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UrbanSCOPE

Urban Sustainable Mobility in Focus: Student Education, Community Involvement and Participative Planning

The UrbanSCOPE project (No. 2019-1-HU01-KA203-061226) was funded by the European Commission. The content of this publication does not necessarily reflect the views of the European Commission.

Call 2019, KA2 – Cooperation for innovation and the exchange of good practices

KA203 – Strategic Partnerships for Higher Education

Project Coordinator:

Széchenyi István University (Hungary)

Project Partners:

Technishe Universität Darmstadt (Germany)

PRISMA – Centre for Development Studies (Greece)

Universiteit Utrecht (Netherlands)

Municipality of Győr (Hungary)

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IO4 - SUMP learning courses

National Report - Germany

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Content

1. Abstract (500 words)
2. Introduction (1/2 page)
3. The course (max 6 pages)
    a. The didactic concept and methodologies
    b. The didactic tools used (LBG + other communication tools used within the course)
    c. The syllabus and working plan/tasks
    d. A summary of the results of the student's projects
4. The Evaluation of the course (max 4 pages)
    a. Evaluation from the student´s perspective (Interviews)
    b. Evaluation from the teacher´s perspective (SWOT analysis)
5. Transferability and Sustainability (max 1 page) – clarify what can be transferable in future courses, and why, how and where. In addition, provide an idea on how this process of teaching can be sustainable.
6. Conclusion (Max 1 page) – summarize the lessons learned within the entire process and provide an outlook for future courses in this area
7. Annex – supporting material to explain any parts of this document (e.g. submissions of the student´s projects / answered questionnaires)

Evaluation of the course from the teacher´s perspective (SWOT analysis)

The teacher will analyse the given course using the SWOT methodology (Strengths, Weaknesses, Opportunities, and Threats) and based on the evaluation of the students (questionnaires, interviews) and on self-reflection. The teacher will develop a SWOT for each of the following aspects:

1. The didactic concept and methodology (e.g. the activities planned, the topics taught, the degree of difficulties of the tasks provided, the results of the students, the motivation of the students)
2. Communication and media tools (e.g. how did the communication worked if it was online, which tools were good or did not worked well…)
3. Organisation (e.g. preparation, organization of the course itself, post-production)
4. Special software and its educational function (LGB developed by Uni Utrecht)

You can use this miro board to create your SWOTS:

https://miro.com/app/board/uXjVOW5WBGs=/?invite_link_id=315453250237

1. Abstract

The project Urban SCOPE aims to contextualize education, citizen participation in the processes of sustainable urban mobility planning, described on the SUMP guidelines provided by the European Union. In this light, one of the projects aims is to create a teaching course and test it with the focus on sustainable urban mobility planning and active participation in city planning processes. In the case of the city of Darmstadt, an interdisciplinary course was tailored for architecture and engineers, specialized in land use management, students from the Technical University of Darmstadt. In addition, a real case of study was given to the students to learn from it, namely the city of Wiesbaden, from which also the city planning office was actively involved on the course giving practical input to the students. The course was positively evaluated by the students and some practical lessons for the teachers were learned.

2. Introduction

As part of the project Urban SCOPE, and in fulfilment of the Intellectual Output 4, an interdisciplinary course was created and tailored for architecture and engineer students from the Technical University of Darmstadt. The main focus of the course was Sustainable Urban Mobility Planning, active participation in city planning processes and interdisciplinary work. The main objective of the course was to teach and bring up to front this important topic on the curricula of architecture and engineer students, who are the future planners of our cities.

The course took place from October to December in 2021. This document reports the course concept, didactics, and material, as well as the results of the student's projects, the evaluation of the course, and some lessons learned of the entire process.

This document is intended to be helpful for higher education teachers in order to give a guide on how to create an interdisciplinary course on this topic and which aspects need to be considered.

3. The course

A seminar + project work with the topic "Mapping the mobility network of inner Wiesbaden" was offered and tested with a total of 14 students.

In this seminar, students learn about the Urban Sustainable Mobility Planning process (SUMP) developed by the European union and apply the knowledge in a real case study, namely, the city of Wiesbaden, in Hessen, Germany. The seminar is an introduction to the topic urban sustainable mobility and research methodologies in urban planning (e.g. mapping, observations, counting, comparative studies etc.), focusing on the first part of the planning process, which is the analysis.

The seminar is a part of the international project Urban SCOPE, funded by the European Union. In addition, the seminar is a cooperation between Department of Architecture (FB15), The Institute of Geodesy of the Technical University of Darmstadt (TUDa) and the City Planning department of Wiesbaden, intended to contextualize research with practice.

a. The didactic concept and methodology

The didactic concept, methods used and means of communication are shown in the diagram below (Figure 1). The didactic concept is “Research Oriented Teaching” and it is seen as a cycle that goes from theory, to research design, to research practice and back to gained knowledge. In terms of topics, the seminar is based on the topic Urban Sustainable Mobility, Land Use Planning and Research Methodologies in city planning. The course use a combination of didactic methods as: experiment on site, group work, discussions and workshops.

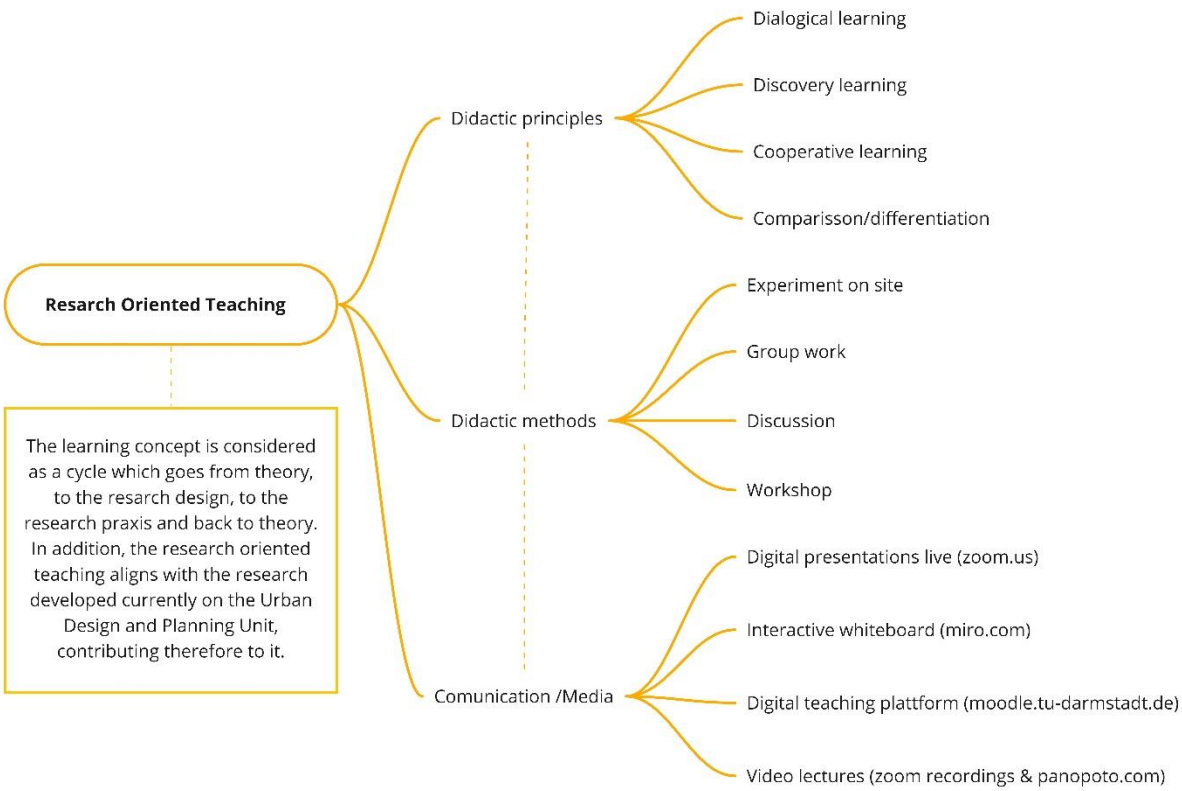


Figure 1: Didactic concept, methodologies and communication media

The course format was a combination of lectures, seminar, and collaborative project work. Although there were online lectures, the course was based on a self-initiated group research project in which empirical data were collected using various methods from the field of urban planning and the data were evaluated and analysed. Active participation in discussion of course content was an important component of the course.

All learning material was uploaded to the online platform to provide students with the flexibility to learn when it was convenient for them. Nevertheless, there was a fixed day for class when online presence was required (sometimes in the large group – and sometimes in the smaller groups – for the critiques).

Students worked in groups (e.g., three students from architecture and one from civil engineer) to design and develop a research project with the same theme but in two different locations. The goal of this type of work was to conduct an analysis and comparison in terms of Urban Sustainable Mobility between two different public spaces in the city of Wiesbaden. The comparison included the differences and similarities between the natural, cultural, economic, and legal factors underlying mobility aspects and accessibility of public space. The public spaces were pre-selected from the teachers and persons from the city planning office based on future plans/strategies on the agenda of the Municipality of Wiesbaden. Students were responsible for organizing the format, times, and working materials within their teams.

b. The didactic tools

As seen in figure 1, a combination of digital tools was used in order to communicate and enhance the learning process. Among these tools were:

- Digital presentations live – via Zoom, in which online presence was required. Yet, important lectures were recorded and uploaded in the learning platform of the TUDa, to facilitate and make more flexible the learning process.
- Interactive White Board (miro.com): an interactive white board was created for the students to work, exchange ideas and present their progress (See figure 2). Link: https://miro.com/app/board/o9J_lqBp29k=/?share_link_id=762179664274
- Digital teaching platform (Moodle.tu-darmstadt.de): this platform was used to exchange information between the teachers and students. In addition, all important information about the course were posted there (See figure 3).
- Pre-recorded video lectures (panopto.com): video lectures were recorded with the software panopto, used by the TUDa. The video

lectures were uploaded on the learning platform for the students to watch in advance and prepare for discussion.

- GIS (Geoinformation Systems) as a digital tool to learn about land use planning and urban sustainable mobility: since the digital tool developed by the project Urban SCOPE was at the time not ready, another very good tool which fitted for the course was selected. In addition, this tool was new for architecture students. A one-day online workshop was organized for students on the topic of Land Use Planning and SUM + the digital tool GIS (Geoinformation System), which is a powerful tool to analyse, create and design urban mobility strategies. A lecturer from the Institute of Geodesy lead this workshop and provided architecture students very valuable knowledge and experience.

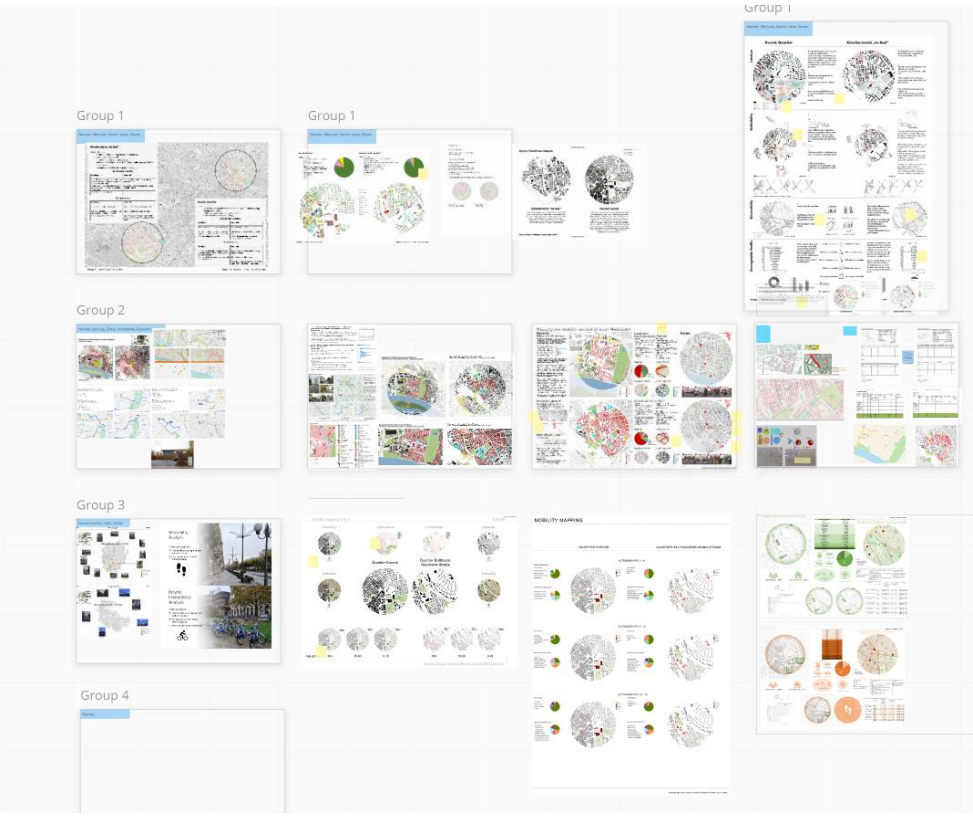


Figure 2: Miro Board used for the seminar " Mapping the mobility network of inner Wiesbaden"

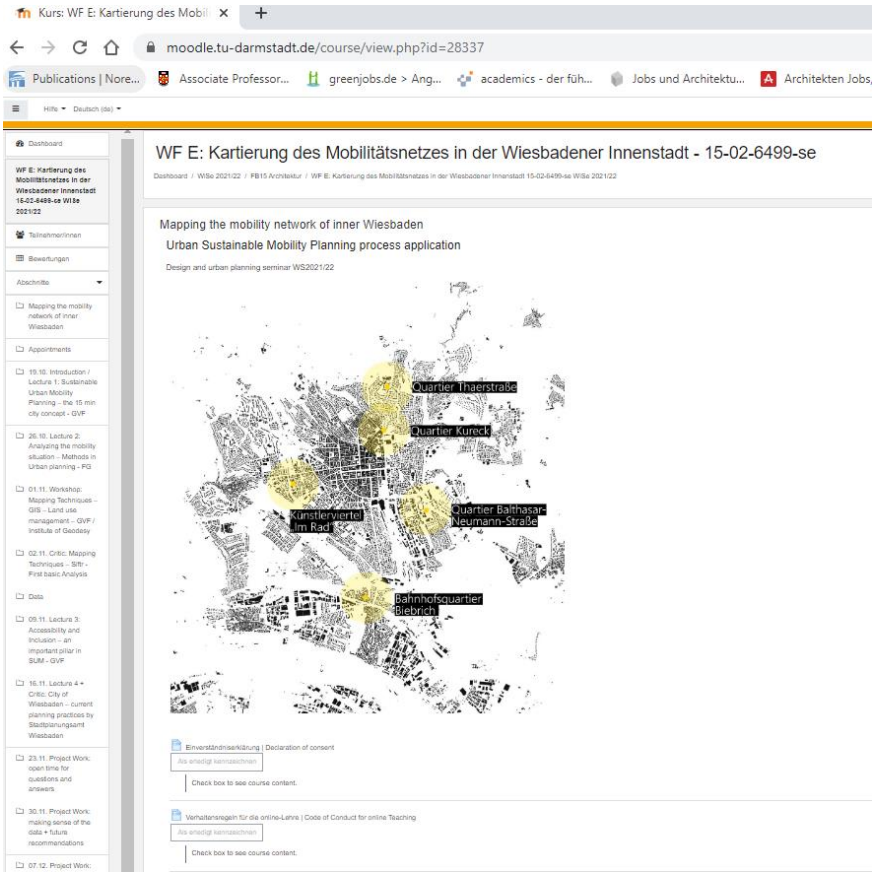


Figure 3: Learning Platform (moodle.tu-darmstadt.de) used for the seminar " Mapping the mobility network of inner Wiesbaden"

c. The syllabus and working plan

(see the complete version in the Annex)

	FB15 – FG Entwerfen und Stadtplanung / FB13 – Institut für Geodäsie, FG Landmanagement
Format	Seminar + Project work
Credit points	3 ECTS / 3 credit points
Language	English / Deutsch

Learning objectives

At the end of the course the students are able to:

- To understand and apply some concepts and processes of urban sustainable mobility planning through developing a self-initiated research project on a real case-study.
- To apply different research methodologies used in urban planning by collecting empirical data, targeting a certain hypothesis related to mobility problems in cities.

- To learn about and apply digital tools for analyzing mobility issues in cities (augmented reality tools, mapping tools, etc.).
- To identify and understand the different elements that can affect (negatively and positively) the sustainable urban mobility using the "15min city" as a successful model.

The task

Students are about to pick two of the areas marked in the following map (1.5km diameter/15min walk) of the city of Wiesbaden (See Figure 4). For most the five areas marked on the map, a new redeveloping project is planned in the near future. Therefore, it is interesting to observe carefully if the areas in mention satisfy all needs of a resident in a radius of 15min by foot. The variety of the selected areas will bring fruitful perspectives of the city through its comparability.

Important basic aspects to analyse and evaluate are:

- Land use mixture – though mapping and analysing existing uses on the area.
- Walkability and cycle infrastructure – though analysis of walkability and an evaluation of the existing cycle infrastructure
- Design diversity – though an analysis of the quality of the architecture, landscape and urban design

In addition, students will formulate a specific research question related to a specific topic/focus of interest of the group, for example:

- The child friendly city
- The green city
- Accessibility (in any term: social, cognitive, physical)
- The healthy city
- Elderly friendly city
- Design and the effects on mobility, etc.

To answer these question(s), other tools and methods should be applied, as: questionnaires, interviews, observations on site, photo documentation, structured evaluations, etc.

Students will conclude with a presentation of the results:

- analysis, evaluation and comparison of the areas according to the 15min city concept
- the answer to the research question and insights of the focus selected
- future recommendations to improve the area

Figure 4: Map of Wiesbaden and selected areas to analyse.

Further development

It is to expect that the students joining this seminar, will also be part of the Master Design Studio of the Urban Design and Planning Unit. Therefore, this course is structured to have a deeper understanding of the first planning phases of urban sustainable mobility, to be further developed on the design studio running parallel and with the same case study area, focusing on the new urban development "Ostfeld".

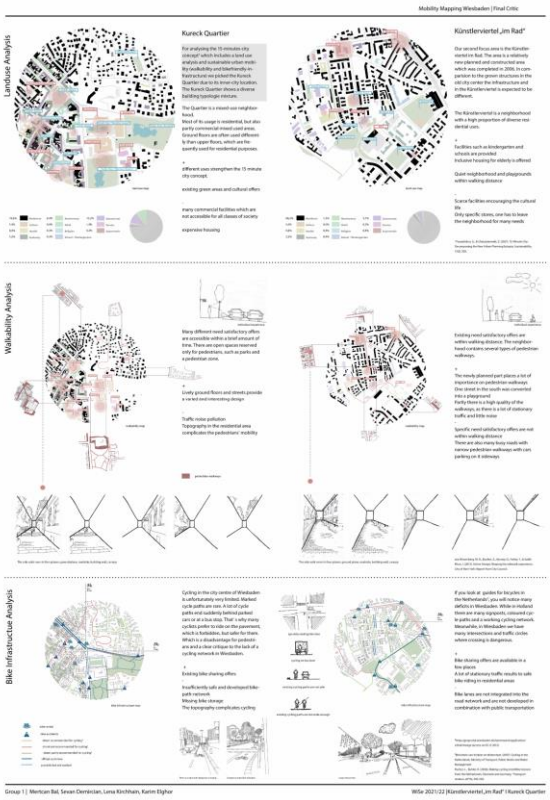
This course, as mentioned before, will have a focus on the first processes of preparing a SUMP (See Figure 5), which are mainly the analysis, determining the planning framework and building some visions for the area.

Figure 5: Source: Guidelines for developing and implementing a Sustainable Urban Mobility Plan (2019). Highlighted the areas to be developed on the seminar

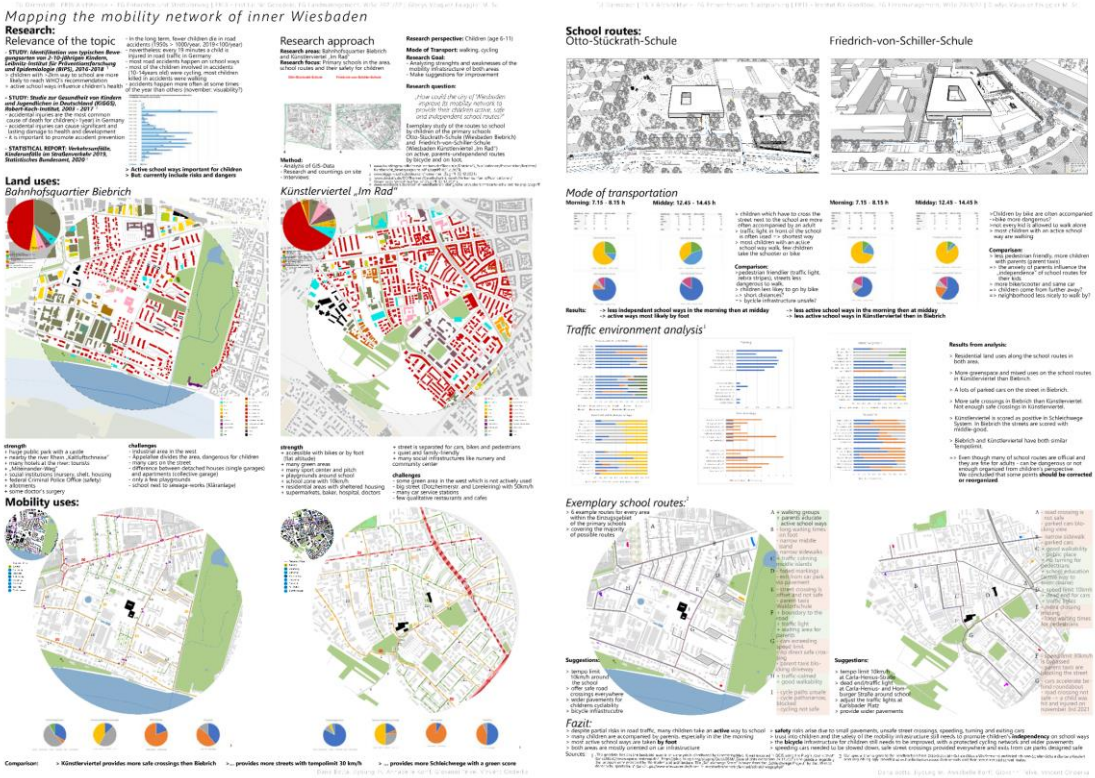
d. Summary of the Students Projects Results

Three research projects on the topic of sustainable urban mobility planning were created and developed. A summary of the outputs as follows:

The first group tackled the research question of whether the concept of the 15-min city as well as the quality of sustainable urban mobility and the demographic profile of residents in the analysed selected areas are related, hypothesising that the accessibility of daily needs by foot and an existing sustainable mobility network plays a minor role in choosing the place of residence. The methods used by this group were: a walkability and cycleability analysis, and a survey on site.



The second group tackled the research question of how to improve the mobility network of the city of Wiesbaden to provide their children active, safe and independent school routes. This method used were: walkability and cycleability analysis using a scoring thorough a GIS analysis, observations on site and expert interviews.



The third group focused on inclusion and accessibility for adults and elderly. The main method used were surveys on site.

4. Evaluation of the course

a. Evaluation from the student's perspective through interviews

The course was evaluated with face to face interviews at the end of the course via Zoom. The interview contained six different open questions to provide many insights from the student's perspective and allowing flexible answers. In total we conducted three long interviews. A summary of each question can be found below.

1. *What interested you about the seminar? Why did you choose it? Were your expectations met?*

Most of the respondents find that the focus on the analytical approach to urban planning sparked their interest. That includes a strong interest in the theory of urban planning, specifically sustainable mobility in inner cities and traffic planning. Another prominent reason to choose the seminar was the case study area, the city of Wiesbaden. Being the capital of

the state of Hesse, the expectations on its mobility network were very high. All of the students decided to take the seminar because they wanted to investigate the SUMP approach in an important city near to their university and place of residence. The proximity and the possibility to analyze an area on site was also a strong motivator for signing up for the course.
The expectations of the students were met because the structure of the seminar included a continuous assignment over several weeks for each group. That is why their analysis could be worked on in sufficient depth and in a comprehensive way.

2. *How was this course different from others?*

All respondents agreed that this course was very different from other courses for many reasons. First of all, the clear emphasis on a scientific and analytic approach to urban planning and urban sustainable mobility was very unique. In most of the other courses at the faculty of architecture in Darmstadt the students have not that much time to focus on the analysis because the final presentation is a design, which means that the analytical part must be done in a very short period of time and might not even be focused on mobility or traffic. This was different in this seminar and all participants stated that it was their first time that they focused so strongly on the research area.
Furthermore the formulation of a research question and the testing of scientific methods in order to ensure a high quality analysis was much appreciated since that is something that usually would only take place in the very late stages of the students' study career.
A very important distinction was the strong interdisciplinary and international approach of the seminar, building interdisciplinary teams with students from another study area – in this case, geodesy – and the classes being held in English entirely.

3. *How was the cooperation in the interdisciplinary teams? Did you learn something new from the other discipline?*

The experiences regarding the collaboration and the composition of the interdisciplinary teams are almost identical among the respondents. The interdisciplinary teams consisted of students of architecture and of geodesy from TU Darmstadt. Every respondent appreciated the approach a lot and could name specific added value from the collaboration like being able to enter more data into the group's analysis thanks to the other one's knowledge of the data analysis software GIS, which was used by every group in the seminar. Thanks to the very different academic profiles of the group members, tasks could get assigned according to each participant's background and more efficiently. While the students of geodesy explained their fellow students how important it is to quickly access data relevant for urban planning,

e.g. pavement measures, architecture students put emphasis on the physical and human perspective arguing that it is mandatory for a planner to visit the city and get your own overview of the research area. All of the respondents reported that their working styles created a lot of misunderstandings in the beginning but, in sum, then developed to form synergies that made their mapping project better.

4. *What problems arose within the course? And how did you solve them?*

Almost all problems mentioned by the respondents refer to the organization of the work inside the smaller groups. With group sizes between four and five persons the structure given by the lecturers was not far away from the respondents favored group size of three to four persons. Nevertheless, finding time slots when all group members can actively work together was challenging because of the pandemic and associated meeting restrictions. The lecturers had prepared several digital tools in advance in order facilitate a flawless work flow in digital rooms were not only people can meet but also working material could be shared among the students openly. Those digital tools (Zoom, Moodle, Miro, Digital Townhall "Kuhle") were actively used by the participants. The misunderstandings that occurred due to different academic backgrounds and were mentioned before, were solved by the students by investing more time in an active and clear communication among themselves. So it was reported that after having a slow working speed at the beginning of the group work phase it significantly increased once the tasks (e.g. mapping, counting, drawing, interpreting the interviews) had been distributed by them. The distribution of task was even described as "crucial" in order to finish the group project successfully.

5. *What new did you learn? Was there a particularly striking or surprising finding?*

The most common answer to this question is the scientific approach to analyze urban mobility scenarios and the formulation of a research question. It was perceived as a new and exciting academic exercise. From a methodological point of view it stands out that it was the first time for the students to choose a research method for themselves and decide independently on the case study's design. The respondents stated that they learned to transfer contents from other lectures such as sustainable mobility and land use planning to their own case study.
For the students it was surprising how low the quality of Wiesbaden's mobility network really is. From the standpoint of the SUMP framework, which the students learned about in the theoretical block at the beginning of the seminar, they stated that their hometown Darmstadt had a better mobility structure than the state's capital. The respondents applied the content

from the SUMP framework and were able to compare one city with another and identify deficiencies in the design of public space, e.g. a much too strong prioritization of the car as a mean of transport.

6. What was your highlight of the seminar?

The biggest surprises were the personal experiences during the on-site measurements and countings because the students entirely took the role of the observer. They reported that changing the role from a citizen that usually has to travel from his_her house to the university or work on a daily basis, to the role of the observing urban researcher made them realize to which amount mobility behaviors, and therefore social behavior, is dictated by the design of public spaces and the existing mobility services. On the other hand students were able to identify pretty precisely the needs of each user group that they were observing, e.g. schoolchildren, elderly people.
For others the highlight of the seminar was the general setting of the seminar with its various cooperations like the City Planning Office of Wiesbaden that gave insight on real challenges that Wiesbaden's mobility faces and the personal contacts within the interdisciplinary student groups.

b. Evaluation from the teacher's perspective

In order to provide a holistic view of the course, the teacher evaluated it in form of a SWOT chart (strengths, weaknesses, opportunities and threats). The perspective of the teacher is also a good opportunity to improve the generic course, not only in terms of content, but as well in other aspects as: organization, time management, capacities, tools, etc. The evaluation of the teacher as follows:

Strengths	research oriented teaching as a didactic model is efficient cooperation with the department of Geodesy, specialized in land use planning (supporting the topic of mobility) cooperation with the city of Wiesbaden and using a real case study

Weaknesses	short time during a semester to develop a complete research project short time to cover all the content/stages of SUMP
Opportunities	Include more partners on the course (other disciplines) Availability of digital Teaching plattforms to collaborate even internationally Include other digital tools to analyse and propose sustainable mobility strategies
Threats	Lack of knowledge from the students regarding the topic of SUMP and/or the use of certain digital tools Lack of interest from the students on this topic - the course would not be given if there are less students

5. Transferability and Sustainability

The pilot course tested at the Technical University of Darmstadt, Department of Architecture, Urban Design and Planning Chair, was further developed in another format, namely a design studio. In this further development, the students worked with the same city (Wiesbaden), to design a new complex of mixed uses, being mobility one of the important aspects of the design. In this sense, the results of the seminar (Mapping mobility of Wiesbaden) were transferred to the design studio students and were useful as a first analysis of the area. Some of the students were taking part of both classes (the seminar and the design studio) and profited even more from the content of both courses.
This example can serve as a pilot test for transferability, in which two or more classes take advantages of the synergies and cooperate to work with the same partner (in this case the city of Wiesbaden), the same area, but with a different focus, complementing each other.

As part of the sustainability, it is recommended to embed this seminar related to SUMP into the learning program for architecture students since it is a very important and currently a main topic for city planners. Ideally the seminar should be offered minimum once a year, in winter semester when the number of students is greater. The Chair of Urban Design and Planning could apply yearly for funding (local or international, as the Erasmus + Program) to cover the expenses for the instructor of this course and material needed.

6. Conclusion & Outlook

The objectives of the pilot SUMP course at the Technical University of Darmstadt, Department of Architecture were achieved having offered a seminar which was: Interdisciplinary, addressing students of urban planning and design, but also students of other departments, in this case, students of environmental engenieering, specialized in land use management. There is the potential to include other departments of the TUDa, as sociology, transport engineers, etc. to enrich the experiences, not only for the students, but also for the teachers. This proposed course outlined the process for preparing a SUMP involving citizens in the process, and invited a local authority for cooperation, in this case the city planning department of Wiesbaden. In addition, the students had contact with the citizens when they applied their methodologies (e.g. interviews and questionnaires), having a closer look into the citizens needs and wishes when it comes to mobility.

The fact that the Urban SCOPE tool could not be tested on the pilot course could be seen as a weakness for the project, but it opened new opportunities to learn and use other existing digital tools very much specialized for SUMP. One example, and the one used for this pilot course was the Geoinformation Systems (Arc GIS), which is a program that can analyse several factors for several purposes. In our case was to develop an analysis for land uses, since it is very much related to urban mobility. The cooperation with the students of the department of environmental engineering already had knowledge on this tool, contrary to the architecture students. The course was a platform for the architecture students to learn this new tool.
In this sense, it is important for the teachers to know since the beginning the type and level of knowledge and background that the students are bringing to the class. This would help to know weaknesses or challenges that are going to be faced by the students later in the course. In addition, would help to design the course in a way that everyone benefit from it and learn.

As for the transferability, it is recommended to join synergies with other course, so that the knowledge exchange among teachers and students is greater and the outputs are even more complete. It is also recommended to join synergies with other courses since the process of SUMP can be quite complicated and long to be covered in one course. Furthermore, it is recommended to embed the course at the learning system of the universities since urban sustainable mobility is topic very much on the agendas of the local and regional governments, were all, students, practitioners, decision makers and all stakeholders related to SUMP need to reach to achieve sustainability.

7. Annex – Complete Syllabus of the Course

Mapping the mobility network of inner Wiesbaden

Description

In this seminar, students learn about the Urban Sustainable Mobility Planning process (SUMP) developed by the European union and apply the knowledge in a real case study, namely, the city of Wiesbaden, in Hessen, Germany. The seminar is an introduction to the topic urban sustainable mobility and research methodologies in urban planning (e.g. mapping, observations, counting, comparative studies etc.), focusing on the first part of the planning process, which is the analysis.

The seminar is a part of the international project Urban SCOPE, funded by the European Union. In addition, the seminar is a cooperation between Department of Architecture (FB15), The Institute of Geodesy of the Technical University of Darmstadt (TUDa) and the City Planning department of Wiesbaden, intended to contextualize research with practice.

	FB15 – FG Entwerfen und Stadtplanung / FB13 – Institut für Geodäsie, FG Landmanagement
Format	Seminar + Project work
Credit points	3 ECTS / 3 credit points
Language	English / Deutsch

Learning objectives

At the end of the course the students are able to:

- To understand and apply some concepts and processes of urban sustainable mobility planning through developing a self-initiated research project on a real case-study.
- To apply different research methodologies used in urban planning by collecting empirical data, targeting a certain hypothesis related to mobility problems in cities.
- To learn about and apply digital tools for analyzing mobility issues in cities (augmented reality tools, mapping tools, etc.).
- To identify and understand the different elements that can affect (negatively and positively) the sustainable urban mobility using the "15min city" as a successful model.

Requirements

The course format is a combination of lectures, seminars and collaborative project work. Although there will be online lectures, the course will be based on a self-initiated group research project, gathering empirical data through different methods used in the urban planning field and the evaluation of the data. Active participation in academic discussion surrounding course content and student projects will be a critical component of the course.

The course will be held in an online form (video-conference + online learning platform, Miro and Moodle).

Students will work in groups of two or three persons, to analyze two specific areas through the lens of the "15min city" concept. This form of work will allow at the end of the seminar a better understanding of the functioning areas of the city in terms of sustainable mobility and the comparability among them.

The 15-minute Wiesbaden?

The city of Wiesbaden is developing in an economically prosperous environment with very close links to the Rhine-Main conurbation.

The city of Wiesbaden is aware of having followed planning principles for many decades that have structured the urban space and spatially separated the areas of living, working, shopping and culture. According to these planning principles and the resulting built environment, the automobile was given a lot of importance and the city and public spaces were primarily seen as a transit area.

Public transportation, bicycle infrastructure, and pedestrian traffic were given less priority during these years. Wiesbaden would like to change this and, within the scope of municipal possibilities, develop a city with short distances that increase accessibility[1].

Within this background, the concept of "the 15-minute city" (See figure 1), used by the city of Paris, offers a good framework to analyze and compare future reconversion areas of the city in terms of mobility. The concept is based on attributes that have being used in the past as successful design aspects in a city: walkability, density, land use mix and design diversity. In addition, this concept embraces the four important pillars of sustainable mobility:

- Social, through inclusion and accessibility
- Economical, through enhancing local commerce,
- Environmental, through the reduction of carbon emissions
- Health, through the increase of active travel

The 15-minute city is a residential urban concept in which all city residents are able to meet most of their needs within a short walk or bicycle ride from their homes. The concept is derived from historical concepts of walkability and accessibility, inspired firstly by authors as Jane Jacobs and Clarence Perry, and lately, in 2020, used by the scientist Carlo Moreno and popularized by the Mayor of Paris, Anne Hidalgo (See Figure 1).

In this sense, the city of Wiesbaden, which has been structured in the past with spatially separated areas (living, work, shopping and culture), is a good case of study to start

[1] Das Mobilitätsleitbild der Landeshauptstadt Wiesbaden. Prof. Dr. Andreas Knie, Dipl.-Ing. Ina-Marie Orawiec und Prof. Dr. Petra K. Schäfer. Herausgeber: ESWE Verkehrsgesellschaft mbH, Gartenfeldstraße 18, 65189 Wiesbaden. Juni 2020.

observing, analyzing and comparing to conclude with a decentralization strategy in order to improve the mobility of its residents.

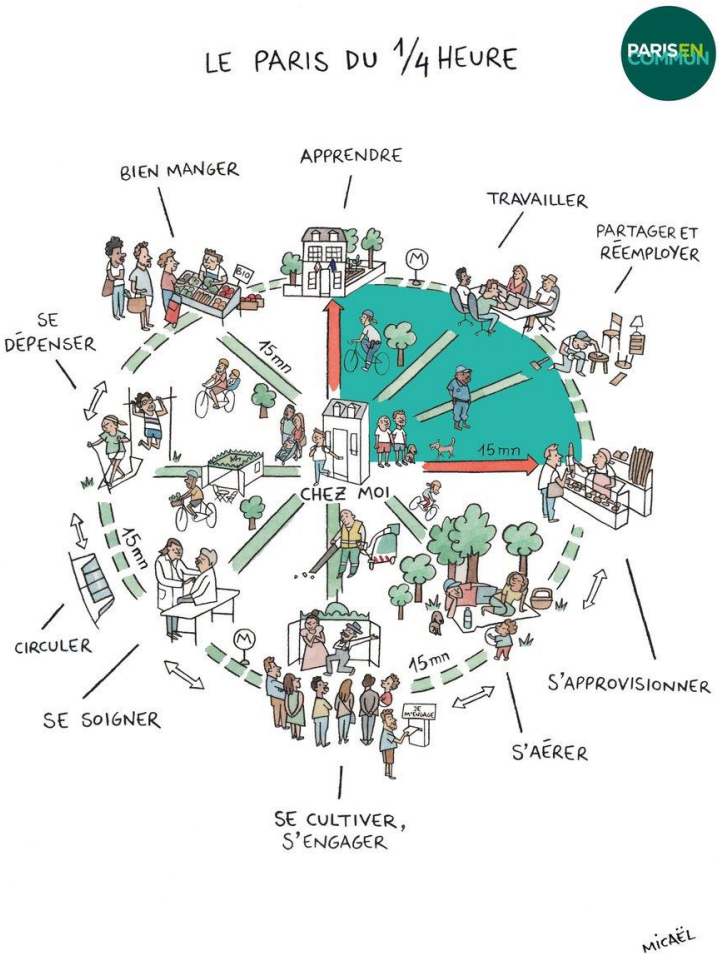


Figure 6: „le Paris du Quart d´heur". Anne Hidalgo, Paris en Commun. January 2020.

The task

Students are about to pick two of the areas marked in the following map (1.5km diameter/15min walk) of the city of Wiesbaden (See Figure 2). For most the five areas marked on the map, a new redeveloping project is planned in the near future. Therefore, it is interesting to observe carefully if the areas in mention satisfy all needs of a resident in a radius of 15min by foot. The variety of the selected areas will bring fruitful perspectives of the city through its comparability.

Important basic aspects to analyze and evaluate are:

- Land use mixture – though mapping and analyzing existing uses on the area.
- Walkability and cycle infrastructure – though analysis of walkability and an evaluation of the existing cycle infrastructure

- Design diversity – though an analysis of the quality of the architecture, landscape and urban design

In addition, students will formulate a specific research question related to a specific topic/focus of interest of the group, for example:

- The child friendly city
- The green city
- Accessibility (in any term: social, cognitive, physical)
- The healthy city
- Elderly friendly city
- Design and the effects on mobility, etc.

To answer these question(s), other tools and methods should be applied, as: questionnaires, interviews, observations on site, photo documentation, structured evaluations, etc.

Students will conclude with a presentation of the results:

- analysis, evaluation and comparison of the areas according to the 15min city concept
- the answer to the research question and insights of the focus selected
- future recommendations to improve the area

Figure 7: Map of Wiesbaden and selected areas to analyze.

Further development

It is to expect that the students joining this seminar, will also be part of the Master Design Studio of the Urban Design and Planning Unit. Therefore, this course is structured to have a deeper understanding of the first planning phases of urban sustainable mobility, to be further developed on the design studio running parallel and with the same case study area, focusing on the new urban development “Ostfeld”.

This course, as mentioned before, will have a focus on the first processes of preparing a SUMP (See Figure 3), which are mainly the analysis, determining the planning framework and building some visions for the area.

Figure 8: Source: Guidelines for developing and implementing a Sustainable Urban Mobility Plan (2019). Highlighted the areas to be developed on the seminar

Evaluation

The final grade will be composed as follow:

- Completion of the tasks of each session (25%),
- Active participation on the workshop + critic (25%)
- Final presentation and outputs (50%)

The final output for each team will be:

- Maximum 2 posters in A2 format which will include graphic material but also text, explaining the shortly the analysis made on the area. Most emphasis should be given to the stronger aspect founded thought the analysis and the future recommendations. The poster should be design for: web-publication (size & color should be adjusted). All types of sources used on the poster should be provided. Graphic representation will also be graded.

Appointments

Date	Time	Topic

19.10.2021	10:30	Lecture 1: Sustainable Urban Mobility Planning – the 15 min city concept - GVF
26.10.2021	10:30	Lecture 2: Analyzing the mobility situation – Methods in Urban planning - FG
27.10.21	10:00	Excursion to Wiesbaden – Together with the design students - FG + GVF (Optional) – To be decided More information will be provided
02.11.2021	10:00	Lecture 3 / Workshop: Mapping Techniques – GIS – Land use management – GVF / Prof. Linke
09.11.2021	10:30	Lecture 4: Accessibility and Inclusion – an important pillar in SUM - GVF
16.11.2021	10:30	Lecture 5 + Critic 1: City of Wiesbaden – current planning practices by Stadtplanungsamt Wiesbaden
23.11.2021	10:30	Project Work: open time for questions and answers Time for the students to continue working on the field gathering empirical data
30.11.2021	10:30	Project Work: making sense of the data + future recommendations Time for the students to continue working on the field gathering empirical data
07.12.2021	10:30	Project Work: Open time for questions and answers Time for the students to continue working on the field gathering empirical data
14.12.2021	10:30	Final presentation and submission of the posters

Literature

Sustainable Urban Mobility Planning SUMP

Rupprecht Consult - Forschung & Beratung GmbH (editor) 2019, Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan, Second Edition.

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Burbidge, S., & Goulias, K. (2009). Active travel behavior. Transportation letters, 1(2), 147-167.

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Pozoukidou, G.; Chatziyiannaki, Z., 2021. 15-Minute City: Decomposing the New Urban Planning Eutopia. Sustainability 2021, 13, 928. https://doi.org/10.3390/su13020928

Wiesbaden

Landeshauptstadt Wiesbaden, Stadtplanungsamt, 2018. Integriertes Stadtentwicklungskonzept 2030+

Knie, A., Orawiec, Ina-M., Schäffer, P., 2018. Das Mobilitätsleitbild der Landeshauptstadt Wiesbaden. ESWE Verkehrsgesellschaft mbH. Wiesbaden, 2020.

Stadtplan WMS Dienst: http://geoportal.wiesbaden.de/kartenwerk/application/stadtplan

Mobilitätsleitbild Fakten | Mobilität 365 (mobilitaet365.de)

Flächennutzungsplan Flächennutzungsplan Wiesbaden

Kurzfassung Verkehrsentwicklungsplan Wiesbaden Verkehrsentwicklungsplan_WI_2030-1.pdf (ziv.de)

Fahrradverleihssystem ESWE Verkehr meinRad (eswe-verkehr.de)

soziale Infrastruktur Kindertagesstätten Wiesbaden

Car Sharing Carsharing Standorte Wiesbaden

Radverkehrskarte Radverkehrskarte Wiesbaden

Radwege zur Schule Schleichwegeprojekt Wiesbaden

5 areas to analyze: in Wiesbaden:

- Quartier Thaerstraße Quartier Thaerstrasse Wiesbaden (thaerstrasse-wiesbaden.de)
- Künstlerviertel „Im Rad“ Landeshauptstadt Wiesbaden - Stadtplanung (o-sp.de)
- Quartier Balthasar-Neumann-Straße Landeshauptstadt Wiesbaden - Stadtplanung (o-sp.de)

- Quartier Kureck link
- Banhofsquartier Biebrich Wiesbaden link

Urban Design / Urban planning

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Florida, Richard. "Chapter 15: Building the Creative Community." In The Rise of the Creative Class Revisited, by Richard Florida, 304–349. New York: Basic Books, 2014.

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Lynch, Image of The City. Cambridge, MA: MIT & Harvard. 1960

Speck, Jeff. "Part I: Why Walkability?" In Walkable City: How Downtown Can Save America, One Step at a Time, by Jeff Speck, 13–35. New York: Farrar, Straus, and Giroux, 2012.

Inclusive Design / Access for All

Accessible Hubs. International workshop on Universal Design in urban mobility system.

The workshop looks into the design and accessibility of intermodal mobility hubs (public or private places where passengers and cargo can change between different modes of transportation). Link to videos –

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The World Bank (2020) Handbook for Gender-Inclusive Urban Planning Design. Washington, DC: International Bank for Reconstruction and Development.

Methodology

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Preiser, W. F., White, E., & Rabinowitz, H. (2015). Post-Occupancy Evaluation (Routledge Revivals). Routledge.

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Williams, Sarah. "Chapter 1: Big Data For Cities Is Not New" and "Conclusion: It's How We Work With Data That Really Matters." In Data Action: Using Data for Public Good, by Sarah Williams, 1–48, 213–221

Wolfrum, S. (Ed.). (2014). Platzatlas: Stadträume in Europa. Birkhäuser. https://www.degruyter.com/view/title/496757