Brain and Behavior Neurocriminology Training Course

Professional Development Training Course Outline

Category	Criminology	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In an era of rapid advancement in neuroscience and forensic psychology, Neurocriminology emerges as a groundbreaking discipline that explores the intricate relationship between the human brain and criminal behavior. Training Course on Neurocriminology – Brain & Behavior is designed for professionals across criminology, law enforcement, psychiatry, and legal studies to understand how brain structure, neurochemical imbalances, and traumatic brain injuries can influence violent, antisocial, and deviant behavior. With the integration of functional MRI, neuroimaging, and cognitive neuroscience, this course provides a deep dive into how biological, psychological, and social factors intersect in the genesis of crime.

As crime prevention becomes increasingly proactive, Neurocriminology offers vital insights for designing rehabilitative strategies, risk assessments, and legal defenses. Through a mix of theoretical content, real-world case studies, and hands-on training in neuroscience-informed criminal profiling, participants will acquire the tools to identify neurobiological risk factors, understand psychopathy, and apply neuroscientific findings in justice-related contexts. By the end of this course, learners will be well-equipped to apply neurocriminological principles in criminal investigations, policy development, rehabilitation programming, and forensic evaluations.

Programme Curriculum

Brain and Behavior Neurocriminology Training Course

Introduction

In an era of rapid advancement in neuroscience and forensic psychology, Neurocriminology emerges as a groundbreaking discipline that explores the intricate relationship between the human brain and criminal behavior. Brain and Behavior Neurocriminology Training Course is designed for professionals across criminology, law enforcement, psychiatry, and legal studies to understand how brain structure, neurochemical imbalances, and traumatic brain injuries can influence violent, antisocial, and deviant behavior. With the integration of functional MRI, neuroimaging, and cognitive

neuroscience, this course provides a deep dive into how biological, psychological, and social factors intersect in the genesis of crime.

As crime prevention becomes increasingly proactive, Neurocriminology offers vital insights for designing rehabilitative strategies, risk assessments, and legal defenses. Through a mix of theoretical content, real-world case studies, and hands-on training in neuroscience-informed criminal profiling, participants will acquire the tools to identify neurobiological risk factors, understand psychopathy, and apply neuroscientific findings in justice-related contexts. By the end of this course, learners will be well-equipped to apply neurocriminological principles in criminal investigations, policy development, rehabilitation programming, and forensic evaluations.

Course Objectives

1. Understand the core concepts and history of neurocriminology.
2. Identify neurobiological correlates of antisocial behavior.
3. Examine the role of genetics and epigenetics in criminal predisposition.
4. Analyze the impact of brain injuries and abnormalities on violent behavior.
5. Explore neuroimaging techniques in forensic contexts.
6. Investigate psychopathy through neurological and behavioral lenses.
7. Understand adolescent brain development and juvenile delinquency.
8. Assess the role of neurotransmitters and hormones in aggression.
9. Evaluate the influence of childhood trauma on brain development.
10. Apply neurocriminological knowledge in criminal profiling.
11. Integrate neuroscience into correctional and rehabilitative systems.
12. Analyze legal implications and ethical challenges in using brain-based defenses.
13. Design informed policies for crime prevention based on brain-behavior insights.

Target Audiences

1. Criminal Justice Professionals
2. Forensic Psychologists
3. Neuroscientists and Brain Researchers
4. Law Enforcement Officers
5. Legal and Correctional Officers
6. Mental Health Practitioners
7. Criminology Students and Educators
8. Rehabilitation and Policy Specialists

Course Duration: 10 days

Course Modules

Module 1: Introduction to Neurocriminology

- Definition and evolution of neurocriminology
- Historical cases linking brain abnormalities to crime
- Core theories: Biological determinism vs. free will
- Neurolaw: Bridging neuroscience and criminal law
- Ethics of brain-based behavioral explanations
- **Case Study**: Phineas Gage and the origins of neurocriminology

Module 2: Brain Structures and Aggression

- Functions of the amygdala, prefrontal cortex, and limbic system
- Brain abnormalities and aggressive tendencies
- Neurodevelopmental risk factors

- Role of gray matter reduction
- Imaging evidence from violent offenders
- **Case Study**: Charles Whitman's tumor and homicidal behavior

Module 3: Genetics, Epigenetics & Crime

- Role of MAOA gene (warrior gene)
- Nature vs. nurture debates
- Epigenetic changes due to trauma
- Genetic predisposition in violent crimes
- Twin and adoption studies in criminology
- **Case Study**: The Dutch MAOA gene family study

Module 4: Neurotransmitters, Hormones & Violence

- Role of serotonin, dopamine, and cortisol
- Hormonal influences (e.g., testosterone)
- Chemical imbalances and impulsivity
- Brain chemistry and addiction-related crimes
- Pharmacological interventions in offenders
- **Case Study**: Serotonin levels in violent prisoners

Module 5: Childhood Trauma & Brain Development

- Adverse Childhood Experiences (ACEs)
- Neurodevelopmental impact of abuse
- Long-term behavioral consequences
- PTSD and criminal outcomes
- Trauma-informed interventions
- **Case Study**: The Bucharest Early Intervention Project

Module 6: Brain Injury and Criminal Behavior

- Traumatic Brain Injury (TBI) and impulsivity
- Frontal lobe damage and decision-making
- Stroke, dementia, and aggression
- Post-concussion syndrome in offenders
- Assessing fitness to stand trial
- **Case Study**: NFL athletes and violent behavior post-TBI

Module 7: Juvenile Brain & Criminal Liability

- Adolescent brain development stages
- Immaturity, impulsivity, and decision-making
- Neuroscience of peer influence
- Legal considerations in juvenile justice
- Neuroscience-informed sentencing reforms
- **Case Study**: Roper v. Simmons Supreme Court ruling

Module 8: Psychopathy & the Brain

- Neurological traits of psychopathy
- Emotional processing deficits
- Brain scans of psychopathic individuals
- Sociopathy vs. psychopathy: key differences
- Risk assessment tools and interventions

- **Case Study**: Brain scans of serial killer Brian Dugan

Module 9: Neurocriminology in Criminal Profiling

- Understanding criminal intent through brain analysis
- Using fMRI and EEG in profiling
- Behavioral pattern recognition
- Linking cognition to crime scene evidence
- Limitations and reliability of neuroprofiles
- **Case Study**: FBI's use of neurodata in serial homicide profiling

Module 10: Substance Abuse & Neurocriminology

- Impact of drugs on brain functioning
- Addiction, crime, and brain changes
- Decision-making impairments in addicts
- Rehabilitation through neuroscience
- Policy responses to drug-related offenses
- **Case Study**: Methamphetamine and violent crime correlation

Module 11: Neuroscience in Corrections & Rehabilitation

- Brain-based rehabilitation programs
- Cognitive-behavioral and neurofeedback therapy
- Reducing recidivism via neural interventions
- Designing prison environments using neuroscience
- Success metrics and evaluation tools
- **Case Study**: Sweden's neuro-cognitive prison reform model

Module 12: Legal and Ethical Issues

- Neuroscience evidence in court
- The insanity defense and brain scans
- Issues of consent and privacy in neurotesting
- Sentencing mitigation via brain abnormalities
- Public perceptions of neurocriminology
- **Case Study**: United States v. Hinckley – insanity defense

Module 13: Emerging Neurotechnologies

- Brain fingerprinting
- Predictive analytics using neural data
- AI and neuroscience in forensic analysis
- Lie detection through brain scans
- Ethical debates on predictive justice
- **Case Study**: Brainwave detection in lie detection trials

Module 14: Neuroscience and Gender Differences

- Brain-behavior differences in male vs. female offenders
- Hormonal cycles and crime patterns
- Gender-specific rehabilitation strategies
- Neurocriminology of domestic violence
- Underdiagnosis of female psychopathy
- **Case Study**: Female serial killer Aileen Wuornos and neurobehavioral insights

Module 15: Policy Implications of Neurocriminology

- Policy making using neuroscientific data
- Funding priorities in neurocriminological research
- Creating preventive strategies in education and healthcare
- Integrating neuroscience in law enforcement training
- Global perspectives on neurocriminology policy adoption
- **Case Study**: UK Parliament's Committee on Neuroscience and the Law

Training Methodology

- Interactive expert-led lectures
- Case-based learning and scenario analysis
- Brain imaging data interpretation exercises
- Group debates on ethical dilemmas
- Hands-on workshops with mock trials
- Policy development simulations

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com