

Microbiology, Virology, Hygiene

The course runs for one semester in the first clinical year and spreads over 13 weeks of teaching/examination/introduction/holidays.

Structure (changes are possible):

- Lectures Microbiology, Hygiene, Virology, Parasitology. Four hours per week (38 total)

Topics covered:

Microbiology (general bacteriology, gram positive cocci, Enterobacteriaceae, gastrointestinal infections, pneumonia (agents and disease), anaerobic bacteria, pathogenic fungi, meningitis (agents and disease), Mycobacteria, spirochetes, STD.

Hygiene (mechanisms and development of antibiotic resistance, hygiene, hospital acquired infection)

Virology (this is taught by the Institute for Virology as a part of our course. If you need detailed information, please consult Prof. Schätzl (schaetzl@lrz.tum.de))

Parasitology (classification of parasites, protozoa (Plasmodium, Trypanosoma, Amoeba, Leishmania, Toxoplasma), metazoan (selected nematodes, trematodes and cestodes))

- Lectures Immunology (9 hours total)

Topics covered: Cells, organs, receptors; innate immunity, danger; B cells, antibodies; T cells, MHC, antigen presentation, thymic maturation; cytokines; memory; defence against microbes; vaccination; immunodeficiency, transplantation; immunopathology.

- Practical course/laboratory classes (four hours per week, 40 hours total)

Topics covered: Microscopy, bacterial culture; diagnostics of bacterial species; urinary tract infection; pneumonia, PCR; antibiotics resistance; diagnostics of bacterial dysentery; hygiene and disinfection; immunological methods; blood groups; pathogenic fungi; anaerobic bacteria; clinical cases; virology (see above); protozoa (demonstration, microscopy); metazoa (demonstration, microscopy of worm eggs).

Examination:

Written, 45 minutes, usually 30 questions (multiple choice or short written answers), covering all of the above. Students who fail the first exam will be re-examined orally.

Contact person: Prof. Häcker, hacker@lrz.tum.de