Development Structure and Function (DSF) – FOM1
FM-105 330 course hours
Updated November 2018

DSF integrates gross and clinical anatomy, physiology, histology and development into a 260-hour, 5-month course beginning in the third month of year one. DSF integrates regional and systemic aspects of human structure with physiological function. Thorax anatomy is linked with cardiovascular and respiratory functions. Abdominal and pelvic structure are integrated with gastrointestinal, renal and reproductive functions. Head/neck anatomy are integrated with pituitary-regulated endocrine systems. Musculoskeletal anatomy is linked to bone and growth physiology. About half of DSF is lecture-based, combining major concepts in physiology, anatomy, histology and development with clinical imaging illustrations. The remainder utilizes gross and virtual microscopy laboratories, physiology problem-solving sessions, and audience response feedback. Simulation engages students in experiential learning; students use Anatomage virtual dissection to investigate regional anatomy of clinical cases, perform ultrasound of the same region on standardized patients, and manage high-fidelity mannequin case scenarios related to the regional anatomy.

After the completion of the DSF course, the MS1 will be able to:

- Demonstrate and apply knowledge pertaining to normal structure (macro and micro) and radiological appearance of organ systems in the human body (Physician as a Scientist and Clinical Problem Solver)
- Analyze the physiological processes that underlie normal functioning of organ systems in the human body (Physician as a Scientist and Clinical Problem Solver)
- Illustrate the fundamental principles that underlie normal prenatal development and establish a body plan required for further development of organ systems in the human being (Physician as a Scientist and Clinical Problem Solver)
- Correlate the unique structural (macro and micro) organization of organ systems in the human body with their development and functions being (Physician as a Scientist and Clinical Problem Solver)
- Predict clinical outcomes in common disease processes that result from altered development, structure, or function of organ systems in the human body (Physician as a Scientist and Clinical Problem Solver)
- Critique the use of imaging modalities in diagnosis of human diseases and evaluate their roles in diagnosing common alterations in development, structure, or function of organ systems in the human body (Physician as a Scientist and Clinical Problem Solver)
- Dissect human cadavers in the laboratory to analyze spatial organization of organ systems and acquire the necessary ethical, social, collaborative, professional, and surgical skills for future practice of medicine (Physician as a Scientist, Clinical Problem Solver, Communicator, Advocate, and Person)

Summative assessments comprise ≥75% of the grade. Exams combine multiple-choice questions with performance-based assessments that use laboratory specimens and images. The remainder of the grade derives from timely completion of assignments, active participation in laboratory and conference sessions, and performance on low-stakes online quizzes.

Course co-leaders
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