

MHSC106 Anatomy and Physiology in Health and Social Care

ECTS Value: 2 ECTS
Self-Study Hours: 24

Contact Hours: 10
Assessment Hours: 16

Overall Objectives and Outcomes

The module will delve into the human anatomy and the complex physiological systems that function in harmony with the human body. The participants will explore the practical side of measuring vital signs and reporting them. They will learn how other diagnostic systems fit within the health system and support diagnosis similarly to how vital signs do in a practical session. Also learn about support services that are available to support individuals in delayed milestones or for physical rehabilitation. This module will give participant general knowledge on some common conditions in both childhood and adulthood and how healthy and unhealthy lifestyle affect us physiologically. It will also touch on ethical issues relating to medical situations and healthcare rights.

By the end of this module, the learner will be able to:

Competences

- a. Create resources that are well researched and explained effectively to students.
- b. Support students' practice in the safe and hygienic use of health and social care equipment practices and measuring of the vital signs; while giving them a wider understanding of the various diagnostic services available and how to support individuals requiring these tests.
- c. Discuss the interrelationship between human physiology and healthy/ unhealthy behaviours including how physiological insufficiencies in one organ has a domino effect on the rest of human body.
- d. Lead a discussion on the potential ethical health dilemmas including those relating the healthcare rights.
- e. Interpret the normal function of systems and their major pathophysiological conditions.

Knowledge

- a. Identify the key aspects of the human anatomy and physiology throughout the various life stages
- b. Explain what occurs anatomically and physiologically during delayed milestones
- c. Describe the effects of common conditions within childhood and adulthood associated with the physiological processes of the different body systems including infection, hereditary and common disease.
- d. Describe the ethical issues surrounding healthcare including the human rights relating to health
- e. Identify the key aspects surrounding human growth and development of each life stage. Including the major systems both anatomically and physiologically.
- f. Describe what is meant by vital signs, their purpose, and observations made while performing the procedures; also identify possible physiological signs of illness e.g. excessive sweating, impaired vision, atypical lack of concentration and what do they signify.
- g. Describe common diagnostic tests that help clinicians evaluate the human body conservatively and aware of what the individual going through the test might feel or is required of him/her.
- h. Describe the support services available to help children reach their milestones or individuals rehabilitate from injury or condition.

- i. Describe the structure and physiology of the human body;
- j. Explain the mechanisms of disease related to the main systems of the body
- k. Discuss the use of various equipment to measure and record vital signs as well as other diagnostic tests
- l. Learn to communicate effectively with patients at every life stage through age appropriate information.
- m. Identify general health susceptibilities or practices that are present between different cultures that effect our diverse society, e.g. lower bone density tends to occur in Caucasian and Asian women; African communities have a predisposition to high blood pressures. This segment will include elements like female genital mutilation
- n. Identify between normal and abnormal readings when measuring the vital signs;
- o. Interpret the normal function of systems and their major pathophysiological conditions.

Skills

Applying knowledge and understanding

The learner will be able to:

- a. Demonstrate knowledge and understanding of the human body, anatomically and physiological.
- b. Demonstrate an understanding of how physiology and pathology relate during the various life stages.
- c. Demonstrate an understanding of how a healthy and unhealthy lifestyle can compound on our body addressing the underlying physical, psychological, cultural, and social determinants of oral and general health.
- d. Demonstrate the techniques used to accurately measure temperature, blood pressure, pulse and breathing rate.
- e. Demonstrate knowledge of recording vital signs on chart.
- f. Demonstrate a general understanding of other diagnostic tools and what is required of the patient.
- g. Evaluate knowledge of the physiological processes of the different body systems;
- h. Use different tools and equipment in relation to measuring the vital signs.

Assessment Methods

This module will be assessed through: Portfolio and Assignment

Suggested Readings

Core Reading List

1. Carlson, B. M. (2018). *The Human Body: Linking Structure and Function* (1st ed.). Academic Press.
2. Hinchliffe, S., Manderson, L., & Moore, M. (2021). Planetary healthy publics after COVID-19. *The Lancet Planetary Health*, 5(4), e230–e236. [https://doi.org/10.1016/s2542-5196\(21\)00050-4](https://doi.org/10.1016/s2542-5196(21)00050-4)
3. Merrill, G. F. (2008). *Our Marvelous Bodies: An Introduction to the Physiology of Human Health* (1st ed.). Rutgers University Press.
4. Royal College of Physicians. (2017). *National Early Warning Score (NEWS) 2 Standardising the assessment of acute-illness severity in the NHS*. <https://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news-2>
5. *The Lancet Commission on diabetes: using data to transform diabetes care and patient lives*. (2020). [https://doi.org/10.1016/S0140-6736\(20\)32374-6](https://doi.org/10.1016/S0140-6736(20)32374-6)
6. World Health Organization. (2020). *WHO Guidelines on Physical Activity and Sedentary Behaviour*. Retrieved from: [9789240015128-eng.pdf \(who.int\)](https://www.who.int/publications/m/item/9789240015128-eng)

Supplementary Reading List

1. Frontera, W. R., Delisa, J. A., Gans, B. M., Walsh, N. E., & Robinson, L. R. (2010). *Delisa's Physical Medicine & Rehabilitation: Principles and Practice (Delisa's Physical Medicine and Rehabilitation)* (5th ed.). Lippincott Williams & Wilkins.
2. Johnston, E., Olivas, G., Steele, P., Smith, C., & Bailey, L. (2017). Exploring Pedagogical Foundations of Existing Virtual Reality Educational Applications: A Content Analysis Study. *Journal of Educational Technology Systems*, 46(4), 414–439. <https://doi.org/10.1177/0047239517745560>
3. Kurniawan, M. H., Suharjito, Diana, & Witjaksono, G. (2018). Human Anatomy Learning Systems Using Augmented Reality on Mobile Application. *Procedia Computer Science*, 135, 80–88. <https://doi.org/10.1016/j.procs.2018.08.152>
4. Layona, R., Yulianto, B., & Tunardi, Y. (2018). Web based Augmented Reality for Human Body Anatomy Learning. *Procedia Computer Science*, 135, 457–464. <https://doi.org/10.1016/j.procs.2018.08.197>
5. Reinus, J. F., & Simon, D. (2014). *Gastrointestinal Anatomy and Physiology: The Essentials* (1st ed.). Wiley-Blackwell.
6. Sacks, E., Mehrtash, H., Bohren, M., Balde, M. D., Vogel, J. P., Adu-Bonsaffoh, K., Portela, A., Aderoba, A. K., Irinyenikan, T. A., Maung, T. M., Thwin, S. S., Mon, N. O., Soumah, A. M., Guure, C., Diallo, B. A., Adeyanju, A. O., Maya, E., Adanu, R., Gülmezoglu, A. M., & Tunçalp, Z. (2021). The first 2 h after birth: prevalence and factors associated with neonatal care practices from a multicountry, facility-based observational study. *The Lancet Global Health*, 9(1), e72–e80. [https://doi.org/10.1016/s2214-109x\(20\)30422-8](https://doi.org/10.1016/s2214-109x(20)30422-8)
7. Smith, R. W., Barnes, I., Green, J., Reeves, G. K., Beral, V., & Floud, S. (2021). Social isolation and risk of heart disease and stroke: analysis of two large UK prospective studies. *The Lancet Public Health*, 6(4), e232–e239. [https://doi.org/10.1016/s2468-2667\(20\)30291-7](https://doi.org/10.1016/s2468-2667(20)30291-7)
8. Wardle, H., & McManus, S. (2021). Suicidality and gambling among young adults in Great Britain: results from a cross-sectional online survey. *The Lancet Public Health*, 6(1), e39–e49. [https://doi.org/10.1016/s2468-2667\(20\)30232-2](https://doi.org/10.1016/s2468-2667(20)30232-2)