ITT Technical Institute

CJ2570
Forensic Technology

Onsite Course

SYLLABUS

Credit hours: 4.5

Contact/Instructional hours: 56 (34 Theory Hours, 22 Lab Hours)

Prerequisite(s) and/or Corequisite(s):
Prerequisites: CJ1470 Criminalistics or equivalent

Course Description:
This course is a continuation of the study of forensics begun in the Criminalistics course. Students use principles of forensics and technology tools to further examine evidence and recreate crime scenes.

Outside Work:

For purposes of defining an academic credit hour for Title IV funding purposes, ITT Technical Institute considers a quarter credit hour to be the equivalent of: (a) at least 10 clock hours of classroom activities and at least 20 clock hours of outside preparation; (b) at least 20 clock hours of laboratory activities; or (c) at least 30 clock hours of externship, practicum or clinical activities. ITT Technical Institute utilizes a "time-based option" for establishing out-of-class activities which would equate to two hours of out-of-class activities for every one hour of classroom time. The procedure for determining credit hours for Title IV funding purposes is to divide the total number of classroom, laboratory, externship, practicum and clinical hours by the conversion ratios specified above. A clock hour is 50 minutes.

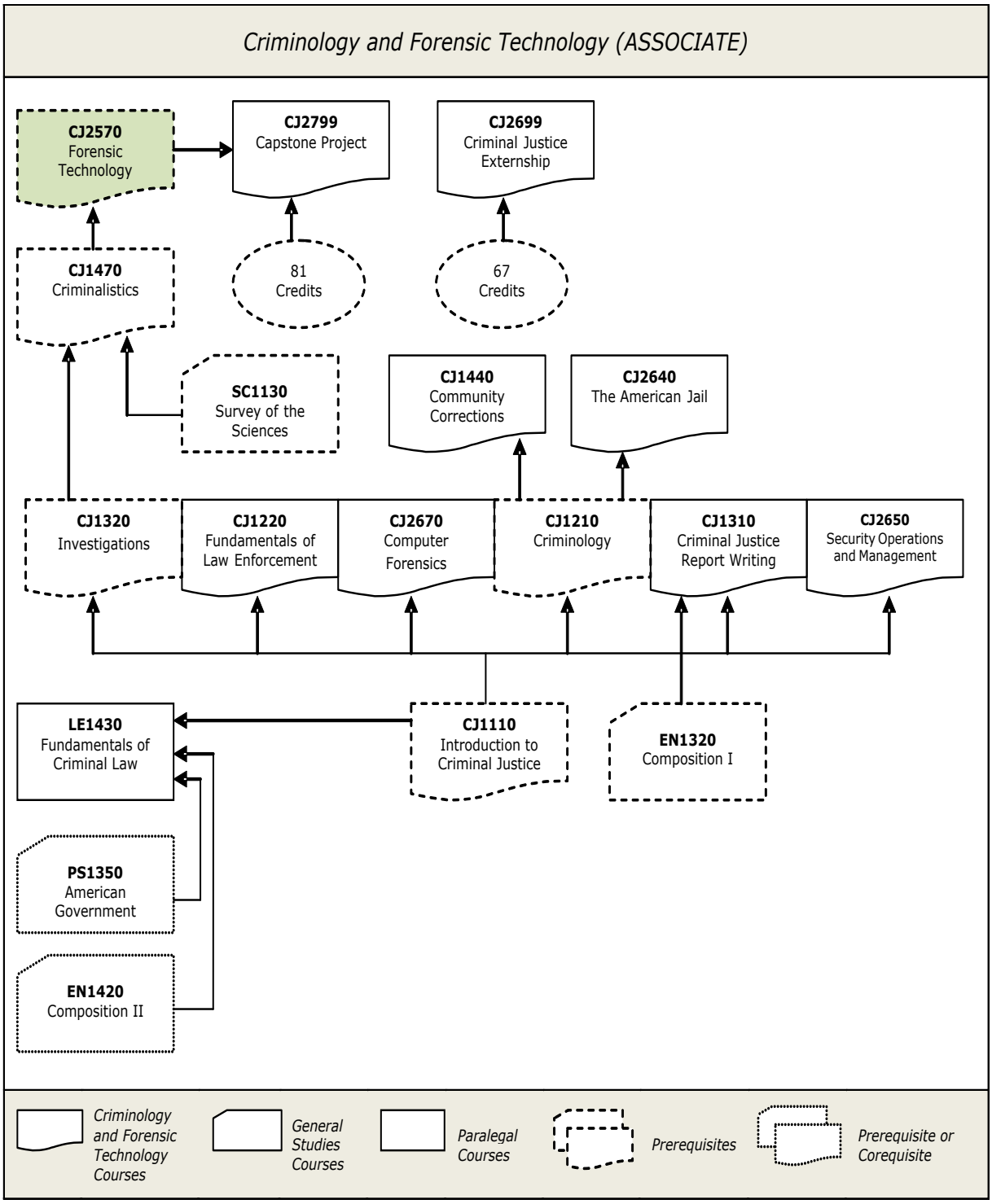
A credit hour is an artificial measurement of the amount of learning that can occur in a program course based on a specified amount of time spent on class activities and student preparation during the program course. In conformity with commonly accepted practice in higher education, ITT Technical Institute has institutionally established and determined that credit hours awarded for coursework in this program course (including out-of-class assignments and learning activities described in the "Course Outline" section of this syllabus) are in accordance with the time-based option for awarding academic credit described in the immediately preceding paragraph.

Where Does This Course Belong?

This course is required for the Criminology and Forensic Technology program. This program covers the following core areas:

- Law enforcement
- Adjudication
- Corrections
- Forensics
- Security

The following diagram demonstrates how this course fits in the program:


Criminology and Forensic Technology (ASSOCIATE)
CJ2570 Forensic Technology
CJ2799 Capstone Project
CJ2699 Criminal Justice Externship
CJ1470 Criminalistics
81 Credits
67 Credits
SC1130 Survey of the Sciences
CJ1440 Community Corrections
CJ2640 The American Jail
CJ1320 Investigations
CJ1220 Fundamentals of Law Enforcement
CJ2670 Computer Forensics
CJ1210 Criminology
CJ1310 Criminal Justice Report Writing
CJ2650 Security Operations and Management
LE1430 Fundamentals of Criminal Law
CJ1110 Introduction to Criminal Justice
EN1320 Composition I
PS1350 American Government
EN1420 Composition II
Criminology and Forensic Technology Courses
General Studies Courses
Paralegal Courses
Prerequisites
Prerequisite or Corequisite

Course Summary

Major Instructional Areas

1. Biological evidence
2. Blood spatter evidence
3. Gunshot evidence
4. Arson evidence
5. Death evidence
6. Forensic photography

Course Objectives

1. Describe the role of a forensic technician in the criminal justice system.
2. Demonstrate procedures for collecting physical and biological evidence.
3. Analyze blood spatters documented at a crime scene.
4. Explain the procedures for collecting gunshot residue evidence.
5. Demonstrate how to use a trajectory kit.
6. Explain the procedures for collecting arson evidence.
7. Apply best practices to process firearms and death evidence.
8. Create photos with correct lighting to capture accurate information and relational evidence.
9. Evaluate physical evidence to reconstruct a crime scene.
10. Describe how to identify illicit drugs and drug paraphernalia and how to document drug use at a crime scene.
11. Explain the fundamental principles of fingerprinting.
12. Identify research and trends that will affect the future of forensic technology.
13. Explain the methods for excavating buried remains.
14. Use the ITT Tech Virtual Library to research topics related to forensics.

Learning Materials and References

Required Resources

Textbook Package	New to this Course	Carried over from Previous Course(s)	Required for Subsequent Course(s)
Young, T., & Ortmeier, P.J. (2011). *Crime scene investigation: The forensic technician's field manual*. Boston: Prentice Hall.	■		■
Other Items	**New to this Course**	**Carried over from Previous Course(s)**	**Required for Subsequent Course(s)**
SmartDraw software		■	■
Onsite Student Lab Kit		■	■
Stereomicroscope		■	■
35mm SLR digital camera with flash unit		■	■
Cyanoacrylate fuming chamber		■	■
Fluorescent light source		■	■
Student Kit		■	■
Drug Kit		■	■
Identikit (Web-based Software Application)		■	■
AutoDesk Crisis Command II (Web-based Software Application)	■		■
Allen, S. (2007). Crime scene myths. *Law & Order*, 55(4), 90-94. ITT Tech Virtual Library>ProQuest Criminal Justice	■		
Anonymous. (2003). Without a Trace? Advances in Detecting, *NIJ Journal*, 249(1), 2-8. NCJ 20090. National Criminal Justice Reference Service website	■		
Colwell, K. (2003). Evidence collection: Preservation and presentation for civil litigation. *Law & Order*, 51(11), 60-65. ITT Tech Virtual Library> ProQuest Criminal Justice	■		
Davis, B., & Clayton, J. (2003). Equipping your CSI unit. *Law & Order*, 51(5), 58-61. ITT Tech Virtual Library>ProQuest Criminal Justice	■		

Other Items	New to this Course	Carried over from Previous Course(s)	Required for Subsequent Course(s)
Dees, T. (2001). Diagramming software. *Law & Order*, 52(10), 134-139. ITT Tech Virtual Library>ProQuest Criminal Justice	■		
Duterte, M., Jacinto, C., Sales, P., & Murphy, S. (2009). What's in a label? Ecstasy sellers' perceptions of pill brands. *Psychoactive Drugs* 41(1), 27-37. ITT Tech Virtual Library>ProQuest Criminal Justice	■		
Gardner, R. M. (2006). Defining a methodology for bloodstain pattern analysis. *Journal of Forensic Identification*, 56(4), 549-557. ITT Tech Virtual Library>ProQuest Criminal Justice	■		
Haskell, N., & Haskell, C. (2002). Forensic entomology. *Law & Order*, 50(5), 58-63. ITT Tech Virtual Library>ProQuest Criminal Justice	■		
Jänisch, S., Meyer, H., Germerott, T., Albrecht, U., Schulz, Y., & Debertin, A. (2010). Analysis of clinical forensic examination reports on sexual assault. *International Journal of Legal Medicine* 124(3), 227-235. ITT Tech Virtual Library>ProQuest Criminal Justice	■		
Knaap, W., & Adach, E. (2002). The Knaap process: Lifting two-dimensional footwear and fingerprint impressions using dental stone. *Journal of Forensic Identification*, 52(5), 561-571. ITT Tech Virtual Library>ProQuest Criminal Justice	■		
Moore, C. (2005). Crime scene integrity. *Law Enforcement Technology*, 32(2), 130. ITT Tech Virtual Library>ProQuest Criminal Justice	■		
Petraco, N. (2011). Common hand tools seen in casework. *Color atlas of forensic toolmark identification.* CRC Press: New York, NY. ITT Tech Virtual Library> Databases>CRCNetbase	■		
Reis, G. (2001). Digital cameras: CSI and crime labs focus. *Law & Order*, 49(9), 58-58-64. ITT Tech Virtual Library>ProQuest Criminal Justice	■		

Recommended Resources

Books, Professional Journals

- Adams, T. F., & Krutsinger, J. L. (2000). *Crime scene investigation*. Upper Saddle River, NJ: Prentice Hall.
- Biggs, M. (2001). *Just the facts: Investigative report writing*. Upper Saddle River, NJ: Prentice Hall.
- Byrd, M. (2001). *Crime scene evidence: A guide to the recovery and collection of physical evidence*. Temecula, CA: Staggs Publishing.
- Fisher, B. A. J. (2003). *Techniques of crime scene investigation* (7th ed.). Boca Raton, FL: CRC Press.
- Gardner, R. (2005). *Practical crime scene processing and investigation*. Boca Raton, FL: CRC Press.
- Genge, N. E. (2002). *The forensic casebook: the science of crime scene investigation*. New York, NY: Ballantine Books.
- Lyman, M. D. (2002). *Criminal investigation: The art and the science.* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.
- Owen, D., Noguchi, T.T., & Reichs, K. (2000*). Hidden evidence: Forty true crimes and how forensic science helped to solve them*. Toronto, ON: Firefly Books.
- Platt, R. (2003) *Crime scene: The ultimate guide to forensic science*. New York, NY: DK Publishing.
- Ramsland, K. M. (2001). *The forensic science of C.S.I*. New York, NY: Boulevard.
- Robinson, E. M. (2010). *Crime scene photography*. (2nd ed.). Boston, MA: Academic Press Elsevier.
- Saferstein, R. E. (2002). *Forensic science handbook*, *1* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.
- Staggs, S. (2000). *Introduction to fingerprint comparison*. Temecula, CA: Staggs Publishing.
- Worral, J. L. (2004). *Criminal procedure: From first contact to appeal*. Upper Saddle River, NJ: Allyn & Bacon.
- *Forensic Focus* magazine: www.forensicfocusmag.com

Videos

Hearst Enterprises. (2008). *Modern Marvels: Forensic Science: The Crime Fighter's Weapon*, A&E Television Networks.

Professional Associations

- The American Academy of Forensic Sciences: http://www.aafs.org/
- The International Association of Bloodstain Pattern Analysts: http://www.iabpa.org/
- International Crime Scene Investigators Association: http://www.icsia.org/
- Association for Crime Scene Reconstruction: http://www.acsr.org
- The Association for Firearms and Tool Mark Examiners: http://www.afte.org/
- International Association for Property and Evidence: http://www.iape.org/index.php
- International Association for Identification: http://www.theiai.org/

ITT Tech Virtual Library (accessed via Student Portal)

- Periodicals> Web Collections and Indexes
  - Law Journals
- School of Study> School of Criminal Justice> Databases
  - LexisNexis Academic
- School of Study> School of Criminal Justice> Recommended Links
  - General> LLRX: Law and Technology Resources for Legal Professions
  - Law> American Law Sources On-line
  - Law> FindLaw

NOTE: All links are subject to change without prior notice.

Information Search

Use the following keywords to search for additional online resources that may be used for supporting your work on the course assignments:

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- Crime scene
- FBI "*Handbook of Forensic Services*"
- Forensic science resources
- Forensics
- Criminalistics
- Entomology
- Crime scene investigations
- Criminologist
- Free forensic science training
- Physical evidence
- Evidence technician

- Forensic investigations
- Federal Rules of Evidence
- Forensic entomology

Course Plan

Suggested Learning Approach

In this course, you will be studying individually and within a group of your peers. As you work on the course deliverables, you are encouraged to share ideas with your peers and instructor, work collaboratively on projects and team assignments, raise critical questions, and provide constructive feedback.

Use the following advice to receive maximum learning benefits from your participation in this course:

DO	DON'T
▪ Do take a proactive learning approach. ▪ Do share your thoughts on critical issues and potential problem solutions. ▪ Do plan your course work in advance. ▪ Do explore a variety of learning resources in addition to the textbook. ▪ Do offer relevant examples from your experience. ▪ Do make an effort to understand different points of view. ▪ Do connect concepts explored in this course to real-life professional situations and your own experiences.	▪ Don't assume there is only one correct answer to a question. ▪ Don't be afraid to share your perspective on the issues analyzed in the course. ▪ Don't be negative about the points of view that are different from yours. ▪ Don't underestimate the impact of collaboration on your learning. ▪ Don't limit your course experience to reading the textbook. ▪ Don't postpone your work on the course deliverables – work on small assignment components every day.

Course Outline

Unit 1: Introduction to Forensics

Out-of-class work:
11 hrs.

Upon completion of this unit, students are expected to:

- Describe the role of a forensic technician and distinguish it from that of a criminalist.
- Describe the training and education requirements for a forensic technician.
- Describe the role of an investigator.
- Articulate the functions of a crime laboratory and the safety precautions required of a forensic technician.
- Explain the importance of effective note taking and detailed report writing.
- Articulate how a forensic technician should prepare for court.
- Evaluate evidence to construct a courtroom exhibit.
- Identify the parts of the Onsite Student Lab Kit.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Young & Ortmeier, Chapter 1 and Chapter 15 • ITT Tech Virtual Library> Periodicals> ProQuest Criminal Justice> Davis, B., & Clayton, J. (2003). Equipping your CSI unit. *Law & Order, 51*(5), 58-61	Assignment	Unit 1 Assignment 1: Summary of Forensic Technician's Tools and Techniques (EMPLOYMENT ACTIVITY)	2.85%
	Lab	Unit 1 Lab 1: Introduction to Lab Equipment	2%

Unit 2: Crime Scene Documenting

Out-of-class work:
11 hrs.

Upon completion of this unit, students are expected to:

- Describe the purposes of forensic photography.
- Understand how to use a digital camera with flash and other photographic equipment.
- Explain how to adjust camera settings to improve photo clarity.
- Demonstrate different uses of flash apparatus and white balance to improve photo clarity.
- Create overhead and cross projection sketches.
- Demonstrate how to obtain accurate measurements using different techniques.
- Explain how to depict furniture within a crime scene. Distinguish between hand-drawn and computer-assisted drawings.
- Distinguish between hand-drawn and computer-assisted drawings.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Young & Ortmeier, Chapters 2-3 • ITT Tech Virtual Library> Periodicals> ProQuest Criminal Justice> Dees, T. (2001). Diagramming software. *Law & Order, 52(*10), 134-139 • Reis, G. (2001). Digital cameras: CSI and crime labs focus. *Law & Order*, 49(9), 58-58-64	Lab	Unit 2 Lab 1: Crime Scene Diagramming and Photography, and Scale Measurement	2%
	Quiz	Unit 2 Quiz 1	3.75%

Unit 3: Evidence Collection and Analysis

Out-of-class work:
11 hrs.

Upon completion of this unit, students are expected to:

- Define physical evidence.
- Demonstrate proper techniques for packaging and securing physical evidence.
- Demonstrate proper techniques for conducting a presumptive blood test, collecting blood, and evidence control samples.
- Describe the proper way to collect trace evidence, sharp evidence, hair, and fibers.
- Explain the difference between class and individual characteristics of evidence.
- Describe the proper steps for collecting and processing a questioned document.
- Describe the uses of a forensic alternate light source.
- Complete a descriptive evidence report.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Young & Ortmeier, Chapter 4 • ITT Tech Virtual Library> Periodicals> ProQuest Criminal Justice> Colwell, K. (2003). Evidence collection: Preservation and presentation for civil litigation. *Law & Order, 51*(11), 60-65	Assignment	Unit 3 Assignment 1: Proper Packaging for Evidence	2.85%
	Lab	Unit 3 Lab 1: Proper Packaging for Evidence	2%

Unit 4: Fingerprints

Out-of-class work:
11 hrs.

Upon completion of this unit, students are expected to:

- Identify three basic fingerprint patterns and their subcategories.
- Explain the purpose of the Automated Fingerprint Identification System (AFIS).
- Articulate the role of pre-transfer, transfer, and post-transfer in the recovery of latent fingerprints.
- Demonstrate the ability to process and lift a fingerprint using standard black and magnetic powders.
- Demonstrate the ability to photograph a fingerprint.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Young & Ortmeier, Chapter 5 • ITT Tech Virtual Library> Periodicals> ProQuest Criminal Justice> Allen, S. (2007). Crime scene myths. *Law & Order, 55*(4), 90-94.	Assignment	Unit 4 Assignment 1: Fingerprint Assignment with Chart	2.85%
	Project	Project 1: Composite of a Crime Scene	10%
	Lab	Unit 4 Lab 1: Fingerprint and AFIS Exercises	2%

Unit 5: Crime Scenes

Out-of-class work:
11 hrs.

Upon completion of this unit, students are expected to:

- Describe the role of the first responding officer.
- Articulate the steps to processing, photographing, and searching a crime scene.
- Demonstrate the ability to locate and photograph evidence at a crime scene.
- Explain the requirements for obtaining a search warrant.
- Describe processing techniques used at an officer-involved shooting scene.
- Explain the investigative focus at an arson scene and the procedures for collecting arson evidence.
- Describe the role of Federal Disaster Mortuary Operational Response Team (DMORT).
- Explain the cycle of violence.
- Describe the types of evidence typically located at the scene of child neglect.
- Explain the importance of entomological evidence.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Young & Ortmeier, Chapters 6-7 • ITT Tech Virtual Library> Periodicals> ProQuest Criminal Justice> Moore, C. (2005). Crime scene integrity. *Law Enforcement Technology, 32*(2), 130	Assignment	Unit 5 Assignment 1: Moore Article	2.85%
	Quiz	Unit 5: Quiz 2	3.75%
	Lab	Unit 5 Lab 1: Crime Scene Processing Practice	2%

Unit 6: Vehicles and Drugs

Out-of-class work:
11 hrs.

Upon completion of this unit, students are expected to:

- Describe the steps to process a motor vehicle used in a crime.
- Describe the photographs obtained at a multi-vehicle collision scene and of a stolen motor vehicle.
- Describe CSA drug schedules and classifications and the type of paraphernalia used with various types of drugs.
- Summarize the hazards encountered at a clandestine methamphetamine laboratory.
- Describe evidence that is collected at a drug-related crime scene.
- Explain the dangers of poly-drug use.
- Demonstrate the steps to conducting surveillance photography.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Young & Ortmeier, Chapter 8 and Chapter 12 • ITT Tech Virtual Library> Periodicals> ProQuest Criminal Justice> Duterte, M., Jacinto, C., Sales, P., & Murphy, S. (2009). What's in a label? Ecstasy sellers' perceptions of pill brands. *Psychoactive Drugs 41*(1), 27-37	Lab	Unit 6 Lab 1: Vehicle Processing	2%

Unit 7: Impressions and Firearms

Out-of-class work:
11 hrs.

Upon completion of this unit, students are expected to:

- Document shoe and tire impressions with various techniques.
- Cast a tool mark impression.
- Explain the importance of ballistics to criminal investigation.
- Apply proper procedure to collecting and preserving firearm evidence.
- Use rods and laser beams to determine bullet trajectory.
- Photograph a laser beam using photographic fog or a white board.
- Document and collect cartridges from a revolver or a semi-automatic pistol.
- Describe the information that can be obtained from an examination of an expended firearm cartridge casing or projectile.
- Articulate how bullet holes and cracks in glass are analyzed to determine the sequence of shots fired.
- Explain procedures for collecting gunshot residue evidence to determine firing distance.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Young & Ortmeier, Chapters 9-10 • ITT Tech Virtual Library> Periodicals> ProQuest Criminal Justice> Knaap, W., & Adach, E. (2002). The Knaap process: Lifting two-dimensional footwear and fingerprint impressions using dental stone. *Journal of Forensic Identification, 52*(5), 561-571 • ITT Tech Virtual Library> Books> CRCNetbase Petraco, N. (2011). Common hand tools seen in casework. *Color atlas of forensic toolmark identification.* CRC Press: New York, NY.	Lab	Unit 7 Lab 1: Shoe Impression Casting	1 %
		Unit 7 Lab 2: Tool Markings	1%
	Quiz	Unit 7 Quiz 3	3.75%

Unit 8: Bloodstain Pattern

Out-of-class work:
11 hrs.

Upon completion of this unit, students are expected to:

- Describe the education and training that a bloodstain pattern expert must obtain.
- Determine the directionality of a blood spatter.
- Demonstrate the steps for photographing bloodstain patterns.
- Describe the three basic bloodstain pattern classifications and the subcategories of each.
- Demonstrate the steps for reconstructing an impact mechanism bloodstain pattern using the tangent and stringing techniques.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Young & Ortmeier, Chapter 11 • ITT Tech Virtual Library> Periodicals> ProQuest Criminal Justice> Gardner, R. M. (2006). Defining a methodology for bloodstain pattern analysis. *Journal of Forensic Identification, 56*(4), 549-557.	Lab	Unit 8 Lab 1: Blood Spatter Analyses	2%
	Project	Project 2: Vehicle Processing	10%

Unit 9: Evidence Documentation and Collection Involving Subjects

Out-of-class work:
11 hrs.

Upon completion of this unit, students are expected to:

- Describe the legally permissible procedure to identify, collect, preserve, and document evidence from a crime suspect or victim.
- Demonstrate the steps for photographing, measuring, and documenting injuries on a live victim.
- Describe suspect processing safety precautions.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Young & Ortmeier, Chapter 13 • ITT Tech Virtual Library> Periodicals> ProQuest Criminal Justice> Jänisch, S., Meyer, H., Germerott, T., Albrecht, U., Schulz, Y., & Debertin, A. (2010). Analysis of clinical forensic examination reports on sexual assault. *International Journal of Legal Medicine 124*(3), 227-235	Assignment	Unit 9 Assignment 1: Jänisch, et al., article	2.85%
	Quiz	Unit 9 Quiz 4	3.75%
	Lab	Unit 9 Lab 1: Bite Marks	2%

Unit 10: Autopsy

Out-of-class work:
11 hrs.

Upon completion of this unit, students are expected to:

- Describe the role of the forensic pathologist.
- Distinguish among cause, mechanism, and manner of death.
- List the five categories of manner of death.
- Describe the characteristics of a sharp force and blunt force injury.
- Describe the characteristics of contact, close-range, and distant gunshot entry wounds.
- Define asphyxia and the categories of traumatic death caused by asphyxia.
- Define algor mortis, livor mortis, and rigor mortis.
- Articulate the biological processes that accompany decomposition.

- Describe the photographs taken and evidence collected during a postmortem examination.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Young & Ortmeier, Chapter 14 • ITT Tech Virtual Library> Periodicals> ProQuest Criminal Justice> Haskell, N., & Haskell, C. (2002). Forensic entomology. *Law & Order, 50(*5), 58-63	Assignment	Unit 10 Assignment 1: Virtual Autopsy Comparison	2.85%
	Lab	Unit 10 Lab 1: Postmortem Observation and Analysis	2%

Unit 11: The Future of Forensics, Course Review and Final Exam

Out-of-class work:
8 hrs.

Upon completion of this unit, students are expected to:

- Identify Internet sources that contain information on forensics.
- Describe four types of information available on selected Internet sites.
- Identify trends that suggest future methods for forensic science.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	**Activity/Deliverable Title**	**Grade Allocation** (% of all graded work)
• Anonymous. (2003). Without a Trace? Advances in Detecting, *NIJ Journal, 249(1)*, 2-8. NCJ 20090. National Criminal Justice Reference Service Web site https://www.ncjrs.gov/pdffiles1/jr000249b.pdf	Assignment	Unit 11 Assignment 1: Future Developments in Forensic Science	2.85%
	Exam	Final Exam	15%
	Project	Project 3: Crime Scene Search (PORTFOLIO)	10%

NOTE: Your instructor may add a few learning activities that will change the grade allocation for each assignment in a category. The overall category percentages will not change.

Evaluation and Grading

Evaluation Criteria

The graded assignments will be evaluated using the following weighted categories:

Category	Weight
Assignments	20%
Labs	20%
Projects	30%
Quizzes	15%
Exam	15%
TOTAL	**100%**

Grade Conversion

The final grades will be calculated from the percentages earned in the course, as follows:

Grade	Percentage	Credit
A	90–100%	4.0
B+	85–89%	3.5
B	80–84%	3.0
C+	75–79%	2.5
C	70–74%	2.0
D+	65–69%	1.5
D	60–64%	1.0
F	<60%	0.0

Academic Integrity

All students must comply with the policies that regulate all forms of academic dishonesty, or academic misconduct, including plagiarism, self-plagiarism, fabrication, deception, cheating, and sabotage. For more information on the academic honesty policies, refer to the Student Handbook and the Course Catalog.

(End of Syllabus)