic DNA Analyst / Quality Assurance Manager
Instructor Email	Kuyper1@marshall.edu
Instructor Telephone	(304) 691-8948
Instructor Office Location	Marshall University Forensic Science Center DNA Laboratory,123
Course Start Date	August 28, 2014
Course End Date	December 11, 2014

COURSE MEETING TIME

Dates/Times	Thursday, 3-5pm
Location	Annex Lab/Class Room

Information for drop or withdraw available on the Academic Calendar at: http://www.marshall.edu/calendar/academic/.
If you should withdraw from this course, please inform the instructor at your earliest convenience.

COURSE MATERIALS AND COST

The following titles are not required texts for this course but rather recommended for additional information pertaining to the covered material. Lectures and laboratory demonstrations will be accompanied by provided handouts.

Title	An Introduction to Forensic Genetics
Author(s)	William Goodwin, Adrian Linacre, Sibte Hadi
Publisher	John Wiley & Sons, Limited
Edition	First Edition
ISBN	978-0-470-01025-9

Title	Fundamentals of Forensic DNA Typing
Author(s)	John M. Butler
Publisher	Elsevier
Edition	Second Edition
ISBN	978-0-12-374999-4

Estimated cost for all books and materials for this course will be the cost of ink for personal printing.

COURSE DETAILS

Description:
The goal of the National Institute of Justice DNA Technical Assistance Program (NIJ TAP) is to prepare select students for placement in host forensic laboratories for validation studies. Although the NIJ-TAP placement of all students enrolled in this course cannot be guaranteed, the course administrators will work diligently with each student to ensure that they are placed as NIJ Technical Assistants or in another DNA Internship. During this course, the student will undergo preparatory lectures and hands-on instrument training. In addition, participants will undergo troubleshooting activities as well as validation plans in preparation to choose placement assignments. The general instruction scheme is to introduce all students to extraction, quantitation, amplification and capillary electrophoresis applications. Additionally, students will participate in introductory laboratory activities. This course is unlike any other course offered at the MUFSC and because of this, introductory information will be presented at an accelerated pace with schedule adjustments occurring at short notice. Participating students are expected to anticipate the unexpected and work with instructors to achieve the goals of

the course.

Credit Hours: 2
Prerequisites: None
Objectives:

1. To accelerate the understanding and familiarity of forensic DNA technologies through intensive lectures and demonstrations that may include:
   DNA extraction methods *(Organic, DNA IQ, Qiagen and Robotic)*
   DNA quantification methods *(AB7500 and Real-time PCR)*
   DNA PCR-based amplification methods *(STR and YSTR)*
   Capillary Electrophoresis Technologies *(AB 310, 3100, 3130xl, and 3500xl)*
   Data analysis methods *(GeneMapper ID and GeneMapper ID-X)*
   Validation procedures
   Quality control and quality assurance

2. To gain practical skills through demonstrations of the above technologies. Because the laboratory activities will most likely be required to perform necessary validation studies in host laboratories, students will be prepared to train in the spring semester for various validation projects.

COURSE SCHEDULE, ACTIVITIES AND POLICIES

Date	Topics and Activities
August 28	An Introduction to Forensic DNA Analysis
September 4	Nucleic Acid Extraction
September 11	Real-Time PCR Quantitation
September 18	Laboratory Demonstration: Qiagen EZ1 Investigator Extraction, Applied Biosystems Quantifiler Duo Real-Time PCR Quantitation
September 25	Hands-On Data Interpretation: Applied Biosystems Quantifiler Duo Real-Time PCR Quantitation & Examination 1 review
October 2	Examination 1
October 9	PCR Amplification
October 16	Laboratory Demonstration: Concentrations, Dilutions and Applied Biosystems Identifiler Amplification
October 23	Capillary Electrophoresis
October 30	Laboratory Demonstration: Applied Biosystems 3130xl Run Setup and Instrument Maintenance
November 6	GeneMapper ID/ID-X Software Algorithms
November 13	Capillary Electrophoresis Artifact Identification and GeneMapper ID Software Setup
November 20	Hands-On Data Interpretation: GeneMapper ID Data Analysis
November 27	Thanksgiving (no class)
December 4	Hands-On Data Interpretation: GeneMapper ID Data Analysis and Software Optimization
December 11	Examination 2

Examinations

Number of Exams	2
Types of Questions	Exams may include multiple choice, statement completion, short and long answer essay questions
Points per Exam	100*
Total Points	200*

**Exam questions in which less than 35% of the class receives full credit will be considered for omission from the final score at the instructor's discretion. If removed, the points per exam and total points will be adjusted appropriately.*

Quizzes

Number of Quizzes	12
Types of Questions	Quizzes may include multiple choice, statement completion, and short answer essay questions
Points per Quiz	5*
Total Points	50**

**Each quiz will include a single bonus question worth 0.5 points (10% of the total score). Bonus question points do not count against the student score.*
***The two lowest quiz scores will be dropped from the final total number of points available.*

Assignments

Written and laboratory assignments will be given at the instructor's discretion. In the event that no assignments are given during the semester, the point percentage set aside for assignments will be split evenly between the examination and quiz point percentage.

Grading Breakdown

Item	Percent of Final Grade
Examinations	80
Quizzes	10
Assignments	10
Total	100

Policies

No make-up lecture presentation, laboratory instruction, quizzes or exams will be available. Each exam will cover both theoretical and any analytical information covered such as laboratory demonstrations. Any information presented could be included on any quizzes or assignments, however, the final examination is not cumulative. If the material tested on each exam varies from the proposed schedule, the instructor will notify students as to the information covered. No review session will be performed prior to examinations. Students will be given partial credit on all examination short and long answer essay questions at the instructor's discretion.

GRADING

The traditional 10 point grading scheme will be used for this course.

COMMUNICATION

Students may contact the instructor at any time for clarification on presented material or additional information. Email is preferred and will yield a quicker response time in most cases, however, you may stop by my office or call if you prefer. Appointments are preferred to pop-ins.

UNIVERSITY POLICIES

Academic Dishonesty
All students should be familiar with the university's policy concerning academic dishonesty. This policy can be found on pp. 66 - 68 of the undergraduate catalog http://www.marshall.edu/catalog/undergraduate/ug_10-11_published.pdf, or on pp. 61 – 63 in the 2009 online graduate catalog http://www.marshall.edu/catalog/graduate/S2009/gr_sp09_published.pdf. (Faculty are encouraged to add any additional information specific to their expectations and/or rules regarding academic dishonesty in their class).

Policy for Students with Disabilities
Marshall University is committed to equal opportunity in education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone 304 696-2271 to provide documentation of their disability. Following this, the DSS Coordinator will send a letter to each of the student's instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, please visit http://www.marshall.edu/disabled or contact Disabled Student Services Office at Prichard Hall 11,

phone 304-696-2271.

University Computing Services' Acceptable Use Policy:
All students are responsible for knowing this policy, which can be found on the web at http://www.marshall.edu/ucs/CS/accptuse.asp.

Affirmative Action Policy:
This course will follow Marshall University's policy on Affirmative Action, which can be found on p. 63 of the undergraduate catalog http://www.marshall.edu/catalog/undergraduate/ug_10-11_published.pdf, or on pp. 16-17 of the 2008 graduate catalog http://www.marshall.edu/catalog/graduate/S2009/gr_sp09_published.pdf. Specifically, all students will be afforded equal opportunity without regard to race, color, sex, religion, age, disability, national origin, or sexual orientation.

LAURA JO KUYPER
Marshall University Forensic Science Center
1401 Forensic Science Drive, Huntington, WV 25701
Phone: (304) 691-8948
Fax: (304) 691-8928
kuyper1@marshall.edu

POSITION TITLE & DESCRIPTION

The Marshall University Forensic Science Center employs me as a ***Forensic DNA Analyst Level III***, ***Parentage DNA Analyst II***, and ***Quality Assurance Manager*** in the DNA Laboratory.

All DNA Analysts report to and receive administrative direction from the Technical Leader of the DNA Laboratory. As a Forensic DNA Analyst I conduct analysis on forensic samples submitted for DNA identification as well as technical and administrative reviews of forensic cases. As a Parentage DNA Analyst I conduct analysis on relationship samples submitted for DNA identification as well as technical and administrative reviews of relationship cases. I am also qualified to conduct analysis on database/reference samples submitted for DNA identification as well as technical and administrative reviews of database samples.

As the Quality Assurance Manager I report to and receive administrative direction from the Director of the DNA Laboratory and work closely with the Technical Leader. I have the responsibility to provide leadership, guidance and support in the administration of all quality assurance and quality control programs as well as the authority to ensure that the quality system is implemented and followed as mandated by the FBI Quality Assurance Standards for Forensic DNA Testing and DNA Databasing Laboratories and the International Standards Organization (ISO 17025).

OTHER EMPLOYMENT

Marshall University employs me as a part-time ***Associate Graduate Faculty Member*** since August 2013. Courses taught include:
FSC 650: DNA Technical Assistance Program

I am a contract employee for ANSI-ASQ National Accreditation Board/FQS. I am a technical assessor for audits to the FBI Quality Assurance Standards (forensic DNA testing and DNA databasing) as well as the ISO 17025 assessment criteria.

I am a contract employee for the National Forensic Science Technology Center, Inc. (NFSTC). I am a technical assessor for audits to the FBI Quality Assurance Standards (forensic DNA testing and DNA databasing).

COURTROOM EXPERIENCE

I have experience testifying to results in the Forensic DNA discipline since 2011. I currently have testified two times at the state level.

QUALIFICATIONS, TRAINING & PROFESSIONAL MEMBERSHIPS

- Bachelor of Science in Chemistry, Kentucky Wesleyan College, Owensboro, KY, 1995.
- Associate of Applied Science in Business Technology/Management, Ashland Community College, Ashland, KY, 1997.
- Master of Science in Forensic Science/DNA Analysis, Marshall University, Huntington, WV, 1999.
- West Virginia State Police Laboratory Intern, Biochemistry Section, 1998.
- Marshall University CODIS Laboratory Intern, 1998.
- Attended various workshops and professional meetings to continue my education in the field of Biology.
- Member of the Mid-Atlantic Association of Forensic Scientists since 2003.
- Member of the Association of Forensic Quality Assurance Managers since 2005.
- Analyzed approximately 400 DNA cases using ABI 3103xl with AmpF/STR® Profiler Plus®, AmpF/STR® Cofiler®, AmpF/STR® Identifiler® and AmpF/STR® Identifiler® Plus kits as well as the PowerPlex® 16 and PowerPlex® 16 HS systems from Promega.

- Tested over 10,000 samples using AmpF/STR® Profiler Plus®, AmpF/STR® Cofiler®, AmpF/STR® Identifiler® and AmpF/STR® Identifiler® Plus kits as well as the PowerPlex® 16 and PowerPlex® 16 HS systems from Promega.
- Completed DNA analysis of approximately 2000 samples using AmpF/STR® Profiler Plus®, AmpF/STR® Cofiler®, AmpF/STR® Identifiler® and AmpF/STR® Identifiler® Plus kits as well as the PowerPlex® 16 and PowerPlex® 16 HS systems from Promega.
- Administrative and Technical review of approximately 300 forensic DNA cases.
- Administrative and Technical review of approximately 100 relationship cases.
- Administrative and Technical review of approximately 5000 database samples.
- Since 2008 I have been a part of 20 assessments in 15 different laboratory systems.

PROFICIENCY TEST RECORDS

I have successfully completed proficiency testing since 2001. The following are proficiency tests I have completed in the past three years.

- CTS 10-572 and CTS 10-575
- CTS 11-572 and CTS 11-575
- CTS 12-572 and CTS 12-575
- CTS 13-572 and CTS 13-575

CONTINUED EDUCATION

1992

- "Genetics", Kentucky Wesleyan College, 1992

1996

- "Statistical Methods", Ashland Community College, 1996

1997

- "Human Biochemistry", Marshall University, 1997

1998

- "Cell and Molecular Biology", Marshall University, 1998
- "Introduction to Microscopy/Photography", Marshall University, 1998
- "Forensic Science I, A Course in DNA", Marshall University, 1998
- "Biostatistics", Marshall University, 1998
- "Law of Evidence", Marshall University, 1998

1999

- "Legal Court in Forensic Science", Marshall University, 1999

2001

- "Ethical Problems Facing the Expert Witness", (Andre Moenssens), American Academy of Forensic Science's 53rd Annual Meeting, Seattle, WA, February 2001.
- "Short Tandem Repeat Analysis Data: Processing, Interpretation, and Storage", (Deborah Hobson – FBI), American Academy of Forensic Science's 53rd Annual Meeting, Seattle, WA, February 2001.
- American Academy of Forensic Science's 53rd Annual Meeting, Seattle, WA, February 2001.
- Florida DNA Training Workshop, Clearwater, FL, May-June 2001.
- "FBI Casework Workshop", (Mike Garvey, Deborah Hobson, Julie Kidd, Jill Smerick – FBI), Marshall University, June 2001.
- "Parentage Testing Seminar", (Mike Baird – LifeCodes Corp.), Marshall University, July 2001.
- Promega's 12th International Symposium on Human Identification, Biloxi, MS, October 2001.
- "Performance Level Auditing Workshop", (Kevin Lothridge, David Epstein – NFSTC), Marshall University, November 2001.

2002

- "ABI Prism 3100 Genetic Analyzer Training", (Carol Scherczinger – ABI), Marshall University, March 2002.
- Promega's 1st Advanced CE STR Working Group Meeting, Memphis, TN, April 2001.
- "STR Workshop Beyond the Core 13", 2002 Mid-Atlantic Association of Forensic Scientists Annual Meeting, Frederick, MD, April 2002.
- 2002 Mid-Atlantic Association of Forensic Scientists Annual Meeting, Frederick, MD, April 2002.

- "DNA Auditor Training", (Richard Guerrieri – FBI), Marshall University, May 2002.
- 8th Annual CODIS User's Conference, Washington, DC, November 2002.

2003

- Evidence Processing Training, (Sherri Lemons – West Virginia State Police), West Virginia State Police Crime Laboratory Central Processing Unit, Charleston, WV, July - September 2004.
- "ABI Prism 3100 Series Genetic Analyzers and AmpF/STR Training", (Michelle Shepherd – ABI), Marshall University, September 2003.

2004

- "Quantifiler and GeneMapper ID Training", (Michelle Shepherd – ABI), Marshall University, April 2004.
- GeneMapper ID WebEx Training, (Michelle Shepherd – ABI), Marshall University, May 2004.
- Mid-Atlantic Association of Forensic Scientists Annual Meeting, Wilmington, DE, April 2004.
- Laboratory Health and Safety, (James Kaufman – Laboratory Safety Institute), Las Vegas, NV, August 2004.
- 3rd Annual Association of Forensic Quality Assurance Managers Meeting, Las Vegas, NV, August 2004.
- "Expert Testimony", (Karen Vilanueva Matkovich, Joseph Noggy), Marshall University, November 2004

2005

- "ABI 3130 Genetic Analyzer Training", (Michelle Shepherd – ABI), Marshall University, February 2005.
- American Academy of Forensic Science's 57th Annual Meeting, New Orleans, LA, February 2005.
- "GeneMapper ID Data Analysis", (Karen Howard – MU Consultant), Marshall University, April 2005.
- 4th Annual Association of Forensic Quality Assurance Managers Seminar, Indian Rocks Beach, FL, October 2005.
- ISO/IEC 17025:2005 and Laboratory Accreditation Training Course, (Kenneth Staub – A2LA), Orlando, FL, November 2005.

2006

- Y Chromosome, (Terry Fenger – MUFSC), Marshall University, April 2006.
- 5th Annual Association of Forensic Quality Assurance Managers Seminar, Missoula, MT, October 2006.
- GeneMapper ID Training, (Jaime Handelsman – ABI), Marshall University, December 2006.

2007

- Mid-Atlantic Association of Forensic Scientists Annual Meeting, Washington D.C., May 2007.
- 6th Annual Association of Forensic Quality Assurance Managers Seminar, Milwaukee, WI, September 2007.

2008

- ISO Without Tears, (Pat Wojtowicz – FQS-I), Clearwater, FL, February 2008.
- Mid-Atlantic Association of Forensic Scientists Annual Meeting, Huntington, WV, April - May 2007.
- Expert Witness Workshop, (Chris Chiles and David Castle), Huntington, WV, April 2008.
- Body Fluid Identification from Sexual Assault Evidence, Huntington, WV, April 2008.
- HITA/AABB Workshop (Promega Workshop), Hollywood, CA, October 2008.
- Forensic Population Genetics Workshop (Martin Tracey, Promega Workshop), Hollywood, CA, October 2008.
- Promega's 19th International Symposium on Human Identification, Hollywood, CA, October 2008.

2009

- Y-STR Training, (Sarah Bowen and Karen Howard – MUFSC), Marshall University, May 2009.
- FQS-I ISO 17025 Assessor and Internal Auditor Workshop (William Tillstone – FQS-I), Clearwater, FL, June 2009.
- FBI DNA Auditor Training – Revised QAS (Heather Seubert – FBI), Clearwater, FL, June 2009.
- 8th Annual Association of Forensic Quality Assurance Managers Seminar, Anaheim, CA, October 2009.
- Understanding the Basics of Root Cause Analysis (Denise Robitaille – Paton Professional), Anaheim, CA, October 2009.

2010

- Relationship Training (Kelly Beatty – MUFSC), Marshall University, February 2010.

2011

- Emerging DNA Technologies (Karen Howard, Justin Godby and Jennifer Hayden – MUFSC), Marshall University, November 2011.

2012

- Promega's 23rd International Symposium on Human Identification (ISHI), Nashville, TN, October 2012.

2013

- NIST DNA Mixture Interpretation Workshop and Webcast, 2013

PAMELA J. STATON, Ph.D.

Marshall University Forensic Science Center: 1401 Forensic Science Drive, Huntington, WV 25701
staton1@marshall.edu |304-691-8962 (Office) 304-691-8929 (Fax) 304-634-5263 (Mobile) |
www.marshall.edu/forensics

EDUCATION

Ph.D. **Biomedical Sciences**, 2001. Marshall University School of Medicine, Huntington, WV
M.S. **Medical Technology**, 1978. West Virginia University, Morgantown, WV
B.S. **Medical Technology**, 1975. Morehead State University, Morehead, KY

NATIONAL CERTIFICATION

- **Medical Technologist, MT(ASCP) #104280**, American Society of Clinical Pathologists
- **Specialist in Microbiology, SM(ASCP) # 1920**, American Society of Clinical Pathologists

PROFESSIONAL MEMBERSHIPS

- American Academy of Forensic Sciences (AAFS)
- American Society of Crime Laboratory Directors (ASCLD)
- American Society of Clinical Pathologists (ASCP)
- Delta Delta Epsilon Forensic Science Honorary Society
- Council of Forensic Science Educators (COFSE)

EMPLOYMENT HISTORY

- **Graduate Program Coordinator, Researcher & Associate Professor,** *January 2003 to present.* Tenured 2007. Day-to-day administrator; research & teaching. Marshall University Forensic Science, Graduate College, Joan C. Edwards School of Medicine, Huntington, WV.
- **Faculty,** *July 1998 to December 2002.* Tenured 2001. Shawnee State University, Department of Medical Laboratory Science, Portsmouth, OH. Teaching: Microbiology, Blood Banking/Transfusion Medicine, Hemostasis, Clinical Correlation
- **Department Chair & Faculty** *October 1988 to July 1998.* Shawnee State University, Department of Medical Laboratory Science, Portsmouth, OH. Microbiology, Orientation to Clinical Laboratory Sciences, Clinical Correlation
- **Graduate Assistant & Ph.D. Candidate,** *January 1998 to August 2001.* Marshall University School of Medicine Department of Microbiology, Immunology, Molecular Genetics, Huntington, WV.
- **Microbiology Departmental Supervisor,** *September 1984 to October 1988.* King's Daughters' Medical Center, Ashland, KY; Pharmacy & Therapeutics Committee Member; College of American Pathologist Auditor; Infection Control Committee Member
- **Clinical Education Coordinator & Assistant Professor,** *June 1981 to August 1983.* Florida International University, Department of Medical Laboratory Sciences, Miami, FL. Teaching: Hematology, Microbiology, Laboratory Management

- **Laboratory Manager & Adjunct Professor,** *September 1979 to June 1981.* Florida International University, Department of Medical Laboratory Sciences, Miami, FL. Teaching: Hematology, Clinical Chemistry, Blood Banking/Transfusion Medicine, Microbiology
- **Chemist, Division of Toxicology,** *January 1979 to September 1979.* Smith Kline & French Laboratories, Toxicology Division, Miami, FL; Drug, toxicology, and therapeutic drug monitoring.
- **Graduate Teaching Assistant,** *August 1976 to December 1978.* West Virginia University, Department of Medical Technology. Morgantown, WV.
- **Medical Technologist,** *July 1975 to July 1976.* Beckley Appalachian Regional Hospital & School of Medical Technology. Beckley, WV. Clinical microbiology, hematology, chemistry, blood banking technologist.

TEACHING & COURSE DEVELOPMENT

- **Seminar** – FSC 680 Fall: Course Director; student research presentations; resume, CV, and cover letter development; PowerPoint tools; research design; career development of internship and job seekers; portfolio development and use; interview preparation and tools; evaluation and self-evaluation; research paper rubric; research poster rubric; accrediting agency [FEPAC] seminar requirement. 1 credit hr
- **Seminar** – FSC 680 Spring: Course Director; student lay audience presentations; student poster presentations; MUFS Research Day organization; student HR interviews; student technical specialty interviews; creating interview panels of working professional; national testing and certification; preparation for AAFS presentations and national meeting participation; accrediting agency [FEPAC] seminar requirements. 1 credit hr
- **Internship** – FSC 630 Summer: Course Administrator; Internship identification, conference calls, and placements; internship agreement approvals; internship oversight; internship requirements such as research paper, research paper rubric, intern evaluation of internship experience, host laboratory evaluation of intern, attendance and punctuality, research slide presentation development, research poster development; accrediting agency [FEPAC] research requirements. 5 credit hrs
- **Biochemistry** – FSC 624 Fall: Course Director; teaching: nucleic acid section; key developer of forensic biochemistry section; recruitment, assignment and coordination of faculty; compiling and administering testing; grading; syllabus design and schedule. 4 credit hrs
- **Bioterrorism** – FSC 610 Spring: Course Coordinator: syllabus & schedule; teaching: laboratory techniques section. 3 credit hrs
- **Laboratory Management** – FSC 650 Spring: Course Instructor; essentials of laboratory management for students aspiring to attain positions as laboratory directors, managers, technical leaders, supervisors or other leadership roles. 2 credit hrs
- **DNA Technical Assistance** – FSC 650 Fall & Spring: Program developer and administrator. Fall 2 credits; Spring 2 credits
- **Firearms Technical Assistance** – FSC 650 Fall & Spring: Program developer and administrator. Fall 1 credit; Spring 1 credit
- **Other Course Oversight for FEPAC Purposes**: FSC 604, FSC 619, FSC 665, FSC 603, FSC 627, FSC 629

GRANTS- FUNDED

- **Staton, Pamela, PI**: 2010 to 2011 **Funded $468,000;** WV Water Quality: Bacterial Source Tracking, Pathogen Profiling and Assay Development; USDA-NIFA-FADM
- **Staton, Pamela, PI:** 2009 to 2010 **Funded $360,360**; West Virginia Water Quality: Bacterial Source Tracking and Pathogen Profiling; USDA-CSREES_FADM
- **Staton, Pamela, PI**: 2008 **Funded $875,000** Y-STR Analysis Training in Support of State and Local Law Enforcement; National Institute of Justice
- **Staton, Pamela, PI:** 2008 to 2009 **Funded 383,862;** West Virginia Water Quality: Bacterial Source Tracking & Pathogen Profiling; USDA-CSREES-FADM
- **Staton, Pamela, PI:** 2006 to 2008 **Funded $555,985** West Virginia Water Quality: Fecal Source Tracking and Pathogen Profiling; USDA_CSREES_FADM
- **Staton, Pamela, PI**: 2005 to 2006 **Funded $528,323;** Assessment of West Virginia Water Quality: Bacterial Source Tracking Database Development and Method Validation; USDA_CSREES_FADM
- **Staton, Pamela, PI**: 2004 to 2005 **Funded $502,457.** West Virginia Water Quality: Bacterial Source Tracking USDA_CSREES_FADM
- **Staton, Pamela, PI:** 2003 to 2004 **Funded $577,590.** West Virginia Water Quality: Bacterial Source Tracking; USDA_CSREES_FADM
- **Staton, Pamela, PI:** 2003 to 2004 **Funded $152,000.** Bacterial Source Tracking: WV Department of Agriculture

---

PROPOSALS – PENDING

2013 - Crime Scene Investigation Continuing Education Program submitted to the Battlefield Vehicle Forensics Training Manager Combat Incident Analysis Division (CIAD) National Ground Intelligence Center (NGIC)

GRANTS - UNFUNDED

- **Staton, Pamela.** 2012 Forensic Soil Analysis: Evaluation and Standardization of Soil Sample Storage, DNA Extraction Methods & Validation of Automated Ribosomal Intergenic Spacer Analysis Microbial Community Profiling; National Institute of Justice
- **Staton, Pamela.** 2011 Multidisciplinary Approach to Forensic Soil Analysis: A same source comparison of DNA-based microbial community profiling (MCP), scanning electron microscopy, and inductively coupled plasma atomic emission spectroscopy (IPC-AES); National Institute of Justice.

DIRECT SUPERVISION

- **Academic Program Administrative Assistant** – 2012 to present. Primary supervisor of a full-time Administrative Assistant whose role includes website and publication design and maintenance, accreditation materials management and follow-up, scheduling and organizing.

- **Academic Program Manager** – 2006 to present. Primary supervisor of a full-time Program Manager whose primary role includes academic program accounting and financial recordkeeping; assists me in areas related to Academic Affairs, Student Affairs including Admissions.
- **Research Technicians (1 to 4/year)** – 2003 to 2012. Primary PI and daily supervisor of anywhere from one to four full-time research technicians in any given year.
- **Students (~36/semester)** - Primary supervisor regarding program-wide, required activities including academic advising, Plan of Study, registration, selection of area of emphasis, adding and dropping courses, satisfactory academic progress reports, letters of recommendation for internships and employment purposes, intern and employee reference for background checks, resume/cover/CV assistance, interview preparation, assistance in finding jobs and internships, recruiting supervisors for student GA assignments per semester, assessment of GA activities, academic probation, seminar presentation reviewer, research reviewer, research committee member; approve student absence and travel; approve student admissions, academic common market, expenditures such as student/class supplies, class-related lab supplies, instructors, utilities, maintenance, computer access; student organization advisor; honorary society advisor, and other items academic program-related.

PROFESSIONAL SERVICE OUTSIDE MARSHALL UNIVERSITY

- 2014 Workshop Presenter, American Academy of Forensic Sciences, Annual Meeting, Seattle, WA, February 2014 Topic: Effective Curricular Design and Improvement for Forensic Science Educational Programs
- 2013- Secretary, Council on Forensic Science Education (COFSE)
- 2010 – to present: Graduate Program Representative, American Academy of Forensic Sciences (AAFS) College & University Fair Washington, DC
- 2012- Graduate Program Representative, Council of Forensic Science Educators (COFSE).
- 2008 and 2009- Grant Reviewer, Great Lakes WATER Institute. University of Wisconsin, Milwaukee, WI.
- 2007- Coordinated Management of Water Quality Protection and Food and Safety. California Vegetable Production Conference, San Luis Obispo, CA
- 2005- Science Advisory Board, Environmental Pathogens Information Network (EPI-Net).
- 2005- Grant Reviewer, National Oceanic and Atmospheric Administration (NOAA) Oceans and Human Health Initiative (OHHI). Silver Spring, MD
- 2005- Exhibitor, BIO[tech] 2005, Philadelphia, PA
- 2004- Exhibitor, BIO[tech] 2004, San Francisco, CA

MARSHALL UNIVERSITY SERVICE

- 2013-2014 – Marshall University School of Medicine Promotion & Tenure Committee
    - 2003 to present – Program Coordinator, MU Forensic Science MS Program
- 2013 – Advisory Committee, MU Integrated Science & Technology, Digital Forensics and Information Assurance Departments
- 2003 to present MU Annual Review Reporting, MU Office of Assessment
- 2003 to present MU Program Review and Resource Development Reporting, MU Office of Assessment
- 2003 to present- Chair, Forensic Science Faculty Committee

- 2003 to present- Chair, Forensic Science Admissions Subcommittee
- 2003 to present- Chair, Forensic Science Accreditation & Program Review
- 2003 to present- Chair, Forensic Science Graduate Studies Committee (Curriculum Committee)
- 2006 to present- Chair, Forensic Science Advisory Committee
- 2007 to present –DNA Technical Assistance Program (TAP) Director
- 2007 to present – Biological Safety Advisor to MUFSC Safety Committee;
- 2013 to present – Marshall Collateral Duty Officer for Forensic Science Center
- 2013 (new) – Firearms and Toolmarks Technical Assistance Program (TAP) Director
- 2007 to 2008- Marshall University Faculty Senate
- 2007 to 2008- Marshall University Budget and Academic Policy Committee

PUBLICATIONS AND POSTERS

- **Staton, Pamela;** Carpenter, A. Betts, Jackman, Susan H. IL-7 is a Critical Factor in Modulating Lesion Development in Skn-Directed Autoimmunity. J. Immunology, p3978-3986. 2006.
  ADD 2014
- Dembia, Emilie; Chenoweth, Sarah; Hayden, Jennifer; **Staton, Pamela**. "Validation of the Applied Biosystems 3500 Genetic Analyzer with a Comparison of the Identifiler Plus and PowerPlex 16 HS Amplification Kits", AAFS Conference, February 2013.
- Jacque, Kathleen; Redhead, Lynnet; Bowen, Sarah; **Staton, Pamela.** "Internal Validation of the AmpFlSTR Yfiler Amplification Kit on a Life Technologies 3130 Genetic Analyzer," AAFS Conference, February 2013
- Thatch, Christopher; Imes, Danielle; Bostwick, Valerie; **Staton, Pamela**. "Validation of the Applied Biosystems 3500XL with PowerPlex 16 HS," AAFS Conference, February 2013
- Barr, Sarah; Summerfield, Chad; Seferyn, Season; **Staton, Pamela.** "Validation and Comparison of the AmpFlSTR Identifiler Plus PCR Amplification Kit to Identifiler, MiniFiler, and Yfiler for the Pinellas County, Florida Forensic Laboratory," AAFS Conference, February 2013
- Gapinski, Allison; James, Julie; Marra, Misty; **Staton, Pamela.** "Internal Validation of the AmpFlSTR Identifiler Plus PCR Amplification Kit and Comparison to Identifiler for the Boston Police Department Crime Laboratory," AAFS Conference, February 2013
- Tokarz, Jessica; Milne, Scott; Hardy, Sarah; **Staton, Pamela**; Mayntz-Press, Kathleen. "Internal Validation of the PowerPlex Y23 Amplification Kit for Use in Forensic Casework," AAFS Conference, February 2013.
- Vickman, Tiffany; **Staton, Pamela J.** "Spectrophotometric Comparison of Storage and Preservation Methods on Trace Soil." AAFS Conference, 2012
- Quirindongo, Dana; Rushton, Catherine; Rankin, J. Graham; **Staton, Pamela J.** "The effect that storage condition, drying method, and length of time soil sample is stored on FTIR results." Marshall University Forensic Science Research Day, 2012.
- Fete, Emily; **Staton, Pamela J**. "Internal Validation of GeneMapper® *ID-X* for use in Forensic Casework." AAFS Conference, 2012
- Bard, Tiffany; Lupino, Cara; Bostwick, Valerie; Godby, Justin; **Staton, Pamela J**. "Internal Validation of AmpFLSTR® Plus on Applied Biosystems PRISM® 310 Genetic Analyzer." AAFS Conference, 2012

- Kramer, Kevin; Myers, Brent; Harrah-Lea, Heather; and **Staton, Pamela J.** "Comparison of Room Temperature Forensic DNA Extract Sample Preservation Methods". AAFS Annual Meeting, 2011.
- Sawin, Andrew; Chute, Jason; Harrah-Lea, Heather; and **Staton, Pamela.** "Comparative Analysis of Quantifiler® Duo, Plexor® HY, and MavenQST™ DNA Quantification Systems". AAFS Annual Meeting, 2011.
- Rommel, Megan; Bas, Jennifer; Murga, Kimberly; and **Staton, Pamela.** "Comparative Evaluation of Manual Extraction Methods of the Biology/DNA Unit of the Las Vegas Metropolitan Police Department Forensic Laboratory." AAFS Annual Meeting, 2011.
- Runyan, Melissa N.; Myers, Brent; and **Staton, Pamela J.,** "Validation of Applied Biosystem's Quantifiler ® Duo DNA Quantification Kit". Marshall University Forensic Science Research Day, 2010.
- Mest, Mallory; McGuckian, Amy; Crouse, Crouse; Cecelia A.; and **Staton; Pamela J.** "The Evaluation of Multiple Commercially-Available Extraction Chemistries for Forensic Laboratory". Marshall University Forensic Science Research Day, 2010.
- Keaton, Rachel; Pranger, Natasha; Staton, Pamela J. "Internal Validation of GeneMapper®ID-X v.1.0.1 as an Expert System for use in a Databasing Laboratory". Marshall University Forensic Science Research Day, 2010.
- Hoffman, Amanda J.; McWilliams, Scott; Gartside, Bill; **Staton, Pamela J.** "Internal Validation of the AmpFℓSTR® Identifiler® Kit on the Applied Biosystems 3130 Instrument". Marshall University Forensic Science Research Day, 2010.
- Hayden, Jennifer; Carradine, Cassie; **Staton, Pamela J.,** "Internal Validation of a Florescent Labeling System: A New Spermatozoa Identification Method". Marshall University Forensic Science Research Day, 2010.
- Hayden, Jennifer; Carradine, Cassie; **Staton, Pamela J.** "Internal Validation of a Robotic Liquid Handler for Real-time PCR Set Up". Marshall University Forensic Science Research Day, 2010.
- Edwards, Sally; Sanger, Margaret; **Staton, Pamela J.** "Internal Validation of Y-STRs for Casework at the Kentucky State Police Central Laboratory ". Marshall University Forensic Science Research Day, 2010.
- Asfar, Mohammed; Ammann, Monica; **Staton, Pamela J.;** " Internal Validation of AmpFlSTR® MiniFiler™ PCR Amplification kit for Forensic Casework". Marshall University Forensic Science Research Day, 2010.
- Pilon, Dana M.; Fiorucci, Kimberly D.; and **Staton, Pamela J.** "Internal Validation of the AmpF/STR® MiniFiler™ Amplification Kit for Use in Forensic Casework". Marshall University Forensic Science Research Day, 2009.
- Lovelace, Rachel; Hahn, Jeff; Harmon, Rachel; Schueler, Sindey; and **Staton, Pamela J.** "Streamlining and Optimizing the Procedures of a State Databank Lab". Marshall University Forensic Science Research Day, 2009.
- Brown, Tarah R.; Brewer, Lisa M.; **Staton, Pamela J.** "Internal Validation of AmpF/STR® MiniFiler™ Amplification Kit for Metropolitan Police Department". Marshall University Forensic Science Research Day, 2009.

RECENT CONTINUING EDUCATION (Last 5 years)

- *Quality Matters for Higher Education. Quality Matters Program: A National Benchmark for Online Course Design,* Marshall University. February 2013
- *The Ethics of Stewardship and the Stewardship of Ethics (Ethics I); Answering the NAS: The Ethics of Leadership and the Leadership of Ethics (Ethics II);* RTI International; nij.org on-line training; February 2013
- *Policy Forum- Crime Laboratory Backlogs: The Impact on Justice,* RTI International Forum, www.nij.gov; May 2013
- *Interdisciplinary Symposium – A National Forensic Science Enterprise and Transparency in Forensic Science: Legal and Practitioner Views on our Path Forward,* AAFS, February 2013. Washington, DC
- *Grant Funding Opportunities in the Forensic Sciences for Academic Programs,* AAFS, February 2013. Washington, DC
- *Multidisciplinary Approaches to Effective Communication and Report Writing,* AAFS, February 2013. Washington, DC
- American Academy of Forensic Science (AAFS), Annual Meeting attendance, Washington, DC, February 2013
- *Working in Forensics: From the Streets, to the Battlefield, to the Boardroom,* AIDE, May 2012, Huntington, WV.
- *Anti-Forensics: Occult Computing,* AIDE, May 2012, Huntington, WV.
- *ImageScan,* AIDE, May 2012, Huntington, WV.
- *Mobile Device Security and the Impact on Digital Investigations,* AIDE, May 2012, Huntington, WV.
- *Putting Forensics Back into Digital Forensics,* AIDE, May 2012, Huntington, WV.
- *A Forensic Analysis of Social Media Artifacts in Windows 7 and Windows 8,* AIDE, May 2012, Huntington, WV.
- *Future Sources of Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Applied Behavior Analysis: Its Role in the Digital Investigation,* AIDE, May 2012, Huntington, WV.
- *The Evolving Role of Cyber,* AIDE, May 2012, Huntington, WV.
- *Windows 8 Forensic Analysis- A Forensic First Look,* AIDE, May 2012, Huntington, WV.
- *Surviving the Witness Stand: A Basic Guide to Preparation for the Courthouse and Testifying,* AIDE, May 2012, Huntington, WV.
- *Search and Seizure of Digital Evidence- Legal Considerations II,* AIDE, May 2012, Huntington, WV.
- *Field Analysis & Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Proper Collection, Handling and Documentation of Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Types of Digital Evidence and Digital Crimes,* AIDE, May 2012. Huntington, WV.
- *Introduction/Foundations of Digital Forensics,* AIDE, May 2012, Huntington, WV.
- *Appalachian Institute of Digital Evidence (AIDE)* attendance. May 21, 2012. Marshall University. Huntington, WV
- *What Did You Just Step In? Use Forensic Soil Examinations to Find Out,* American Academy of Forensic Science, February 2012. Atlanta, GA

- *Introduction to Expert Witness Testimony*, American Academy of Forensic Science (AAFS), February 2011. Chicago, IL
- *FEPAC On-Site Evaluator Training Session*, AAFS, February 2011. Chicago, IL
- *Introduction to Expert Witness Testimony*, AAFS, February 2011. Chicago, IL
- *Internationalization of Forensic Sciences*, AAFS, February 2011. Chicago, IL
- MFRC Forensic Science Education Forum, invited participant, Indianapolis, IN, June 2010
- *American Academy of Forensic Science, Annual Meeting attendance,* Seattle, WA, February 2010
- *Seven Deadly Sins of Forensic Science.* American Academy of Forensic Science Conference. Denver, CO. February 2009. Session.
- *Ethics in Forensic Practice.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Integrated Microfluidics.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Ethics and Forensic Science.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Body Fluid Identification from Sexual Assault Evidence.* Mid-Atlantic Association of Forensic Science (MAAFS) Annual Meeting. Huntington, WV. April 30, 2008. Workshop.
- *Expert Witness Testimony.* MAAFS Annual Meeting. Huntington, WV. April 30, 2008. Workshop.
- *Daubert Admissibility Issues and Preparation Elements for the Forensic Scientist.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Automating Your Lab: Run Biomek Run!.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Managing in the Forensic Sciences.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Human DNA Quantification.* AAFS Conference. Washington, DC. February 2008. Workshop.

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: MUSOM | Dept/Division: Forensic Science | Alpha Designator/Number: FSC | (•) Graded ( ) CR/NC

Contact Person: Dr. Pamela Staton | Phone: 304-691-8962

NEW COURSE DATA:

New Course Title: DNA Technical Assistance Program (TAP)

Alpha Designator/Number: F S C 6 4 3

Title Abbreviation: D N A T e c h A s s i s t a n c e I I

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)

The goal of the DNA Technical Assistance Program (DNA TAP) is to prepare select students for placement in host forensic laboratories for validation and evaluation research studies. The student undergoes accelerated lectures and intense hands-on laboratory exercises including analytical procedures, instrument training, and data analysis.

Co-requisite(s):

First Term to be Offered: Spring 2016

Prerequisite(s): FSC 642

Credit Hours: 2

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head Pamela J Staton	Date 4-13-2015
Registrar Roberta Ferguson 269999	Date 4/27/15
College Curriculum Chair Pamela Staton	Date 4-23-2015
Graduate Council Chair TChristofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: MUSOM | Department/Division: Forensic Science | Alpha Designator/Number: FSC

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Laura Kuyper
Pamela Staton

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not Applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not Applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not Applicable
Although the TAP placement of all students enrolled in this course cannot be guaranteed, the course administrators will work diligently with each student to ensure that they are placed as DNA Technical Assistants or in another DNA Internship.

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not Applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

To accelerate the understanding and familiarity of forensic DNA technologies through intensive lectures and demonstrations that may include: DNA extraction methods, quantification methods, PCR-based amplification methods, Capillary Electrophoresis, and Data analysis methods.

To gain practical skills through demonstrations of the above technologies. Because the laboratory activities will most likely be required to perform necessary validation studies in host laboratories, students will be prepared to train in the spring semester for various validation projects.

7. COURSE OUTLINE (May be submitted as a separate document)

Spring Semester:
To accelerate the understanding and familiarity of forensic DNA technologies through intensive demonstrations and hands-on experience, specific to the student's TAP internship placement.

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

An Introduction to Forensic Genetics, William Goodwin, Adrian Linacre, Sibte Hadi, John Wiley & Sons, Limited, First Edition, 978-0-470-01025-9

Fundamentals of Forensic DNA Typing, John M. Butler, Elsevier, Second Edition, 978-0-12-374999-4

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Fall Semester:
Lecture

Spring Semester:
Demonstration and hands-on lab work

Summer:
Internship

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Spring Semester:
hands-on lab work with documentation of procedures used

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

Complete fall semester (FSC 642 DNA Technical Assistance I) before spring semester

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Forensic Science
Course Number and Title: FSC 643 DNA Technical Assistance Program II (TAP)
Catalog Description: The goal of the DNA Technical Assistance Program (DNA TAP) is to prepare select students for placement in host forensic laboratories for validation and evaluation research studies. The student undergoes accelerated lectures and intense hands-on laboratory exercises including analytical procedures, instrument training, and data analysis.
Prerequisites: FSC 642
First Term Offered: Spring 2016
Credit Hours: 2

Marshall University Course Syllabus

Course Name	Technical Assistance Program
College/Department	Graduate/Forensic Science
Semester	Spring 2015
Instructor name and title	Laura Kuyper, MSFS, Forensic DNA Analyst / Quality Assurance Manager
Instructor Email	Kuyper1@marshall.edu
Instructor Telephone	(304) 691-8948; cell (606) 831-8217
Instructor Office Location	Marshall University Forensic Science Center DNA Laboratory, 123
Course Start Date	January 12, 2014
Course End Date	May 8, 2014

COURSE MEETING TIME

Dates/Times	Thursday, 12-3PM and Friday 2-5PM
Location	Annex Lab / Annex Class Room

Information for drop or withdraw available on the Academic Calendar at: http://www.marshall.edu/calendar/academic/.
If you should withdraw from this course, please inform the instructor at your earliest convenience.

COURSE MATERIALS AND COST

The following titles are not required texts for this course but rather recommended for additional information pertaining to the covered material. Lectures and laboratory demonstrations will be accompanied by provided handouts.

Title	An Introduction to Forensic Genetics
Author(s)	William Goodwin, Adrian Linacre, Sibte Hadi
Publisher	John Wiley & Sons, Limited
Edition	First Edition
ISBN	978-0-470-01025-9

Title	Fundamentals of Forensic DNA Typing
Author(s)	John M. Butler
Publisher	Elsevier
Edition	Second Edition
ISBN	978-0-12-374999-4

Estimated cost for all books and materials for this course will be the cost of ink for personal printing.

COURSE DETAILS

Description:
The goal of the DNA Technical Assistance Program (DNA TAP) is to prepare select students for placement in host forensic laboratories for validation studies. Although the TAP placement of all students enrolled in this course cannot be guaranteed, the course administrators will work diligently with each student to ensure that they are placed as DNA Technical Assistants or in another DNA Internship. During this course, the student will undergo intense hands-on laboratory exercises including analytical procedures, instrument training, and data analysis. In addition, participants will undergo troubleshooting activities throughout the analytical process as well as validation planning exercises. All activities will be in preparation for placement assignments. The general instruction scheme is to introduce all students to DNA extraction, quantitation, amplification and electrophoresis applications in a hands-on, realistic environment designed to mimic Forensic DNA experiments as accurately as possible. Additionally, students will participate in experimental design and preparation to introduce material requirement concerns and purchasing issues commonly seen in the laboratory

environment. This course is unlike any other course offered at the MUFSC and because of this, schedule adjustments could potentially occur regularly at short notice. Participating students are expected to anticipate the unexpected and work with instructors to achieve the goals of the course.

Credit Hours: 1
Prerequisites: None
Objectives:

1. To accelerate the understanding and familiarity of forensic DNA technologies through intensive lectures and demonstrations that may include:
   - DNA extraction methods *(Organic, DNA IQ, Qiagen and Robotic)*
   - DNA quantification methods *(AB7500 and Real-time PCR)*
   - DNA PCR-based amplification methods *(STR and YSTR)*
   - Capillary Electrophoresis Technologies *(AB 310, 3100, 3130xl, and 3500xl)*
   - Data analysis methods *(GeneMapper ID and GeneMapper ID-X)*
   - Validation procedures
   - Quality control and quality assurance

2. To gain practical skills through demonstrations of the above technologies. Because the laboratory activities will most likely be required to perform necessary validation studies in host laboratories, students will be prepared to train in the spring semester for various validation projects.

COURSE SCHEDULE, ACTIVITIES AND POLICIES

Date	Topics and Activities
January 15-16	Validation overview; Pipetting
January 22-23	Quiz #1; Outline of projects (timeline, supplies inventory, reagent preparation, sample preparation, etc.)
January 29-30	Laboratory work
February 5-6	Laboratory work
February 12-13	Laboratory work
February 19-20	No class; AAFS 67th Annual Scientific Meeting
February 26-27	Laboratory work
March 5-6	Laboratory work
March 12-13	Laboratory work
March 19-20	No class; Spring Break
March 26-27	Laboratory work
April 2-3	Laboratory work
April 9-10	Laboratory work
April 16-17	Laboratory work
April 24-25	Laboratory work
April 30	Laboratory work
May 1	Evaluation of laboratory work
May 7-8	Evaluation of laboratory work

Examinations

Number of Exams	None
Types of Questions	N/A
Points per Exam	N/A
Total Points	N/A

Quizzes

Number of Quizzes	Up to 5
Types of Questions	Quizzes may include multiple choice, statement completion, and short answer essay questions and will cover work in the laboratory
Points per Quiz	5*
Total Points	Up to 25

**Each quiz will include a single bonus question worth 0.5 points (10% of the total score). Bonus question points do not count against the student score.*

Assignments

Written and laboratory assignments will be based on the DNA TAP assignment of the individual participant and given at the instructor's discretion.

Grading Breakdown

Item	Percent of Final Grade
Examinations	N/A
Quizzes	15
Assignments – Laboratory Project	85
Total	100

Policies

No make-up lecture presentation, laboratory instruction, quizzes or exams will be available. Any information presented could be included on any quizzes or assignments.

GRADING

The traditional 10 point grading scheme will be used for this course.

COMMUNICATION

Students may contact the instructor at any time for clarification on presented material or additional information. Email is preferred and will yield a quicker response time in most cases, however, you may stop by my office or call if you prefer.

UNIVERSITY POLICIES

Academic Dishonesty
All students should be familiar with the university's policy concerning academic dishonesty. This policy can be found on pp. 66 - 68 of the undergraduate catalog http://www.marshall.edu/catalog/undergraduate/ug_10-11_published.pdf, or on pp. 61 – 63 in the 2009 online graduate catalog http://www.marshall.edu/catalog/graduate/S2009/gr_sp09_published.pdf. (Faculty are encouraged to add any additional information specific to their expectations and/or rules regarding academic dishonesty in their class).

Policy for Students with Disabilities
Marshall University is committed to equal opportunity in education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone 304 696-2271 to provide documentation of their disability. Following this, the DSS Coordinator will send a letter to each of the student's instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, please visit http://www.marshall.edu/disabled or contact Disabled Student Services Office at Prichard Hall 11, phone 304-696-2271.

University Computing Services' Acceptable Use Policy:
All students are responsible for knowing this policy, which can be found on the web at http://www.marshall.edu/ucs/CS/accptuse.asp.

Affirmative Action Policy:

This course will follow Marshall University's policy on Affirmative Action, which can be found on p. 63 of the undergraduate catalog http://www.marshall.edu/catalog/undergraduate/ug_10-11_published.pdf, or on pp. 16-17 of the 2008 graduate catalog http://www.marshall.edu/catalog/graduate/S2009/gr_sp09_published.pdf. Specifically, all students will be afforded equal opportunity without regard to race, color, sex, religion, age, disability, national origin, or sexual orientation.

Fair Use of Copyrighted Works:
Please note that the instructor may use some works that are copyrighted by the publisher or original author. These works are provided to students under the Educational Fair Use provision of Title 17 of the US Code and are not to be shared with individuals who are not enrolled in this course.

LAURA JO KUYPER
Marshall University Forensic Science Center
1401 Forensic Science Drive, Huntington, WV 25701
Phone: (304) 691-8948
Fax: (304) 691-8928
kuyper1@marshall.edu

POSITION TITLE & DESCRIPTION

The Marshall University Forensic Science Center employs me as a ***Forensic DNA Analyst Level III***, ***Parentage DNA Analyst II***, and ***Quality Assurance Manager*** in the DNA Laboratory.

All DNA Analysts report to and receive administrative direction from the Technical Leader of the DNA Laboratory. As a Forensic DNA Analyst I conduct analysis on forensic samples submitted for DNA identification as well as technical and administrative reviews of forensic cases. As a Parentage DNA Analyst I conduct analysis on relationship samples submitted for DNA identification as well as technical and administrative reviews of relationship cases. I am also qualified to conduct analysis on database/reference samples submitted for DNA identification as well as technical and administrative reviews of database samples.

As the Quality Assurance Manager I report to and receive administrative direction from the Director of the DNA Laboratory and work closely with the Technical Leader. I have the responsibility to provide leadership, guidance and support in the administration of all quality assurance and quality control programs as well as the authority to ensure that the quality system is implemented and followed as mandated by the FBI Quality Assurance Standards for Forensic DNA Testing and DNA Databasing Laboratories and the International Standards Organization (ISO 17025).

OTHER EMPLOYMENT

Marshall University employs me as a part-time ***Associate Graduate Faculty Member*** since August 2013. Courses taught include:
FSC 650: DNA Technical Assistance Program

I am a contract employee for ANSI-ASQ National Accreditation Board/FQS. I am a technical assessor for audits to the FBI Quality Assurance Standards (forensic DNA testing and DNA databasing) as well as the ISO 17025 assessment criteria.

I am a contract employee for the National Forensic Science Technology Center, Inc. (NFSTC). I am a technical assessor for audits to the FBI Quality Assurance Standards (forensic DNA testing and DNA databasing).

COURTROOM EXPERIENCE

I have experience testifying to results in the Forensic DNA discipline since 2011. I currently have testified two times at the state level.

QUALIFICATIONS, TRAINING & PROFESSIONAL MEMBERSHIPS

- Bachelor of Science in Chemistry, Kentucky Wesleyan College, Owensboro, KY, 1995.
- Associate of Applied Science in Business Technology/Management, Ashland Community College, Ashland, KY, 1997.
- Master of Science in Forensic Science/DNA Analysis, Marshall University, Huntington, WV, 1999.
- West Virginia State Police Laboratory Intern, Biochemistry Section, 1998.
- Marshall University CODIS Laboratory Intern, 1998.
- Attended various workshops and professional meetings to continue my education in the field of Biology.
- Member of the Mid-Atlantic Association of Forensic Scientists since 2003.
- Member of the Association of Forensic Quality Assurance Managers since 2005.
- Analyzed approximately 400 DNA cases using ABI 3103xl with AmpF/STR® Profiler Plus®, AmpF/STR® Cofiler®, AmpF/STR® Identifiler® and AmpF/STR® Identifiler® Plus kits as well as the PowerPlex® 16 and PowerPlex® 16 HS systems from Promega.

- Tested over 10,000 samples using AmpF/STR® Profiler Plus®, AmpF/STR® Cofiler®, AmpF/STR® Identifiler® and AmpF/STR® Identifiler® Plus kits as well as the PowerPlex® 16 and PowerPlex® 16 HS systems from Promega.
- Completed DNA analysis of approximately 2000 samples using AmpF/STR® Profiler Plus®, AmpF/STR® Cofiler®, AmpF/STR® Identifiler® and AmpF/STR® Identifiler® Plus kits as well as the PowerPlex® 16 and PowerPlex® 16 HS systems from Promega.
- Administrative and Technical review of approximately 300 forensic DNA cases.
- Administrative and Technical review of approximately 100 relationship cases.
- Administrative and Technical review of approximately 5000 database samples.
- Since 2008 I have been a part of 20 assessments in 15 different laboratory systems.

PROFICIENCY TEST RECORDS

I have successfully completed proficiency testing since 2001. The following are proficiency tests I have completed in the past three years.

- CTS 10-572 and CTS 10-575
- CTS 11-572 and CTS 11-575
- CTS 12-572 and CTS 12-575
- CTS 13-572 and CTS 13-575

CONTINUED EDUCATION

1992

- "Genetics", Kentucky Wesleyan College, 1992

1996

- "Statistical Methods", Ashland Community College, 1996

1997

- "Human Biochemistry", Marshall University, 1997

1998

- "Cell and Molecular Biology", Marshall University, 1998
- "Introduction to Microscopy/Photography", Marshall University, 1998
- "Forensic Science I, A Course in DNA", Marshall University, 1998
- "Biostatistics", Marshall University, 1998
- "Law of Evidence", Marshall University, 1998

1999

- "Legal Court in Forensic Science", Marshall University, 1999

2001

- "Ethical Problems Facing the Expert Witness", (Andre Moenssens), American Academy of Forensic Science's 53rd Annual Meeting, Seattle, WA, February 2001.
- "Short Tandem Repeat Analysis Data: Processing, Interpretation, and Storage", (Deborah Hobson – FBI), American Academy of Forensic Science's 53rd Annual Meeting, Seattle, WA, February 2001.
- American Academy of Forensic Science's 53rd Annual Meeting, Seattle, WA, February 2001.
- Florida DNA Training Workshop, Clearwater, FL, May-June 2001.
- "FBI Casework Workshop", (Mike Garvey, Deborah Hobson, Julie Kidd, Jill Smerick – FBI), Marshall University, June 2001.
- "Parentage Testing Seminar", (Mike Baird – LifeCodes Corp.), Marshall University, July 2001.
- Promega's 12th International Symposium on Human Identification, Biloxi, MS, October 2001.
- "Performance Level Auditing Workshop", (Kevin Lothridge, David Epstein – NFSTC), Marshall University, November 2001.

2002

- "ABI Prism 3100 Genetic Analyzer Training", (Carol Scherczinger – ABI), Marshall University, March 2002.
- Promega's 1st Advanced CE STR Working Group Meeting, Memphis, TN, April 2001.
- "STR Workshop Beyond the Core 13", 2002 Mid-Atlantic Association of Forensic Scientists Annual Meeting, Frederick, MD, April 2002.
- 2002 Mid-Atlantic Association of Forensic Scientists Annual Meeting, Frederick, MD, April 2002.

- "DNA Auditor Training", (Richard Guerrieri – FBI), Marshall University, May 2002.
- 8th Annual CODIS User's Conference, Washington, DC, November 2002.

2003

- Evidence Processing Training, (Sherri Lemons – West Virginia State Police), West Virginia State Police Crime Laboratory Central Processing Unit, Charleston, WV, July - September 2004.
- "ABI Prism 3100 Series Genetic Analyzers and AmpF/STR Training", (Michelle Shepherd – ABI), Marshall University, September 2003.

2004

- "Quantifiler and GeneMapper ID Training", (Michelle Shepherd – ABI), Marshall University, April 2004.
- GeneMapper ID WebEx Training, (Michelle Shepherd – ABI), Marshall University, May 2004.
- Mid-Atlantic Association of Forensic Scientists Annual Meeting, Wilmington, DE, April 2004.
- Laboratory Health and Safety, (James Kaufman – Laboratory Safety Institute), Las Vegas, NV, August 2004.
- 3rd Annual Association of Forensic Quality Assurance Managers Meeting, Las Vegas, NV, August 2004.
- "Expert Testimony", (Karen Vilanueva Matkovich, Joseph Noggy), Marshall University, November 2004

2005

- "ABI 3130 Genetic Analyzer Training", (Michelle Shepherd – ABI), Marshall University, February 2005.
- American Academy of Forensic Science's 57th Annual Meeting, New Orleans, LA, February 2005.
- "GeneMapper ID Data Analysis", (Karen Howard – MU Consultant), Marshall University, April 2005.
- 4th Annual Association of Forensic Quality Assurance Managers Seminar, Indian Rocks Beach, FL, October 2005.
- ISO/IEC 17025:2005 and Laboratory Accreditation Training Course, (Kenneth Staub – A2LA), Orlando, FL, November 2005.

2006

- Y Chromosome, (Terry Fenger – MUFSC), Marshall University, April 2006.
- 5th Annual Association of Forensic Quality Assurance Managers Seminar, Missoula, MT, October 2006.
- GeneMapper ID Training, (Jaime Handelsman – ABI), Marshall University, December 2006.

2007

- Mid-Atlantic Association of Forensic Scientists Annual Meeting, Washington D.C., May 2007.
- 6th Annual Association of Forensic Quality Assurance Managers Seminar, Milwaukee, WI, September 2007.

2008

- ISO Without Tears, (Pat Wojtowicz – FQS-I), Clearwater, FL, February 2008.
- Mid-Atlantic Association of Forensic Scientists Annual Meeting, Huntington, WV, April - May 2007.
- Expert Witness Workshop, (Chris Chiles and David Castle), Huntington, WV, April 2008.
- Body Fluid Identification from Sexual Assault Evidence, Huntington, WV, April 2008.
- HITA/AABB Workshop (Promega Workshop), Hollywood, CA, October 2008.
- Forensic Population Genetics Workshop (Martin Tracey, Promega Workshop), Hollywood, CA, October 2008.
- Promega's 19th International Symposium on Human Identification, Hollywood, CA, October 2008.

2009

- Y-STR Training, (Sarah Bowen and Karen Howard – MUFSC), Marshall University, May 2009.
- FQS-I ISO 17025 Assessor and Internal Auditor Workshop (William Tillstone – FQS-I), Clearwater, FL, June 2009.
- FBI DNA Auditor Training – Revised QAS (Heather Seubert – FBI), Clearwater, FL, June 2009.
- 8th Annual Association of Forensic Quality Assurance Managers Seminar, Anaheim, CA, October 2009.
- Understanding the Basics of Root Cause Analysis (Denise Robitaille – Paton Professional), Anaheim, CA, October 2009.

2010

- Relationship Training (Kelly Beatty – MUFSC), Marshall University, February 2010.

2011

- Emerging DNA Technologies (Karen Howard, Justin Godby and Jennifer Hayden – MUFSC), Marshall University, November 2011.

2012

- Promega's 23rd International Symposium on Human Identification (ISHI), Nashville, TN, October 2012.

2013

- NIST DNA Mixture Interpretation Workshop and Webcast, 2013

PAMELA J. STATON, Ph.D.

Marshall University Forensic Science Center: 1401 Forensic Science Drive, Huntington, WV 25701
staton1@marshall.edu |304-691-8962 (Office) 304-691-8929 (Fax) 304-634-5263 (Mobile) |
www.marshall.edu/forensics

EDUCATION

Ph.D. **Biomedical Sciences**, 2001. Marshall University School of Medicine, Huntington, WV
M.S. **Medical Technology**, 1978. West Virginia University, Morgantown, WV
B.S. **Medical Technology**, 1975. Morehead State University, Morehead, KY

NATIONAL CERTIFICATION

- **Medical Technologist, MT(ASCP) #104280**, American Society of Clinical Pathologists
- **Specialist in Microbiology, SM(ASCP) # 1920**, American Society of Clinical Pathologists

PROFESSIONAL MEMBERSHIPS

- American Academy of Forensic Sciences (AAFS)
- American Society of Crime Laboratory Directors (ASCLD)
- American Society of Clinical Pathologists (ASCP)
- Delta Delta Epsilon Forensic Science Honorary Society
- Council of Forensic Science Educators (COFSE)

EMPLOYMENT HISTORY

- **Graduate Program Coordinator, Researcher & Associate Professor**, *January 2003 to present.* Tenured 2007. Day-to-day administrator; research & teaching. Marshall University Forensic Science, Graduate College, Joan C. Edwards School of Medicine, Huntington, WV.
- **Faculty**, *July 1998 to December 2002.* Tenured 2001. Shawnee State University, Department of Medical Laboratory Science, Portsmouth, OH. Teaching: Microbiology, Blood Banking/Transfusion Medicine, Hemostasis, Clinical Correlation
- **Department Chair & Faculty** *October 1988 to July 1998.* Shawnee State University, Department of Medical Laboratory Science, Portsmouth, OH. Microbiology, Orientation to Clinical Laboratory Sciences, Clinical Correlation
- **Graduate Assistant & Ph.D. Candidate**, *January 1998 to August 2001.* Marshall University School of Medicine Department of Microbiology, Immunology, Molecular Genetics, Huntington, WV.
- **Microbiology Departmental Supervisor**, *September 1984 to October 1988.* King's Daughters' Medical Center, Ashland, KY; Pharmacy & Therapeutics Committee Member; College of American Pathologist Auditor; Infection Control Committee Member
- **Clinical Education Coordinator & Assistant Professor**, *June 1981 to August 1983.* Florida International University, Department of Medical Laboratory Sciences, Miami, FL. Teaching: Hematology, Microbiology, Laboratory Management

- **Laboratory Manager & Adjunct Professor**, *September 1979 to June 1981.* Florida International University, Department of Medical Laboratory Sciences, Miami, FL. Teaching: Hematology, Clinical Chemistry, Blood Banking/Transfusion Medicine, Microbiology
- **Chemist, Division of Toxicology**, *January 1979 to September 1979.* Smith Kline & French Laboratories, Toxicology Division, Miami, FL; Drug, toxicology, and therapeutic drug monitoring
- **Graduate Teaching Assistant**, *August 1976 to December 1978.* West Virginia University, Department of Medical Technology. Morgantown, WV.
- **Medical Technologist**, *July 1975 to July 1976.* Beckley Appalachian Regional Hospital & School of Medical Technology. Beckley, WV. Clinical microbiology, hematology, chemistry, blood banking technologist.

TEACHING & COURSE DEVELOPMENT

- **Seminar** – FSC 680 Fall: Course Director; student research presentations; resume, CV, and cover letter development; PowerPoint tools; research design; career development of internship and job seekers; portfolio development and use; interview preparation and tools; evaluation and self-evaluation; research paper rubric; research poster rubric; accrediting agency [FEPAC] seminar requirement. 1 credit hr
- **Seminar** – FSC 680 Spring: Course Director; student lay audience presentations; student poster presentations; MUFS Research Day organization; student HR interviews; student technical specialty interviews; creating interview panels of working professional; national testing and certification; preparation for AAFS presentations and national meeting participation; accrediting agency [FEPAC] seminar requirements. 1 credit hr
- **Internship** – FSC 630 Summer: Course Administrator; Internship identification, conference calls, and placements; internship agreement approvals; internship oversight; internship requirements such as research paper, research paper rubric, intern evaluation of internship experience, host laboratory evaluation of intern, attendance and punctuality, research slide presentation development, research poster development; accrediting agency [FEPAC] research requirements. 5 credit hrs
- **Biochemistry** – FSC 624 Fall: Course Director; teaching: nucleic acid section; key developer of forensic biochemistry section; recruitment, assignment and coordination of faculty; compiling and administering testing; grading; syllabus design and schedule. 4 credit hrs
- **Bioterrorism** – FSC 610 Spring: Course Coordinator: syllabus & schedule; teaching: laboratory techniques section. 3 credit hrs
- **Laboratory Management** – FSC 650 Spring: Course Instructor; essentials of laboratory management for students aspiring to attain positions as laboratory directors, managers, technical leaders, supervisors or other leadership roles. 2 credit hrs
- **DNA Technical Assistance** – FSC 650 Fall & Spring: Program developer and administrator. Fall 2 credits; Spring 2 credits
- **Firearms Technical Assistance** – FSC 650 Fall & Spring: Program developer and administrator. Fall 1 credit; Spring 1 credit
- **Other Course Oversight for FEPAC Purposes**: FSC 604, FSC 619, FSC 665, FSC 603, FSC 627, FSC 629

GRANTS- FUNDED

- **Staton, Pamela, PI**: 2010 to 2011 **Funded $468,000;** WV Water Quality: Bacterial Source Tracking, Pathogen Profiling and Assay Development; USDA-NIFA-FADM
- **Staton, Pamela, PI:** 2009 to 2010 **Funded $360,360**; West Virginia Water Quality: Bacterial Source Tracking and Pathogen Profiling; USDA-CSREES_FADM
- **Staton, Pamela, PI**: 2008 **Funded $875,000** Y-STR Analysis Training in Support of State and Local Law Enforcement; National Institute of Justice
- **Staton, Pamela, PI:** 2008 to 2009 **Funded 383,862;** West Virginia Water Quality: Bacterial Source Tracking & Pathogen Profiling; USDA-CSREES-FADM
- **Staton, Pamela, PI:** 2006 to 2008 **Funded $555,985** West Virginia Water Quality: Fecal Source Tracking and Pathogen Profiling; USDA_CSREES_FADM
- **Staton, Pamela, PI**: 2005 to 2006 **Funded $528,323;** Assessment of West Virginia Water Quality: Bacterial Source Tracking Database Development and Method Validation; USDA_CSREES_FADM
- **Staton, Pamela, PI**: 2004 to 2005 **Funded $502,457.** West Virginia Water Quality: Bacterial Source Tracking USDA_CSREES_FADM
- **Staton, Pamela, PI:** 2003 to 2004 **Funded $577,590.** West Virginia Water Quality: Bacterial Source Tracking; USDA_CSREES_FADM
- **Staton, Pamela, PI:** 2003 to 2004 **Funded $152,000.** Bacterial Source Tracking: WV Department of Agriculture

---

PROPOSALS – PENDING

2013 - Crime Scene Investigation Continuing Education Program submitted to the Battlefield Vehicle Forensics Training Manager Combat Incident Analysis Division (CIAD) National Ground Intelligence Center (NGIC)

GRANTS - UNFUNDED

- **Staton, Pamela.** 2012 Forensic Soil Analysis: Evaluation and Standardization of Soil Sample Storage, DNA Extraction Methods & Validation of Automated Ribosomal Intergenic Spacer Analysis Microbial Community Profiling; National Institute of Justice
- **Staton, Pamela.** 2011 Multidisciplinary Approach to Forensic Soil Analysis: A same source comparison of DNA-based microbial community profiling (MCP), scanning electron microscopy, and inductively coupled plasma atomic emission spectroscopy (IPC-AES); National Institute of Justice.

DIRECT SUPERVISION

- **Academic Program Administrative Assistant** – 2012 to present. Primary supervisor of a full-time Administrative Assistant whose role includes website and publication design and maintenance, accreditation materials management and follow-up, scheduling and organizing.

- **Academic Program Manager** – 2006 to present. Primary supervisor of a full-time Program Manager whose primary role includes academic program accounting and financial recordkeeping; assists me in areas related to Academic Affairs, Student Affairs including Admissions.
- **Research Technicians (1 to 4/year)** – 2003 to 2012. Primary PI and daily supervisor of anywhere from one to four full-time research technicians in any given year.
- **Students (~36/semester)** - Primary supervisor regarding program-wide, required activities including academic advising, Plan of Study, registration, selection of area of emphasis, adding and dropping courses, satisfactory academic progress reports, letters of recommendation for internships and employment purposes, intern and employee reference for background checks, resume/cover/CV assistance, interview preparation, assistance in finding jobs and internships, recruiting supervisors for student GA assignments per semester, assessment of GA activities, academic probation, seminar presentation reviewer, research reviewer, research committee member; approve student absence and travel; approve student admissions, academic common market, expenditures such as student/class supplies, class-related lab supplies, instructors, utilities, maintenance, computer access; student organization advisor; honorary society advisor, and other items academic program-related.

PROFESSIONAL SERVICE OUTSIDE MARSHALL UNIVERSITY

- 2014 Workshop Presenter, American Academy of Forensic Sciences, Annual Meeting, Seattle, WA, February 2014 Topic: Effective Curricular Design and Improvement for Forensic Science Educational Programs
- 2013- Secretary, Council on Forensic Science Education (COFSE)
- 2010 – to present: Graduate Program Representative, American Academy of Forensic Sciences (AAFS) College & University Fair Washington, DC
- 2012- Graduate Program Representative, Council of Forensic Science Educators (COFSE).
- 2008 and 2009- Grant Reviewer, Great Lakes WATER Institute. University of Wisconsin, Milwaukee, WI.
- 2007- Coordinated Management of Water Quality Protection and Food and Safety. California Vegetable Production Conference, San Luis Obispo, CA
- 2005- Science Advisory Board, Environmental Pathogens Information Network (EPI-Net).
- 2005- Grant Reviewer, National Oceanic and Atmospheric Administration (NOAA) Oceans and Human Health Initiative (OHHI). Silver Spring, MD
- 2005- Exhibitor, BIO[tech] 2005, Philadelphia, PA
- 2004- Exhibitor, BIO[tech] 2004, San Francisco, CA

MARSHALL UNIVERSITY SERVICE

- 2003 to present – Program Coordinator, MU Forensic Science MS Program
- 2013 (new) – Advisory Committee, MU Integrated Science & Technology, Digital Forensics and Information Assurance Departments
- 2003 to present MU Annual Review Reporting, MU Office of Assessment
- 2003 to present MU Program Review and Resource Development Reporting, MU Office of Assessment
- 2003 to present- Chair, Forensic Science Faculty Committee

- 2003 to present- Chair, Forensic Science Admissions Subcommittee
- 2003 to present- Chair, Forensic Science Accreditation & Program Review
- 2003 to present- Chair, Forensic Science Graduate Studies Committee (Curriculum Committee)
- 2006 to present- Chair, Forensic Science Advisory Committee
- 2007 to present –DNA Technical Assistance Program (TAP) Director
- 2007 to present – Biological Safety Advisor to MUFSC Safety Committee;
- 2013 to present – Marshall Collateral Duty Officer for Forensic Science Center
- 2013 (new) – Firearms and Toolmarks Technical Assistance Program (TAP) Director
- 2007 to 2008- Marshall University Faculty Senate
- 2007 to 2008- Marshall University Budget and Academic Policy Committee

PUBLICATIONS AND POSTERS

- **Staton, Pamela;** Carpenter, A. Betts, Jackman, Susan H. IL-7 is a Critical Factor in Modulating Lesion Development in Skn-Directed Autoimmunity. J. Immunology, p3978-3986. 2006.
- Dembia, Emilie; Chenoweth, Sarah; Hayden, Jennifer; **Staton, Pamela**. "Validation of the Applied Biosystems 3500 Genetic Analyzer with a Comparison of the Identifiler Plus and PowerPlex 16 HS Amplification Kits", AAFS Conference, February 2013.
- Jacque, Kathleen; Redhead, Lynnet; Bowen, Sarah; **Staton, Pamela.** "Internal Validation of the AmpFlSTR Yfiler Amplification Kit on a Life Technologies 3130 Genetic Analyzer," AAFS Conference, February 2013
- Thatch, Christopher; Imes, Danielle; Bostwick, Valerie; **Staton, Pamela**. "Validation of the Applied Biosystems 3500XL with PowerPlex 16 HS," AAFS Conference, February 2013
- Barr, Sarah; Summerfield, Chad; Seferyn, Season; **Staton, Pamela.** "Validation and Comparison of the AmpFlSTR Identifiler Plus PCR Amplification Kit to Identifiler, MiniFiler, and Yfiler for the Pinellas County, Florida Forensic Laboratory," AAFS Conference, February 2013
- Gapinski, Allison; James, Julie; Marra, Misty; **Staton, Pamela.** "Internal Validation of the AmpFlSTR Identifiler Plus PCR Amplification Kit and Comparison to Identifiler for the Boston Police Department Crime Laboratory," AAFS Conference, February 2013
- Tokarz, Jessica; Milne, Scott; Hardy, Sarah; **Staton, Pamela**; Mayntz-Press, Kathleen. "Internal Validation of the PowerPlex Y23 Amplification Kit for Use in Forensic Casework," AAFS Conference, February 2013.
- Vickman, Tiffany; **Staton, Pamela J.** "Spectrophotometric Comparison of Storage and Preservation Methods on Trace Soil." AAFS Conference, 2012
- Quirindongo, Dana; Rushton, Catherine; Rankin, J. Graham; **Staton, Pamela J.** "The effect that storage condition, drying method, and length of time soil sample is stored on FTIR results." Marshall University Forensic Science Research Day, 2012.
- Fete, Emily; **Staton, Pamela J.** "Internal Validation of GeneMapper® *ID-X* for use in Forensic Casework." AAFS Conference, 2012
- Bard, Tiffany; Lupino, Cara; Bostwick, Valerie; Godby, Justin; **Staton, Pamela J.** "Internal Validation of AmpFLSTR® Plus on Applied Biosystems PRISM® 310 Genetic Analyzer." AAFS Conference, 2012

- Kramer, Kevin; Myers, Brent; Harrah-Lea, Heather; and **Staton, Pamela J.** "Comparison of Room Temperature Forensic DNA Extract Sample Preservation Methods". AAFS Annual Meeting, 2011.
- Sawin, Andrew; Chute, Jason; Harrah-Lea, Heather; and **Staton, Pamela.** "Comparative Analysis of Quantifiler® Duo, Plexor® HY, and MavenQST™ DNA Quantification Systems". AAFS Annual Meeting, 2011.
- Rommel, Megan; Bas, Jennifer; Murga, Kimberly; and **Staton, Pamela.** "Comparative Evaluation of Manual Extraction Methods of the Biology/DNA Unit of the Las Vegas Metropolitan Police Department Forensic Laboratory." AAFS Annual Meeting, 2011.
- Runyan, Melissa N.; Myers, Brent; and **Staton, Pamela J.,** "Validation of Applied Biosystem's Quantifiler ® Duo DNA Quantification Kit". Marshall University Forensic Science Research Day, 2010.
- Mest, Mallory; McGuckian, Amy; Crouse, Crouse; Cecelia A.; and **Staton; Pamela J.** "The Evaluation of Multiple Commercially-Available Extraction Chemistries for Forensic Laboratory". Marshall University Forensic Science Research Day, 2010.
- Keaton, Rachel; Pranger, Natasha; Staton, Pamela J. "Internal Validation of GeneMapper®ID-X v.1.0.1 as an Expert System for use in a Databasing Laboratory". Marshall University Forensic Science Research Day, 2010.
- Hoffman, Amanda J.; McWilliams, Scott; Gartside, Bill; **Staton, Pamela J.** "Internal Validation of the AmpFℓSTR® Identifiler® Kit on the Applied Biosystems 3130 Instrument". Marshall University Forensic Science Research Day, 2010.
- Hayden, Jennifer; Carradine, Cassie; **Staton, Pamela J.,** "Internal Validation of a Florescent Labeling System: A New Spermatozoa Identification Method". Marshall University Forensic Science Research Day, 2010.
- Hayden, Jennifer; Carradine, Cassie; **Staton, Pamela J.** "Internal Validation of a Robotic Liquid Handler for Real-time PCR Set Up". Marshall University Forensic Science Research Day, 2010.
- Edwards, Sally; Sanger, Margaret; **Staton, Pamela J.** "Internal Validation of Y-STRs for Casework at the Kentucky State Police Central Laboratory ". Marshall University Forensic Science Research Day, 2010.
- Asfar, Mohammed; Ammann, Monica; **Staton, Pamela J.;** " Internal Validation of AmpFlSTR® MiniFiler™ PCR Amplification kit for Forensic Casework". Marshall University Forensic Science Research Day, 2010.
- Pilon, Dana M.; Fiorucci, Kimberly D.; and **Staton, Pamela J.** "Internal Validation of the AmpF/STR® MiniFiler™ Amplification Kit for Use in Forensic Casework". Marshall University Forensic Science Research Day, 2009.
- Lovelace, Rachel; Hahn, Jeff; Harmon, Rachel; Schueler, Sindey; and **Staton, Pamela J.** "Streamlining and Optimizing the Procedures of a State Databank Lab". Marshall University Forensic Science Research Day, 2009.
- Brown, Tarah R.; Brewer, Lisa M.; **Staton, Pamela J.** "Internal Validation of AmpF/STR® MiniFiler™ Amplification Kit for Metropolitan Police Department". Marshall University Forensic Science Research Day, 2009.

RECENT CONTINUING EDUCATION (Last 5 years)

- *Quality Matters for Higher Education. Quality Matters Program: A National Benchmark for Online Course Design,* Marshall University. February 2013
- *The Ethics of Stewardship and the Stewardship of Ethics (Ethics I); Answering the NAS: The Ethics of Leadership and the Leadership of Ethics (Ethics II);* RTI International; nij.org on-line training; February 2013
- *Policy Forum- Crime Laboratory Backlogs: The Impact on Justice,* RTI International Forum, www.nij.gov; May 2013
- *Interdisciplinary Symposium – A National Forensic Science Enterprise and Transparency in Forensic Science: Legal and Practitioner Views on our Path Forward,* AAFS, February 2013. Washington, DC
- *Grant Funding Opportunities in the Forensic Sciences for Academic Programs,* AAFS, February 2013. Washington, DC
- *Multidisciplinary Approaches to Effective Communication and Report Writing,* AAFS, February 2013. Washington, DC
- American Academy of Forensic Science (AAFS), Annual Meeting attendance, Washington, DC, February 2013
- *Working in Forensics: From the Streets, to the Battlefield, to the Boardroom,* AIDE, May 2012, Huntington, WV.
- *Anti-Forensics: Occult Computing,* AIDE, May 2012, Huntington, WV.
- *ImageScan,* AIDE, May 2012, Huntington, WV.
- *Mobile Device Security and the Impact on Digital Investigations,* AIDE, May 2012, Huntington, WV.
- *Putting Forensics Back into Digital Forensics,* AIDE, May 2012, Huntington, WV.
- *A Forensic Analysis of Social Media Artifacts in Windows 7 and Windows 8,* AIDE, May 2012, Huntington, WV.
- *Future Sources of Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Applied Behavior Analysis: Its Role in the Digital Investigation,* AIDE, May 2012, Huntington, WV.
- *The Evolving Role of Cyber,* AIDE, May 2012, Huntington, WV.
- *Windows 8 Forensic Analysis- A Forensic First Look,* AIDE, May 2012, Huntington, WV.
- *Surviving the Witness Stand: A Basic Guide to Preparation for the Courthouse and Testifying,* AIDE, May 2012, Huntington, WV.
- *Search and Seizure of Digital Evidence- Legal Considerations II,* AIDE, May 2012, Huntington, WV.
- *Field Analysis & Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Proper Collection, Handling and Documentation of Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Types of Digital Evidence and Digital Crimes,* AIDE, May 2012. Huntington, WV.
- *Introduction/Foundations of Digital Forensics,* AIDE, May 2012, Huntington, WV.
- *Appalachian Institute of Digital Evidence (AIDE)* attendance. May 21, 2012. Marshall University. Huntington, WV
- *What Did You Just Step In? Use Forensic Soil Examinations to Find Out,* American Academy of Forensic Science, February 2012. Atlanta, GA

- *Introduction to Expert Witness Testimony*, American Academy of Forensic Science (AAFS), February 2011. Chicago, IL
- *FEPAC On-Site Evaluator Training Session*, AAFS, February 2011. Chicago, IL
- *Introduction to Expert Witness Testimony*, AAFS, February 2011. Chicago, IL
- *Internationalization of Forensic Sciences*, AAFS, February 2011. Chicago, IL
- MFRC Forensic Science Education Forum, invited participant, Indianapolis, IN, June 2010
- *American Academy of Forensic Science, Annual Meeting attendance,* Seattle, WA, February 2010
- *Seven Deadly Sins of Forensic Science.* American Academy of Forensic Science Conference. Denver, CO. February 2009. Session.
- *Ethics in Forensic Practice.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Integrated Microfluidics*. AAFS Conference. Denver, CO. February 2009. Workshop.
- *Ethics and Forensic Science.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Body Fluid Identification from Sexual Assault Evidence.* Mid-Atlantic Association of Forensic Science (MAAFS) Annual Meeting. Huntington, WV. April 30, 2008. Workshop.
- *Expert Witness Testimony.* MAAFS Annual Meeting. Huntington, WV. April 30, 2008. Workshop.
- *Daubert Admissibility Issues and Preparation Elements for the Forensic Scientist.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Automating Your Lab: Run Biomek Run!.* MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Managing in the Forensic Sciences*. MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Human DNA Quantification.* AAFS Conference. Washington, DC. February 2008. Workshop.

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: MUSOM | Dept/Division: Forensic Science | Alpha Designator/Number: FSC | (•) Graded ( ) CR/NC

Contact Person: Dr. Pamela Staton | Phone: 304-691-8962

NEW COURSE DATA:

New Course Title: Forensic Laboratory Management

Alpha Designator/Number: F S C 6 4 6

Title Abbreviation: Lab Management

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)

This course provides a foundation in management theory, principles & application necessary for forensic scientists who aspire to assume future positions as crime lab supervisors, managers, technical leaders, quality managers, directors or other roles as leaders in their field. This course addresses management theory as well as its practical application to the crime laboratory setting from an ISO/IEC 17025 perspective.

Co-requisite(s): none | First Term to be Offered: Spring 2016

Prerequisite(s): none | Credit Hours: 2

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head Pamela J Staton	Date 4-7-2015
Registrar Roberta Ferguson 269999	Date 4/27/15
College Curriculum Chair Pamela Staton	Date 4-23-2015
Graduate Council Chair TChristofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: _____ Department/Division: _____ Alpha Designator/Number: _____

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Ted Smith
Laura Kuyper
Pamela Staton

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

not applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

not applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

not applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

not applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

see attached

7. COURSE OUTLINE (May be submitted as a separate document)

see attached

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

see attached

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

see attaced

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

not applicable

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

see attached

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Forensic Science
Course Number and Title: FSC 646 Forensic Laboratory Management
Catalog Description: This course provides a foundation in management theory, principles & application necessary for forensic scientists who aspire to assume future positions as crime lab supervisors, managers, technical leaders, quality managers, directors or other roles as leaders in their field. This course addresses management theory as well as its practical application to the crime laboratory setting from an ISO/IEC 17025 perspective.
Prerequisites: N/A
First Term Offered: Spring 2016
Credit Hours: 2

Marshall University
FSC 650- Lab Management

Course Title/Number	
Semester/Year	Spring 2014
Days/Time	M 1-3
Location	FSC West Wing 2
Instructor(s)	Ted Smith, Laura Kuyper
Office	Forensic Science Center
Phone	304-691-8931
E-Mail	smith251@marhall.edu; kuyper1@marshall.edu
Office/Hours	By appointment
University Policies	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy be going to www.marshall.edu/academic-affairs and clicking on "Marshall University Policies." Or, you can access the policies directly by going to http://www.marshall.edu/academic-affairs/?page_id=802 Academic Dishonesty/ Excused Absence Policy for Undergraduates/ Computing Services Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Forgiveness/ Academic Probation and Suspension/ Academic Rights and Responsibilities of Students/ Affirmative Action/ Sexual Harassment

Course Description (From Catalog)

This course provides a foundation in management theory, principles and application necessary for forensic scientists who aspire to assume future positions as crime laboratory supervisors, managers, technical leaders, quality managers, directors or other roles as leaders in their field. This course addresses management theory as well its practical application to the crime laboratory setting from an ISO/IEC 17025 perspective.

COURSE MATERIALS:

1. ISO/IEC 17025 checklist, ISO 9000 Quality management systems — Fundamentals and vocabulary, ILAC G19, ILAC G24
2. Additional Assessment Documents: Accrediting Body (AB) specific criteria, FBI_QAS: Supplemental Requirement; ASCLD-LAB Checklist; FQS Checklist
3. Document describing management practice and values underlying ISO/IEC 17025 Standards
4. Document describing general management theory
5. Document describing accreditation scheme
6. Document describing steps in the accreditation process
7. Document describing conduct of assessments and surveillance visits
8. Samples of forms used during assessment (e.g., non-conformity form, preliminary report form, checklists); Pre-assessment Checklists
9. Case studies describing assessment at an imaginary CAB written so as to provide examples of acceptable and unacceptable assessor practice, identification of non-conformities and communication difficulties with the CAB. One case study in the form of a quality manual for a CAB.
10. Exercises to be used during the course (PMI, Uncertainty of Measurement, McClelland's Need Assessment, Persuasion IQ, Emotional Intelligence EQ);

11. **GOALS:** At the completion of this course, the successful student will:

1. Be familiar with the management theory, practice, and values inherent in an ISO/IEC 17025 compliant

forensic laboratory.

2. Understand the two dimensions of effective leadership and their implication on the long-term success.
3. Identify the four dimensions of momentum and how they contribute to the successful implementation of a management agenda.
4. Recognize the difference between a facilitative and a directive leadership approach and when each approach can be most effective.
5. Be more aware of inter/intrapersonal dynamics of management.
6. Be familiar with the specific requirements of ISO/IEC standards and requirements used by accrediting bodies as they apply to testing laboratories.
7. Have knowledge and understanding of the accreditation criteria and accreditation procedures;
8. Be able to work as a member of a team;
9. Be able to more effectively communicate and deal with the human relations aspects of assessment.
10. With appropriate guidance and supervision of an experienced lead assessor, be prepared to plan, organize, conduct and report on assessment of a forensic laboratory.
11. Gain sufficient knowledge and experience to enable them to identify, record and classify non-conformities;
12. Develop effective information gathering techniques and interpersonal skills appropriate for use during assessment.

LECTURE OBJECTIVES: At the completion of this course, the successful student should be able to:

1. Articulate the basic management concepts and values that underlie ISO/IEC 17025 compliance.
2. Articulate the concepts of production QA and QC and explain the importance of QA and QC as it relates to [an ISO/IEC 17025 forensic laboratory.
3. Outline the typical quality concerns of a manufacturing (production) environment.
4. Correlate key ISO/IEC 17025 requirements and "best" management practice.
5. Describe general structure of the ISO/IEC accreditation hierarchy.
6. Identify the required content of a quality manual and the management practices/values required to support it.
7. Discuss calibration as it relates to:
    a. Traceability of measurement and its application.
    b. Calibration management systems in the laboratory.
    c. Uncertainty of measurement determinations as they are applied throughout various areas of forensic laboratory practice.
8. Discuss reference materials and quality control measures as they are used to address issues of uncertainty of measurement.
9. Describe the process of inter-laboratory and intra-laboratory comparison/assessment as they relate to:
    a. Clarification of the relationship between competencies, proficiency tests, performance evaluations.
    b. Mechanisms, criteria, current programs, and follow-up action.
    c. Risk assessment and participation plans.
10. Explain human aspects of assessment, as they relate to:
    a. Techniques for conducting the assessment to establish the method of working and the degree of compliance with the a laboratory's procedures and the accreditation criteria;
    b. Advice on methods of communication-questioning techniques;
    c. Skills needed to gather information in an objective, friendly, and professional manner;
    d. Conflicts of interest and ethical concerns.
11. Describe typical administrative and pre-assessment procedures which include:
    a. Application process
    b. Appointment of lead assessor
    c. Examination of the quality manual
    d. Providing preliminary reports to the assessed laboratory

e. Performing a document review
f. Preparing an agenda
g. Pre-assessment visits and reports
h. Composition, selection and appointment of assessment team
i. Preparation for assessment (e.g. provision of latest quality manual and other relevant documentation to lead assessor and assessors as appropriate.

12. Summarize the following as they relate to the conduct of assessments:
    a. Purpose and type with implications for assessors.
    b. Preparation of program and agenda for assessment including briefing of assessment team.
    c. Opening meetings.
    d. Examination of quality management system, gathering information and recording observations.
    e. Role of technical assessors.
        - Assessment of documented test/calibration/inspection procedures and their validation.
        - Assessment of technical competence including the need for technical assessors to:
            1. Talk to staff.
            2. Observe staff performing tests/calibrations/inspections.
            3. Observation of all aspects of the testing/calibration/inspection process from sample preparation, equipment and environment used, methods, method validation, standards, calibration, reference materials, data recording and analysis, quality control and reporting procedures.
        - Assessment of calibration arrangements, including traceability of measurement and uncertainty, internal calibration procedures and calibration intervals.
        - Use of computers, and software validation.
        - Performing a vertical assessment.
        - Performance in proficiency testing programs/external quality assessment schemes or other relevant inter-laboratory comparisons.
    f. Describe procedures as they relate to conducting the closing meeting including reporting findings and non-conformities.
    g. Describe post-assessment activities as they relate to:
        1. Following up on corrective actions that address any non-conformities identified.
        2. Assessment deliverables such as report, draft scope, checklists, etc.
        3. Describe the process for granting accreditation.
        4. Describe the process of surveillance and re-assessment.

ACTIVITIES:

13. **Case studies** for group discussions, Identify and draft the wording of non-conformities.
14. Various **self-assessment** tools.
15. **Written examination** that allows for the demonstration of participant attainment of the level of knowledge for work as an assessor that includes:
    a. The content and practical application of ISO/IEC 17025 in respect to laboratories or inspection bodies.
    b. The steps involved in planning, organizing and conducting assessments against the requirements of these standards.
    c. Identifying, wording, classifying and reporting non-conformities.
    d. The human relations aspects of assessment.
    e. Basic management concepts that underlie the ISO standards
16. **Mock Assessment** (team/group exercise) including
    a. Team/group examination of CAB against accreditation criteria noting quality of assessor performance and practice; [Note: The case studies need to contain examples of assessors assessing compliance with the technical requirements of the accreditation criteria as well as the quality management systems requirements.]

b. Given a quality manual and AB guidelines, identify any non-conformities. Team representative will be asked to report back findings of possible non-conformities with accreditation criteria and bad practice. Instructors will provide input where necessary.
c. Guidance of team/group on preparations for report-back to management of laboratory;
d. Report-back by team leader and individual members of each team/group in turn to management with presentation of outcome of assessment and non-conformities identified.
e. Draft the wording of non-conformities.

17. Weekly quizzes

a. Five points
b. Based on previous weeks materials

Grading Policy

A= 90-100% B= 80-89% C= 70-79% D= 60-69% F= 59% or below

Attendance Policy

Attendance is mandatory.

Other Policies

Weather (pg. 37-38):
http://www.marshall.edu/catalog/graduate/F2011/Gr_2011-2012_published.pdf
Computing services:
http://www.marshall.edu/ucs/CS/accptuse.asp.
Affirmative Action (pg. 36):
http://www.marshall.edu/catalog/graduate/F2011/Gr_2011-2012_published.pdf
Academic Dishonesty (pg. 48-57):
http://www.marshall.edu/catalog/graduate/F2011/Gr_2011-2012_published.pdf
Disabilities:
http://www.marshall.edu/disabled

Course Schedule (1 hr. lectures are listed for a 2 hr. class session)

Date	Lecture	Topic	Activity
	1	Introduction to Laboratory Management...ISO Perspective	Familiarization with documents ISO/IEC 17025, 17020 ... ILAC G19, G24, G9, FBI QAS, Compliance checklists, etc.
	2	Hierarchy of Lab Management & Accreditation	
	3	Leadership	Preferred leadership style; PMI
	4	Systems Approach	
	5	Process Management	
	6	Involvement of People	McClelland's; Value ID, Emotional Intelligence
	7	Customer Focus	
	8	Continual Improvement	
	9	Beneficial Relationships	Active listening Exercise
	10	Factual Decision Making	
	11	ISO/IEC 17025 Management Practice Correlation	
	12	Section 5 ISO/IEC 17025 STDS	5.1, 5.2, FBI QAS, SWGDRUG
	13	Section 5 ISO/IEC 17025 STDS	5.3, Space/Time, 5.4 Validation
	14	Section 5 ISO/IEC 17025 STDS	5.4.6 Uncertainty of Measurement
	15	Section 5 ISO/IEC 17025	5.4.7 Data Control. Electronic vs. paper, 5.5 Equipment

		STDS	
	16	Section 5 ISO/IEC 17025 STDS	5.6 Traceability, 5.7 Sampling, 5.8 Handling
	17	Section 5 ISO/IEC 17025 STDS	5.9 Quality Assurance, 5.10 Reporting, Assign Exercise Section 5
	18	Section 5 Exercise Debrief	
	19	Section 4 ISO/IEC 17025 STDS	Terminology, 4.1, 4.2
	20	Section 4 ISO/IEC 17025 STDS	4.3 Document vs. Record; 4.4, 4.5
	21	Section 4 ISO/IEC 17025 STDS	4.6 Purchasing, 4.7, 4.8 Complaints
	22	Section 4 ISO/IEC 17025 STDS	4.9 Non-Conforming Work, 4.10 Improvements
	23	Section 4 ISO/IEC 17025 STDS	4.11 Corrective Action vs. Preventative Action; Drug Problem Exercise
	24	Section 4 ISO/IEC 17025 STDS	4.13 Control of Records, 4.14 Audits ... Assessments; 4.15 Review
	25	Section 4 Exercise Debrief	
	25	Auditing	Planning, performing, do's and don'ts
	27	Assessment	Exercise to be coordinated with MUFSC DNA laboratory
	28	Assessment	
	29	Assessment	
	30	Assessment	
	31 Final		
	32 Final		

Managing

***The Fifth Discipline: The Art & Practice of The Learning Organization.** Peter M. Senge, Crown Publishing Group. Kindle Edition, 2010

"The World Without Freewill," Azim F. Shariff & Kathleen D. Vohls, **Scientific American**, June 2014.

***Credibility: How Leaders Gain and Lose It, Why People Demand It.** James M. Kouzes & Barry Z. Posner, Barry Z. Wiley. Kindle Edition, 2011

Police Culture. Diane Wetendorf. http://www.abuseofpower.info/Culture_Brotherhood.htm, 2013

"Shared Leadership: Can Empowerment Work in a Police Organizations?" Todd Wuestewald, Brigitte Steinheider, **The Police Chief,** vol. 73, no. 1, January 2006

Managing for Excellence. D. Bradford & A Cohen, Wiley and Sons, 1984

Influence: Science and Practice. Robert B. Cialdini, (5th Edition) Pearson HE, Inc., Kindle Edition, 2009

Influence Without Authority. Allan R. Cohen & David L. Bradford, Wiley. Kindle Edition, 2007

Establishing Momentum: Managing Structure, Resources, and Performance. Samuel B. Bacharach, eCornell, 2013

Sustaining Momentum: Motivating through Vision, Culture, and Political Agility. Samuel B. Bacharach, eCornell, 2013

Mapping the Political Terrain of Allies and Resistors. Samuel B. Bacharach, eCornell, 2013

***Switch: How to Change Things When Change Is Hard.** Chip Heath & Dan Heath, Random House, Inc., Kindle Edition, 2010

Fair Process: Managing in the Knowledge Economy. W. C. Kim & R. Mauborgne, ***Harvard Business Review***, 2003

Crime Laboratory Management, J. J. St. Clair, Academic Press, 2003

Medical Laboratory Management and Supervision: Operations, Review, and Study Guide, Lionel A. Vernadoe, 1996

Theory in Practice: Increasing Professional Effectiveness. Chris Argyris & Donald A. Schon, Jossey-Bass, Inc., 1974

Beyond Change Management. Dean Anderson & Linda Ackerman Anderson, Pfieffer, 2010

Manager as Negotiator. David A. Lax, Free Press. Kindle Edition, 1987

***Getting to Yes: Negotiating Agreement Without Giving In.** Roger Fisher, William L. Ury, Bruce Patton, Penguin Group US, Kindle Edition, 2011

ZOPA,

Negotiation (Harvard Business Essentials). Richard Luecke, Harvard Business Review Press. Kindle Edition, 2003.

***Sex, Ecology, Spirituality: The Spirit of Evolution.** Ken Wilber, Shambhala Publications. Kindle Edition, 2011

Beyond Change Management: How to Achieve Breakthrough Results Through Conscious Change Leadership. Dean Anderson & Linda Ackerman Anderson, Wiley. Kindle Edition, 2010

ISO/IEC/ILAC Documents

FBI Quality Assurance Standards for DNA Testing Laboratories, September 1, 2011

ISO Standard 9000:2005; Quality management systems - Fundamentals and vocabulary

ISO/IEC 17025:2005; General requirements for the competence of testing and calibration laboratories

ILAC G19:08:2014; Modules in a Forensic Science Process

ILAC G19:2002; Guidelines for Forensic Science Laboratories

http://ilac.org/

http://iso.org/

Innovation Management

Boundary Spanning Leadership: Six Practices for Solving Problems, Driving Innovation, and Transforming Organizations. Chris Ernst; Donna Chrobot-Mason, Kindle Edition, 2010.

The Human Side of Managing Human Innovation: A collection of Readings, edited by Ralph Katz, Oxford University Press, 2004

Cultural Change in Organizations. Robert P. Crosby, Vivo Publishing Inc., 2011

Developing and Agenda for Change. Samuel B. Bacharach, eCornell, **2013**

Overcoming Organizational Defenses. Chris Argyris, New York: Prentice-Hall, 1990.

"Motivating Professions in Organizations," Ralph Katz, in **The Human Side of Managing Technological Innovation,** Oxford University Press, 2004

Get Them On Your Side. Samuel B. Bacharach, F+W Media, Inc., Kindle Edition, 2005

Negotiating Support and Buy-In for Your Agenda. Samuel B. Bacharach, eCornell, 2014

Keep Them On Your Side: Leading And Managing for Momentum, Samuel B. Bacharach, F+W Media, Inc.. Kindle Edition. 2006

Satisfied Customers Tell Three Friends, Angry Customers Tell 3,000: Running a Business in Today's Consumer-Driven World. Pete Blackshaw, Random House, 2008

Leading & Managing Innovation: What Every Executive Team Must Know about Project, Program & Portfolio Management. Shane C. Archibald & Russell D. Archibald, Kindle Edition, 2013

"Rules of Innovation," Clayton Christensen, in **The Human Side of Managing Technological Innovation,** 2004

"Examining Some Myths about New Product Winners," Robert G. Cooper in **The Human Side of Managing Technological Innovation,** 2004

"Managing Innovation," Charlan Jeanne Nemeth in **The Human Side of Managing Technical Innovation,** 2004

Implementing Radical Innovation in Mature Firms," Richard Leifer, et al. in **The Human Side of Managing**

"Organizational Issues in the Introduction of New Technologies," Ralph Katz and Thomas Allen in **The Human Side of Managing Technological Innovation,** 2004

The Other Side of Innovation: Solving the Execution Challenge. Vijay Govindarajan & Chris Trimble, Harvard Business Review

Why Your Innovation Leadership Training Will Fail, Henry Doss, Forbes, http://www.forbes.com/, 2013.

Switch: How to Change Things When Change Is Hard. Chip Heath, Dan Heath, Random House, Inc.. Kindle Edition, 2010.

Innovation's Nine Critical Success Factors. Vijay Govindarajan, Harvard Business Review, July 5, 2011

Stop Blaming Resistance to Change and Start Using It. Jeffrey D. Ford & Laurie W. Ford, **Organizational Dynamics,** Vol. 39, No. 1, 2010

Product Management

Managing Product Management: Empowering Your Organization to Produce Competitive Products and Brands. Steven Haines. McGraw-Hill. Kindle Edition, 2011

Managing Product Management: Empowering Your Organization to Produce Competitive Products and Brands. Steven Haines. McGraw-Hill. Kindle Edition, 2011.

"Product Management Gets Stronger." Barry Jaruzelski, Richard Holman, and Ian MacDonald in **Strategy+Business,** Issue 70, Spring 2013.

The Strategic Role of Product Management. Pragmatic Marketing. EBook: SRPM_PM0113.pdf, 2013

The Top 12 Product Management Mistakes – And How to Avoid Them. Martin Cagan, Silicon Valley Product

Activity-Based Management, an Overview. The Chartered Institute of Management Accountants. Technical Briefing, April 2001.

The Discipline of Product Management. Phillip J. Windley, Information Paper, State of Utah, http://www.windley.com/docs/ProductManagement.pdf, 2002

Communication

Resolving Conflicts at Work: Ten Strategies for Everyone on the Job. Kenneth Cloke & Joan Wiley Goldsmith, Kindle Edition, 2011

4 Steps to Fast, Effective Meetings. Christine Comaford, Forbes, 2/28/2012

Improving Communication in the Workplace: Pinpoint Leadership Skill Development Training Series. Timothy F. Bednarz, Majorium Business Press, Kindle Edition, 2011

4 Barriers to Effective Communication & What to Do About Them. Gwyn Teatro, November 20, 2011

"Best Practices to Create an Effective Internal Communications Plan to Improve Profits," Rebecca Stanonik, **Marketing: Office,** October 10, 2013

Effective Internal & External Communication. Ann Frederick, EHow, 2014

Messages: The Communication Skills Book. Matthew McKay, Martha Davis, & Patrick Fanning, New Harbinger Publications. Kindle Edition, 2009

Mastering Communication at Work: How to Lead, Manage, and Influence. Jon Wortmann & Ethan F. Becker, McGraw-Hill. Kindle Edition, 2009

Getting to Yes: Negotiating Agreement Without Giving In. Roger Fisher, William L. Ury, Bruce Patton, Penguin Group US, Kindle Edition, 2011

LAURA JO KUYPER
Marshall University Forensic Science Center
1401 Forensic Science Drive, Huntington, WV 25701
Phone: (304) 691-8948
Fax: (304) 691-8928
kuyper1@marshall.edu

POSITION TITLE & DESCRIPTION

The Marshall University Forensic Science Center employs me as a ***Forensic DNA Analyst Level III***, ***Parentage DNA Analyst II***, and ***Quality Assurance Manager*** in the DNA Laboratory.

All DNA Analysts report to and receive administrative direction from the Technical Leader of the DNA Laboratory. As a Forensic DNA Analyst I conduct analysis on forensic samples submitted for DNA identification as well as technical and administrative reviews of forensic cases. As a Parentage DNA Analyst I conduct analysis on relationship samples submitted for DNA identification as well as technical and administrative reviews of relationship cases. I am also qualified to conduct analysis on database/reference samples submitted for DNA identification as well as technical and administrative reviews of database samples.

As the Quality Assurance Manager I report to and receive administrative direction from the Director of the DNA Laboratory and work closely with the Technical Leader. I have the responsibility to provide leadership, guidance and support in the administration of all quality assurance and quality control programs as well as the authority to ensure that the quality system is implemented and followed as mandated by the FBI Quality Assurance Standards for Forensic DNA Testing and DNA Databasing Laboratories and the International Standards Organization (ISO 17025).

OTHER EMPLOYMENT

Marshall University employs me as a part-time ***Associate Graduate Faculty Member*** since August 2013. Courses taught include:
FSC 650: DNA Technical Assistance Program

I am a contract employee for ANSI-ASQ National Accreditation Board/FQS. I am a technical assessor for audits to the FBI Quality Assurance Standards (forensic DNA testing and DNA databasing) as well as the ISO 17025 assessment criteria.

I am a contract employee for the National Forensic Science Technology Center, Inc. (NFSTC). I am a technical assessor for audits to the FBI Quality Assurance Standards (forensic DNA testing and DNA databasing).

COURTROOM EXPERIENCE

I have experience testifying to results in the Forensic DNA discipline since 2011. I currently have testified two times at the state level.

QUALIFICATIONS, TRAINING & PROFESSIONAL MEMBERSHIPS

- Bachelor of Science in Chemistry, Kentucky Wesleyan College, Owensboro, KY, 1995.
- Associate of Applied Science in Business Technology/Management, Ashland Community College, Ashland, KY, 1997.
- Master of Science in Forensic Science/DNA Analysis, Marshall University, Huntington, WV, 1999.
- West Virginia State Police Laboratory Intern, Biochemistry Section, 1998.
- Marshall University CODIS Laboratory Intern, 1998.
- Attended various workshops and professional meetings to continue my education in the field of Biology.
- Member of the Mid-Atlantic Association of Forensic Scientists since 2003.
- Member of the Association of Forensic Quality Assurance Managers since 2005.
- Analyzed approximately 400 DNA cases using ABI 3103xl with AmpF/STR® Profiler Plus®, AmpF/STR® Cofiler®, AmpF/STR® Identifiler® and AmpF/STR® Identifiler® Plus kits as well as the PowerPlex® 16 and PowerPlex® 16 HS systems from Promega.

- Tested over 10,000 samples using AmpF/STR® Profiler Plus®, AmpF/STR® Cofiler®, AmpF/STR® Identifiler® and AmpF/STR® Identifiler® Plus kits as well as the PowerPlex® 16 and PowerPlex® 16 HS systems from Promega.
- Completed DNA analysis of approximately 2000 samples using AmpF/STR® Profiler Plus®, AmpF/STR® Cofiler®, AmpF/STR® Identifiler® and AmpF/STR® Identifiler® Plus kits as well as the PowerPlex® 16 and PowerPlex® 16 HS systems from Promega.
- Administrative and Technical review of approximately 300 forensic DNA cases.
- Administrative and Technical review of approximately 100 relationship cases.
- Administrative and Technical review of approximately 5000 database samples.
- Since 2008 I have been a part of 20 assessments in 15 different laboratory systems.

PROFICIENCY TEST RECORDS

I have successfully completed proficiency testing since 2001. The following are proficiency tests I have completed in the past three years.

- CTS 10-572 and CTS 10-575
- CTS 11-572 and CTS 11-575
- CTS 12-572 and CTS 12-575
- CTS 13-572 and CTS 13-575

CONTINUED EDUCATION

1992

- "Genetics", Kentucky Wesleyan College, 1992

1996

- "Statistical Methods", Ashland Community College, 1996

1997

- "Human Biochemistry", Marshall University, 1997

1998

- "Cell and Molecular Biology", Marshall University, 1998
- "Introduction to Microscopy/Photography", Marshall University, 1998
- "Forensic Science I, A Course in DNA", Marshall University, 1998
- "Biostatistics", Marshall University, 1998
- "Law of Evidence", Marshall University, 1998

1999

- "Legal Court in Forensic Science", Marshall University, 1999

2001

- "Ethical Problems Facing the Expert Witness", (Andre Moenssens), American Academy of Forensic Science's 53rd Annual Meeting, Seattle, WA, February 2001.
- "Short Tandem Repeat Analysis Data: Processing, Interpretation, and Storage", (Deborah Hobson – FBI), American Academy of Forensic Science's 53rd Annual Meeting, Seattle, WA, February 2001.
- American Academy of Forensic Science's 53rd Annual Meeting, Seattle, WA, February 2001.
- Florida DNA Training Workshop, Clearwater, FL, May-June 2001.
- "FBI Casework Workshop", (Mike Garvey, Deborah Hobson, Julie Kidd, Jill Smerick – FBI), Marshall University, June 2001.
- "Parentage Testing Seminar", (Mike Baird – LifeCodes Corp.), Marshall University, July 2001.
- Promega's 12th International Symposium on Human Identification, Biloxi, MS, October 2001.
- "Performance Level Auditing Workshop", (Kevin Lothridge, David Epstein – NFSTC), Marshall University, November 2001.

2002

- "ABI Prism 3100 Genetic Analyzer Training", (Carol Scherczinger – ABI), Marshall University, March 2002.
- Promega's 1st Advanced CE STR Working Group Meeting, Memphis, TN, April 2001.
- "STR Workshop Beyond the Core 13", 2002 Mid-Atlantic Association of Forensic Scientists Annual Meeting, Frederick, MD, April 2002.
- 2002 Mid-Atlantic Association of Forensic Scientists Annual Meeting, Frederick, MD, April 2002.

- "DNA Auditor Training", (Richard Guerrieri – FBI), Marshall University, May 2002.
- 8th Annual CODIS User's Conference, Washington, DC, November 2002.

2003

- Evidence Processing Training, (Sherri Lemons – West Virginia State Police), West Virginia State Police Crime Laboratory Central Processing Unit, Charleston, WV, July - September 2004.
- "ABI Prism 3100 Series Genetic Analyzers and AmpF/STR Training", (Michelle Shepherd – ABI), Marshall University, September 2003.

2004

- "Quantifiler and GeneMapper ID Training", (Michelle Shepherd – ABI), Marshall University, April 2004.
- GeneMapper ID WebEx Training, (Michelle Shepherd – ABI), Marshall University, May 2004.
- Mid-Atlantic Association of Forensic Scientists Annual Meeting, Wilmington, DE, April 2004.
- Laboratory Health and Safety, (James Kaufman – Laboratory Safety Institute), Las Vegas, NV, August 2004.
- 3rd Annual Association of Forensic Quality Assurance Managers Meeting, Las Vegas, NV, August 2004.
- "Expert Testimony", (Karen Vilanueva Matkovich, Joseph Noggy), Marshall University, November 2004

2005

- "ABI 3130 Genetic Analyzer Training", (Michelle Shepherd – ABI), Marshall University, February 2005.
- American Academy of Forensic Science's 57th Annual Meeting, New Orleans, LA, February 2005.
- "GeneMapper ID Data Analysis", (Karen Howard – MU Consultant), Marshall University, April 2005.
- 4th Annual Association of Forensic Quality Assurance Managers Seminar, Indian Rocks Beach, FL, October 2005.
- ISO/IEC 17025:2005 and Laboratory Accreditation Training Course, (Kenneth Staub – A2LA), Orlando, FL, November 2005.

2006

- Y Chromosome, (Terry Fenger – MUFSC), Marshall University, April 2006.
- 5th Annual Association of Forensic Quality Assurance Managers Seminar, Missoula, MT, October 2006.
- GeneMapper ID Training, (Jaime Handelsman – ABI), Marshall University, December 2006.

2007

- Mid-Atlantic Association of Forensic Scientists Annual Meeting, Washington D.C., May 2007.
- 6th Annual Association of Forensic Quality Assurance Managers Seminar, Milwaukee, WI, September 2007.

2008

- ISO Without Tears, (Pat Wojtowicz – FQS-I), Clearwater, FL, February 2008.
- Mid-Atlantic Association of Forensic Scientists Annual Meeting, Huntington, WV, April - May 2007.
- Expert Witness Workshop, (Chris Chiles and David Castle), Huntington, WV, April 2008.
- Body Fluid Identification from Sexual Assault Evidence, Huntington, WV, April 2008.
- HITA/AABB Workshop (Promega Workshop), Hollywood, CA, October 2008.
- Forensic Population Genetics Workshop (Martin Tracey, Promega Workshop), Hollywood, CA, October 2008.
- Promega's 19th International Symposium on Human Identification, Hollywood, CA, October 2008.

2009

- Y-STR Training, (Sarah Bowen and Karen Howard – MUFSC), Marshall University, May 2009.
- FQS-I ISO 17025 Assessor and Internal Auditor Workshop (William Tillstone – FQS-I), Clearwater, FL, June 2009.
- FBI DNA Auditor Training – Revised QAS (Heather Seubert – FBI), Clearwater, FL, June 2009.
- 8th Annual Association of Forensic Quality Assurance Managers Seminar, Anaheim, CA, October 2009.
- Understanding the Basics of Root Cause Analysis (Denise Robitaille – Paton Professional), Anaheim, CA, October 2009.

2010

- Relationship Training (Kelly Beatty – MUFSC), Marshall University, February 2010.

2011

- Emerging DNA Technologies (Karen Howard, Justin Godby and Jennifer Hayden – MUFSC), Marshall University, November 2011.

2012

- Promega's 23rd International Symposium on Human Identification (ISHI), Nashville, TN, October 2012.

2013

- NIST DNA Mixture Interpretation Workshop and Webcast, 2013

PAMELA J. STATON, Ph.D.

Marshall University Forensic Science Center: 1401 Forensic Science Drive, Huntington, WV 25701
staton1@marshall.edu |304-691-8962 (Office) 304-691-8929 (Fax) 304-634-5263 (Mobile) |
www.marshall.edu/forensics

EDUCATION

Ph.D. **Biomedical Sciences**, 2001. Marshall University School of Medicine, Huntington, WV
M.S. **Medical Technology**, 1978. West Virginia University, Morgantown, WV
B.S. **Medical Technology**, 1975. Morehead State University, Morehead, KY

NATIONAL CERTIFICATION

- **Medical Technologist, MT(ASCP) #104280**, American Society of Clinical Pathologists
- **Specialist in Microbiology, SM(ASCP) # 1920**, American Society of Clinical Pathologists

PROFESSIONAL MEMBERSHIPS

- American Academy of Forensic Sciences (AAFS)
- American Society of Crime Laboratory Directors (ASCLD)
- American Society of Clinical Pathologists (ASCP)
- Delta Delta Epsilon Forensic Science Honorary Society
- Council of Forensic Science Educators (COFSE)

EMPLOYMENT HISTORY

- **Graduate Program Coordinator, Researcher & Associate Professor**, *January 2003 to present.* Tenured 2007. Day-to-day administrator; research & teaching. Marshall University Forensic Science, Graduate College, Joan C. Edwards School of Medicine, Huntington, WV.
- **Faculty**, *July 1998 to December 2002.* Tenured 2001. Shawnee State University, Department of Medical Laboratory Science, Portsmouth, OH. Teaching: Microbiology, Blood Banking/Transfusion Medicine, Hemostasis, Clinical Correlation
- **Department Chair & Faculty** *October 1988 to July 1998.* Shawnee State University, Department of Medical Laboratory Science, Portsmouth, OH. Microbiology, Orientation to Clinical Laboratory Sciences, Clinical Correlation
- **Graduate Assistant & Ph.D. Candidate**, *January 1998 to August 2001.* Marshall University School of Medicine Department of Microbiology, Immunology, Molecular Genetics, Huntington, WV.
- **Microbiology Departmental Supervisor**, *September 1984 to October 1988.* King's Daughters' Medical Center, Ashland, KY; Pharmacy & Therapeutics Committee Member; College of American Pathologist Auditor; Infection Control Committee Member
- **Clinical Education Coordinator & Assistant Professor**, *June 1981 to August 1983.* Florida International University, Department of Medical Laboratory Sciences, Miami, FL. Teaching: Hematology, Microbiology, Laboratory Management

- **Laboratory Manager & Adjunct Professor,** *September 1979 to June 1981.* Florida International University, Department of Medical Laboratory Sciences, Miami, FL. Teaching: Hematology, Clinical Chemistry, Blood Banking/Transfusion Medicine, Microbiology
- **Chemist, Division of Toxicology,** *January 1979 to September 1979.* Smith Kline & French Laboratories, Toxicology Division, Miami, FL; Drug, toxicology, and therapeutic drug monitoring
- **Graduate Teaching Assistant,** *August 1976 to December 1978.* West Virginia University, Department of Medical Technology. Morgantown, WV.
- **Medical Technologist,** *July 1975 to July 1976.* Beckley Appalachian Regional Hospital & School of Medical Technology. Beckley, WV. Clinical microbiology, hematology, chemistry, blood banking technologist.

TEACHING & COURSE DEVELOPMENT

- **Seminar** – FSC 680 Fall: Course Director; student research presentations; resume, CV, and cover letter development; PowerPoint tools; research design; career development of internship and job seekers; portfolio development and use; interview preparation and tools; evaluation and self-evaluation; research paper rubric; research poster rubric; accrediting agency [FEPAC] seminar requirement. 1 credit hr
- **Seminar** – FSC 680 Spring: Course Director; student lay audience presentations; student poster presentations; MUFS Research Day organization; student HR interviews; student technical specialty interviews; creating interview panels of working professional; national testing and certification; preparation for AAFS presentations and national meeting participation; accrediting agency [FEPAC] seminar requirements. 1 credit hr
- **Internship** – FSC 630 Summer: Course Administrator; Internship identification, conference calls, and placements; internship agreement approvals; internship oversight; internship requirements such as research paper, research paper rubric, intern evaluation of internship experience, host laboratory evaluation of intern, attendance and punctuality, research slide presentation development, research poster development; accrediting agency [FEPAC] research requirements. 5 credit hrs
- **Biochemistry** – FSC 624 Fall: Course Director; teaching: nucleic acid section; key developer of forensic biochemistry section; recruitment, assignment and coordination of faculty; compiling and administering testing; grading; syllabus design and schedule. 4 credit hrs
- **Bioterrorism** – FSC 610 Spring: Course Coordinator: syllabus & schedule; teaching: laboratory techniques section. 3 credit hrs
- **Laboratory Management** – FSC 650 Spring: Course Instructor; essentials of laboratory management for students aspiring to attain positions as laboratory directors, managers, technical leaders, supervisors or other leadership roles. 2 credit hrs
- **DNA Technical Assistance** – FSC 650 Fall & Spring: Program developer and administrator. Fall 2 credits; Spring 2 credits
- **Firearms Technical Assistance** – FSC 650 Fall & Spring: Program developer and administrator. Fall 1 credit; Spring 1 credit
- **Other Course Oversight for FEPAC Purposes**: FSC 604, FSC 619, FSC 665, FSC 603, FSC 627, FSC 629

GRANTS- FUNDED

- **Staton, Pamela, PI**: 2010 to 2011 **Funded $468,000;** WV Water Quality: Bacterial Source Tracking, Pathogen Profiling and Assay Development; USDA-NIFA-FADM
- **Staton, Pamela, PI:** 2009 to 2010 **Funded $360,360**; West Virginia Water Quality: Bacterial Source Tracking and Pathogen Profiling; USDA-CSREES_FADM
- **Staton, Pamela, PI**: 2008 **Funded $875,000** Y-STR Analysis Training in Support of State and Local Law Enforcement; National Institute of Justice
- **Staton, Pamela, PI:** 2008 to 2009 **Funded 383,862;** West Virginia Water Quality: Bacterial Source Tracking & Pathogen Profiling; USDA-CSREES-FADM
- **Staton, Pamela, PI:** 2006 to 2008 **Funded $555,985** West Virginia Water Quality: Fecal Source Tracking and Pathogen Profiling; USDA_CSREES_FADM
- **Staton, Pamela, PI**: 2005 to 2006 **Funded $528,323;** Assessment of West Virginia Water Quality: Bacterial Source Tracking Database Development and Method Validation; USDA_CSREES_FADM
- **Staton, Pamela, PI**: 2004 to 2005 **Funded $502,457.** West Virginia Water Quality: Bacterial Source Tracking USDA_CSREES_FADM
- **Staton, Pamela, PI:** 2003 to 2004 **Funded $577,590.** West Virginia Water Quality: Bacterial Source Tracking; USDA_CSREES_FADM
- **Staton, Pamela, PI:** 2003 to 2004 **Funded $152,000.** Bacterial Source Tracking: WV Department of Agriculture

---

PROPOSALS – PENDING

2013 - Crime Scene Investigation Continuing Education Program submitted to the Battlefield Vehicle Forensics Training Manager Combat Incident Analysis Division (CIAD) National Ground Intelligence Center (NGIC)

GRANTS - UNFUNDED

- **Staton, Pamela.** 2012 Forensic Soil Analysis: Evaluation and Standardization of Soil Sample Storage, DNA Extraction Methods & Validation of Automated Ribosomal Intergenic Spacer Analysis Microbial Community Profiling; National Institute of Justice
- **Staton, Pamela.** 2011 Multidisciplinary Approach to Forensic Soil Analysis: A same source comparison of DNA-based microbial community profiling (MCP), scanning electron microscopy, and inductively coupled plasma atomic emission spectroscopy (IPC-AES); National Institute of Justice.

DIRECT SUPERVISION

- **Academic Program Administrative Assistant** – 2012 to present. Primary supervisor of a full-time Administrative Assistant whose role includes website and publication design and maintenance, accreditation materials management and follow-up, scheduling and organizing.

- **Academic Program Manager** – 2006 to present. Primary supervisor of a full-time Program Manager whose primary role includes academic program accounting and financial recordkeeping; assists me in areas related to Academic Affairs, Student Affairs including Admissions.
- **Research Technicians (1 to 4/year)** – 2003 to 2012. Primary PI and daily supervisor of anywhere from one to four full-time research technicians in any given year.
- **Students (~36/semester)** - Primary supervisor regarding program-wide, required activities including academic advising, Plan of Study, registration, selection of area of emphasis, adding and dropping courses, satisfactory academic progress reports, letters of recommendation for internships and employment purposes, intern and employee reference for background checks, resume/cover/CV assistance, interview preparation, assistance in finding jobs and internships, recruiting supervisors for student GA assignments per semester, assessment of GA activities, academic probation, seminar presentation reviewer, research reviewer, research committee member; approve student absence and travel; approve student admissions, academic common market, expenditures such as student/class supplies, class-related lab supplies, instructors, utilities, maintenance, computer access; student organization advisor; honorary society advisor, and other items academic program-related.

PROFESSIONAL SERVICE OUTSIDE MARSHALL UNIVERSITY

- 2014 Workshop Presenter, American Academy of Forensic Sciences, Annual Meeting, Seattle, WA, February 2014 Topic: Effective Curricular Design and Improvement for Forensic Science Educational Programs
- 2013- Secretary, Council on Forensic Science Education (COFSE)
- 2010 – to present: Graduate Program Representative, American Academy of Forensic Sciences (AAFS) College & University Fair Washington, DC
- 2012- Graduate Program Representative, Council of Forensic Science Educators (COFSE).
- 2008 and 2009- Grant Reviewer, Great Lakes WATER Institute. University of Wisconsin, Milwaukee, WI.
- 2007- Coordinated Management of Water Quality Protection and Food and Safety. California Vegetable Production Conference, San Luis Obispo, CA
- 2005- Science Advisory Board, Environmental Pathogens Information Network (EPI-Net).
- 2005- Grant Reviewer, National Oceanic and Atmospheric Administration (NOAA) Oceans and Human Health Initiative (OHHI). Silver Spring, MD
- 2005- Exhibitor, BIO[tech] 2005, Philadelphia, PA
- 2004- Exhibitor, BIO[tech] 2004, San Francisco, CA

MARSHALL UNIVERSITY SERVICE

- 2013-2014 – Marshall University School of Medicine Promotion & Tenure Committee
    - 2003 to present – Program Coordinator, MU Forensic Science MS Program
- 2013 – Advisory Committee, MU Integrated Science & Technology, Digital Forensics and Information Assurance Departments
- 2003 to present MU Annual Review Reporting, MU Office of Assessment
- 2003 to present MU Program Review and Resource Development Reporting, MU Office of Assessment
- 2003 to present- Chair, Forensic Science Faculty Committee

- 2003 to present- Chair, Forensic Science Admissions Subcommittee
- 2003 to present- Chair, Forensic Science Accreditation & Program Review
- 2003 to present- Chair, Forensic Science Graduate Studies Committee (Curriculum Committee)
- 2006 to present- Chair, Forensic Science Advisory Committee
- 2007 to present –DNA Technical Assistance Program (TAP) Director
- 2007 to present – Biological Safety Advisor to MUFSC Safety Committee;
- 2013 to present – Marshall Collateral Duty Officer for Forensic Science Center
- 2013 (new) – Firearms and Toolmarks Technical Assistance Program (TAP) Director
- 2007 to 2008- Marshall University Faculty Senate
- 2007 to 2008- Marshall University Budget and Academic Policy Committee

PUBLICATIONS AND POSTERS

- **Staton, Pamela;** Carpenter, A. Betts, Jackman, Susan H. IL-7 is a Critical Factor in Modulating Lesion Development in Skn-Directed Autoimmunity. J. Immunology, p3978-3986. 2006.
  ADD 2014
- Dembia, Emilie; Chenoweth, Sarah; Hayden, Jennifer; **Staton, Pamela.** "Validation of the Applied Biosystems 3500 Genetic Analyzer with a Comparison of the Identifiler Plus and PowerPlex 16 HS Amplification Kits", AAFS Conference, February 2013.
- Jacque, Kathleen; Redhead, Lynnet; Bowen, Sarah; **Staton, Pamela.** "Internal Validation of the AmpFlSTR Yfiler Amplification Kit on a Life Technologies 3130 Genetic Analyzer," AAFS Conference, February 2013
- Thatch, Christopher; Imes, Danielle; Bostwick, Valerie; **Staton, Pamela.** "Validation of the Applied Biosystems 3500XL with PowerPlex 16 HS," AAFS Conference, February 2013
- Barr, Sarah; Summerfield, Chad; Seferyn, Season; **Staton, Pamela.** "Validation and Comparison of the AmpFlSTR Identifiler Plus PCR Amplification Kit to Identifiler, MiniFiler, and Yfiler for the Pinellas County, Florida Forensic Laboratory," AAFS Conference, February 2013
- Gapinski, Allison; James, Julie; Marra, Misty; **Staton, Pamela.** "Internal Validation of the AmpFlSTR Identifiler Plus PCR Amplification Kit and Comparison to Identifiler for the Boston Police Department Crime Laboratory," AAFS Conference, February 2013
- Tokarz, Jessica; Milne, Scott; Hardy, Sarah; **Staton, Pamela**; Mayntz-Press, Kathleen. "Internal Validation of the PowerPlex Y23 Amplification Kit for Use in Forensic Casework," AAFS Conference, February 2013.
- Vickman, Tiffany; **Staton, Pamela J.** "Spectrophotometric Comparison of Storage and Preservation Methods on Trace Soil." AAFS Conference, 2012
- Quirindongo, Dana; Rushton, Catherine; Rankin, J. Graham; **Staton, Pamela J.** "The effect that storage condition, drying method, and length of time soil sample is stored on FTIR results." Marshall University Forensic Science Research Day, 2012.
- Fete, Emily; **Staton, Pamela J.** "Internal Validation of GeneMapper® *ID-X* for use in Forensic Casework." AAFS Conference, 2012
- Bard, Tiffany; Lupino, Cara; Bostwick, Valerie; Godby, Justin; **Staton, Pamela J.** "Internal Validation of AmpFLSTR® Plus on Applied Biosystems PRISM® 310 Genetic Analyzer." AAFS Conference, 2012

- Kramer, Kevin; Myers, Brent; Harrah-Lea, Heather; and **Staton, Pamela J.** "Comparison of Room Temperature Forensic DNA Extract Sample Preservation Methods". AAFS Annual Meeting, 2011.
- Sawin, Andrew; Chute, Jason; Harrah-Lea, Heather; and **Staton, Pamela.** "Comparative Analysis of Quantifiler® Duo, Plexor® HY, and MavenQST™ DNA Quantification Systems". AAFS Annual Meeting, 2011.
- Rommel, Megan; Bas, Jennifer; Murga, Kimberly; and **Staton, Pamela.** "Comparative Evaluation of Manual Extraction Methods of the Biology/DNA Unit of the Las Vegas Metropolitan Police Department Forensic Laboratory." AAFS Annual Meeting, 2011.
- Runyan, Melissa N.; Myers, Brent; and **Staton, Pamela J.,** "Validation of Applied Biosystem's Quantifiler ® Duo DNA Quantification Kit". Marshall University Forensic Science Research Day, 2010.
- Mest, Mallory; McGuckian, Amy; Crouse, Crouse; Cecelia A.; and **Staton; Pamela J.** "The Evaluation of Multiple Commercially-Available Extraction Chemistries for Forensic Laboratory". Marshall University Forensic Science Research Day, 2010.
- Keaton, Rachel; Pranger, Natasha; Staton, Pamela J. "Internal Validation of GeneMapper®ID-X v.1.0.1 as an Expert System for use in a Databasing Laboratory". Marshall University Forensic Science Research Day, 2010.
- Hoffman, Amanda J.; McWilliams, Scott; Gartside, Bill; **Staton, Pamela J.** "Internal Validation of the AmpFℓSTR® Identifiler® Kit on the Applied Biosystems 3130 Instrument". Marshall University Forensic Science Research Day, 2010.
- Hayden, Jennifer; Carradine, Cassie; **Staton, Pamela J.,** "Internal Validation of a Florescent Labeling System: A New Spermatozoa Identification Method". Marshall University Forensic Science Research Day, 2010.
- Hayden, Jennifer; Carradine, Cassie; **Staton, Pamela J.** "Internal Validation of a Robotic Liquid Handler for Real-time PCR Set Up". Marshall University Forensic Science Research Day, 2010.
- Edwards, Sally; Sanger, Margaret; **Staton, Pamela J.** "Internal Validation of Y-STRs for Casework at the Kentucky State Police Central Laboratory ". Marshall University Forensic Science Research Day, 2010.
- Asfar, Mohammed; Ammann, Monica; **Staton, Pamela J.;** " Internal Validation of AmpFlSTR® MiniFiler™ PCR Amplification kit for Forensic Casework". Marshall University Forensic Science Research Day, 2010.
- Pilon, Dana M.; Fiorucci, Kimberly D.; and **Staton, Pamela J.** "Internal Validation of the AmpF/STR® MiniFiler™ Amplification Kit for Use in Forensic Casework". Marshall University Forensic Science Research Day, 2009.
- Lovelace, Rachel; Hahn, Jeff; Harmon, Rachel; Schueler, Sindey; and **Staton, Pamela J.** "Streamlining and Optimizing the Procedures of a State Databank Lab". Marshall University Forensic Science Research Day, 2009.
- Brown, Tarah R.; Brewer, Lisa M.; **Staton, Pamela J.** "Internal Validation of AmpF/STR® MiniFiler™ Amplification Kit for Metropolitan Police Department". Marshall University Forensic Science Research Day, 2009.

RECENT CONTINUING EDUCATION (Last 5 years)

- *Quality Matters for Higher Education. Quality Matters Program: A National Benchmark for Online Course Design,* Marshall University. February 2013
- *The Ethics of Stewardship and the Stewardship of Ethics (Ethics I); Answering the NAS: The Ethics of Leadership and the Leadership of Ethics (Ethics II);* RTI International; nij.org on-line training; February 2013
- *Policy Forum- Crime Laboratory Backlogs: The Impact on Justice,* RTI International Forum, www.nij.gov; May 2013
- *Interdisciplinary Symposium – A National Forensic Science Enterprise and Transparency in Forensic Science: Legal and Practitioner Views on our Path Forward,* AAFS, February 2013. Washington, DC
- *Grant Funding Opportunities in the Forensic Sciences for Academic Programs,* AAFS, February 2013. Washington, DC
- *Multidisciplinary Approaches to Effective Communication and Report Writing*, AAFS, February 2013. Washington, DC
- American Academy of Forensic Science (AAFS), Annual Meeting attendance, Washington, DC, February 2013
- *Working in Forensics: From the Streets, to the Battlefield, to the Boardroom,* AIDE, May 2012, Huntington, WV.
- *Anti-Forensics: Occult Computing,* AIDE, May 2012, Huntington, WV.
- *ImageScan,* AIDE, May 2012, Huntington, WV.
- *Mobile Device Security and the Impact on Digital Investigations,* AIDE, May 2012, Huntington, WV.
- *Putting Forensics Back into Digital Forensics,* AIDE, May 2012, Huntington, WV.
- *A Forensic Analysis of Social Media Artifacts in Windows 7 and Windows 8,* AIDE, May 2012, Huntington, WV.
- *Future Sources of Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Applied Behavior Analysis: Its Role in the Digital Investigation,* AIDE, May 2012, Huntington, WV.
- *The Evolving Role of Cyber,* AIDE, May 2012, Huntington, WV.
- *Windows 8 Forensic Analysis- A Forensic First Look,* AIDE, May 2012, Huntington, WV.
- *Surviving the Witness Stand: A Basic Guide to Preparation for the Courthouse and Testifying,* AIDE, May 2012, Huntington, WV.
- *Search and Seizure of Digital Evidence- Legal Considerations II,* AIDE, May 2012, Huntington, WV.
- *Field Analysis & Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Proper Collection, Handling and Documentation of Digital Evidence,* AIDE, May 2012, Huntington, WV.
- *Types of Digital Evidence and Digital Crimes,* AIDE, May 2012. Huntington, WV.
- *Introduction/Foundations of Digital Forensics,* AIDE, May 2012, Huntington, WV.
- *Appalachian Institute of Digital Evidence (AIDE)* attendance. May 21, 2012. Marshall University. Huntington, WV
- *What Did You Just Step In? Use Forensic Soil Examinations to Find Out,* American Academy of Forensic Science, February 2012. Atlanta, GA

- *Introduction to Expert Witness Testimony*, American Academy of Forensic Science (AAFS), February 2011. Chicago, IL
- *FEPAC On-Site Evaluator Training Session*, AAFS, February 2011. Chicago, IL
- *Introduction to Expert Witness Testimony*, AAFS, February 2011. Chicago, IL
- *Internationalization of Forensic Sciences*, AAFS, February 2011. Chicago, IL
- MFRC Forensic Science Education Forum, invited participant, Indianapolis, IN, June 2010
- *American Academy of Forensic Science, Annual Meeting attendance,* Seattle, WA, February 2010
- *Seven Deadly Sins of Forensic Science.* American Academy of Forensic Science Conference. Denver, CO. February 2009. Session.
- *Ethics in Forensic Practice.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Integrated Microfluidics*. AAFS Conference. Denver, CO. February 2009. Workshop.
- *Ethics and Forensic Science.* AAFS Conference. Denver, CO. February 2009. Workshop.
- *Body Fluid Identification from Sexual Assault Evidence.* Mid-Atlantic Association of Forensic Science (MAAFS) Annual Meeting. Huntington, WV. April 30, 2008. Workshop.
- *Expert Witness Testimony.* MAAFS Annual Meeting. Huntington, WV. April 30, 2008. Workshop.
- *Daubert Admissibility Issues and Preparation Elements for the Forensic Scientist*. MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Automating Your Lab: Run Biomek Run!*. MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Managing in the Forensic Sciences*. MAAFS Annual Meeting. Huntington, WV. April 2008. Workshop.
- *Human DNA Quantification.* AAFS Conference. Washington, DC. February 2008. Workshop.

Curriculum Vitae
Ted A. Smith

CONTACT INFORMATION

Route 3, Box 18
1645A Glenwood Road
Milton, WV 25541
United States of America
Cell: 304-634-3293
tasmith432@msn.com

RELEVANT WORK HISTORY

Forensic Consultant

Work as an International Senior Forensic Advisor under contract in DOJ/ICITAP programs. Primary projects include the following:

Colombia, ICITAP Program; May 2013 – Present

Lead advisor of multi-disciplined team tasked with assessing the status forensic services in Colombia, the status of ISO/IEC 17025 accreditation efforts and evaluating the National Forensic Strategy (Five Year Plan), and delineating training and equipment needs for the systems.

Provide management and accreditation training (ISO/IEC 17025/17020) to the leadership and staff of the ***Instituto Nacional de Medicina Legal y Ciencias Forense, the Dirección Nacional Cuerpo Técnico de Investigación (CTI)***, the ***Dirección de Investigación Criminal e Interpol*** *(DIJIN) and the* ***Centro de Identificación Humana.*** Training topics to date have included: Management Theory (Dealing with Uncertainty), Overcoming Organizational Mental Models, Communication (Conflict), Managing Momentum, Production Management Strategic and Tactical, Correlation of ISO/IEC 17025 Standards to Management Practice, Innovation Management and ISO/IEC 17025 Assessor Training.

Mexico, Merida Initiative; December 2009 – Present

The Initiative is a multi-year program of counterdrug and anticrime assistance to Mexico and Central America; work as Senior Forensic Advisor in a program that generally focuses on improving the capacity of justice systems in the region and specifically on improving forensic science services. The project focus is on the infusion of quality control mechanisms into the country's forensic analysis system; it involves identifying and developing improvement strategies for all aspects of the existing system: including training, equipment, facility, analytical schemes, supply mechanisms, and budgetary needs. Major success to date: helped the ***Mexican Federal Police*** design, equip, develop, validate, and accredit (ISO/IEC 17025) its new DNA analysis laboratory. Currently assisting the ***Procuraduría General de la Republica (PGR)*** central laboratories (Chemistry, Questioned Documents, Firearms, and Genetics) in Mexico City with their ISO/IEC 17025 accreditation efforts; offering general quality management advice to all laboratories and specific technical advice to the Genetics (STR DNA analysis) laboratory.

Algeria, ICITAP Program; May 2014 – December 2014

Provide management training to the leadership and staff of the ***Institute Nationale de Criminalistique et Criminologie, Gendarmerie Nationale of Algeria.*** Training topics included:

Management Theory (Dealing with Uncertainty), Organizational Mental Models, Effecting Agency Cultural Change, Credibility, Communication (Conflict), Managing Momentum, Production Management, Working Group Dynamics and Innovation Management

Brazil, Instituto Nacional de Criminalistica (INC); March 2013 – September 2014

The program was developed to offer advice to Brazil's Federal Police at the ***Instituto Nacional de Criminalistica (INC)*** regarding the implementation of ISO/TEC 17025 accreditation requirements at the ***Instituto*** in the drug chemistry and genetics laboratories. Provide assistance in drafting policies and protocols that relate to the management of the laboratory, technical protocols and procedures in the genetic section, and overall integrity of the evidence. The policies and procedures drafted and implemented will serve as a model for the other INC forensic disciplines, as well as satellite laboratories, under future assistance programs. The facility was accredited by ANSI/ASQ FQS in September 2014.

Iraq, Ministry of Interior (MoI) Forensic Program; September 2007 – July 2009

Worked as the Senior Forensic Advisor to the Iraq and US governments on the Coalition's MoI Transition Team (MNSTC-I, Directorate of Interior Affairs), was employed to help develop and implement a national forensics strategy that would jump-start the Iraqi Police Scientific Services laboratory system. The strategy was developed, funded (~$20 million USD), and has been implemented; functioned as the project's senior technical and laboratory management advisor. The project involved developing training schemes for scientists, equipment acquisition, facility redesign and renovation, development of analytical schemes (SOPs), setting up consumable supply mechanisms, development of budgetary needs and the infusion of quality control mechanisms. The plan was designed to comprehensively stand up three fully functional scientific laboratories and a training laboratory that would provide scientific services for the whole country of Iraq. The services provided will include analytical chemistry (drug, arson, explosive, and gun shot residue analysis), analytical biology (DNA analysis), firearm/toolmark examination, document examination, and fingerprint examination.

Special Project Manager, MUFSC

Dates: January 2010 - Present

Work as the Special Project Manager at the Marshall University Forensic Science Center. Duties include: evaluating DNA testing procedures and interpretations of lab results for interpretation biases (i. e. cognitive bias); working with the Technical Leader and staff of the DNA laboratory to promote process improvement; helping train forensic professionals who attend week long, grant funded training sessions at MUFSC; consulting with state/federal agencies and the community at large; providing supervision to staff conducting research and methods development on new forensic DNA technologies, identifying grant opportunities and writing proposals to secure federal grant funding; statistically assessing the results obtained from laboratory projects.

Director, West Virginia State Police Forensic Laboratory

Worked technically as a forensic biologist for twenty-three years and have examined and analyzed evidence for thousands of biology cases. During my tenure as a forensic biologist designed, implemented, developed, equipped, and supervised the WVSP DNA analysis laboratory; served as

the first WVSP CODIS Databank Administrator and DNA Technical Leader; served as the WVSP Laboratory's initial Quality Manager; and was its Director from 2002-2007.

• Director Forensic Laboratory (civilian)	August 2006 - September 2007
• OIC Forensic Laboratory (O9)	March 2002 - August 2006 (retired)
• Quality Assurance Officer/Manager	June 2001 - March 2002
• Supervisor Biochemistry Section (DNA unit)	January 1992 - June 2001
• Supervisor Serology Section	July 1989 - January 1992
• Bench Serologist	October 1985 - July 1989

Other Employment

Employed as Adjunct Professor by Marshall University College of Science from 2000 (fall) to 2006 (spring) and regularly taught the following courses (lecture/lab): ISC 205 Intro Forensic Science, IST 445 DNA Forensics and IST 482 DNA APS for Science.

Management Training

- Change Leadership, Cornell University 2013-2014
  - *ILRSM513 Establishing Momentum: Managing Structure, Resources, and Performance*
  - *ILRSM514 Sustaining Momentum: Motivating Through Vision, Culture, and Political Agility*
  - *ILRSM512 Mobilizing the Coalition for Action*
  - *ILRSM509 Developing an Agenda for Change*
  - *ILRSM510 Mapping the Political Terrain of Allies and Resistors*
  - *ILRSM511 Negotiating Support and Buy-In for Your Agenda*
- WVSP Supervisory In-service Training (1989 - 2006)
- Police Risk Management Seminar, West Virginia Cultural Center (WVSP)
- Supervision of Police Personnel Northwestern University Traffic Institute (WVSP)
- Business/accounting/law courses at Marshall University, Huntington, West Virginia (1987-1990)
- Earned graduate-level professional degree (90 hrs) that included management courses (1981)

Specialized Technical Training

- *DNA GPA Assessor Training*, National Forensic Science Training Center
- *ABI 3100 Capillary Electrophoresis, GeneMapper, Real-Time PCR Training*, Marshall University Forensic Science Center
- *FBI QAS DNA Auditor Training*, Marshall University Forensic Science Center
- *Forensic Statistics Workshop*, Marshall University Forensic Science Center
- *Biochemistry*, Marshall University School of Medicine
- *Statistics*, Marshall University Graduate College
- *Image Processing*, Marshall University School of Medicine
- *Microscopy/Photography*, Marshall University School of Medicine
- *DNA Technologies I*, Marshall University School of Medicine
- *Cell and Molecular Biology*, Marshall University School of Medicine
- *Laboratory Techniques I & II*, Marshall University School of Medicine
- *Statistics and Population Genetics for Forensic Science*, NC State University
- *DNA Typing With STRs Workshop*, Promega Corporation
- *Quality Assurance and Quality Control*, Marshall University School of Medicine
- *Future DNA Technologies*, Marshall University School of Medicine

- *DNA Technologies*, Marshall University School of Medicine
- *Diagnostic Virology*, Marshall University School of Medicine
- *Molecular Genetics and Population Statistics*, Marshall University School of Medicine
- *Molecular Biology of Forensics*, Marshall University School of Medicine
- *HLA DQα Forensic DNA Amplification and Typing*, Cetus Corporation
- *International Seminar on the Forensic Applications of PCR Technology*, FBI Academy
- *Laboratory Application of DNA Methods*, FBI Academy
- *Forensic Application of DNA Typing Methods*, FBI Academy
- *Hae III Forensic Training*, Lifecodes Corporation
- *Safe Use of Radionuclides*, Oakridge Universities
- *Radiological Monitoring,* Office of Emergency Services WV
- *Advanced Forensic Science Analytical Genetic Testing*
- *Allotyping Techniques*, Tri-State Labs
- *Principles of Microscopy*, Marshall University
- *Electrophoresis/Isoelectric Focusing Workshop,* LKB Labs
- *Hair and Fiber Analysis,* FBI Academy

Research and Validation Projects

- *Web Based Forensic Information Management System (FIMS)*, 2004 to 2007

  Working with Dr. Rhaspal S. Ahluwalia at the College of Engineering and Mineral Resources at West Virginia University to design and implement an information management system for the WVSP forensic facility that will allow end user interaction.

- *Participated in Visiting Scientist Program*, FBI Research Lab (approximately five months), 1991

  Research focused on the development of STR based analysis systems. Work summarized as PCR Amplification of the VNTR Polymorphism Located 3' to the Human Type II Collagen Gene, Proceedings of the International Seminar on the Forensic Application of PCR Technology, 1991.

- *The Detection of Group Specific Component (Gc) in the General Population of West Virginia*, JFSCA, 35:6:1436-40 (November 1990)

- *Population Data of Casework in West Virginia on Six Genetic Marker Systems*, JFSCA, 34:4:1007-10 (July 1989)

- *Simultaneous Isoelectric Focusing of Phosphoglucomutase and Erthyrocyte Acid Phosphatase in Thin Layer Polyacrylamide Gels*, presented at spring meeting of the Southern Association of Forensic Scientists, 1987

Additional Publications

- *A New Tool for the Criminal Justice System—DNA Analysis*, WVCJJ, 1:1:6-8 (August 1993).

DNA Protocol Validations

- 3500 Genetic Analyzer, capillary based DNA analysis system

- 3130 Genetic Analyzer, capillary based DNA analysis system
- 377 Gene Analyzer, gel based DNA analysis system
- 7500 Real-Time PCR system
- Qiagen BioRobot EZ1xl, automated DNA extraction system
- Qiagen EZ1 DNA Investigator Kit, automated DNA extraction
- Quantifiler® Duo DNA, RT PCR based Quantification system
- Quantifiler® Human DNA, RT PCR based Quantification system
- Identifiler Plus, fluorescent/capillary based-DNA analysis system
- PowerPlexY, fluorescent/capillary based-DNA analysis system
- YPlex6, fluorescent/gel based-DNA analysis system
- PowerPlex16, fluorescent/gel based-DNA analysis system
- Profiler Plus, fluorescent/gel based-DNA analysis system
- Geneprint STR System FFV, silver staining/gel PCR-based DNA analysis system
- Geneprint STR System CTT, silver staining/gel PCR-based DNA analysis system
- AmpliFLP D1S80, silver staining/gel PCR-based DNA analysis system)
- AmpliType HLA-DQα, dot blot PCR-based DNA analysis system
- Hae III RFLP DNA analysis system, probes D2S44, D13S14, D4S139, and D1S7; (1992)
- GeneMapper®, data collection and analysis software
- GeneMapper® ID-X, data collection analysis software
- GeneScan®, data analysis software
- Genotyper®, allele identification software
- ABI PRISM® 377 data collection software

EDUCATION

Marshall University, School of Medicine, Huntington, WV, 1999 (MS)
WV State Police Academy, Institute, WV, 1986
Southern Seminary, Louisville, KY, 1981 (Master of Divinity)
Marshall University, Huntington, WV, 1978 (BS)

Undergraduate (BS): Biological Sciences/Chemistry (minor)
Graduate (MS): Forensic Sciences/DNA Analysis

ADDITIONAL QUALIFICATIONS

Project Director

Served as the project director/author for twenty-three successful laboratory improvement grant applications and awards. Improvements included creation of DNA analysis laboratory; redesign of laboratory LIMS system; renovation and redesign of the Firearm/Toolmark, Drug Identification, and Latent Print Sections; creation of an evidence Processing Section; installation of robotic systems for DNA analysis and the general upgrade of the analytical capabilities of the laboratory.

Played a foundational role in the creation of the Marshall University CODIS Testing Laboratory, the West Virginia State Police Crime Scene Teams, and the West Virginia State Police Cyber Crime Unit

Educator

Functioned as a certified law enforcement-training officer for the State of West Virginia for twenty years and as an adjunct professor at Marshall University for six years; to date have instructed many different audiences in a variety of settings on a wide array of scientific topics. Have taught university students in a formal classroom setting, police officers at the WVSP Academy, hospital personnel in emergency rooms, and have routinely given seminar lectures for the Office of the Chief Medical Examiner, Marshall University, West Virginia University, and West Virginia State University. Have also regularly provided training to SARTs, SANEs, judges, magistrates, and attorneys.

Other Relevant Professional Activities

- Founding member of West Virginia's SANE Advisory Board
- Member of the Governor's West Virginians against Violence Committee that reviews grants and recommends awards for VOCA and VAWA applicants
- Member of NIJ's General Forensics Technical Working Group that reviews general forensic science research and sets future funding priorities
- Member of the National Sexual Violence Resource Center's Sexual Assault Response Team (SART) Project Advisory Committee tasked with developing a national SART toolkit
- Member of West Virginia's Department of Health and Human Resources Key Players in Rape Prevention committee tasked with developing a comprehensive five-year plan for rape prevention for the State
- Participant in the NIJ sponsored Foresight Project that is designed to evaluate and change the basic business model for forensic laboratories
- ASCLD/LAB Inspector – from 1994 to 2007 participated in the inspection and evaluation of numerous national and international laboratory facilities
- Laboratory IT Administrator - functioned as one of the WVSP Forensic Laboratory's system administrators for numerous years. Primary focus was in-house software implementation and use. Am well-versed in the use of a wide array of database, word processing, spreadsheet, image storage, image manipulation, image capture, and presentation software

Memberships

- Southern Association of Forensic Scientists
- American Society of Crime Laboratory Directors
- ASTM International

PROFESSIONAL AWARDS

- US Department of Justice, Victim Assistance Award (2006)
- US Department of Justice, Victim Assistance Award (2005)
- The Foundation for the Improvement of Justice Award (2005)
- National Sexual Violence Resource Center Award for Outstanding Advocacy & Community Work in Ending Sexual Violence (2005)
- West Virginia Prosecuting Attorneys Association, Criminal Justice Partnership Award (1999)

Chair: Tracy Christofero | **GC#6: Course Addition**

Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: COEPD Dept/Division: Leadership Studies Alpha Designator/Number: LS 635 (•) Graded ( ) CR/NC

Contact Person: Dr. Mike Cunningham Phone: 6-1912

NEW COURSE DATA:

New Course Title: Organizational Theory

Alpha Designator/Number: L S 6 3 5

Title Abbreviation: O r g a n i z a t i o n a l T h e o r y

(Limit of 25 characters and spaces)

Course Catalog Description: (Limit of 30 words)
This course analyzes leadership theories and their application to leadership and management in nonprofit and public sector organizations.

Co-requisite(s): none First Term to be Offered: spring, 2016

Prerequisite(s): none Credit Hours: 3

Course(s) being deleted in place of this addition (*must submit course deletion form*):

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head Michael Cunningham (JW)	Date 8-17-15
Registrar Roberta Simpson 130401	Date 8/26/15
College Curriculum Chair	Date 8/24/15
Graduate Council Chair JChristofero	Date 10-12-15

Request for Graduate Course Addition - Page 2

College: COEPD | Department/Division: Leadership Studies | Alpha Designator/Number: LS 635

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Dennis M. Anderson
Bobbi Nicholson
Charles Bethel

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "***Not Applicable***" if not applicable.

Not applicable

3. REQUIRED COURSE: If this course will be required by another deparment(s), identify it/them by name. Enter "***Not Applicable***" if not applicable.

Not applicable

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "***Not Applicable***" if not applicable.

Not applicable

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "***Not Applicable***" if not applicable.

Not applicable

6. COURSE OBJECTIVES: (May be submitted as a separate document)

1) identify and explicate the changes in fundamental approaches to leadership (e.g., "great man," situational, contingency, functional, transactional, transformational, adaptive, and emerging trends)
2) identify and explicate the changes in fundamental approaches to management (i.e., prescriptive, human relations, behavioral, and emerging dialectical models);
3) relate the influence of intellectual theories/movements (i.e., modernism, postmodernism, critical theory) on leadership and organizational theory;
4) explain how competing social, cultural or political claims (e.g., "scientifically based" or "data-driven" decision-making or practices, etc.) affect the execution of certain theoretical models in organizational leadership; and

7. COURSE OUTLINE (May be submitted as a separate document)

Course Outline for LS 635

Week 1: Introduction
- Course objectives and requirements
- Orientation to theory development, required elements/characteristics, distinctions between theories and hypotheses, identification of relevant peer-reviewed journals, etc.
- Modern vs. postmodern theories

Week 2: Great man/trait theories
Week 3: Situational and contingency theories
Week 4: Analysis of case studies on trait, situational and contingency theories in the public sector
Week 5: Functionalist and path-goal theories
Week 6: Behavioral/behaviorist theories
Week 7: Analysis of case studies on path-goal and behavioral theories in the public sector
Week 8: Transactional leadership theory
Week 9: Transformational and servant leadership theories
Week 10: Analysis of case studies on transactional, transformational and servant leadership in the public sector
Week 11: Adaptive leadership theories
Week 12: Analysis of case studies on adaptive leadership in the public sector
Week 13: Special topics: Postmodern theories (post-industrial, feminist, critical theorist, etc.), leadership assessment development
Week 14: Comparing and contrasting best leadership practices
Week 15: Final projects, wrap-up and review

8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)

Gareth R. Jones (2013), Organizational Theory, Design, and Change. Prentice-Hall

John, McAuley, Joanne Duberly, and Phil Johnson (2007), Organizatioanl Theory: Challenges and Perspectives. Prentice-Hall.

9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)

Case study, blogs, group exercises

Request for Graduate Course Addition - Page 4

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

Use of rubrics to evaluate case studies and other written assignments; final project

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

Apple, M.W. (2004). Ideology and curriculum. New York: Routledge.
Argyris, C., & Schön, D. (1975). Theory in practice: Increasing professional effectiveness. San Francisco: Jossey Bass.
Bolman, L., & Deal, T. (2000). Reframing organizations: Artistry, choice, and leadership. San Francisco: Jossey Bass.
Freire, P. (1985). The politics of education: Culture, power and liberation. (D. Macedo, trans.). New York: Bergin & Garvey.
Goleman, D., Boyatzis, R., & McKee, A. (2002). Primal leadership: Realizing the power of emotional intelligence. Boston, Mass.: Harvard University Press.
Heifetz, R., & Linsky, M. (2002). Leadership on the line: Staying alive through the dangers of leading. Cambridge, Mass.: Harvard University Press.
Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. Journal of Applied Psychology, 89, 755-768.

Larsson, G. (2006). The developmental leadership questionnaire: Some psychometric properties. Scandinavian Journal of Psychology. 74, 4, 253-262.
Kouzes, J., & Posner, B. (2002). The leadership challenge. San Francisco: Jossey-Bass.
McGregor, D. (1960). The human side of enterprise. New York: McGraw Hill.
McLaren, P., & Kincheloe, J.L. (Eds.) (2007). Critical pedagogy: Where are we now? New York: Peter Lang.
Quinn, R. E. (2004). Building the bridge as you walk on it: A guide for leading change. San Francisco, Jossey-Bass.
Schön, D. (1983). The reflective practitioner: How professionals think in action. New York: Basic Books.
Sternberg, R.J. (2007). Foreward to the Special Issue on Leadership. American Psychologist. Washington, DC: American Psychological Association
Torbert, B. (2004). Action inquiry — The secret of timely and transformational leadership. San Francisco: Berrett-Koehler.
Van Wart, M. (2013). Lessons from leadership theory and the contemporary challenges of leaders. Public Administration Review. Hoboken, NJ: Wiley-Blackwell.

Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Course Number and Title:
Catalog Description:
Prerequisites:
First Term Offered:
Credit Hours:

Department: Leadership Studies
Course Number and Title: LS 635 Organizational Theory
Catalog Description: This course analyzes leadership theories and their application to leadership and management in nonprofit and public sector organizations.
Prerequisites: None
First Term Offered: Spring, 2016
Credit Hours: 3

Chair: Tracy Christofero | **GC#4: Major or Degree**

Request for Graduate Addition, Deletion, or Change of a Major or Degree

NOTE: Before you submit a request for a new Major or Degree, you must submit an INTENT TO PLAN form. Only after the INTENT TO PLAN goes through the approval process are you ready to submit this request for a new Major or Degree. For detailed information on new programs please see: http://wvhepcdoc.wvnet.edu/resources/133-11.pdf.

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one PDF copy without signatures to the Graduate Council Chair.
3. ***The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.***

College: College of Health Professic Dept/Division: Social Work

Contact Person: Peggy Proudfoot Harman, MSW, PhD. Phone: (304) 696-3146

Degree Program: Masters of Social Work

Check action requested: ☒ Addition ☐ Deletion ☐ Change

Effective Term/Year: Fall 20 16 ☐ Spring 20 ☐ Summer 20 ☐

Information on the following pages must be completed before signatures are obtained.

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head	Date 9/2/15
College Curriculum Chair	Date 9-8-15
College Dean	Date 9-8-15
Graduate Council Chair J Christofero	Date 10-11-15
Provost/VP Academic Affairs	Date
Presidential Approval	Date
Board of Governors Approval	Date

Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 2

Please provide a rationale for addition, deletion, change: (May attach separate page if needed)

Please see attached rationale for addition of the Master of Social Work Program.

Please describe any changes in curriculum:
List course number, title, credit hours. Note whether each course is required or optional. Enter NONE if no change. (May attach separate page if needed)

Please See attached description of curriculum.

1. ADDITIONAL RESOURCE REQUIREMENTS: If your program requires additional faculty, equipment or specialized materials to ADD or CHANGE this major or degree, attach an estimate of the time and money required to secure these items.
NOTE: Approval of this form does not imply approval for additional resources. Enter NONE if not applicable.

Please see attached Additional Resource Requirements.

2. NON-DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the request and any response received from them. Enter NONE if not applicable.

Please see attached information

For catalog changes as a result of the above actions, please fill in the following pages.

Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 3

3. *Current* Catalog Description

Insert the *Current* Catalog Description and page number from the latest catalog for entries you would like to change. (May attach separate page if needed)

Not Applicable. This is a new degree program. Please see attached Catalog Description

4. *Edits* to the Current Description

Attach a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 4

5. *New* Catalog Description

Insert a 'clean' copy of your proposed description, i.e., no strikethroughs or highlighting included. This should be what you are proposing for the new description. (May attach separate page if needed)

Please see attached document with New Catalog Description.

Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 5

Please insert in the text box below your change summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:
Major or Degree:
Type of Change: *(addition, deletion, change)*
Rationale:

Department: Social Work
Major or Degree: Master of Social Work
Type of Change: (addition, deletion, change) Addition
Rationale: There is currently one Master of Social Work Program in West Virginia that has face to face courses - West Virginia University. Concord University offers an online only Master of Social Work program. Currently there are no Master of Social Work Programs offering a specialization in Integrated Behavioral Health. Please see attached form for rationale.

Rationale for Addition of the Master of Social Work Program:

The mission of the Marshall University Master of Social Work Program is to prepare students for an advanced level of practice as social work specialists grounded in core professional values and competencies of social work practice.

The proposed Master of Social Work Degree supports the mission of Marshall University by:

- Providing opportunities for students to undertake intensive graduate-level education in their chosen fields upon admission to graduate school, giving them solid foundations for becoming competent professionals
- Providing opportunities for students to use their knowledge, creativity, and critical thinking skills to make their communities better places in which to live
- Providing opportunities for students to examine critically the many issues facing society and, through the process of civil discourse, prepare themselves to become socially responsible individuals who contribute to the betterment of society
- Enabling students to appreciate and to cultivate diversity, and to value differences
- Educating a citizenry capable of living and working effectively in a global environment

Furthering the intellectual, artistic and cultural life of the community and region.

The proposed Master of Social Work program supports the mission of the College of Health Professions (COHP) through providing specialized instruction for graduate students focused on interactions with clients experiencing Multiple Chronic Conditions (MCC) as outlined in the Department of Health and Human Services (2014). To address the growing need for an integrated approach to primary and behavioral health care, Marshall University's MSW program will prepare students to work in the field of behavioral health care. The integration of primary and behavioral health care as defined by the Hogg Foundation (2013) as: "the systematic coordination of physical and behavioral healthcare. The idea is that physical and behavioral health problems often occur at the same time. Integrating services to treat both will yield the best results and be the most acceptable and effective approach for those being served." Students will have the opportunity to develop skills to be utilized in health care (to include mental health and substance abuse) with underserved and military populations. The proposed Master of Social Work Degree will be accredited by the Council on Social Work Education (CSWE) which is recognized by the Council for Higher Education Accreditation (CHEA) as the sole accrediting

agency for social work education in the United States. This accreditation assures that the Master of Social Work Program will meet the COHP mission of program integrity through rigorous professional education standards, high student learning, performance expectations, and outcomes.

Program Features

General Information

The Marshall University Department of Social work seeks to prepare well-qualified social workers who practice from a strong professional value-base to serve the mission of the university. Our graduates will promote social justice through their practices with diverse client systems. In the context of a research institution, the Marshall University Department of Social Work is committed to knowledge development that informs social work practice, recognizing the importance of interdisciplinary collaboration to solve complex social problems

According to the Bureau of Labor and Statistics (2014), the job outlook for social workers is expected to grow faster than average for all occupations through the year 2022 at a rate of 19%. The Master of Social Work (M.S.W.) degree will prepare graduates for positions in state, national, and international non-profit, public sector, and public service leadership roles. Graduates from the Marshall University Master of Social Work Program will be trained academically in social work practice, social research, social policy, and service learning in rural and underserved areas.

Social work is a profession concerned with the prevention and amelioration of social problems and the enhancement of the quality of human life. Social workers achieve these goals through direct practice with individuals, families, groups, and community organizations; advocacy; social planning; social policy analysis and formulation; research; and administration. Social work practice helps people mobilize their resources to deal with present circumstances and to enlarge their prospects for the future. Since problems of the individual cannot be seen in any meaningful way in isolation from the broad social and community context in which they occur, social work also takes a leadership role in bringing about institutional and social change.

Program Impact, and Internship Opportunities: Marshall University's main and satellite campuses in Huntington, Point Pleasant, and South Charleston are located in county and state governing centers in West Virginia, and are home to many non-profit and public sector organizations requiring the services of Licensed M.S.W. level employees. The M.S.W. program at Marshall University will offer focused social work practice applications in Integrated Behavioral Health. Students trained in Integrated Behavioral Health will be prepared for internships at the Marshall University Medical School's Rural Health Initiative Programs and be on the cutting edge of interfacing with Primary care physicians who work with underserved populations experiencing Multiple Chronic Conditions. These applications will include courses in mental health and substance abuse assessment and intervention; social work practice with families and groups; social policy issues impacting health service delivery and social work practice with military families. Additionally, there are many local internship and potential job

placement sites through the Veterans Administration (VA) Hospital and the VA outreach programs. Since Marshall University is located in a tri-state area, many more opportunities exist than are normally available in more rural settings.

Employment Opportunities: *U.S. News and World Report* (2011) indicated in a list of the 50 Best Careers that Social Work has an excellent occupational outlook. The report pointed out that an MSW provides professionals with knowledge and skills to work in roles of Marriage and Family Therapists, Mediators, Medical Social Work, and Public Health. Social Workers provide many therapeutic services, treating patients battling conditions such as depression, alcoholism, and anorexia making them invaluable components within Primary Care Medical Homes and Integrated Primary and Behavioral Health settings. The increase in veterans returning from war with Multiple Chronic Conditions (MCC) both physically and mentally has increased the need for Master level social workers as team members in Integrated Primary and Behavioral Health care settings. The Occupational Outlook Handbook, 2010-2011 Edition reports that job prospects for social workers will grow faster than average for all occupations and are particularly favorable for social workers who work in rural areas (U.S. Government, 2011).

Masters of Social Work programs are in high demand on the state and local levels as well as nationally and internationally with large job growth projections over the next 10 years. With Marshall University's focus on becoming an educational leader in global networks, commerce, and community action, the Master of Social Work program offers a rich and prodctive opportunity for local, state, national, and international students. The Huntington regional area offers an excellent opportunity for national and international students to work together in rural areas with various populations. Moreover, issues with primary and behavior health are global making training in concepts of Integrated Behavioral Health portable to other countries.

In addition to health care facilities, primary fields that employ social workers in both public and private organizations are: children and families, disabilities, aging, corrections, and mental health/clinical community.

Alternatives to Program Development: A Master of Social Work degree is considered to be a "terminal degree". As such, students holding the "MSW" degree are eligible to obtain their social work license upon graduation from a program accredited by the Council of Social Work Education (CSWE). Our program will be fully accredited and allow our graduates to work in a variety of settings. The MSW is a highly sought after degree because our graduates are highly versatile, licensed eligible, and able to bill for many types of services. The Social Work Program Advisory Council has continuously supported the development of an MSW Program at Marshall University.

Please describe any changes in curriculum: List course number, title, credit hours. Note whether each course is required or optional. Enter NONE if no change. (May attach separate page if needed)

The Master of Social Work (MSW) Program will consist of two different tracks; the Standard Program and the Advanced Standing Program. The Standard Program (both full-time and part-time) will require the completion of 60 academic credit hours. This track is designed for students entering the MSW Program who do not have a Bachelor of Social Work (BSW) degree or meet the requirements for the Advanced Standing Program. The first year of the Standard Program will consist of the foundation content (24 credit hours) and the second year will consist of the advanced content (36 credit hours). The Advanced Standing Program will require the completion of 36 academic credit hours and will consist of the second year of advanced study course content. The Advanced Standing Program is for students entering the MSW Program with a BSW degree and who meet specific GPA requirements.

Foundation Level for Non-Advanced Standing

The M.S.W. Program will consist of a foundation level curriculum to include the following:

1. SWK 501-Foundations of Generalist Practice I- 3 credit hours
2. SWK 511-Foundations of Human Behavior in the Social Environment- 3 credit hours
3. SWK 521-Foundations of Policy - 3 credit hours
4. SWK 531-Foundations of Generalist Practice II- 3 credit hours
5. SWK 541-Foundations of Research - 3 credit hours
6. SWK 551- Foundation Field Practicum-6 credit hours

Advanced Standing Program

An applicant for admission to the Master of Social Work program who holds a baccalaureate degree from an undergraduate social work program accredited by the Council of Social Work Education may be admitted with advanced standing.

1. SWK 613-Advanced Human Behavior and Social Environment- 3 credit hours
2. SWK Elective (Advanced Behavioral Health) - 3 credit hours
3. SWK 633-Advanced Clinical Social Work Practice in Behavioral Healthcare with Individuals and Families - 3 credit hours
4. SWK 634-Advanced Clinical Social Work Practice in Behavioral Healthcare with Groups, Communities & Organizations - 3 credit hours
5. SWK 622- Integrated Health Policy and Services - 3 credit hours
6. SWK 642-Advanced Social Work Research I - 3 credit hours
7. SWK 643- Advanced Social Work Research II – 3 credit hours

8. SWK 653-Advanced Field Practicum --9 credit hours
9. SWK -Elective (Advanced Behavioral Health Focus)- 3 credit hours
10. SWK 615 Psychopathology – 3 credit hours

All regular 2-year students must complete 60 credits in order to graduate from the program. All students enrolled in the regular 60 credit program must complete two separate (two semesters each) academic year long field placements. Students who enter our program with advanced standing complete only one academic (two semesters) year long field placement. All Non-Advanced and Advanced Standing students will be required to take:

Behavioral Health Elective Courses

These electives contextualize student learning into two platforms of practice including Behavioral Health Services for Military Families and Behavioral Health Services for Underserved Populations. Behavioral Health students will deepen their understanding of issues facing military veterans, their families, and underserved populations by working in field placements where behavioral health services focused on these populations takes place. A full range of electives is offered to supplement the required sequence of courses, thus permitting students an opportunity to deepen and enrich their knowledge of issues faced by military veterans and underserved populations.

1. Behavioral Health Services for Military Families

SWK 650 Understanding Military Culture

SWK 653 Military Mental Health and the Impact of Trauma

SWK 655 Comorbidity of Mental and Physical Disorders

2. Behavioral Health Services for Underserved Populations

SWK 670 Advanced Theories and Practice with Children

SWK 673 Family & Community Violence in Rural and Underserved Areas

3. Primary and Behavioral Health Integration Electives

SWK 630 Intersections of Mental Health, Substance Abuse and Trauma

SWK 631 Integrated Health Care: Models and Practice

SWK 633 Homelessness: Implications for Behavioral Healthcare

SWK 634 Drug Dependency

SWK 635 Older Adults

SWK 636 Contemporary Global Issues

SWK 656 Substance Abuse Assessment and Intervention

SWK 657 Cultural Competence in Substance Abuse Services

Composition of the Marshall University Master of Social Work Program:

Foundation Curriculum	15 hours
Foundation Field Instruction	6 hours
Specialization	27 hours
Field Instruction	9 hours
Psychopathology	3 hours

1. ADDITIONAL RESOURCE REQUIREMENTS: If your program requires additional faculty, equipment or specialized materials to ADD or CHANGE this major or degree, attach an estimate of the time and money required to secure these items. NOTE: Approval of this form does not imply approval for additional resources. Enter NONE if not applicable.

Program Implementation and Projected Requirements

Program Administration: The Council on Social Work Education requires that M.S.W. programs have a full time director. The Master of Social Work Program will require a Director who is a member of the Social Work faculty. The Director of the Program must have full-time appointment to the social work program and sufficient assigned time (at least 50%) to provide educational and administrative leadership (CSWE standard).

Program Projections: Marshall University expects to graduate approximately 149 graduate students in the Master of Social Work Program by the fifth year (2020-2021).

Faculty Instructional Requirements: The Council on Social Work Education requires that M.S.W. programs have a minimum of six full time faculties with primary assignments to the M.S.W. program. At least four of the new positions would be at the doctoral level.

Accreditation of the Program will require the Social Work Department to hire six additional faculty members in order to meet the standards established by the CSWE accrediting agency for this MSW graduate degree.

The new faculty positions reported in the total salary and benefit costs include in year one a program administrator with 50% instructional time and 50% release time, two new faculty

members, including a field coordinator with 50% instructional time and 50% release time. During the second year two additional full-time faculties are to be added and in year three, an additional faculty member would be hired. This equates to a faculty size of six full-time faculty members by year three. The faculty FTE is calculated using an equivalent full-time faculty load of 18 credit hours per year. Faculty salaries are estimated at $65,000 per year in year one for an associate professor and $55,000 per year for an assistant professor. The projections include the cost of two professors and two assistant professors by the end of year three. Faculty salaries are projected based on hiring newly graduated Ph.D.'s and ABD's, and reflect average social work faculty salaries as reported by the Council on Social Work Education (CSWE), 2010. Please see Table 4 in Attachments. Faculty startup costs reflect equipment which is usually a onetime cost. No research support staffs are included in the calculations because it is projected that the Department will acquire grant funds which will offset the startup costs. Additionally two Graduate Assistant positions have been included in the budget and will be assigned research tasks as needed.

Library Resources and Instructional Materials: Resources from Marshall University Drinko Library will be utilized, both at the library and online. Other instructional materials are available through publishers whose texts are utilized in the program. Since graduate coursework at Marshall University's MSW Program is aimed at working professionals, Social Work faculties recognize that off-site search and retrieval as well as document delivery are important issues. Therefore, databases have been acquired and provided to students in an IP-specific mode. The databases are mounted to the library's website so that the online catalog, online databases, and online research web links may be utilized by any remote users who have access to the worldwide web and the Marshall University passwords to the databases. A non-traditional graduate student may call up this web site 7 days a week, 24 hours per day, search the site and locate first-class, graduate-level resources, and print the results of their research at their search terminal. For documents not available by web delivery to the user, the Library may transmit web-based faxed documents to researchers. Online reference access to professional librarians has been set up, as has a materials request form, which will permit graduate students to request acquisition of specialty materials in an expedited manner.

Support Services Requirements: Marshall University presently has most of the needed support services to support an MSW Program. The divisions within the University all have computer labs and students have access to laptops and computers in the library. The Library and the Center for Academic Technologies and the Computer Services and Institutional Research Office all have worked to provide excellent support for students living both on and off campus. Those living off campus can easily access academic and research resources from home and other remote locations. This is integral to the MSW Program as many of the candidates will be non-traditional students.

Marshall University also provides services to students with disabilities and academic needs through the Office of Student Support Services. Additionally, the International Student (INTO) program addresses needs of students from a wide variety of cultures and backgrounds. Career Services has worked closely with the Social Work Department to help prepare and link social work majors with appropriate employment opportunities. The only area of identified possible need will be secretarial/clerical support.

Facilities Requirements: Approximately 8 offices fully equipped with office furniture, computer, printer, and telephone will be required. Six (6) offices will be designated for new faculty, one (1) office will be designated for use by Adjunct Faculty, and one (1) office will house the Administrative Associate.

Operating Resource Requirements: Current expenses include those expenses normally encountered by the instructional departments in higher education. These expenses include marketing, office expense, travel, supplies, and other related expenses. The cost of obtaining the necessary accreditation for the Program has been included based on the latest available information.

Operating Resource Assumptions: Based on the pro forma budget model, in-state funds will be used to support the program. Revenue projections are calculated by applying the current graduate tuition and fee rates for both instate and out-of-state students to estimated enrollment totals. The financial projections are based on the assumptions that 75% of the students enrolled in the classes will be in-state residents and that 25% of the students enrolled will be drawn from out-of-state. No rates for clinical graduate degrees have been used in this projection.

The Program Investigator for the Public Service Grant, a Title IV grant program administered by the West Virginia Department of Health and Human Services will be requesting additional funding under this Title IV grant program to provide financial assistance to student planning to enroll in these classes. This assistance increases the ability of the Program to achieve the desired results since some of the financial burden for the cost of attending these classes can be borne by the grant program. The number student FTE that will be eligible for these funds is dependent upon the State's Penetration Rate, the University's ability to increase cost share and the student's willingness to work in the child services area upon graduation.

Source of Operating Resources: The Program is expected to generate small but positive cash flows for the first three years and with increases in year four and five as the program grows in student attendance.

2. NON-DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the request and any response received from them. Enter NONE if not applicable.

Existing Programs: West Virginia University offers full and part-time M.S.W. programs throughout West Virginia. West Virginia University's main campus in Morgantown offers a full menu of M.S.W. program designs and concentrations. West Virginia University's off campus sites such as WVU Charleston offers part-time evening programs with limited course selections and areas of concentration. Concord University is offering an online M.S.W. Program with periodic meetings. At this time no MSW program offers a specialization in Behavioral Health.

5. New Catalog Description Insert a 'clean' copy of your proposed description, i.e., no strikethroughs or highlighting included. This should be what you are proposing for the new description. (May attach separate page if needed)

M.S.W. Program Catalog Description

M.S.W. Foundation Curriculum

The foundation curriculum promotes a generalist perspective in which the simultaneous impact of many systemic levels (individuals, families, groups, organizations, and communities) on clients' lives is critically analyzed and recognized. The foundation builds upon a liberal arts base that fosters an understanding of society as a complex organization of diverse people and ideas. Social problems are understood as occurring within the nexus of culture, conflict, development, ecology, and systems and as such, efforts to help or intervene must include consideration of these forces. Students will be able to critically identify and assess social problems, specifically attending to 1) how such problems are maintained, 2) how they impact the quality of people's life, 3) cultural sensitivity and appreciation of marginalized people, and 4) how to actively promote social and economic justice. In the foundation year, the focus is on the development of critical thinking skills in all the areas mentioned.

M.S.W. Advanced Curriculum - Advanced Social Work Practice

The advanced practice curriculum seeks to develop the utilization and application of critical thinking, relative to behavioral health, on all levels - in reading professional writing and research, in students' practice, in the classroom, and in the students' own thinking. Consistently monitoring practice ethically, evaluating theoretical principles and epistemologies, and utilizing technological advances become basic practice patterns. Specific skill sets developed include: 1) Creating, organizing and integrating ideas and action on engaging diverse client systems effectively in change; 2) Assessing, conceptualizing and analyzing theoretical, practice and research problems from multiple perspectives and utilize critical thinking skills to formulate impressions based upon the data; 3) Analyzing, synthesizing and evaluating the evidence available to guide advanced social work practice; 4) Synthesizing, formulating and implementing a plan of action for social work practice that addresses complex issues and problems, builds consensus and incorporates multiple-level forces on client systems; 5) Analyzing and evaluating data of client progress and outcomes and assess implications and consequences of this progress and outcomes; 6) Synthesizing, creating, and organizing ideas from theory, research and practice

for social justice; 7) Demonstrating the ability to integrate culturally competent skills into all aspects of social work practice; 8) Demonstrating the knowledge of the roles of behavioral health providers working in primary care settings, theories and models of care, and cross-cultural issues; and 9) Demonstrating skills in engagement, assessment, intervention planning and implementation, and practice evaluation in the primary and behavioral health care setting.

M.S.W. Practicum Education

All students admitted to the 60 credit-hour program are required to satisfactorily complete (900 clock hours) in approved practicum sites. If employed in a human services agency meeting the Department's criteria as a placement site, the student may apply to undertake the practicum at her/his place of employment. This may be accomplished when the agency is willing to shift the student's work role and supervision in such a manner as necessary to meet the school's educational objectives for practicum instruction.

M.S.W. Electives

The Marshall University Department of Social Work provides electives as enrichment to the specialized learning in the advanced year. Social work positions call for skills and knowledge that are broader than any narrowly defined specialization. For example, Behavioral Health care workers are asked to know psychopathology, substance abuse, managed care, AIDS, and a range of other substantive areas. Many school social workers share the need for the same content. In addition, it is noted that social workers frequently change jobs, often to another field of practice. Social work education seeks to teach students to think critically, analyze systematically, and know where to find information and resources within the context of social work history, development and values. It is this type of education that best prepares students to function in a rapidly changing society.

In this curriculum paradigm, electives are considered enrichment. Some of this enrichment is in the form of very specific course content that aligns with a specific focus area or specialization. For example the enrichment may take the form of a complementary course such as a student focused on children and families taking a management course to prepare for career possibilities or the student interested in community and international practice, taking a course in family intervention to understand the complexities of family practice. Or, the enrichment may take the form of exploration as in the case of the student taking an aging or child welfare course to better understand those fields of practice and to prepare for various job prospects. Finally, the enrichment may include a course of general interest such as a women's issues course which crosses numerous focus areas, but may not correspond specifically to the direct focus of the student.

Master of Social Work Program Projected Budget for Academic Years 2016- 2022

Net Tuition Formula

Initial Annual	Res	Non-res
Total Tuition	10,386	22,256
Less Cap Fe	205	800
Less Special	199	199
Less Aux Fe	339	339
Total fees/s	743	1,338
Total Annua	1,486	2,676
Net Tuition	8,900	19,580

Enrollment Mix based on 30 students per yr @ 5% annual tuitio

		Year#1 7/16-6/17	Year#2 7/17-6/18	Year#3 7/18-6/19	Year#4 7/19-6/20	Year#5 7/20-6/21
Resident - 1st year		23	21	20	20	20
Non-Resident - 1st year		7	9	10	10	10
Resident - 2nd year			23	21	20	20
Non-Resident - 2nd year			7	9	10	10
Fee Rate Increase Resident			5.00%	5.00%	5.00%	5.00%
Fee Rate Increase Non-Resident			5.00%	5.00%	5.00%	5.00%
Fee Rate Increase Metro			5.00%	5.00%	5.00%	5.00%
Resident Tuition Rate		8,900	9,345	9,812	10,303	10,818
Non-Resident Tuition Rate		19,580	20,559	21,587	22,666	23,800

FY2016 - FY2020

Based on 30 students - 75% Res & 25%	Year#1 7/16-6/17	Year#2 7/17-6/18	Year#3 7/18-6/19	Year#4 7/19-6/20	Year#5 7/20-6/21	Year#6 7/21-6/22
YR1 Fees Resident	204,700	196,245	196,240	206,060	216,360	227,180
YR1 Fees Non-Resident	137,060	185,031	215,870	226,660	238,000	249,900
YR2 Fees Resident		214,935	206,052	206,060	216,360	227,180
YR2 Fees Non-Resident		143,913	194,283	226,660	238,000	249,900
Total Resident Fees	204,700	411,180	402,292	412,120	432,720	454,360
Total Non-Resident Fees	137,060	328,944	410,153	453,320	476,000	499,800
TOTAL SOURCES	341,760	740,124	812,445	865,440	908,720	954,160

Use Budget

FACULTY	Name	Pos#	Year#1 7/16-6/17	Year#2 7/17-6/18	Year#3 7/18-6/19	Year#4 7/19-6/20	Year#5 7/20-6/21	Year#6 7/21-6/22
Faculty Director		Ph.D	80,000	80,000	80,000	80,000	80,000	80,000
Faculty		Ph.D	60,000	60,000	60,000	60,000	60,000	60,000
Faculty		MSW/ABD	55,000	55,000	55,000	55,000	55,000	55,000
Faculty		MSW	-	50,000	50,000	50,000	50,000	50,000
Faculty		Ph.D	-		65,000	65,000	65,000	65,000
Faculty		Ph.D			65,000	65,000	65,000	65,000
Labor Pool/Contingency		3%	384	1,164	1,966	2,793	3,645	4,523
Benefits-Fac	ulty/adm	28%	53,200	96,600	96,600	96,600	100,800	99,400
TOTAL FACULTY			248,584	342,764	473,566	474,393	479,445	478,923
PART-TIME FACULTY								
Part-Time Faculty			5,000	5,000	5,000	5,000	5,000	5,000
Benefits-Fac	u 15.0%		773	796	820	844	869	896
TOTAL PART-TIME FACULTY			5,923	6,101	6,284	6,472	6,665	6,866

ADMINISTRATION/PERSONELL			Year#1 7/16-6/17	Year#2 7/17-6/18	Year#3 7/18-6/19	Year#4 7/19-6/20	Year#5 7/20-6/21	Year#6 7/21-6/22
Administrative Associate -		TBA6	25,363	26,124	26,908	27,715	28,546	29,403
Labor Pool/C	0.0%		1,543	2,350	3,180	4,036	4,918	5,825
Benefits-Sup	28.0%		7,102	7,314	7,534	7,760	7,992	8,391
Graduate As	1=$ 3200			3,200	3,200	6,400	6,400	6,400
Labor Pool/C	0.0%			384	384	384	384	384
Benefits-Stud	1.0%		-	36	36	68	68	68
GA Tuition				8,900	8,900	28,000	28,000	28,000
TOTAL ADMINISTRATION/PERSONNEL			34,008	48,308	50,142	74,363	76,308	78,471
TOTAL STAFF			5	8	8	8	8	8

OPERATING EXPENSES (5% inflation FY		Year#1 7/16-6/17	Year#2 7/17-6/18	Year#3 7/18-6/19	Year#4 7/19-6/20	Year#5 7/20-6/21	Year#6 7/21-6/22
Faculty Recruitment		6,000	6,000	6,000	6,000	6,000	6,000
Faculty Start-Up		10,000	10,000	10,000	10,000	10,000	10,000
Accreditation Fees		4,134	3,974	2,700	3,108	3,108	3,108
Operating Expenses (5% inflation FY16		27,500	28,875	30,319	31,835	33,426	35,098
TOTAL OPERATING EXPENSES		47,634	48,849	49,019	50,943	52,534	54,206

	Year#1 7/16-6/17	Year#2 7/17-6/18	Year#3 7/18-6/19	Year#4 7/19-6/20	Year#5 7/20-6/21	Year#6 7/21-6/22
TOTAL PERSONNEL	234,931	397,173	529,992	555,228	562,418	564,260
TOTAL OPERATING EXPENSES	47,634	48,849	49,019	50,943	52,534	54,206
NET TOTAL BUDGET	282,565	446,022	579,011	606,171	614,952	618,466

PROGRAM SUMMARY	Year#1 7/16-6/17	Year#2 7/17-6/18	Year#3 7/18-6/19	Year#4 7/19-6/20	Year#5 7/20-6/21	Year#6 7/21-6/22
TOTAL PERSONNEL	-234,931	-397,173	-529,992	-555,228	-562,418	-564,260
TOTAL OPERATING EXPENSES	(47,634)	(48,849)	(49,019)	(50,943)	(52,534)	(54,206)
TOTAL EXPENSES	(282,565)	(446,022)	(579,011)	(606,171)	(614,952)	(618,466)
TOTAL SOURCES	330,199	740,124	812,445	865,440	908,720	954,160
PROGRAM NET	47,634	294,102	233,434	259,269	293,768	335,694

MSW Program Budget Pro Form Formulae/Explanation

Table 1

Formula for Initial Student Tuition Rates

Initial Annual Tuition Rate	Res	Non-res
Total Tuition	10,386	22,256
Less Cap Fee	205	800
Less Special Cap Fees	199	199
Less Aux Fee	339	339
Total fees/semester	743	1,338
Total Annual Fees	1,486	2,676
Net Tuition	8,900	19,580

Rates for Tuition are listed at the bottom of the Budget. Total Tuition reflects the total for the University less $1486 in Total Annual Fees for Resident Tuition and $2676 Total Annual Fees for Non-Resident Tuition.

Table 2

Formula for Anticipated Numbers of Students per year for 6 Years.

Enrollment Mix (attrition per/year) (1 Res 1 Non-res)								
Resident - 1st year			23	21	20	20	20	20
Non-Resident - 1st year			7	9	10	10	10	10
Resident - 2nd year				0	21	20	20	20
Non-Resident - 2nd year				23	9	10	10	10
Fee Rate Increase Resident				5.00%	5.00%	5.00%	5.00%	5.00%
Fee Rate Increase Non-Resident				5.00%	5.00%	5.00%	5.00%	5.00%
Fee Rate Increase Metro				5.00%	5.00%	5.00%	5.00%	5.00%
Resident Tuition Rate			8,900	9,345	9,812	10,303	10,818	11,359
Non-Resident Tuition Rate			19,580	20,559	21,587	22,666	23,800	24,990

The above table shows that the MSW Program will begin with 30 students in Year 1 and have 30 students for year 2. Numbers will increase to 60 students for years 3-6. Resident and Non-Resident. Tuition are $8900 and $19580 based on the **Formula for Initial Student Tuition Rates** above. The Tuition Rates increase from years 2- 6 at a rate of 5%.

Table 3

Breakdown of Net Total Budget and Program Net

	Year#1 7/16-6/17	Year#2 7/17-6/18	Year#3 7/18-6/19	Year#4 7/19-6/20	Year#5 7/20-6/21	Year#6 7/21-6/22
TOTAL PERSONNEL	234,931	397,173	529,992	555,228	562,418	564,260
TOTAL OPERATING EXPENSES	47,634	48,849	49,019	50,943	52,534	54,206
NET TOTAL BUDGET	282,565	446,022	579,011	606,171	614,952	618,466

PROGRAM SUMMARY	Year#1 7/16-6/17	Year#2 7/17-6/18	Year#3 7/18-6/19	Year#4 7/19-6/20	Year#5 7/20-6/21	Year#6 7/21-6/22
TOTAL PERSONNEL	-234,931	-397,173	-529,992	-555,228	-562,418	-564,260
TOTAL OPERATING EXPENSES	(47,634)	(48,849)	(49,019)	(50,943)	(52,534)	(54,206)
TOTAL EXPENSES	(282,565)	(446,022)	(579,011)	(606,171)	(614,952)	(618,466)
TOTAL SOURCES	330,199	740,124	812,445	865,440	908,720	954,160
PROGRAM NET	47,634	294,102	233,434	259,269	293,768	335,694

The above table represents Personnel Expenses, Operating Expenses, and the Net Total Budget from years 1-6 reflecting a 5% annual increase in operating expenses. The Program Summary table reflects Total Expenses by summing - Total Personnel Expenses and Total Operating Expenses. Total Sources (positive number) is added to Total Operating Expenses (a negative number) for the Program Net sum.

Table 4

Faculty Salary

Median Salary and Middle 50 Percent Salary Range of Full-Time, Non-Administrative Faculty by Carnegie Classification and Rank* (adjusted for 9 months)

Rank	Carnegie Classification	Median Salary	Middle 50%		# of Faculty Reporting
Professor	RU/VH	$111,513	$93,875	$138,250	150
	RU/H	$84,610	$76,270	$95,399	76
	DRU	$48,375	$45,000	$84,380	8
	Master's/L	$74,850	$65,500	$98,377	94
	Master's/M	$65,703	$41,572	$77,000	16
	Master's/S	$73,259	$69,000	$84,926	11
	Bac/A&S	$81,953	$69,500	$93,338	11
	Bac/Div	$64,000	$47,583	$85,125	5
Associate Professor	RU/VH	$77,111	$68,976	$88,626	175
	RU/H	$67,139	$61,549	$72,000	116
	DRU	$60,624	$56,662	$65,720	21
	Master's/L	$60,702	$54,668	$69,958	156
	Master's/M	$56,072	$49,500	$60,272	25
	Master's/S	$60,110	$48,600	$72,000	6
	Bac/A&S	$56,800	$51,831	$77,747	8
	Bac/Div	$51,300	$40,000	$58,500	7
Assistant Professor	RU/VH	$62,611	$55,492	$70,275	190
	RU/H	$56,713	$51,585	$61,000	138
	DRU	$52,274	$49,063	$56,850	32
	Master's/L	$52,500	$47,543	$60,000	215
	Master's/M	$45,090	$39,884	$53,530	42
	Master's/S	$45,000	$42,825	$55,085	18
	Bac/A&S	$45,900	$40,181	$52,750	13
	Bac/Div	$43,500	$36,944	$45,900	20

The above table includes salary information on full-time faculty with titles of full professor, associate professor, or assistant professor that do not have an administrative title (n = 2,197). Salaries were adjusted to reflect a nine-month academic period. If there were less than five faculty members in a single category, salary information was excluded to ensure confidentiality.

The average salary (adjusted for 9-months) for full-time faculty members with no administrative title was $94,405 for Professors, $69,008 for Associate Professors, and $56,208 for Assistant Professors. The table below shows the salary by rank and Carnegie Classification of the institutions where the faculty members are employed (see the Institutional section for more details onthe Carnegie Classifications).