

Syllabus: 3D Scanning & Printing

TU Berlin Summer University 2019 Term 3

Week 1 July 22nd-26th

	22	23	24	25	26
	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 - 10:30	Welcome Day! Room tbc, building tbc 10:30: Orientation session 12:30-13:15: Buffet lunch 13:30-15:30: First class session 15:30-16:15: Campus Tour 16:15-16:45: Coffee & Cake	Session 2 Lecture 3D scanning / intro to GOM inspect	Session 5 3D scans post processing with GOM inspect // 3D scanning	Session 7 Presentation μ CT and CT scanning an object	Session 10 Lecture 3D lab projects (museums, heart valves)
11:00 - 12:30		Session 3 3D scanning objects	Session 6 3D scans post processing with GOM inspect // 3D scanning	Session 8 CT scanning another object // 3D scanning // GOM inspect	Cultural Program
13:30 - 15:30		Session 4 3D scanning objects	Cultural Program	Session 9 CT scanning another object // 3D scanning // GOM inspect	
16:00 +					

Week 2 July 29th- August 2nd

	29	30	31	1	2
	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 - 10:30	Session 11 Lectures: possibilities after scanning & design guidelines and printer capabilities: 3DP	Session 14 Excursion Leibniz Institute for Zoo and Wildlife Research (IZW)	Session 17 Excursion Replica Workshop (Gipsformerei)	Session 19 Blender / CAD	No class

11:00 - 12:30	Session 12 Intro to Blender	Session 15 Excursion Institute for Zoo and Wildlife Research (IZW)	Session 18 Excursion Replica Workshop (Gipsformerei)	Session 20 Blender / CAD	
13:30 – 15:30	Session 13 Blender/CAD	Session 16 - Optional free time at the Zoo	Cultural Program	Session 21 Blender / CAD	
16:00 +	Cultural Program				

Week 3 August 5th- 9th

	5	6	7	8	9
	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 - 10:30	Session 22 Blender / CAD	Session 25 3DP post processing	Session 28 3DP post processing	Session 30 Blender / CAD	No class
11:00 - 12:30	Session 23 Blender / CAD	Session 26 3DP post processing	Session 29 lecture design guidelines and printer capabilities: SLS / powder preparation	Session 31 Blender / CAD.	
13:30 – 15:30	Session 24 3DP preparation / start 1st print 3DP	Session 27 Blender / CAD for improvements /start 2nd print 3DP	Cultural Program	Session 32 SLS preparation (preheat and pack)/start 1st print SLS	
16:00 +	Cultural Program				

Week 4 August 12th-16th

	12	13	14	15	16
	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 - 10:30	Session 33 SLS post processing	Session 36 SLS post processing	Session 39 flexible time for scanning / 3D modeling	Session 42 CAVE presentation of works, time for documenting (photos)	No class
11:00 - 12:30	Session 34 Blender / CAD	Session 37 flexible time for scanning / 3D modeling	Session 40 flexible time for scanning / 3D modeling	Session 43 Cleaning	Final presentations

13:30 - 15:30	Session 35 Blender / CAD for improvements /start 2nd print SLS	Session 38 flexible time for scanning / 3D modeling	Session 41 flexible time for scanning / 3D modeling	No class	Certificates Ceremony Lichthof, 1 st floor, TU Berlin main building
16:00 +	Cultural Program				

Key

Lecture	Field Trip or Practical	Assessment	Cultural Program activity*
---------	-------------------------	------------	----------------------------

*The cultural program timetable will be emailed to you shortly before your course starts. For more information about the cultural program, and for examples of previous schedules, head here: https://www.tu-berlin.de/menue/summer_university/cultural_program/

Assessment information

The course will focus on 3D-printing and 3D-scanning. Basic experience with CAD-software (such as Rhino, Solid Works, 3D Studio Max or blender) is as well requested as a capability as the use of personal laptops. Participants are requested to select an object for 3D-scanning.

Grading information

All participants of the TU Berlin Summer & Winter University are required to select their grading option at the time of registration. The two options available are (i) graded or (ii) pass/fail.

All participants who select option (i) graded, will receive a grade under the German grading system. The following table provides an overview of the grading system and equivalent scores for international credit transfers:

Total mark	German grade	English description
More or equal to 95	1,0	Excellent
More or equal to 90	1,3	Very good
More or equal to 85	1,7	Good
More or equal to 80	2,0	Good
More or equal to 75	2,3	Good
More or equal to 70	2,7	Satisfactory
More or equal to 65	3,0	Satisfactory
More or equal to 60	3,3	Satisfactory
More or equal to 55	3,7	Sufficient
More or equal to 50	4,0	Sufficient
Less than 50	5,0	Failed

Credit Points

ECTS is a point system and European standard developed by the Commission of the European Community. ECTS stands for European Credit Transfer System. The aim is to provide common procedures and guarantee academic recognition of studies abroad. The credit system is based on student workload. All lectures, seminars, excursions and homework count towards the workload. One point is awarded for the equivalent of 25-30 hours of workload.

Reading list

Here are reading materials which will be used or referred to during the course. You are not required to read these in advance – this is for your information and reference.

All sources below are available either open source, in the TU Berlin library, or will be provided to you directly by your lecturers, during the course.

To search resources available in the TU Berlin library, check here: <https://www.ub.tu-berlin.de/en/searching-for-resources/>

1. resource 1
2. paper 2
3. book 3
4. book 4