

ADENDAS PARA EL MÁSTER UNIVERSITARIO ERASMUS MUNDUS EN IMAGE PROCESSING AND COMPUTER VISION

Ante la situación generada por la declaración de Estado de Alarma en Marzo de 2020, se han establecido las siguientes adendas a las guías docentes de la presente titulación.

Estructura del documento

Este documento es un compendio de las adendas propuestas para esta titulación. Se han dispuesto por cursos y cuatrimestres.

Utilice los marcadores del documento para una mejor navegación.

ADDENDUM TO THE COURSE GUIDE: Applied Video Sequence Analysis

Code - Course title: 33239 - APPLIED VIDEO SEQUENCES ANALYSIS

Degree: Máster Erasmus Mundus en Tratamiento de Imágenes y Visión Artificial

Faculty: 350 - Escuela Politécnica Superior

Academic year: 2019/20

This document describes the changes to enabling online/remote teaching for the course “Applied Video Sequence Analysis” during the suspension of face-to-face (presential) teaching activities in March of 2020. These changes are effective after the date 2020/03/16

1.1. Pre-requisites for online/remote teaching

In order to follow the theory, lab, and evaluation sessions, the students need a computer with Internet connection and the OpenCV library version 3.4. The instructions for installing and setting up OpenCV in personal computers are already available in Moodle.

In addition, we will use Microsoft Teams for videoconferences (<https://teams.microsoft.com/>) which can be freely used by UAM students as part of the university campus license. This application can be used as a web app or it can be installed in each student's computer.

1.2. Teaching-and-learning methodologies

The remaining (theoretical) lectures will be delivered online. Video(s) for each the lecture will be posted in Moodle before the scheduled class starting time according to Moodle's calendar.

The remaining (practical) laboratory sessions will be delivered online. The lab guide and draft code (if any) will be posted in Moodle before each lab session according to Moodle's calendar. Furthermore, a forum will be created for posting questions related to each laboratory.

Instead of having class during the originally scheduled time for both lectures and labs (Tuesday 12:00-14:00 and Thursdays 10:00-12:00), the teacher will be available in the course group of Microsoft Teams for face-to-face communication to answer lectures/labs questions. For these tutorial sessions, the assistance is not mandatory. Further instructions will be sent by email.

An updated schedule for the course has been posted to the course Moodle.

1.3. Evaluation procedures

Regular assessment (ordinary):

Lecture evaluations, TE1 and TE2, will be Moodle questionnaires with limited duration. Students will do the questionnaires remotely for TE1 and for TE2 (if presential not possible). Instructions for the questionnaires will be given through a live chat session. The TE1 evaluation is scheduled on 24/03/2020 (12.00-14.00) and TE2 evaluation is scheduled on the 07/05/2020 (10.00-12.00).

All lab assignments PR1...PR4 will be evaluated as planned in the original course guide.

In the ordinary exam period, we will consider the same scheme of the original course guide for overall evaluation: $\text{Grade} = 40\% \text{TE} + 60\% \text{PR}$

Extraordinary assessment (resit):

we will consider the same scheme of the original course guide for overall evaluation ($\text{Grade} = 40\% \text{TE} + 60\% \text{PR}$) where TE will be a Moodle questionnaire and PR will be a project on a proposed research topic in video analysis. The deadline for both TE and PR is 8th of June.

Modifications to the Guide to Applied Bayesian Methods

This document details the procedure that will be followed in ABM during the suspension of all face-to-face activities in Madrid and in UAM for the covid-19 emergency for the academic year 2019/20.

Modifications:

Lectures:

- Material for the theoretical contents of the subject will be made available through Moodle at posgrado.uam.es.
- Online sessions will also be held in the same schedule as the course through teams.microsoft.com, if possible. These sessions will start ON March 16th.
- Asynchronous communication with the students via chat and forums will also be available either through teams.microsoft.com or the Moodle web page of the course.

Assignments and handouts:

- In relation to the programming assignments all deadlines and handouts are maintained.
- Material for the programming assignments and handouts will be put on the Moodle web page of the course.
- Online lectures for programming assignments will also start on Monday 16th, through teams.microsoft.com, if possible.
- Asynchronous communication with the students via chat and forums will also be available either through teams.microsoft.com or the Moodle web page of the course.

Final exams:

- The June and May final exams will be done online in the same schedule.
- The exams will consist of a 30min moodle test for the first part of the subject and a written exam for the second and third parts of the subject. This written exam will

have to be completed at home in a period of 24h and then submit photos of the completed exam through posgrado.uam.es in the given time.

ADDENDUM TO THE COURSE GUIDE:

Tutored Research and Development Project I

Code - Course title: 3341– TUTORED RESEARCH AND DEVELOPMENT PROJECT I

Degree: Máster Erasmus Mundus en Tratamiento de Imágenes y Visión Artificial

Faculty: 350 - Escuela Politécnica Superior

Academic year: 2019/20

This document describes the changes to enabling online/remote teaching for the course “Tutored Research and Development Project I” during the suspension of face-to-face (presential) teaching activities in March of 2020. These changes are effective after the date 2020/03/16

1.1. Pre-requisites for online/remote teaching

In order to meet their supervisors, the students need a computer with Internet connection. In addition, we will use Microsoft Teams for team meetings (<https://teams.microsoft.com/>), which can be used as a web app or it can be installed in each student’s computer. Both programs can be freely used by UAM students as part of the university campus license. Alternative platforms can be exceptionally used to accommodate requisites from supervisors at the other Universities. TRDPs requiring specific software or hardware that is inaccessible for the students should adapt their workplans.

1.2. Teaching-and-learning methodologies

Weekly meetings with UAM’s supervisors and with the rest of the team members will be held online. Contact your UAM’s supervisor by email to set a date or confirm the regular meeting time.

1.3. Evaluation procedures

Evaluation of the TRDP1 course will be the result of three different aspects: The supervisor’s evaluation of the students’ progress (40%), according to their implication in the follow-up meetings, their initiative, their ability to confront the project, etc.; the evaluation of the TRDP1 Report (30%) by the TRDP Coordinator at PPCU , according to its content, to the degree of success respect to the initial objectives, and to the complexity and extension of the work; and the evaluation of the TRDP1 oral presentation (30%), which will be carried out by the local TRDP Coordinator.

Supervisor evaluation.

Supervisors are asked to deliver their marks by the last week of May through email sent to UAM TRDP Coordinator.

Evaluation of the final report.

The final report will be delivered through a Moodle task. The deadline for the final report remains scheduled for May 24th. These will be sent to PPCU TRDP coordinator for evaluation.

Evaluation of the oral presentation.

Regarding the oral presentation, students are asked to create a slideshow and record themselves presenting (e.g. through the Microsoft Teams platform). The recorded presentation will be delivered through a Moodle task. The deadline for uploading the oral presentation remains scheduled for May 24th. Delivered presentations will be made public in Moodle to all the students in the course.

For questions regarding the presentation, each team will be randomly assigned a 20' temporal slot for a question and answering session during May 25th and May 26th from 10:00 to 13:00. These sessions—conducted through Microsoft Teams, will be online and public to all the students in the course. During this session, UAM TRDP Coordinator will ask questions regarding student's project and their recorded presentation to the presenting team. The rest of students in the course assisting the session will be allowed to ask the presenting team at the end of the session. In the eventuality that one or both members in the team could not guarantee a proper Internet connection at the assigned time slot, questions will be delivered by email to these students and will be answered through a recorded video. Students are required to notify this issue as soon as they receive their time slot notification.

Resources

A LaTeX template for the report and a document disclosing guidelines for the oral presentation have been made available at Moodle:

<https://formacion.uam.es/course/view.php?id=1577§ion=14>.

ADDENDUM TO THE COURSE GUIDE:

Initiation to Research

Code - Course title: 33242 – Initiation to Research

Degree: Máster Erasmus Mundus en Tratamiento de Imágenes y Visión Artificial

Faculty: 350 - Escuela Politécnica Superior

Academic year: 2019/20

This document describes the changes to enabling online/remote teaching for the course “Initiation to Research” during the suspension of face-to-face (presential) teaching activities in March of 2020. These changes are effective after the date 2020/03/16

1.1. Pre-requisites for online/remote teaching

In order to follow the seminars and evaluation sessions, the students need a computer with Internet connection. Besides access to material asynchronous discussion forums and evaluation forms via Moodle, Microsoft Teams (<https://teams.microsoft.com/>) will be used for videoconferences, which can be used as a web app or it can be installed in each student's computer. Both programs can be freely used by UAM students as part of the university campus license.

1.2. Teaching-and-learning methodologies

Currently, the students have already fulfilled the “Workshop on Writing & Presentation Skills” module (11 hours of class and have been evaluated (using two assessments: abstract submission and presentation in front of the class).

The remainder of the course is based on seminars and activities leaded by Scholars. We are in contact with them (most of them from abroad) in order to evaluate the possibility of delivering their activities in on-line modality. News will be posted as soon as possible in Moodle.

If, finally, the Scholars cannot commit to the planned activities due to the current situation, new activities will be organized locally. The new activities schedule will be confirmed, at most, after Eastern.

1.3. Evaluation procedures

Depending on the different Scholars' program evaluation will take one of two possible modalities, in the case that presential evaluation is finally not possible:

- Moodle questionnaires with limited duration
- Evaluation of reports
- Evaluation of lab assignments (either report or challenge results)

ADDENDUM TO THE COURSE GUIDE:

Vision for Multiple or Moving Cameras

Code - Course title: 33243 – VISION FOR MULTIPLE AND MOVING CAMERAS

Degree: Máster Erasmus Mundus en Tratamiento de Imágenes y Visión Artificial

Faculty: 350 - Escuela Politécnica Superior

Academic year: 2019/20

This document describes the changes to enabling online/remote teaching for the course “Vision for Multiple or Moving Cameras” during the suspension of face-to-face (presential) teaching activities in March of 2020. These changes are effective after the date 2020/03/16

1.1. Pre-requisites for online/remote teaching

In order to follow the theory, lab, and evaluation sessions, the students need a computer with Internet connection and Matlab version 2019b. In addition, we will use Microsoft Teams for videoconferences (<https://teams.microsoft.com/>), which can be used as a web app or it can be installed in each student's computer. Both programs can be freely used by UAM students as part of the university campus license.

1.2. Teaching-and-learning methodologies

An updated schedule for the course has been uploaded to Moodle.

The lectures of the remainder of the course will be delivered online, with the following characteristics:

- The sessions (both theory and lab) will be held during the regular scheduled hours (Tuesday 10:00-12:00 and Wednesday 12:00-14:00)
- The sessions will have the following structure:
 - o A) Theory sessions:
 1. Before class starting time, all students are asked to log in Microsoft Teams, and join the corresponding meeting
 2. The professor will explain the class content using Microsoft Teams and students will be able to ask questions using the text and/or voice chats.
 3. A video of the session will be stored in Moodle for reference.
 - o B) Lab sessions:
 1. The lab script and draft code (if any) will be posted in Moodle before the lab session.
 2. At class starting time, all students are asked to log in Microsoft Teams, and join the corresponding meeting
 3. The students will work in the lab tasks individually, and the professor will assist them using the chat during all the session.
- A forum will be created for posting questions related to lab sessions
- The instructions for the lab sessions are also valid for the lab evaluation sessions.

1.3. Evaluation procedures

Online evaluation procedures will be used for the lectures' evaluation of the 2nd and 3rd Units (TH2, TH3), and the final exam. The evaluations will take place in the scheduled dates, using one or several synchronous Moodle questionnaires with limited duration.

The lab evaluation assignment will be evaluated through a lab report as originally scheduled.

ADDENDUM TO THE COURSE GUIDE:

People Detection and Biometric Recognition - 33244

Code - Course title: People Detection and Biometric Recognition

Degree: Máster Erasmus Mundus en Tratamiento de Imágenes y Visión Artificial

Faculty: 350 - Escuela Politécnica Superior

Academic year: 2019/20

This document describes the changes to enabling online/remote teaching for the course “People Detection and Biometric Recognition” during the suspension of face-to-face (presential) teaching activities in March of 2020. These changes are effective after the date 2020/03/16

1.1.Pre-requisites for online/remote teaching

In order to follow the theory, lab, and evaluation sessions, the students need a computer with Internet connection and the Matlab software (which can be freely used by UAM students as part of the university campus license).

In addition, we will use Microsoft Teams for videoconferences (<https://teams.microsoft.com/>) which can be freely used by UAM students as part of the university campus license. This application can be used as a web app or it can be installed in each student’s computer.

1.2. Teaching-and-learning methodologies

The remaining (theoretical) lectures will be delivered online. Video(s) for each the lecture will be posted in Moodle before the scheduled class starting time according to Moodle’s calendar.

The remaining (practical) laboratory sessions will be delivered online. The lab guide and draft code (if any) will be posted in Moodle before each lab session according to Moodle’s calendar. Furthermore, a forum will be created for posting questions related to each laboratory.

Instead of having class during the originally scheduled time for both lectures and labs (Monday 11:00-13:00 and Fridays 10:00-12:00), the teacher will be available in the course group of Microsoft Teams for face-to-face communication to answer lectures/labs questions. For these tutorial sessions, the assistance is not mandatory. Further instructions will be sent by email.

An updated schedule for the course has been posted to the course Moodle.

1.3. Evaluation procedures

Regular assessment (ordinary):

Lecture evaluations, TE1 and TE2, will be Moodle questionnaires with limited duration. Students will do the questionnaires remotely for TE1 and for TE2. Instructions for the questionnaires will be given through a live chat session. The TE1 evaluation is scheduled on 30/03/2020 (11.00-13.00) and TE2 evaluation is scheduled on the 11/05/2020 (11.00-13.00).

All lab assignments (PR) will be evaluated as planned in the original course guide.

In the ordinary exam period, we will consider the same scheme of the original course guide for overall evaluation: Grade = 60%TE + 40%PR

Extraordinary assessment (resit):

we will consider the same scheme of the original course guide for overall evaluation (Grade = $60\%TE + 40\%PR$) where TE will be an online Moodle questionnaire and PR will be a project on a proposed research topic in people detection and biometric recognition. The deadline for both TE and PR is 10th of June.

ADDENDUM TO THE COURSE GUIDE: Tomography & 3D Imaging

Code - Course title: 33245 – Tomography & 3D Imaging

Degree: Máster Erasmus Mundus en Tratamiento de Imágenes y Visión Artificial

Faculty: 350 - Escuela Politécnica Superior

Academic year: 2019/20

This document describes the changes to enabling online/remote teaching for the 2019-2020 course “Tomography & 3D imaging applied to Biomedical samples”. The classes, exam and teaching activities will be online. These changes are effective after the date 2020/03/18.

The classes will continue during the scheduled time (TH and FR 12:00 to 2:00 PM) starting on Thursday 2020/03/19

1.1. Pre-requisites for online/remote teaching

In order to follow the theory, lab, and evaluation sessions, the students need a computer with Internet connection and Matlab Installed on it. The instructions for installing and setting up Matlab using the university license in personal computers are already available in the following [link](#).

In addition, we will use Microsoft Teams ([link](#)) which can be freely used by students. This application has to be installed and configured in each student's computer. Before each theoretical /practical class, the professor will create a conference call in the Teams group of the class. The students will connect to the call to follow the class.

1.2. Teaching-and-learning methodologies

The remaining (theoretical) lectures will be delivered online through Microsoft teams. Video(s) for each lecture will be recorded and posted in Moodle after the class, so the student can review the theoretical contents at any time.

The remaining (practical) laboratory sessions will be also delivered online. The lab guide and draft code (if any) will be posted in Moodle before each lab session. The number of practical sessions is not going to change; however, we will rewrite part of the practical session statements to better adapt them for online use. Furthermore, we will create an explanatory video for each practical session explaining the objective of the practice and the theoretical background necessary to perform the different tasks. Finally, during the time scheduled for the practical sessions, the professor will be available in Microsoft Teams and the students will be able to interact by asking questions, sharing desktop to comment code and so on.

In all the cases, if additional help is required by the student's questions can be directed to the professors using Moodle or email and it will be possible to have one to one Microsoft Teams calls to solve doubts.

For the theoretical and practical sessions, the assistance is as planned in the original course guide.

1.3. Evaluation procedures

Evaluations of the theoretical and practical parts, will be made using Moodle questionnaires with limited duration. Students will do the questionnaires remotely. Instructions for the questionnaires will be given through Microsoft Teams and/or email during the theoretical / practical lectures before the exams.

The final score of the subject will be obtained as planned in the original course guide (ordinary and extraordinary exams included).

1.4. Course calendar (Update)

The following calendar is made under the assumption that the course will not be extended in time

Nuclear Medicine Imaging I (Gamma emitting radionuclides)

March 19	Nuclear Medicine Basics
March 20	Gamma Camera Imaging
March 26	Single Photon Imaging (Advanced)
March 27	X-Ray Imaging - Exam
April 2	P2: Analytic Image Reconstruction
April 3	P2: Analytic Image Reconstruction
Easter Holidays (6-13 April)	
April 16	Deep Learning seminars
April 17	Deep Learning seminars

Nuclear Medicine Imaging II (Positron emitting radionuclides)

April 23	P2: Analytic Image Reconstruction
April 24	Positron Emission Tomography
April 30	Advanced PET imaging & Multimodality Systems
May 7	P3: Iterative Image reconstruction
May 8	P3: Iterative Image reconstruction
May 14	P3: Iterative Image reconstruction
May 21	Ordinary (Final) – Exam