

**Curriculum Content Report  
Substance Abuse/Addiction**

(search terms: abuse, addiction, narcotics, opioids, alcohol, tobacco, pain, neonatal abstinence)

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<b>Year 1</b>	
<b>Course</b>	<b>Content</b>
Cellular & Molecular Medicine	Identify nutrient-drug interactions including symptoms associated with nutritional deficiencies caused by drug abuse.
Lifespan Development	Explain key factors related to problems of crime, sexuality and suicide in adolescence. <ul style="list-style-type: none"> <li>•Substance abuse as a risk factor for child abuse</li> <li>•Substance abuse in children resulting from physical abuse</li> </ul>
Doctoring I	Interpret the roles in medical practice of a variety of societal issues such as: Health Determinants (education, occupation, social organization, etc.), Nutrition, Violence, or Substance Abuse
<b>Year 2</b>	
Clinical Neuroscience	<p>Discuss the complex phenomenology of pain. Describe two categories of pain sensation (first and second pain) and explain the neural basis of each.</p> <p>Characterize the peripheral and central mechanisms underlying hyperalgesia.</p> <p>Characterize the neural mechanisms for the feedback modulation of nociceptive processing.</p> <p>Characterize the neural mechanisms for the feedforward modulation of nociceptive processing.</p> <p>Discuss the affective dimensions of pain and identify the neural systems that are involved in pain affect (suffering).</p> <p>Understand the differences between acute and chronic pain</p> <p>Describe and differentiate the differences between the biomedical and biopsychosocial models of pain</p> <p>Define components of the pain neuromatrix and interpret different drivers for the pain experience</p> <p>Understand and link common pain terminology to clinical examples</p>

	<p>Link principles of neuroplasticity with external stimuli and the pain neuromatrix</p> <p>Demonstrate an understanding of the associational relation between brain structures in sleep, emotions and addiction behaviors.</p>
Pharmacology	<p>Recognize the clinical presentations, mechanisms of action, management of overdose and rehabilitative strategies for common drugs of abuse.</p> <ul style="list-style-type: none"> <li>• Understand what “drug abuse” is.</li> <li>• Comprehend what encompasses addiction, physical dependence, withdrawal, abstinence syndrome, psychological dependence, habituation, and tolerance.</li> <li>• What are the different components of tolerance?</li> <li>• Appreciate the dopamine hypothesis of addiction.</li> <li>• What is different about the schedules of the Controlled Substance Act?</li> <li>• Know the different types of drugs of abuse (opiates, sedative/hypnotics/anxiolytics, alcohol, date rape drugs, stimulants, nicotine, hallucinogens, marihuana, and inhalants).</li> <li>• Discriminate between the major drug classes by their mechanism(s) of action, major abuses, and most prevalent/clinically significant adverse effects.</li> <li>• Analyze clinical symptoms, epidemiologic features and results of lab tests to develop a differential diagnosis between commonly encountered toxins. Outline a management strategy for the poisoned patient, including antidotes, if applicable.</li> <li>• Recognize the clinical presentations, mechanisms of action, management of overdose and rehabilitative strategies for common drugs of abuse. Integrate previously acquired knowledge of anatomy, biochemistry, physiology and pathology with newly acquired information concerning the actions of drugs at the cellular, organ, system, and whole body levels.</li> <li>• Interpret laboratory results and evaluate therapeutic scenarios in order to propose appropriate pharmacotherapy for common clinical problems.</li> </ul>
Introduction to Clinical Psychiatry	Alcohol abuse (2 hours)

	<ul style="list-style-type: none"> <li>• Describe the brain pathways, neurotransmitters and processes that lead to development of substance use disorders.</li> <li>• Recognize the criteria required to diagnose an alcohol use disorder in a patient or clinical vignette.</li> <li>• Be able to diagnose and treat alcohol intoxication, withdrawal and delirium tremens (DT's).</li> <li>• Be able to diagnose and treat Wernicke-Korsakoff's syndrome and alcoholic dementia (cerebellar degeneration).</li> <li>• Be able to list of the variety of treatments needed to treat the long term disease of alcohol use disorder.</li> <li>• Includes content on neurology of abuse</li> </ul> <p>Other substances (2 hours)</p> <ul style="list-style-type: none"> <li>• Identify the patient risk factors and warning signs of prescription drug abuse.</li> <li>• Identify the physician practices that facilitate prescription drug abuse.</li> <li>• Recognize intoxication, withdrawal and how to treat each for opiate/opioids, sedative hypnotics, stimulants, phencyclidine-like substances and the other than phencyclidine hallucinogens and for cannabis in a clinical vignette.</li> <li>• Content includes epidemiology and treatment</li> </ul>
Practice of Medicine	Increased risk for substance abuse in LGBT populations – in Human Sexuality II workshop
<b>Year 3</b>	
Internal Medicine	<p>Screen for substance abuse in the general medical history.</p> <p>Discuss pain management in general medical history</p>
Community Medicine, Rural Primary Care Track	<p>Recognize substance abuse in a community setting – required patient type</p> <p>Tobacco, alcohol and Illegal drug use as a standard reporting item as component of community research reports in preparation for health fairs</p>
Family Medicine	Apply the stages of change model and use motivational interviewing to encourage lifestyle changes to support wellness.

	Alcohol/ substance abuse as required patient type – four exposures required
Psychiatry	<p>Recognize and treat substance abuse in psychiatry patients</p> <p>Substance Use Disorder – Alcohol as required patient type – two exposures required.</p> <p>Substance Use Disorder – other than alcohol as required patient type – two exposures required.</p> <p>Inpatient and outpatient chemical dependency clinical experiences as components of rotation.</p>
Pediatrics	<p>Clinical exposure to neonatal abstinence syndrome in NICU.</p> <p>CLIPP case – prenatal tobacco exposure.</p> <p>Sim lab case – altered mental status with substance abuse as an element of differential diagnosis</p>
<b>Year 4</b>	
Keystone Course	<p>Counseling regarding opioid prescription to reduce liability</p> <p>Naloxone co-prescribing with opioids</p> <p>Neonatal abstinence syndrome prevention</p> <p>Pain control in hospice and palliative care</p>
<b>Elective</b>	
Addiction Medicine	<p>Take histories, examine patients, order and interpret tests necessary to diagnose and manage patients with addiction issues under the supervision of members of the clinic’s multidisciplinary team.</p> <p>Function in an interprofessional team while assisting with care of patients seeking addiction health care.</p> <p>Through evidence based inquiry, patient encounters, and interprofessional team participation, demonstrate knowledge, clinical skills and behaviors required to appropriately address:</p> <ul style="list-style-type: none"> <li>• Lifestyle and behavior associated with addictive disease</li> <li>• The concept of addiction</li> <li>• The neurobiology of reward and addiction.</li> <li>• 12 step programs and the principles behind each step.</li> </ul>

	<ul style="list-style-type: none"> <li>• Opioid maintenance treatments (OMT), both maintenance and tapering protocols, and the advantages/ disadvantages of buprenorphine vs. methadone.</li> <li>• Addiction as a biopsychosocial and spiritual disease.</li> <li>• Urine drug screens</li> </ul>
<p>Substance Abuse and Addiction in Appalachia: Impacting the Community through a Vision of Change. ( An interprofessional elective)</p>	<ul style="list-style-type: none"> <li>•Discuss the physiological responses to drugs of abuse including tolerance, dependence, and withdrawal.</li> <li>•Describe how substance abuse directly affects the Appalachian Region (Southwest Virginia, Northeast Tennessee and Eastern Kentucky).</li> <li>•Develop strategies to prevent abuse and/or diversion in a variety of medical practice settings.</li> <li>•Discuss concepts of prevention methods (i.e., scare tactics, resiliency, environment changing, and legislation) and the challenges associated with prevention.</li> <li>•Explain how drug use by age affects overall lifetime use patterns including use in special populations such as pregnancy, elderly, and children.</li> <li>•Recognize the current issues and psychosocial obstacles in treating various drug addictions.</li> </ul>
<p>Palliative Medicine</p>	<p>Properly use opioid analgesics in end-of-life setting and properly perform opioid conversions</p> <p>Recognize the basics of symptom management in the following areas</p> <ol style="list-style-type: none"> <li>a. pain, neuropathic and nociceptive</li> <li>b. dyspnea</li> <li>c. nausea</li> <li>d. constipation</li> <li>e. nutrition</li> <li>f. other symptoms</li> </ol>