



DESIGNING FOR CLIMATE CHANGE AT THE SONIAN FOREST, BELGIUM

Course ID: TBA

July 5 - August 1, 2020

Academic Credits: 8 Semester Credit Units (Equivalent to 12 Quarter Units)

School of Record: Connecticut College

FIELD SCHOOL DIRECTORS:

Prof. Bruno De Meulder, Department of Architecture, Faculty of Engineering, KU Leuven
(bruno.demeulder@kuleuven.be)

Prof. Kelly Shannon, Department of Architecture, Faculty of Engineering, KU Leuven
(kelly.shannon@kuleuven.be)



INTRODUCTION

Contemporary urban development demands not only innovative thinking, but also highly skilled professionals. As the world continues to urbanize, the stress on natural resources rises exponentially; climate change is exacerbating a pending ecological crisis. Spatial, social and environmental injustices prevail. There is the urgent necessity to significantly overhaul the modes, morphologies and typologies of settling on the planet. Context-embedded urban design and its interplay with visionary environmental planning is necessary to address the precarious stage of development humanity, and more importantly the world, now finds itself.

The Belgian field school in urban design and environmental planning is grounded in the belief in both state-of-the-art design thinking and practices (including innovation from the disciplines of engineering, transportation, and ecology) and local intelligence of places as expressed in specific appropriation of techniques and relation to socio-cultural practices. The field school will be organized by OSA/RUA (Research on Urbanism & Architecture) together with the Department of Environment (unit focused on area-based development, environmental planning and projects) of the Flemish Regional Government and several relevant stakeholders. Flanders is the northern region of Belgium and renowned for its

highly diffuse urbanism, punctuated by a dense constellation of small cities originating from The Middle Ages. It is the most densely populated region of Europe and heavily urbanized. The region is at a tipping point, understanding that it has to shift urban development towards restructuring existing urban environments while recreating space, also literally, for ecology. There is a recognized, urgent need to deeply understand local contexts in order to develop innovative alternatives for strategies, morphologies and typologies that address new ways of living and the predicted consequences of climate change.

The 2020 summer field school will take place in the Sonian Forest and surroundings. The Sonian Forest more or less equals in size the Brussels agglomeration. It occupies the plateau dominating the interfluvial of the Senne (anchoring Brussels center) and Dijl (to the east spanning from Flanders to Wallonia) Rivers' tributaries. It has a long and contentious history that has resulted in the present, where the city and forest appear to be one another's inverse: low versus high, wet versus dry, limited versus endless. The forest functions simultaneously as the central park of the Brussels metropolitan region that completely surrounds it, as base of the (remaining) ecological structure of the region, and as the main spatial structure of the metropole that actually contains its main crossroads. Both the urban as the forest are overstressed. Persistence of strict monofunctional zonal planning hinders a more constructive interplay between forest (in dire need of extension) and city. During the 6-week field school, there will be several days of fieldwork (on bicycles) and moments of interaction with experts and relevant stakeholders. The majority of the time will be spent on iteratively and critically interpreting the territory and developing alternative development scenarios—across scales—for new forms and typologies of both settlement and ecology. New housing typologies, social infrastructure and mobility systems need to be boldly explored.

The ultimate goal of the field school is to formulate alternative development scenarios (from the territorial to typology scales) that are grounded in a critical reading of landscape as structure. In practical terms, this goal will be realized by an iteratively developed "Atlas of Settlements and Environments of in the Sonian Forest Environs in Times of Climate Change."

Intensive fieldwork, interpretative mapping and critical analysis of development dynamics feed an intensive interdisciplinary design charrette with inputs from a wide variety of stakeholders and expertise from different fields. The field school, as a learning by doing laboratory, builds capacity in urban design and environmental planning for the broad field of challenges that contemporary landscapes and urbanism are facing.

ACADEMIC CREDIT UNITS & TRANSCRIPTS

Credit Units: Attending students will be awarded 8 semester credit units (equivalent to 12 quarter credit units) through our academic partner, Connecticut College. Connecticut College is a private, highly ranked liberal arts institution with a deep commitment to undergraduate education. Students will receive a letter grade for attending this field school (see grading assessment and matrix). This field school provides a minimum of 160 direct instructional hours. Students are encouraged to discuss the transferability of credit units with faculty and registrars at their home institution prior to attending this field school.

Transcripts: An official copy of transcripts will be mailed to the permanent address listed by students on their online application. One more transcript may be sent to the student home institution at no cost. Additional transcripts may be ordered at any time through the National Student Clearinghouse: <http://bit.ly/2hvurkl>.

PREREQUISITES

This field school is primarily intended for students in architecture, landscape architecture, urbanism, urban design and urban planning. Those from environmental planning and other relevant fields are as well welcomed, but it must be understood that sketching and photography will be essential components of the fieldwork and that the week of developing design proposals necessitates a design background or at least an interest in and basic skills of design.

DISCLAIMER – PLEASE READ CAREFULLY

Our primary concern is with education. Traveling and conducting field research involves risk. Students interested in participating in any IFR program must weigh whether the potential risk is worth the value of education provided. While risk is inherent in everything we do, we take risk seriously. The IFR engages in intensive review of each field school. Once a program is approved, the IFR reviews each program annually to make sure it complies with all our standards and policies, including student safety.

The IFR does not provide trip or travel cancellation insurance. We encourage students to explore such insurance on their own as it may be purchased at affordable prices. Insuremytrip.com or Travelgurad.com are possible sites where field school participants may explore travel cancellation insurance quotes and policies. If you do purchase such insurance, make sure the policy covers the cost of both airfare and tuition. See this [Wall Street Journal article about travel insurance](#) that may help you with to help to decide whether to purchase such insurance.

We will do our best to follow schedule and activities as outlined in this syllabus. Yet local permitting agencies, political, environmental, personal or weather conditions may force changes. This syllabus, therefore, is only a general commitment. Students should allow flexibility and adaptability as research work is frequently subject to change.

If you have any medical concerns, please consult with your doctor. For all other concerns, please consult with the project director.

COURSE OBJECTIVES

- Students will be intensively engaged with fieldwork, following pre-defined sites and with a given methodology (derived from *Urban Dwelling Environments*, by H. Caminos, J. Turner, J. Steffian, Cambridge: MIT Press, 1969 and various other methods developed by landscape architects and urbanists), in order to critically map and interpret constraints and opportunities for future development in the Sonian Forest and Surroundings.
- They will study the challenges facing settlements and environments in Vietnam's era of increased urbanization and accelerated climate change and learn about existing strategies that are used to make them more adaptive and robust.
- They will have to gain an understanding of the specific, socio-cultural, ecological and political conditions which can frame the possibility of alternative development paradigms and how they can be appropriated locally.
- Students will learn how to derive such an understanding of specific, socio-cultural, ecological and political conditions through, among others, live exchanges with stakeholders. In that sense, participants will acquire experience with the setting up of/conducting living labs.
- Students will learn to read critically maps and other iconographic materials and form conceptualizations from this reading that are relevant to projective thinking concerning sites.

- Students should develop novel, sharp and refined ways to perceive, represent and reimagine the environment.
- Students should develop skills of working as a group and creating a collective project, through the end product of an exhibition and publication.

LEARNING OUTCOMES

- Students will have gained a number of fieldwork tools and methodologies of landscape and urbanism to engage in the local context of the surroundings of the Sonian Forest. More generally speaking, participants will acquire experience with the setting up of/conducting living labs within the fields of urban design and environmental planning.
- Students will learn how to derive an understanding of specific, socio-cultural, ecological and political conditions through a combination of literature review, field work and live exchanges with stakeholders.
- They will have understood principles of landscape urbanism and developed design strategies at the territorial, landscape and urban morphology and typology scales. Attention will focus on adaptation to the predicted consequences of climate change. Beside the principles of landscape urbanism, its main techniques will be transmitted.
- Students should learn to critically read texts and form insights that are relevant to the contemporary context and instructive for landscape urbanisms projections. Similarly, students will learn to critically read maps and other iconographic materials and form conceptualizations from these readings that are relevant to projective thinking concerning sites.
- Students will increase their design capacity and especially learn how to consciously exploit the capacity of design to integrate different, disparate forms of information and knowledge in projective endeavors.
- They will co-produce an exhibition and publication of their work which will serve as platform for discussion with local experts and leaders. This will increase the capacity of students to co-operate (with partners, across different disciplines and sectors) as well as increase their presentation skills (including the capacity to organize exchange with stakeholders during and at the end of a research and design cycle).

GRADING MATRIX

Fieldwork (rigor and application of methods, insights)	30%
Design strategy development (innovation, relevance to local context, clarity of expression)	30%
Presentations (including of reading assignment, mid and final reviews, exhibition and publication preparation)	20%
Group collaboration (with other IFR participants and with locals/interaction with stakeholders)	20%

TRAVEL & MEETING POINT

We suggest you hold purchasing your airline ticket until six (6) weeks prior to departure date. Natural disasters, political changes, weather conditions and a range of other factors may require the cancelation of a field school. The IFR typically takes a close look at local conditions 6-7 weeks prior to program beginning and make Go/No Go decisions by then. Such time frame still allows the purchase deeply discounted airline tickets while protecting students from potential loss if airline ticket costs if we decide to cancel a program.

We will meet participants at the “Le Beauty GastroPub” (147 Groenendaalstraat, Hoeilaart 1560, Belgium) just across from the Groenendaal Train Station at 4pm on July 5th and provide transport by mini-van to the youth hostel. If you missed your connection or your flight is delayed, please call, text or email project director immediately. A local emergency cell phone number will be provided to all enrolled students.

VISA REQUIREMENTS

Students are responsible for obtaining a Belgian VISITOR Visa prior to arrival. This can most easily be done online (<https://unitedstates.diplomatie.belgium.be/en/visa-belgium/visitors>). Please note that you must have a US Passport issued within the last 10 years and with validity that exceeds the intended stay of the applicant by at least three months. Please make sure that your passport has at least two blank pages facing each other where visa and stamps may be affixed.

Citizens of other countries are asked to check the embassy website page at their home country for specific visa requirements.

ACCOMMODATIONS

There will be two sites of accommodation: 1) in the surroundings of the Sonian forest: a youth hostel for six nights; 2) in Leuven: in single-occupancy dorms rooms (with shared bathrooms and toilets) of the KU Leuven. During the days in the forest, the youth hostel will be responsible for our food: they are used to hosting national and international guests. In Leuven, breakfast can be prepared in the shared kitchen of the dorm. For lunch we will organize sandwiches and for dinner students will have a meal plan with the university.

COURSE SCHEDULE

All IFR field school begins with safety orientation. This orientation includes proper behavior at the field area, proper clothing, local cultural sensitivities and sensibilities, potential fauna and flora hazards, review IFR harassment and discrimination policies and review of the student Code of Conduct.

Week 1: Processing of existing information, fieldwork

The workshop will begin with the processing of existing information, lectures about the Sonian Forest and (through dealing with the case) analysis methods. There will be a series of lectures/courses are about the site and (through dealing with the case) analysis methods and tools of landscape urbanism, embedded within a general course on landscape urbanism + punctual lectures from fields that feed the urbanism discourses and practices (in this case: ethnography/social and cultural anthropology (material culture), history, ecology and forestry, environmental sciences, planning). There will be 4 days of fieldwork by bicycle.

Sunday 5 July	arrival in Sonian Forest (sleep in hostel)
Monday 6 July	welcome event in Sonian Forest, introduction lectures for summer school (sleep in hostel)
Tuesday 7 July	lectures by stakeholders, tailored visit in forest museum, evening network moment with stakeholders, resource persons, local community (sleep in hostel)
Wednesday 8 July	fieldwork by bike, tailored trajectories & encounters with local stakeholders / late afternoon workshop (sleep in hostel)
Thursday 9 July	fieldwork by bike, etc. / late afternoon workshop (sleep in hostel)
Friday 10 July	fieldwork by bike / late afternoon workshop (sleep in hostel)
Saturday 11 July	move to Leuven (sleep in Leuven)

Sunday 12 July free (sleep in Leuven)

Week 2 : Problem formulation and project definition through processing fieldwork

The second week will develop a series of design research questions, problem formulation and project definition through critically interrogating the fieldwork and encounters with local stakeholders.

Monday 13 July work session in Leuven at Kasteel Arenberg to develop problem formulation and project definition (sleep in Leuven)

Tuesday 14 July inputs with stakeholders at Kasteel Arenberg to test relevance and importance of problem formulation and project definition (sleep in Leuven)

Wednesday 15 July work session in Leuven at Kasteel Arenberg to redevelop problem formulation and project definition based on interaction with stakeholders (sleep in Leuven)

Thursday 16 July am: lectures by KUL-staff & experts (mapping / precedents) at Kasteel Arenberg
pm: work session in Leuven at Kasteel Arenberg to develop conceptual strategies across scales (from territory to urban tissue) (sleep in Leuven)

Friday 17 July work session in Leuven at Kasteel Arenberg (sleep in Leuven)

Weekend 18-19 July gathering with volunteers organizations (in Sonian Forest, sleep in Leuven)

Week 3: Spatial tactics and strategies development

Various spatial tactics and design strategies are to be tested through an iterative process that involves the simultaneous working across scales and discussion with the teaching staff and other project groups.

Monday 20 July mid-review (with stakeholders & experts) + steering committee with key stakeholders on orientation of design investigation priorities (sleep in Leuven)

Tuesday 21 July am: lectures by KUL (forestry / planning & policy/ precedents), ANB (Nature & Forestry Agency), etc.
pm: work session in Leuven at Kasteel Arenberg to further develop strategies across scales (from territory to urban tissue) (sleep in Leuven)

Wednesday 22 July work session in Leuven at Kasteel Arenberg to further develop strategies across scales (from territory to urban tissue) (sleep in Leuven)

Thursday 23 July work session in Leuven at Kasteel Arenberg to further develop strategies across scales (from territory to urban tissue) (sleep in Leuven)

Friday 24 July work session in Leuven at Kasteel Arenberg to further develop strategies across scales (from territory to urban tissue) (sleep in Leuven)

Week 4: Representation, processing, presentation of summer school outcomes: spatial tactics, strategies, projects

The final week of the workshop will focus on finalization of the design strategies and creation of a publically-accessible exhibition and accompanying publication.

Monday 27 July work session in Leuven at Kasteel Arenberg to create publication and exhibition (sleep in Leuven)

Tuesday 28 July work session in Leuven at Kasteel Arenberg to create publication and exhibition, materials off to printer in evening (sleep in Leuven)

Wednesday 29 July work session in Leuven: presentation training and exhibition mounting (sleep in Leuven)

Thursday 30 July final review in form of large public presentation at Flemish Administration building, Leuven (sleep in Leuven)

Friday 31 July feedback/ evaluation, departure event (sleep in Leuven)

Saturday 1 August departure

EQUIPMENT LIST

Students should bring a camera, sketchbook, pencils & markers and laptop that has basic graphic programs installed (ACAD, Adobe Illustrator, Photoshop and InDesign). If you do not have a laptop or these programs installed, please contact the field school directors so we can work out a solution. Lack of ownership of these items is not a hindrance for your participation in this field school.

REQUIRED READINGS

PDF files of all mandatory readings will be provided to enrolled students via a shared BOX folder.

Readings before arrival in Belgium

Assignment: Every student must choose 3 texts (2 in different general themes and one in part 6, Zenne-Dijle Interfluvial Landscape) in addition to one mandatory text for all. Each student should make one synthesis per text: 1 page ONLY, 11-point Arial with bullet points and important quotes (with page number). The work will be presented to others during first days of field school (coupled with fieldwork images/ drawings).

Mandatory text for all

De Meulder, B. and Shannon, K. (2019) "Forest Urbanisms: The Belgian Sonian Forest and Environs'," *Landscape Architecture Frontiers (LAF)*, Vol. 7: 1, February 2019, pp. 18-33.

General Themes

01 Forestry

Boris, S. D. (2012) "Urban forest and landscape infrastructure: towards a landscape architecture of open-endedness" in *Journal of Landscape Architecture*, 7(2), 54-59

Busse Nielsen, A., Hedblom, M., Stahl Olafsson, A. and Wistrom, B. (2107) "Spatial configurations of urban forest in different landscape and socio-political contexts: identifying patterns for green infrastructure planning " in *Urban Ecosystems* 20: 379-392.

Carlisle, S., Pevzner, N. and Piana, M. (2014) "Introduction: Building the Urban Forest" in *Scenario 04: Building the Urban Forest* (see <https://scenariojournal.com/article/building-the-urban-forest/>)

De Meulder, B. and Shannon, K. (2014) "Forests and Trees in the City: Southwest Flanders and the Mekong Delta" in in *Revising Green Infrastructure: Concepts Between Nature and Design*, D. Czechowski, T. Hauck, G. Hausladen (eds.) London: CRC Press, 427-49.

Konijnendijk van den Bosch, C. (2016) "Tree agency and urban forest governance" in *Smart and Sustainable Built Environment*, vol. 5, no. 2: 176-188.

Konijnendijk van den Bossch, C. C. (2008). *The forest and the city: the cultural landscape of urban woodland*. London: Springer (chapter 13: a forest for the future, but also other chapters)

Piana, M. and Troxel, B. (2014) "Beyond Planting: an Urban Forestry Primer" in *Scenario 04: Building the Urban Forest* (see <https://scenariojournal.com/article/beyond-planting/>)

Steenberg, J., Millward, A., Nowak, D., Robinson, P. and Ellis, A. (2017) "Forecasting Urban Forest Ecosystem Structure, Function and Vulnerability" in *Environmental Management* 59: 33-392.

Szanto, C. and Diedrich, L. (eds) (in progress) *Landscape Laboratories* (not yet published).

Thorpert, P. and Busse Nielsen (2014) A. "Experience of vegetation-borne colours" in *Journal of Landscape Architecture*, 9:1, 60-69.

Weller, R. and Hands, T. (2014) "Building the Global Forest" in *Scenario 04: Building the Urban Forest* (see <https://scenariojournal.com/article/building-the-global-forest/>)

02 Settlements Systems

Cosgrove, D. (2006) "Los Angeles and the Italian Città Diffusa: Landscapes of the Cultural Space Economy" in *Landscapes of a New Cultural Economy of Space*, edited by T.S. Terkenli and A. d'Hautesserre: 69-91.

Dansereau, P. (1978) "An Ecological Grading of Human Settlements" in *Geoforum*, Vol. 9: 161-210.

De Meulder, B. (2010) "Back to the Start and Elsewhere: Travels between Cities and Natures" in N. Meijssams (ed.) *Designing for a Region*, Amsterdam: Sun Academia, 216-227.

De Meulder, B., Schreurs, J., Cock, A. and Notteboom, B. (1999) "Patching up the Belgian Urban Landscape" in *OASE* 52, 78-113.

Purdy, J. (2018) "The world we've built: to be human is to shape the world, to create the infrastructure of our common lives. What do we do when that infrastructure becomes a trap?" in *Dissent* (see https://www.dissentmagazine.org/online_articles/world-we-built-sovereign-nature-infrastructure-leviathan)

03 Water Urbanism

Nolf, C. and De Meulder, B. (2017) "Grafting on the Water Landscape in the Dispersed Urban Territory of Flanders" in *Water vs. Urban Scape*, M. Ranzato (ed.), Berlin: Jovis, 65-82.

Shannon, K. (2013) "Eco-engineering for Water: From Soft to Hard and Back" in *Resilience in Ecology and Urban Design: Linking Theory and Practice for Sustainable Cities*, Future City 3, S.T.A. Pickett et al. (eds), Dordrecht: Springer, 163-81.

04 Productive Landscapes

Bohn, K. and Viljoen, A. (2005) "New Space for Old Cities" in *Continuous Productive Urban Landscapes: Designing Urban Agriculture for Sustainable Cities*, A. Viljoen (ed.), Oxford: Architectural press, 239-250.

Elkin, R.S., (2018) "The Politics of the Rhizophere" Interview with Anna L. Tsing, in *Out of the Woods*, *Harvard Design Magazine*, Cambridge (May 2018)

Imbert, D. (2016) "Aux Fermes, Citoyens!" in *Ecological Urbanism*, M. Mostafavi, G. Doherty (eds.), Lars Muller Publishers, 270-281.

Mance, H. (2018) "Algorithmic wilderness: Robo-bees and drone-seeded forests. Can technology mend our broken relationship with the natural world?" in *Aeon* (see <https://aeon.co/essays/tech-broke-our-relationship-with-wilderness-can-it-mend-it-too>)

McGrath, B. (2018) "Intersecting disciplinary frameworks: the architecture and ecology of the city" in *Ecosystem Health and Sustainability*, 4(6): 148-159.

Purdy, J. (2015) "An Environmentalism for the Left" in *Dissent* (see <https://www.dissentmagazine.org/article/after-nature-left-environmentalism-jedediah-purdy>)

05 National Parks

Buhle, P. (2000) "First wave eco-socialism" in *Capitalism, Nature, Socialism*, Vol. 11, Iss. 3, 38-40.

06 Zenne-Dijle Interfluvial Landscape

Danneels, K. (2018) "Historicizing Ecological Urbanism: Paul Duvigneaud, the Brussels Agglomeration and the influence of ecology on urbanism (1970-2016)" in *On Reproduction. Re-imagining the political ecology of urbanism. Urbanism & Urbanization Conference Proceedings*, Gent.

Godefroid, S. and Koedam, N. (2003) "Identifying indicator plant species of habitat quality and invasibility as a guide for peri-urban forest management" in *Biodiversity and Conservation* 12: 1699-1713.

Kesteloot, C. and Saey, P. (2002) "Brussels, a truncated metropolis" in *GeoJournal* 58: 53-63.

Poelmans, L. and Van Rompaey, A. (2009) "Detecting and modelling spatial patterns of urban sprawl in highly fragmented areas: A case study in the Flanders-Brussels region" in *Landscape and Urban Planning* 93: 10-19.

Roland, L. C. (2012) "When you can't see the city for the trees. A joint analysis of the Sonian Forest and urban reality" in *Brussels Studies*, 60.

Roland, L.C. (2014) "When archetypes generate uncertainty. The case of the scattered metropolis" in P. Marcolin and J. Flores (eds.) *20th Century New Towns. Archetypes and Uncertainties. Conference Proceedings*, Araujo, Porto, CCEA Centro de Estudos Armaldo Araujo & Escola Superior Artistic do Porto, 350-67.

Smets, B. (2010) "In search of landscape structures in the open landscape around Louvain" in N. Meijssams (ed.) *Designing for a Region*, Amsterdam: Sun Academia, 54-61.

Wambecq, W. and De Meulder, B. (2017) "Flood + Forest: A Migration Corridor for Reconnecting the Brussels Landscape" in Scenario 06: Migration (see <https://scenariojournal.com/article/flood-forest/>)

Verstraeten, G., Notebaert, B., Broothaerts, N., Vandenberghe, J. and De Smedt, P. (2018) "River Landscapes in the Dijle Catchment: From Natural to Anthropogenic Meandering Rivers" in *Landscapes and Landforms of Belgium and Luxembourg*, A. Demoulin (ed.), Cham: Springer, 269-280.