

Effect of government COVID-19 regulations on the veterinary education in 2020/2021.

Orchestration of implementations of COVID19 restrictions and guidelines

Implementations of governmental COVID19 restrictions and guidelines are coordinated centrally by UCPH, who is in direct contact with the relevant governmental institutions dealing with the COVID19 situation.

Since the end of March 2020, the Vice-Dean for education, SUND has chaired weekly meetings between the faculty “Corona Task Force”, the Head of Students Affairs, and the individual “SUND Schools”, including the VetSchool, which until now has been represented by the Heads of the Veterinary Departments, the Chair and Vice-Chair (student) of the Study Board for Veterinary Medicine and Animal Science, the Head of Animal Science Studies, the Chairs of the two departmental teaching committees, and the Head of Veterinary Studies and the VetSchool. Interpretation, implementation and communication of governmental and UCPH COVID19 regulations and guideline and problems regarding the processes are discussed at these meetings.

Effects on Curriculum (cf. Standard 3)

Curriculum activities in Blocks 3 and 4 (spring semester) and summer semester, 2020

As a consequence of the Government announcement on March 12th 2020 regarding a major lockdown of the Danish society, UCPH sent home all students and staff (apart from staff carrying out vital functions, including emergency services at the veterinary teaching hospitals). The Rector ordered all UCPH faculties to convert all teaching and exams within the spring semester (Blocks 3 and 4) to online activities.

At SUND, the Heads of studies and the Study Boards were asked to orchestrate this first conversion of teaching, approve changes and report back to the Dean with the final plan for all courses. This also included the identification of “critical practical and clinical teaching modules and exams”, which could not be converted to online activities due to professional and academic competence requirements as well as suggestions of the first tentative plans for how these critical educational activities would be ensured under different COVID19 – (reopening) scenarios, while still observing the most recent COVID biosecurity guidelines.

As the COVID19 situation came under better control, the Government approved that UCPH allowed groups of researchers/teachers and students onto campus, hence teaching and exam plans were adjusted and re-approved. At first, a limited number of VetSchool staff, researchers/clinicians/teachers and last year students were allowed into campus laboratories and clinics (the latter from 29th April; see UCPH announcements [21/04/2020](#) and SUND announcements [in Danish] [23/04/20](#)). Later on, more researchers/teachers and veterinary students were allowed on campus – the latter included reopening on 18th May for both BSc and MSc students attending designated critical practical and clinical teaching and exams (see UCPH

announcements [5-05-2020](#), [22-05-2020](#) and [28-05-2020](#) and SUND announcements [15/05/20](#)). On the 15th June, all university staff were allowed to return to Campus/office (see [UCPH announcement](#)) and from 26th June, all university students were allowed back on campus, i.e. libraries, study room, group rooms etc. under continued COVID19 preventive guidelines (see [UCPH announcement](#).)

In the veterinary BSc and MSc curricula, the initial COVID19 lock-down specifically affected:

- the last three weeks of all Block 3 courses (13th Mar - 3rd Apr)
- all re-examinations of the autumn semester courses in the interim week (14th -19th April)
- all Block 4 courses and exams (20th April - 21st June)

Consequently, all theoretical teaching and exams and non-critical practical laboratory and clinical exercises were converted to online teaching. Critical practical and clinical teaching and exams (i.e. clinical anatomy, special pathology, clinical rotations at the hospitals, and modules within herd health, gynaecological examination, and meat and hygiene inspection on extra-mural locations) that was initially cancelled in block 3 and block 4 were postponed to last weeks of block 4, the interim summer week (22nd – 28th June), the summer semester and interim weeks of the fall semester.

All postponed practical and clinical teaching and exams were carried out according to the “Covid19-teaching and exam plan”, discussed and approved in the Study Board for Veterinary Medicine and Animal Science and sent for final approval at the Faculty (and sometimes University) level prior to implementation. A list with effects on the individual courses and exams can be provided upon request.

Curriculum activities in Blocks 1, 2, 3 and 4, 2020/2021

Sept. 1st to Dec. 8th overview:

As [announced by UCPH on 7th July](#), 2020, COVID19 restrictions would continue in the autumn semester (Blocks 1 and 2), thus conversion of theoretical teaching to online sessions continued. However, small classes/identified (permanent) groups of students (< 50 persons) and new students were allowed theoretical teaching on campus, e.g. lectures, seminars, exercises, case-work, supervision, obeying the latest biosecurity guidelines from the Ministry of Education and Research ([see guidelines from 2. July](#)). Critical practical and clinical training and work were also allowed when adhering to the COVID19 biosecurity regulations. The cornerstones in the biosecurity regulation were:

- stay home/isolation of students/staff with symptoms
- ≥ 1 m distance between students/staff (2 m to instructing/lecturing staff facing the students)
- hand wash/disinfection
- regular ventilation of indoor rooms
- cough, sneeze into the sleeves and frequent cleaning of contact points.
- in case a distance ≥ 1 meter cannot be ensured (e.g. in clinical work) face masks must be used, except for identified (permanent) study groups (< 50 students), who may sit closer together than 1 meter facing in the same direction in lecture halls and classrooms.

First year BSc-courses in Blocks 1 and 2 were attended physically by students adhering to the above-mentioned biosecurity regulations. Lectures were held as “[Hyflex – teaching](#)”, meaning that lectures were streamed online from the lecture halls using Zoom, Skype or Teams. As lecture halls

at Frederiksberg campus cannot hold a full year cohort of 180 students while also adhering to the biosecurity requirements of ≥ 1 m distances between students/stem groups of students, only half of the Year cohort was allowed to attend a lecture physically, while the other half participated online from home or from other places on campus. The theoretical exercises were carried out as physical teaching in small groups adhering to the COVID19 biosecurity regulations. Practical laboratory teaching including dissections were carried out in small stem groups of students wearing protection gear (i.e. face mask and also gloves, lab coats and washable footwear when appropriate) and separated from other stem groups by at least 1 meter.

For all other veterinary BSc-course lectures as well as lectures in Medicine, Surgery and Reproduction – large animal and companion animal lectures, the teachers could decide whether lectures would be delivered in the Hyflex-lecture format or in a pure online format, resulting in a mixture of both formats. Small group theoretical teaching was once again predominantly given as physical attendance teaching, if the biosecurity regulation could be ensured. However, in a few courses, the students and teachers agreed that online teaching was preferred to teaching with physical attendance for various logistic reasons. These courses were therefore allowed to do everything online.

All practical and clinical teaching was carried out in small stem groups wearing protection gear (i.e. face mask and gloves, lab coats and washable footwear when appropriate) and adhering to the distance requirement whenever possible.

Written theoretical exams that according to the curriculum are described “exams without exam aids” (e.g. notes, internet access), including MCQ-exams, were allowed to be held as physical exams in the exam facilities at Peter Bangsvej, adhering to the COVID19 biosecurity regulations. Thesis defences with physical attendance were allowed if examiners (including external) and students agreed, but without audience. Practical exams and formative tests were allowed if adhering to the COVID19 biosecurity regulations.

[December 9th 2020 to June 31st 2021 overview](#)

Further restrictions regarding students’ and staff’s presence at Campus were announced by the UCPH on December 7th following governmental regulations announced the same day, and again on Dec. 18th. These restrictions were at first valid until Jan.17th, but were later extended at UCPH to 1st of April thus including exams at the end of January 2021.

The new restrictions required that students and staff should keep > 2 meters distance and wear face masks at all times when on campus. Practical clinical work and exercises involving handling patients (including cadavers for diagnostic post mortem) were exempt if wearing adequate protection gear. The new distance requirement resulted in changes in practical laboratory exercises and clinical exercises on dummies and cadavers for teaching, as well as cancellation of some theoretical exams held on Campus (at the Peter Bangsvej Digital Exam Centre). These exams were changed to online exams.

The general requirement for transformation of all theoretical teaching and exam to online teaching was extended beyond April 1st to September 1st. However, all practical laboratory and clinical exercises and exams including those characterized as non-vital were allowed as physical attendance activities if general COVID19 biosecurity regulations could be abided. From June 23th students and

50% of staff were allowed free access to campus, e.g. study rooms, libraries and other students facilities, if tested with valid “Corona passport” and abiding general COVID19 regulations.

In summary, the veterinary BSc- and MSc- curricula has during this period been able to complete all lectures and theoretical exercises as online teaching and all critical practical and clinical teaching, i.e. clinical anatomy, special pathology and clinical rotations at the hospitals as well as most theoretical exams at the Peter Bangsvejs Exam Centre as planned. Laboratory exercises in microbial food safety (block 4), which had been changed to online teaching in 2020 were partly re-established as physical teaching. A few teaching modules in herd health, gynaecological examination and meat and hygiene inspection on extra-mural locations has been postponed to interim weeks and the summer semester in 2021 due to close down of extra mural locations.

MSc-students who have not been able to complete some critical practical/clinical teaching modules within the planned semester due to the COVID19 situation have been granted a exemption from the rules of normal study progression at the MSc-programme, enabling them to continue on the final tracking courses/start their thesis work. As the modules are mandatory, the students have been offered the missing modules later during the summer holidays and/or interim weeks. Similar exemptions have not been necessary at the BSc-programme.

Number of students and staff infected with COVID19

The UCPH and the Health Faculty have carried out detailed surveillance of SARS-CoV-2 among students and staff showing symptoms. Infected students and staff and all fellow students / staff that have been in close-contact with infected persons on campus have been asked to stay in home isolation according to the general COVID19 biosecurity regulation.

Less than 30 veterinary students¹ have been tested positive for SARS-CoV-2, and of these only 3 have probably been infected at UCPH facilities. Monthly lists of number of COVID19-infected and quarantined students are collected by SUND study service and are available on request.

Effects on exams (cf. Standard 8)

All written theoretical exams are normally held at the UCPH Digital Exam Facility at Peter Bangsvej ([see students information on Peter Bangsvej, in English](#)), which offers a closed digital exam environment, in which internet access is strictly regulated and depends on the individual exam. Students use the computers at the facilities to login to the university Digital Exam platform from where they download the exam questions (essay, short answer and/or MCQs) and to which they submit their exam paper. The platform is also used for the submission of BSc and MSc theses, exam project reports etc. The platform is equipped with a plagiarism control system.

The conversion of theoretical exams to “online exams” means that written exams become “open-book” exams, where students were obliged to login to the national Digital Exam platform from their home computer and prepare their exam papers sitting at home. The students must declare a sworn statement that they will have no contact to other people during the examination. Oral exams,

¹ From August 2020 to May 26th 2021, 22 veterinary students have been registered as infected with COVID19 of which 3 has probably been infected students / staff at UCPH campuses. 54 students that has been in close contact with infected students at campus have consequently been quarantined

including the defences of MSc and BSc theses, were performed online via SKYPE or ZOOM. All exam papers are automatically controlled for plagiarism after submission.

The first lockdown in March 2020 was instigated only 2 weeks prior to the regular Block 3 exams. Hence, teachers had already prepared and submitted their exam questions for Block 3 and the short time to the scheduled exam dates did not allow for major revisions of the exam sets. Due to this - and considering that the students had been preparing for the regular types of exams - the Study Board accepted that the exam sets, which had already been prepared for the regular written exams without aids, were used at the “online” theoretical exams, if the examiner found it professionally sound.

Due to the partial lockdown of the Peter Bangsvej Digital Exam Center from December 2020 until September 1st 2021 a few veterinary exams (see above) have been/will be changed to the digital exam format and, subsequently, the course (exam) organizers have changed / been asked to change the exam to better suit the “open book” format.

The conversion to online oral and written exams is supported by the exams office and the Center for Online and Blended Learning. Specific guides were published on the UCPH-intranet ([see teachers guides for digital exams](#)) and UCPH-website ([see guide for online oral exams](#)).

Students' comments²

On behalf of the student organization, I would like to acknowledge how much planning the study boards and teachers put into reworking the exams, lectures and exercises to make it all COVID-19 compliant. The veterinary departments worked especially quick when compared to the other faculties and institutes, but all of the work behind the scenes was not evident for the students. The students have been frustrated with last minute changes, which greatly affected both their lectures and their exams, and rightly so.

Lectures were converted to online attendance, which inhibited the close interactions between students and teacher that we usually reap the benefits of at Vetschool. Students were notified that changes, with regards to date and content, would happen to their impending exams, but not in which manner until, at worst, a week before. All practical exercises were cancelled immediately because they did not comply with the COVID-19 regulations and while solutions were being worked out, the process was not transparent, leaving the students to wonder what would happen to them. The result of commandeering part of the summer vacation to ensure that the mandatory exercises could be undertaken this school year, while not ideal, was met with understanding from the affected students.

While some things could, retrospectively, have been handled better, the sudden revolution in teaching has in some regards created better circumstances for the students going forward. A clear example of this is the recording of lectures, enabling students to have a better and more flexible learning environment.

² Comments by Veterinary Student Organisation (VMF) represented by the Daniel Hjorth Lund, Chair of VMF.

During the fall and winter exams it was possible to facilitate exams at the UCPH Digital Exam Facility at Peter Bangsvej ([see students information on Peter Bangsvej, in English](#)), which made some students nervous due to increase in numbers of COVID incidents in the general public. There was a lot of media attention in January, due to a very outspoken group of students. Their main concern were the risk of infection, which was addressed by the Vice Dean of SUND as well as the studentleader of Medicin. A lot of measures were taken, in accordance to the national guidelines and collaboration with the Danish Health authorities. Increased distance between tables, cleaning between exams and an extra amount of supervisors to help students act appropriately, were some of the measures taken. It was also made possible for students who did not wish to attend to cancel their attempt at the exams. In general students who attended exams at Peter Bangsvej reported that the exams felt safe, and there has not been reported infections in relation to exams.

General Comments:

- The conversion of theoretical teaching has taken place with an impressive speed and surprisingly well due to exceptional efforts from teachers and great flexibility and understanding from students. The goals of SUND's educational 3-year strategy plan for "online and blended learning" were reached within a few months.
- Informational flow to the teachers and students has been difficult and probably confusing at times due to the very complex situation and sudden changes in the COVID19 – scenarios and their possible effects on reopening campus and the implementation of alternative teaching plans of critical practical teaching and the associated COVID19 biosecurity regulations
- The conversion of our normal digital exams without aids at the Peter Bangsvej exam facilities to online home exams has resulted in a substantial increase in reports of exam fraud from examiners due to suspicion of illegitimate contact between students and proven plagiarism from various sources (e.g. common student lecture notes, lecture slides, other students' exam papers).
- The COVID19 situation has resulted in inclusion of the summer month for teaching. Teachers, staff and students thus have had to cancel/reschedule parts of their planned summer holidays.
- All veterinary teaching and exams in 2020/21 have been or will be completed in 2021 despite the COVID19 - this includes critical practical and clinical teaching at campus and extra-mural.

UCPH, July 13th, 2021

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