

Introduction to Health and Medical Sciences (8302- 36 weeks)

Introduction to Health and Medical Sciences
(8302- 36 weeks) IHMS

- 1 Demonstrate creativity and innovation. IHMS.1
- 2 Demonstrate critical thinking and problem solving. IHMS.2
- 3 Demonstrate initiative and self-direction. IHMS.3
- 4 Demonstrate integrity. IHMS.4
- 5 Demonstrate work ethic. IHMS.5
- 6 Demonstrate conflict-resolution skills. IHMS.6
- 7 Demonstrate listening and speaking skills. IHMS.7
- 8 Demonstrate respect for diversity. IHMS.8
- 9 Demonstrate customer service skills. IHMS.9
- 10 Collaborate with team members. IHMS.10
- 11 Demonstrate big-picture thinking. IHMS.11
- 12 Demonstrate career- and life-management skills. IHMS.12
- 13 Demonstrate continuous learning and adaptability. IHMS.13
- 14 Manage time and resources. IHMS.14
- 15 Demonstrate information-literacy skills. IHMS.15
- 16 Demonstrate an understanding of information security. IHMS.16
- 17 Maintain working knowledge of current information-technology (IT) systems. IHMS.17
- 18 Demonstrate proficiency with technologies, tools, and machines common to a specific occupation. IHMS.18

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- 19 Apply mathematical skills to job-specific tasks.** IHMS.19
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- 20 Demonstrate professionalism.** IHMS.20
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- 21 Demonstrate reading and writing skills.** IHMS.21
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- 22 Demonstrate workplace safety.** IHMS.22
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- 23 Examine aspects of planning within an industry/organization.** IHMS.23
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- 24 Examine aspects of management within an industry/organization.** IHMS.24
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- 25 Examine aspects of financial responsibility within an industry/organization.** IHMS.25
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- 26 Examine technical and production skills required of workers within an industry/organization.** IHMS.26
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- 27 Examine principles of technology that underlie an industry/organization.** IHMS.27
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- 28 Examine labor issues related to an industry/organization.** IHMS.28
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- 29 Examine community issues related to an industry/organization.** IHMS.29
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- 30 Examine health, safety, and environmental issues related to an industry/organization.** IHMS.30
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- 31 Identify the purposes and goals of the student organization.** IHMS.31
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- 32 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.** IHMS.32
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- 33 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.** IHMS.33
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- 34 Identify Internet safety issues and procedures for complying with acceptable use standards.** IHMS.34
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- 35 Identify the types of work-based learning (WBL) opportunities.** IHMS.35
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- 36 Reflect on lessons learned during the WBL experience.** IHMS.36
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- 37 Explore career opportunities related to the WBL experience.** IHMS.37
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- 38 Participate in a WBL experience, when appropriate.** IHMS.38
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- 39 Highlight the major developments of healthcare history.** IHMS.39
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- 40 Differentiate among the types of health insurance.** IHMS.40

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- 41 Differentiate among the types of medical care delivery systems.** IHMS.41
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- 42 Describe the roles of healthcare team members.** IHMS.42
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- 43 Differentiate among the scope and functions of the Virginia Department of Health Professions and the Virginia Department of Health.** IHMS.43
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- 44 Examine the influence of the Internet on the healthcare industry and on the individual consumer.** IHMS.44
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- 45 Identify common medical prefixes, roots, and suffixes and their meanings, and medical terms related to human systems.** IHMS.45
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- 46 Describe how word parts are combined to form medical terms.** IHMS.46
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- 47 Interpret common abbreviations used in the healthcare field.** IHMS.47
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- 48 Define terminology that relates to the various elements and systems of the body.** IHMS.48
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- 49 Identify basic anatomical structure and body cavities.** IHMS.49
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- 50 Identify chemical components of the body.** IHMS.50
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- 51 Identify the structures and functions of the cell.** IHMS.51
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- 52 Identify the structures and functions of tissues.** IHMS.52
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- 53 Identify the structures, functions, and diseases of the integumentary system.** IHMS.53
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- 54 Identify the structures, functions, and diseases of the skeletal system.** IHMS.54
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- 55 Identify the structures, functions, and diseases of the muscular system.** IHMS.55
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- 56 Identify the structures, functions, and diseases of blood.** IHMS.56
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- 57 Identify the structures, functions, and diseases of the heart.** IHMS.57
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- 58 Identify the structures, functions, and diseases of blood vessels and blood circulation.** IHMS.58
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- 59 Identify the structures, functions, and diseases of the lymphatic system.** IHMS.59
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- 60 Explain immunity and its relationship with the lymphatic system.** IHMS.60
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- 61 Identify the structures, functions, and diseases of the respiratory system.** IHMS.61

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- 62 Identify the structures, functions, and diseases of the gastrointestinal system.** IHMS.62
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- 63 Identify the structures, functions, and diseases of the endocrine system.** IHMS.63
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- 64 Identify the structures, functions, and diseases of the reproductive system.** IHMS.64
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- 65 Identify the structures, functions and diseases of the nervous system.** IHMS.65
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- 66 Identify the structures, functions and diseases of the urinary system.** IHMS.66
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- 67 Identify the structures, functions, and diseases of the sensory system.** IHMS.67
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- 68 Describe specimen preparation and handling.** IHMS.68
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- 69 Identify the diagnoses, laboratory tests, and procedures used in the treatment for the diseases/disorders of each body system.** IHMS.69
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- 70 Examine body fluids and cells for bacteria, parasites, and other microorganisms.** IHMS.70
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- 71 Analyze the chemical content of fluids and tissues.** IHMS.71
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- 72 Examine cells to determine the quantity of and/or to look for abnormal cells in blood and other body fluids and tissues.** IHMS.72
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- 73 Assess lab findings, using automated equipment and computerized instruments.** IHMS.73
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- 74 Document the results of laboratory findings.** IHMS.74
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- 75 Report lab results to physicians.** IHMS.75
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- 76 Identify the six essential nutrients, sources, and functions for optimal health and wellness.** IHMS.76
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- 77 Describe the digestion and metabolism of food.** IHMS.77
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- 78 Describe dietary guidelines recommended for health promotion.** IHMS.78
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- 79 Identify the principles of food management and safety.** IHMS.79
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- 80 Explain basic dietary management techniques.** IHMS.80
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- 81 Identify common medical conditions related to poor nutrition.** IHMS.81
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- 82 Identify dietary patterns.** IHMS.82
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- 83 Identify general principles of pharmacology.** IHMS.83

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- 84 Describe sources, types, and uses of common drugs.** IHMS.84
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- 85 Explain the naming processes for drugs.** IHMS.85
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- 86 Explain the importance of pharmacokinetics.** IHMS.86
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- 87 Describe the elements of a prescription.** IHMS.87
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- 88 Explain common abbreviations used on prescriptions.** IHMS.88
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- 89 Calculate doses of medications.** IHMS.89
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- 90 Identify drug administration routes.** IHMS.90
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- 91 Explain the importance of drugs and supplements in preventive medicine.** IHMS.91
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- 92 Explain current state and federal regulations regarding the practice of pharmacy.** IHMS.92
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- 93 Summarize the approaches to health care for a variety of patient categories.** IHMS.93
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- 94 Explain the nature and importance of a medical history.** IHMS.94
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- 95 Examine concepts of care relating to ethnic, religious, cultural, and personal preferences.** IHMS.95
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- 96 Explain the principles of effective communication.** IHMS.96
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- 97 Apply principles of communication in establishing therapeutic relationships.** IHMS.97
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- 98 Explain the concept and importance of the Patient, "Bill of Rights."** IHMS.98
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- 99 Explain the function and importance of advance directives for health care.** IHMS.99
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- 100 Examine the concepts of death and dying.** IHMS.100
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- 101 Explain the concept of integrated and holistic care.** IHMS.101
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- 102 Explain the concept of infection control and asepsis.** IHMS.102
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- 103 Explain the chain of infection.** IHMS.103
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- 104 Demonstrate hand hygiene procedures.** IHMS.104
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- 105 Explain transmission-based precautions.** IHMS.105

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- 106** Demonstrate the use of personal protective equipment (PPE) and safe workplace practices. IHMS.106
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- 107** Describe policies and procedures for handling and disposing of infectious and/or hazardous materials. IHMS.107
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- 108** Explain sterile processes. IHMS.108
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- 109** Identify the importance of the CDC and Occupational Safety and Health Administration (OSHA) guidelines. IHMS.109
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- 110** Identify emergency protection areas and devices. IHMS.110
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- 111** Explain methods of fire safety. IHMS.111
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- 112** Identify environmental hazards. IHMS.112
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- 113** Describe the principles of body mechanics. IHMS.113
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- 114** Explain radiographic safety. IHMS.114
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- 115** Explain the importance of maintaining a safe and clean work environment. IHMS.115
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- 116** Explain the process and importance of patient identification. IHMS.116
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- 117** Explain the purpose of medical records. IHMS.117
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- 118** Identify the components of the electronic medical record (EMR). IHMS.118
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- 119** Explain basic traumatic and medical emergency procedures. IHMS.119
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- 120** Identify the essential components of disaster planning. IHMS.120
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- 121** Identify items found in a basic emergency kit. IHMS.121
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- 122** Describe the causes, symptoms, and treatments of selected medical emergencies. IHMS.122
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- 123** Demonstrate CPR with the AED. IHMS.123
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- 124** Explain the concept of biotechnology. IHMS.124
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- 125** Identify the effects of innovations in biotechnology. IHMS.125
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- 126** Describe the effects of biotechnology on preventive health care. IHMS.126
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- 127** Describe the role biotechnology plays in medical forensics. IHMS.127
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- 128** Identify professional agencies and organizations in the healthcare field and the roles of each. IHMS.128

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- 129** Examine the legal issues related to the health and medical science profession. [IHMS.129](#)
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- 130** Explain confidentiality and its connection to HIPAA. [IHMS.130](#)
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- 131** Analyze the role of public health in providing health care. [IHMS.131](#)
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- 132** Conduct a self-assessment to determine career interests in the healthcare field. [IHMS.132](#)
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- 133** Describe the major career fields in health and medical sciences. [IHMS.133](#)
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- 134** Research selected healthcare career(s). [IHMS.134](#)
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- 135** Explain the importance of ongoing professional development and methods of attaining ongoing training in the healthcare industry. [IHMS.135](#)
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- 136** Describe the history and current state of the opioid crisis in the United States. [IHMS.136](#)
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- 137** Describe the history and current state of the opioid crisis in Virginia. [IHMS.137](#)
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- 138** Define the pharmacological components and common uses of opioids. [IHMS.138](#)
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- 139** Examine the science of addiction. [IHMS.139](#)
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- 140** Explain prevention and early intervention strategies. [IHMS.140](#)
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- 141** Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). [IHMS.141](#)
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- 142** Describe the treatment models of addiction therapy. [IHMS.142](#)
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- 143** Describe the medication management antidote used to prevent fatal opioid overdoses. [IHMS.143](#)
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- 144** Explain the science of physiological and mental pain. [IHMS.144](#)
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- 145** Describe the diagnostic tools used in developing pain management plans. [IHMS.145](#)
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- 146** Describe pain treatment options available to various populations of patients. [IHMS.146](#)
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- 147** Describe the effects of opioid dependency on the human body systems. [IHMS.147](#)
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- 148** Explain the mechanism and physical effects of opioids on the human body. [IHMS.148](#)

149 Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication. IHMS.149

150 Describe the withdrawal and tapering side effects of opioid use. IHMS.150

151 Describe storage and disposal options for opioids. IHMS.151

152 Explain community resources for education about opioid use. IHMS.152

153 Describe key communication topics involving opioids for patients. IHMS.153

154 Describe communication topics for caregivers and family members. IHMS.154