

## Human Health and Disease: A Clinical Approach Section E Fall 2017

Instructors: Dr. Ulrik Stoltze & Dr. Wendy Sophie Schou  
Mondays and Thursdays, 15:30-17:30  
Herlev Hospital

### Instructors



#### **Wendy Schou**

M.D. (University of Copenhagen, 2015). Recidency in the Medical Department, Herlev University Hospital (present). Internship in a GP, Bornholm (2016), Internship in the Medical Department, Bornholms Hospital (2015-2016). With DIS since 2016.



#### **Ulrik Kristoffer Stoltze**

M.D. (University of Copenhagen, 2017). Currently: Residency in Gastrointestinal surgery at Herlev Hospital, researcher at Pediatrics Oncology Lab (Bonkolab) at Rigshospitalet and chairman of The Stethoscope, a radio program for medical professionals. Previously: Researcher at St. Jude Children's Research Hospital and the Clinical Genetics Department at Rigshospitalet, doctor in the psychiatric emergency room at Bispebjerg Hospital, and former DIS Course Assistant for Human Health & Disease. With DIS since 2017.

### Course Assistant



#### **Mia Beicher Ansbjerg**

7<sup>th</sup> semester medical student at University of Copenhagen Medical School. B.Sc. Medicine, University of Copenhagen, 2016. Student Assistant at Competence Centre for Transcultural Psychiatry in Ballerup. Volunteer at the suicide prevention hotline, Lifeline, Copenhagen. With DIS since 2016.

### Learning objectives

The objective of the course is to introduce students to the most important human diseases, their diagnoses and treatments, and to the clinical working methods of physicians as practiced at a large, Danish University Hospital (Roskilde and Glostrup Hospital) both in Copenhagen. Upon completion of this course, students will be able to:

1. Write a structured medical report
2. Explain the rationale for choice of tests and treatments in clinical practice
3. Copy basic manual skills (IV insertion, suture, and catheter insertion) and give a basic explanation of the techniques
4. Discuss knowledge of human anatomy, physiology, and scientific context
5. Describe medical practice in a social, international, and scientific context
6. Outline the epidemiology of major diseases in both the industrialized world and the developing world.

### Content

The clinical approach of the course implies studying symptoms, signs, diagnostic methods and treatment of the most important human diseases, writing patient case reviews based upon medical records, and patient interviews, visiting various clinical and diagnostic hospital departments, and performing physical examinations on phantoms or other students.

The course, however, does not provide regular medical training corresponding to that of medical students and does not include shadowing of doctors or physical examination of patients. Patient demonstrations are included in some, but not all, lectures.

### **DIS Contacts**

Lisbeth Borbye, Program Director  
Stephanie Clemente, Project Manager, scl@dis.dk, tel. +45 3376 5477  
Bethany Cucka, Program Assistant, bcu@dis.dk, tel. +45 3376 5789  
Science & Health Program Office, Vestergade 10-B12

### **Pre-requisites**

At least one year of biology and one year of chemistry at the university level. The course is oriented towards serious students with a documented academic interest in medicine.

### **Evaluation**

Students will be evaluated based on participation, three theoretical patient cases, two small tests, and a final examination. There will also be a small assignment related to the study tours. The grade on this assignment will contribute to your participation grade

Tests (2 at 10%)	20%
Patient cases (4 at 7,5%)	30%
Final examination	30%
Study tour Assignment	10%
Participation	10%

### **Participation covers the following areas**

1. Attendance
2. Level of preparation and ability to answer questions asked in class
3. Involvement in class and group discussions
4. Level of individual research and contribution to discussions

### **Policy on late papers**

Late papers will be accepted, but your grade for the paper will be reduced by half a point for each day that it is late.

### **Electronics**

Computer is allowed for class purposes. It is not allowed for other activities such as social networks, sending personal e-mails etc. If you use a computer for other purposes, it will affect your participation grade. Cell phone usage is not allowed in class. It is distracting to both your classmates and your instructors, so please keep them turned off. Otherwise it will affect your participation grade.

### **Theoretical Patient Case (TPC)**

During the semester, you will be presented with three theoretical patient cases in class to work on individually. You are responsible for suggesting, based on the case you get, an appropriate course of questions to get a detailed medical history that will allow you to structure a relevant clinical exam and an appropriate course of paraclinical investigations leading to a preliminary diagnosis. More detailed information will be provided in class.

### **Clinical Patient Case (CPC)**

During the semester, each student will be presented with different real patients and everyone will write up their own case history about the signs, symptoms, ailments and treatments for the specific patients that are introduced to the students. It is important to note that, on these dates, attendance is mandatory. Skipping class for travel or other reasons will not be accepted. More details will be given on this activity as the time approaches for the first Clinical Case Review.

### **Important Information:**

***It is mandatory to attend all classes in which clinical case reviews are presented. Missing a class would result in a 'fail' on that paper.***

### **Tests and Final**

There will be a total of two tests throughout the semester. These tests will consist of a mix of short answer questions and essay questions. Tests may be given at the beginning of class or at the end. If the latter, the material covered in lecture that day may be on the test; so, make sure to pay close attention to the information discussed in lecture that day. Tests in class will generally last a maximum of 30 minutes depending on the amount of information covered. The final exam for this course will be cumulative and will be written in the same manner as tests. The final exam will be two hours in duration.

### **Practical Information**

Medical Practice & Policy faculty and staff have put many hours into selecting and organizing the readings for this course. Please make sure to read all the material assigned; the reading material has been carefully chosen and all of it is pertinent to your success in Human Health and Disease. You have an obligation to your fellow classmates and yourself to come prepared to class. If you have questions or need clarification about a reading or lecture material do not hesitate to speak up and/or contact the course assistant (see contact information above). This is very important as the professors for this course do not have scheduled office hours. However in the case that a meeting is needed, please feel free to set up appointments with them via email. You can contact them, the course assistant, or program assistant Bethany Cucka, ([bcu@dis.dk](mailto:bcu@dis.dk)) to set up an appointment or to ask a question.

### **DIS Policies**

***Attendance:*** You are expected to attend all DIS classes when scheduled. If you miss multiple classes the Office of Academic Support will be notified and they will follow-up with you to make sure that all is well. Absences will jeopardize your grade and your standing at DIS. Allowances will be made in cases of illness, but in the case of multiple absences you will need to provide a doctor's note.

***Academic Honesty:*** Plagiarism and Violating the Rules of an Assignment

DIS expects that students abide by the highest standards of intellectual honesty in all academic work. DIS assumes that all students do their own work and credit all work or thought taken from others. Academic dishonesty will result in a final course grade of "F" and can result in dismissal. The students' home universities will be notified. DIS reserves the right to request that written student assignments be turned in electronic form for submission to plagiarism detection software. See the *Academic Handbook* for more information (on DIS Forum), or ask your instructor if you have questions.

***Disability Resources:*** Any student who has a need for disability accommodations should contact the office of academic support ([acadsupp@dis.dk](mailto:acadsupp@dis.dk)) to coordinate this. Upon DIS approval, students should inform the instructor of accommodations within the first two weeks of class.

***Academic Excellence Award:*** Each semester we recognize one outstanding student from the Medical Practice & Policy Program with an Award of Academic Excellence. It is reserved for a student who has distinguished him- or herself through diligence, commitment, academic performance, and ideally a student who contributes to a good, collaborative learning environment in class.

### **Core Course Week and Study Tours**

Core Course week and study tours are an integral part of the core course as we take the classroom on the road and see how theory presented in the classroom is translated to practice in the field. You will travel with your classmates and DIS faculty/staff on two study tours; a short study tour during Core Course Week and a long study tour to relevant European destinations.

### **Expectations for study tours:**

- Participate in all activities
- Engage in discussions, ask questions, and contribute to achieving the learning objectives
- Respect the destination, the speakers, DIS staff, and your fellow classmates
- Represent yourself, your home university and DIS in a positive light

One of the learning objectives of Human Health and Disease: A Clinical Approach is for you, the student, to be able to describe medical practice in a social, international, and scientific context. The study tours are a way to achieve this learning objective.

**Learning Objectives:**

The objectives of both the short study tour and the long study tour are:

- to showcase examples of clinical practice and health care systems in different sectors and countries
- to broaden the students' view of the challenges that health care providers face
- to show examples of research with clinical relevance
- to explore and learn more about Denmark and other societies in Europe

While on a program study tour DIS will provide hostel/hotel accommodation, transportation to/from the destination(s), approx. 2 meals per day and entrances, guides, and visits relevant to your area of study or the destination. You will receive a more detailed itinerary prior to departure.

**Travel policies:** You are required to travel with your group to the destination. If you have to deviate from the group travel plans, you need approval from the program director and the study tours office.

**Study Tour Assignment**

Before going on the short study tour, you will be divided into groups and be given a specific subject to focus on in your study tour assignment. An observation booklet should be used on both trips for notes, these notes with which should be discussed within your group. A more in-depth description of the study tour assignment will be provided closer to the short study tour. *All parts of the assignment must be completed in order to obtain full credit for the assignment which counts toward 10% of your grade.*

**Required readings**

- **Hole JW:** Essentials of Human Anatomy & Physiology, 9th Edition. WC Brown Publishers, London 2004: Hole.
- **Ford MJ, Hennessey, I, and Japp, A:** Introduction to Clinical Examination, 8th Edition. Churchill Livingstone, London 2005: Ford.
- **O'Neill P, Dornan T, Denning DW:** Medicine. A Core Text with Self-Assessment. Churchill Livingstone, 3rd Edition, 2008: O'Neill.
- **Additional Readings will be posted on Canvas**

NOTE: Not all reading assignments will be covered in class, but all reading assignments are absolutely necessary in order to follow what is actually covered in class. In some cases, where noted, skimming the reading and picking out important points will be sufficient.

**Canvas**

Canvas is a web-based system that allows you to access course resources and communicate with your classmates and faculty. To access Canvas, you can go to the DIS homepage and click the 'Canvas' link on the bottom of the website, or go to: <https://canvas.disabroad.org/login/canvas>. You can also download the Canvas App (By: Instructure) on iPhone and Android mobile smart phones.

**Useful Links and Online Medical Dictionaries**

1. Medline Plus Medical Dictionary  
<http://www.nlm.nih.gov/medlineplus/mplusdictionary.html>
2. Medical Dictionary  
<http://www.medical-dictionary.com/>
3. Medicine Net  
<http://www.medicinenet.com/>
4. Inteli Health  
<http://www.intelihealth.com/IH/ihIH/WSIHW000/408/408.html>
5. UK Medical Search Engine & Health Guide  
<http://www.medic8.com/index.htm>

**Course Schedule**

<b>Day / Date</b>	<b>Time, Room</b>	<b>Title</b>	<b>Readings</b>	<b>Lecturers</b>
Wed 23/08	14:50-16:10  Kosmopol, Fiolstræde 44, 1171 København K, (See Arrival Booklet)	<b>Mandatory Medical Practice &amp; Policy Program Orientation</b>		
Thu 24/08	15:30-17:30  DIS, V10-A33	Lecture 1 <b>Introduction</b> <ul style="list-style-type: none"> <li>• Presentation of the course and the introduction of faculty and students</li> <li>• Introduction to Clinical Case Reviews (CCR) and Theoretical Patient Cases (TPC).</li> <li>• Overview on Danish healthcare system and how to become a doctor in Denmark</li> </ul>	<b>No Readings</b>	Ulrik + Wendy
Mon 28/08	15:30-17:30  DIS, V10-A33	Lecture 2 <b>Clinical Medical Records</b> <ul style="list-style-type: none"> <li>• History and physical examination, understanding signs and symptoms, the structure of medical records.</li> <li>• Clinical Practice: Stethoscopy, blood pressure, pulse</li> </ul> <p><b>**Elect Class Representatives**</b></p>	<b>Ford:</b> 1-55, 72-77, 92-95  Clinical Case Review assignment guide (on Canvas)	Ulrik
Thurs 31/08	15:30-17:30  DIS, V10-A33	Lecture 3 <b>Infectious Disease</b> <ul style="list-style-type: none"> <li>• An overview of the lymphatic system and the cellular components of the immune system</li> <li>• An understanding of innate vs. adaptive immune defense</li> <li>• Most common and most serious infectious diseases: Pneumonia, diarrhea, cystitis, meningitis, sepsis</li> <li>• Focused on symptoms, signs and treatment with antibiotics, as well as a general understanding of epidemiology and etiology</li> </ul>	<b>Hole's:</b> skim: 378-384, read: 384-395  <b>O'Neill:</b> (focus on cases and sign/symptoms, as well as basic, i.e. first-line, treatment) 74-79 (2.2 pneumonias) 134-138 (3.6 food poisoning and GI infection) 188-189 (4.4 urinary tract infection/cystitis) 218-220 (5.2 bacterial meningitis) 408-411 (10.1-2 fever and sepsis) skim: table 82 p380 (immunodeficiencies)st ergade	Ulrik

<p>Mon 04/09</p>	<p>15:30-17:30  Herlev Hospital  Meet CA at DIS Vestergade 7 Courtyard at <b>14.35</b> to depart to Herlev as a group</p>	<p>Lecture 4 <b>Gastroenterology</b></p> <ul style="list-style-type: none"> <li>• An overview of anatomy and physiology – food normal passage through the stomach, small and large intestine</li> <li>• Most frequent symptoms and diseases of the GI tract: Constipation, diarrhea, Upper abdominal pain, Lower abdominal pain, GI bleeding, Nausea/Vomiting and Dyspepsia. Practice an abdominal exam</li> </ul>	<p><b>Hole's:</b> read: 400-413, 420-427 (15.1-6 &amp; 15.9-10)</p> <p><b>O'Neill:</b> (focus on cases and sign/symptoms, as well as basic, i.e. first-line, treatment) 117-120 (3.1 GI signs/symptoms) 122-125 (3.3 stomach &amp; duodenum) 128-134 (3.5 large intestine)</p> <p><b>Ford:</b> 102-107 (abdominal exam)</p> <p><b>Alternatively:</b> <a href="https://youtu.be/XOefpxm38bc">https://youtu.be/XOefpxm38bc</a></p>	<p>Ulrik</p>
<p>Wed 06/09</p>	<p style="text-align: center;"><b>Mandatory Study Tour Orientation</b> Wednesday, September 6 17:30-19:00 DIS, V23-301 Core Course Week, Long Study Tour, Introduction to Healthcare Systems <b>Readings:</b> <i>The Danish Healthcare System (On Canvas); WHO Health Systems in Transition Executive Summary Only (On Canvas)</i></p>			
<p>Thur 07/09</p>	<p style="text-align: center;"><b>Reserved for Make-Up Class</b></p>			
<p>Fri 08/09</p>	<p style="text-align: center;"><b>Medical Practice &amp; Policy Program Social</b> Friday September 8 18:00-20:00 Location: TBA <i>*Get to know your MPP peers before CCW with some light snacks &amp; drinks*</i> <i>More information provided a week before</i></p>			
<p style="text-align: center;"><b>Short Study Tour and Core Course Week</b></p> <p style="text-align: center;"><u>Short Study Tour</u> Monday, September 11 – Wednesday, September 13 Århus/Randers</p> <p style="text-align: center;"><u>Copenhagen Portion</u> Thursday, September 14 – Friday, September 15 (18.30)</p> <p style="text-align: center;"><b>**Please note that it is mandatory to attend all scheduled Core Course Week and Short Study Tour activities**</b></p>				

Thurs 14/09	15:30-17:30 Herlev Hospital	Lecture 5 <b>Gastroenterology and surgery + Patient Case #1</b> <ul style="list-style-type: none"> <li>Anatomy and physiology – liver, gall bladder, pancreas</li> <li>Most frequent disease entities – diseases in liver, gall bladder and pancreas</li> <li>Principles of GI surgery; laparotomy vs. laparoscopy, benefits vs. complications</li> </ul>	<b>O'Neill:</b> (focus on cases and sign/symptoms, as well as basic, i.e. first-line, treatment) 138-154 (3.7-9 liver, gall system & pancreas)	Ulrik
Mon 18/09	15:30-17:30 Hvidovre Hospital lokale 25 i afsnit 156  *Meet Course Assistant at 14:35 at DIS V7 Courtyard*	Lecture 6 <b>OBGYN I</b> <ul style="list-style-type: none"> <li>Anatomy and physiology</li> <li>Problems during early pregnancy</li> <li>Childbirth – postpartum complication – focus on postpartum bleeding</li> </ul> <p><b>*NOTE: LOCATION CHANGE*</b></p>	<b>Hole's:</b> pp. 516-531, 536-553	Birger
Thu 21/09	TBA, 15:30-17:30 Hvidovre Hospital lokale 25 i afsnit 156  *Meet Course Assistant at designated time and destination	Lecture 7 <b>OBGYN II</b> <ul style="list-style-type: none"> <li>Lab training: Simulator training, gynecological training, measurements of bleeding</li> </ul> <p><b>Patient Case #1 Due to Canvas by 15.30</b></p> <p><b>*NOTE: LOCATION CHANGE*</b></p>	<b>None</b>	Birger
Mon 25/09	15:30-17:30 Herlev Hospital	Lecture 8 <b>Endocrinology</b> <ul style="list-style-type: none"> <li>An overview of the hypothalamus-pituitary-thyroid/adrenal axis</li> <li>Concepts of endocrinology; steroid vs. peptide, negative feedback, hypo- vs. hyper-, replacement therapy</li> <li>Most frequent non-diabetic endocrine diseases: thyroid, cortisol, aldosterone and adrenal androgens related disease</li> </ul>	<b>Hole's:</b> skim: 291-297 (11.1-4) read: 297-302 (11.5-6) read: 305-206 (11.8)  <b>O'Neill:</b> 295-311 (7.1-7.4)	Ulrik
Thur 28/09	<b>Reserved for Make-Up Class</b>			

Mon 02/10	15:30-17:30 Herlev Hospital	Lecture 9 <b>Neurology I (+Neurological Examination)</b> <ul style="list-style-type: none"> <li>Anatomy of the central and peripheral nervous system</li> <li>Basic neurology, including neurological diseases: stroke, headache, meningitis, epilepsy</li> <li>Practical: testing the 12 cranial nerves</li> </ul>	<b>Hole's:</b> 214-222, skim 232-254  <b>O'Neill:</b> 218-220 (meningitis), 225-230 (stroke), 235-236 (epilepsy)  <b>Ford:</b> 118-120, 123, 126-132	Wendy
Mon 05/10	<b>Reserved for Make-Up Class</b>			
<b>Long Study Tour</b> Sunday, October 8 – Friday, October 13 Poznan, Poland and Berlin, Germany  <b>**Please note that it is mandatory to attend all scheduled Long Study Tour activities**</b>				
Mon 16/10	15:30-17:30 Herlev Hospital	Lecture 10 <b>Neurology II</b> <ul style="list-style-type: none"> <li>Anatomy of the central and peripheral nervous system</li> <li>Basic neurology, including neurological diseases: stroke, headache, meningitis, epilepsy</li> <li>Practical: testing the 12 cranial nerves</li> </ul>	<b>Ford:</b> 48-60 (skim) 170-171, 159+ 164-165  <b>Hole's:</b> 126-127, 132-134, 145-163 (skim pictures)  <b>+ reading on Canvas</b>	Wendy
Thur 19/10	15:30-17:30 Herlev Hospital	Lecture 11 <b>Cardiology I + Test 1</b> <ul style="list-style-type: none"> <li>Anatomy and physiology of the heart and vascular system.</li> <li>Ischemic heart disease</li> <li>Arrhythmias</li> <li>ECG-reading</li> </ul>	<b>Hole's:</b> 340-377, chapter 13	Wendy
Mon 23/10	15:30-17:30 Herlev Hospital	Lecture 12 <b>Cardiology II</b>	<b>No readings</b>	Wendy
Thur 26/10	16:00-19:30 Simulation and Training Center (Gentofte Hospital)  <b>Meet CA at designated location &amp; time</b>	Lecture 13 <b>DIS Introduction to Clinical Skills Session</b> <ul style="list-style-type: none"> <li>IV Insertion</li> <li>Suture</li> <li>Catheters</li> </ul> <b>**NOTE: LOCATION CHANGE**</b>	<b>Readings on Canvas</b>	DIS Instructors
<b>Travel Break</b> October 30 – November 3				

Mon 06/11	15:30-17:30 Herlev Hospital	Lecture 14 <b>Pulmonary + Patient Case #2</b> •Anatomy and physiology •COPD and Asthma •Demonstration of lung function	<b>Hole's:</b> 442-466  <b>Ford:</b> 22, 88-96  <b>O'Neill:</b> 69-72, 84-93	Wendy
Wed 08/11	<b>Study Tour Assignment Due By 16.00 to Canvas</b>			
Thur 09/11	15:30-17:30 Herlev Hospital	Lecture 15 <b>Emergency room, injuries and trauma + Test 2</b> • Injuries and treatment in emergency room. Common injuries. • Trauma triage and assessment. Common traumas. Burns. • Introduction to ABCDE principle Cases	<b>Ford:</b> 48-60 (skim) 170-171 (critically ill) 158-9 (shoulder joint) 164-165 (spine)  <b>Hole's:</b> 126-127 (6.2 about burns), 132-134 (7.1-2 about bones) 145-163 (skim pictures)  <b>+ reading on Canvas.</b>	Ulrik
Mon 13/11	16:30-20:30 Herlev Hospital 25 <sup>th</sup> floor	Lecture 16 <b>Emergency Medicine Simulation Session (EMSS)</b> • The management of stopped- heart diagnosing • Treatment of cardiac arrest • Practical training in resuscitation • Team training using simulation centre in various patient case scenarios  <b>Patient Case #2 Due to Canvas by 15.30</b>  <b>*NOTE: TIME CHANGE*</b>	<b>On Canvas</b>	Ditte
Thur 16/11	<b>Reserved for Make-Up Class</b>			
Mon 20/11	15:30-17:30 Location: TBA	Lecture 17 <b>Theoretical Patient Cases</b>  Theoretical Patient Cases in class	You will be working with previous material from Gastroenterology, Pulmonology, Neurology and Cardiology. Bring notes.	Ulrik + Wendy
<b>Break</b> Wednesday, November 22 – Friday, November 24				
Mon 27/11	15:30-17:30 Herlev Hospital	Lecture 18 <b>Diabetes</b>	<b>Holes:</b> 306-312  <b>O'Neill:</b> 314-326	Wendy

Thur 30/11	15:30-17:30  Herlev Hospital	Lecture 19 <b>Clinical Genetics &amp; Family History</b> <ul style="list-style-type: none"> <li>• The specialty of clinical genetics</li> <li>• Environment vs. genetics</li> <li>• How to not overinterpret the family history, and what not to miss it</li> <li>• Most common genetics terms and diseases:</li> <li>• Recessive (cystic fibrosis &amp; sickle cell) vs. dominant disorders (BRCA &amp; Huntington's)</li> <li>• Penetrance ("skipping a genetic") + anticipation + X-linked</li> <li>• Abberations (trisomies, eg Down) vs. mutations (Neurofibromatosis)</li> <li>• The survival of the sickest (hemachromatosis &amp; atopic dermatitis).</li> </ul>	<b>Hole's:</b> 83-91 (4.6-7 DNA and protein synthesis)  <b>Ford:</b> 11 (family history)	Ulrik
Mon 04/12	15:30-20:00  Location: TBA  <b>*Note extended time*</b>	Lecture 20 <b>Evaluation</b> <ul style="list-style-type: none"> <li>• Course wrap up &amp; tying it together</li> <li>• Concluding Social</li> </ul> (more information provided closer to date)	<b>No Readings</b>	Ulrik + Wendy
<b>Thursday, December 7</b> DIS End of Semester Showcase Time: 16:00-18:00 Location: DIS, TBA Invitation and more information to come closer to date.				
<b>Final Exams</b> <b>Thursday December 7 – Sunday December 10</b> Time: TBA Location: DIS, TBA Exact date & time of Human Health & Disease: A Clinical Approach Final Exam provided closer to.				