

2026 年度シラバス

科目分類/Subject Categories			
学部等/Faculty	/大学院工芸科学研究科（博士前期課程）： /Graduate School of Science and Technology (Master's Programs)	今年度開講/Availability	/有 : /Available
学域等/Field	/デザイン科学域 : /Academic Field of Design	年次/Year	/1～2年次 : /1st through 2nd Year
課程等/Program	/建築学専攻 : /Master's Program of Architecture	学期/Semester	/第3クォータ : /Third quarter
分類/Category	/授業科目 : /Courses	曜日時限/Day & Period	/集中 : /Intensive

科目情報/Course Information				
時間割番号 /Timetable Number	63419914			
科目番号 /Course Number	63461005			
単位数/Credits	2			
授業形態 /Course Type	講義 : Lecture			
クラス/Class				
授業科目名 /Course Title	建築・景観のデジタル設計法 I : Digital Methods in Architecture and Landscape I			
担当教員名 / Instructor(s)	/Ng Ming Shan/VOLLMER MATTHIAS : Ng Ming Shan/VOLLMER MATTHIAS/			
その他/Other	インターンシップ実施科目 Internship	国際科学技術コース提供科目 IGP	PBL 実施科目 Project Based Learning	DX 活用科目 ICT Usage in Learning
		○	○	
	実務経験のある教員による科目 Practical Teacher	○	Director of SCANVISION (scanvision.ch)	
科目ナンバリング /Numbering Code				

授業の目的・概要 Objectives and Outline of the Course	
日	<p>本コースでは、実環境のデジタルモデルがどのように作成され、建築・ランドスケープ・都市デザイン分野で活用されるかを学びます。複数日にわたるワークショップと自主プロジェクト形式で実施され、レーザースキャナーの操作方法、CloudCompareでのデータ処理、点群データを基にしたモデリング/3D 再構築の手法を習得し、最終的にインタラクティブアプリケーションの制作を目指します。</p> <p>コースは 10 月中旬（10 月 20 日開始週）のスキャン・処理ワークショップから始まり、インタラクティブゲーム開発に向けた 3D モデリング</p>
英	<p>In this course you will learn how digital models of the real environment are created and how they can be used in the field of architecture, landscape and urban design. The course is held in the form of a multi-day workshop and independent project work where you will learn how to work with a laser scanner, process the data in CloudCompare and use the point cloud as a basis for further modelling/3D reconstruction, finally going towards an interactive application.</p> <p>The course will start with a scanning and processing workshop in mid October (in the week starting with 20th October), then continue with working on 3D modelling to develop an interactive game, the final hand in or presentation will be in early November (tbd). Days and times might be adjusted according to students and factory availability.</p> <p>Approximate Workshop schedule:</p> <ol style="list-style-type: none"> 1. Day: Laserscanning, Point Cloud Registration (Outside KIT, Design Factory KIT) 2. Day: Point Cloud Editing, Modelling (Design Factory KIT)

3. Day: Modelling editing and reporting (Design Factory KIT)
--

学習の到達目標 Learning Objectives	
日	レーザースキャン 点群登録とモデリング 点群モデルから CAD ソフトウェアへの転送 3D BIM モデルの作成 デジタル建築と景観モデルの応用
英	Laserscanning Point Cloud Registration and Modelling Transfer from Point Cloud Modell to CAD Software Creation of 3D BIM Models Interactive Application of digital Architecture and Landscape Modells

学習目標の達成度の評価基準 / Fulfillment of Course Goals (JABEE 関連科目のみ)	
日	
英	

授業計画項目 Course Plan			
No.		項目 Topics	内容 Content
1	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
2	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
3	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
4	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
5	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
6	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
7	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
8	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
9	日	This is a workshop and independent project course	This is a workshop and independent project course

	英	independent project course	
	英	This is a workshop and independent project course	This is a workshop and independent project course
10	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
11	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
12	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
13	日	This is a workshop-based course	This is a workshop-based course
	英	This is a workshop and independent project course	This is a workshop and independent project course
14	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course
15	日	This is a workshop and independent project course	This is a workshop and independent project course
	英	This is a workshop and independent project course	This is a workshop and independent project course

履修条件 Prerequisite(s)

日	
英	

授業時間外学習（予習・復習等）

Required study time, Preparation and review

日	受講生はワークショップの全日程に出席する。ワークショップ終了後、学生は指導された内容を応用して仕上げ、最終的にレポートを提出する。
英	Students are asked to attend the full workshop time. After the workshop, students are asked to apply and finish the taught content and finally to hand in a report on the work they have done.

教科書／参考書 Textbooks/Reference Books

日	
英	

成績評価の方法及び基準 Grading Policy

日	出席、注意力、コミットメント、プロジェクトワーク、レポート
英	Attendance, attention and commitment, project work, report

留意事項等 Point to consider

日	
英	