Built Environment

Course catalogue International Spatial Development

Year 2019-2020

DISCOVER YOUR WORLD

Breda University OF APPLIED SCIENCES

Foreword

This course catalogue gives you an overview of your study programme. You will find the following content:
• the annual schedule, examination periods, holidays, etc;
• an overview of all the study components, including workload;
• learning objectives and content for all the study components;
• an overview of the competences;
• an explanation of the competences and the three levels.

Teaching methods

In your study programme, you will be exposed to four teaching methods: projects, courses, training sessions, and mentoring.
• In the ***projects/labs*** you will work together with fellow students in a project group on a large professional assignment. You will acquire knowledge and learn to apply this knowledge in a professional context, operating as a professional in training. The lecturer will coach the groups of students as a project leader.
• In the ***courses*** you will acquire profession-relevant knowledge by attending lectures and actively working on assignments. The lecturer will have the role of teacher and expert supervisor.
• In the ***training sessions*** you will acquire skills. These sessions are held in smaller groups, in which the lecturer will act as instructor and expert.
• Your ***mentor*** will be your personal coach. He or she will keep track of your academic development. You will have regular contacts with your mentor.

Years 1 and 2

The first year is called the propaedeutic phase and it consists of three trimesters of twelve weeks each. The trimesters are usually filled with 1 project and several courses and training sessions. Each academic year comprises sixty ECs study credits.

The main phase of the study programme will start in year 2. This year too consists of 3 trimesters of twelve weeks each. This year will further prepare you for the third and fourth years, which is when learning in practice will be an important component.

Years 3 and 4

The third year of study consists of three trimesters. As a third-year student you will switch between working in practice and studying at BUAS. Two out of the three trimesters you will be doing a work placement. During the other trimester you will attend classes.
You are to find a work placement yourself. Obviously, you will be supported in this process by the placement coordinator. More detailed information can be found in the placement handbook.

The fourth year consists of two semesters. The first semester will be your chosen minor. In the second semester you will work on a graduation project for an industry client. This project is also something that you need to acquire yourself. More detailed information can be found in the graduation handbook.

TER

All relevant rules can be found in the Teaching and Examination Regulations (TER) 2019-2020. In the academic year of 2019-2020, a transitional arrangement will apply. This transitional arrangement will be announced after the board of examiners has approved and officially adopted this arrangement. The transitional arrangement will apply to students who started a project, a course, etc. last year, but have not yet completed it.

We wish you an enjoyable and successful year!

On behalf of the management team of Built Environment and Logistics.,

Debbie Dermout – Director Built Environment and Logistics.
This Course catalogue is part of the Teaching and Examination Regulations(TER) 2019-2020.

Jaarplanning ISD 2019-2020

Week			Year 1		Year 2		Year 3		Year 4 regular		Year 4 not regular			Week
			class:		class:		class:		class:		class:			
	Monday	Friday										Monday	Friday	
33	12-8-2019	16-8-2019	Summer holiday		Summer holiday		Summer holiday		Summer holiday		Summer holiday	12-8-2019	16-8-2019	33
34	19-8-2019	23-8-2019	Summer holiday		Summer holiday		Summer holiday		Exam August		Summer holiday	19-8-2019	23-8-2019	34
35	26-8-2019	30-8-2019	Intro college 28-8		Intro lecture 28-8 (lateral)		Summer holiday		Summer holiday		Graduation Internship week 1	26-8-2019	30-8-2019	35
36	2-9-2019	6-9-2019	Introduction		Summer holiday		Internship 1		Academic week 1		Graduation Internship week 2	2-9-2019	6-9-2019	36
37	9-9-2019	13-9-2019	Academic week 1	Register tests	Academic week 1	Register tests	Internship 2	Register tests	Academic week 2	Register tests minor	Graduation Internship week 3	9-9-2019	13-9-2019	37
38	16-9-2019	20-9-2019	Academic week 2	Register tests	Academic week 2	Register tests	Internship 3	Register tests	Academic week 3	Register tests minor	Graduation Internship week 4	16-9-2019	20-9-2019	38
39	23-9-2019	27-9-2019	Academic week 3	Register tests	Academic week 3	Register tests	Internship 4	Register tests	Academic week 4	Register tests minor	Graduation Internship week 5	23-9-2019	27-9-2019	39
40	30-9-2019	4-10-2019	Academic week 4	Register tests	Academic week 4	Register tests	Internship 5	Register tests	Academic week 5	Register tests minor	Graduation Internship week 6	30-9-2019	4-10-2019	40
41	7-10-2019	11-10-2019	Fieldtrip		fieldtrip		Internship 6		Academic week 6		Graduation Internship week 7	7-10-2019	11-10-2019	41
42	14-10-2019	18-10-2019	Autumn Holidays		Autumn Holidays		Internship 7		Autumn Holidays		Graduation Internship week 8	14-10-2019	18-10-2019	42
43	21-10-2019	25-10-2019	Academic week 5		Academic week 5		Internship 8		Academic week 7		Graduation Internship week 9	21-10-2019	25-10-2019	43
44	28-10-2019	1-11-2019	Academic week 6		Academic week 6		Internship 9		Academic week 8		Graduation Internship week 10	28-10-2019	1-11-2019	44
45	4-11-2019	8-11-2019	Academic week 7		Academic week 7		Internship 10		Academic week 9		Graduation Internship week 11	4-11-2019	8-11-2019	45
46	11-11-2019	15-11-2019	Academic week 8		Academic week 8		Internship 11		Academic week 10		Graduation Internship week 12	11-11-2019	15-11-2019	46
47	18-11-2019	22-11-2019	Academic week 9		Academic week 9		Internship 12		Academic week 11 / TEST WEEK		Graduation Internship week 13	18-11-2019	22-11-2019	47
48	25-11-2019	29-11-2019	Academic week 10		Academic week 10		Internship 13		Academic week 12		Graduation Internship week 14	25-11-2019	29-11-2019	48
49	2-12-2019	6-12-2019	TEST WEEK		TEST WEEK		Internship 14		Academic week 13		Graduation Internship week 15	2-12-2019	6-12-2019	49
50	9-12-2019	13-12-2019	TEST WEEK		TEST WEEK		Presentations		Academic week 14	Register resits minor	Graduation Internship week 16	9-12-2019	13-12-2019	50
51	16-12-2019	20-12-2019	Academic week 1		Academic week 1		SIMgame		Academic week 15	Register resits minor	Graduation Internship week 17/hand-in	16-12-2019	20-12-2019	51
52	23-12-2019	27-12-2019	Christmas Holidays		Christmas Holidays		Christmas Holidays		Christmas Holidays		Christmas Holidays	23-12-2019	27-12-2019	52
1	30-12-2019	3-1-2020	Christmas Holidays		Christmas Holidays		Christmas Holidays		Christmas Holidays		Christmas Holidays	30-12-2019	3-1-2020	1
2	6-1-2020	10-1-2020	Academic week 2	Register resits	Academic week 2	Register resits	Academic week 2		Academic week 16 /RESIT WEEK		Graduation Internship week 18/preperation	6-1-2020	10-1-2020	2
3	13-1-2020	17-1-2020	Academic week 3	Register resits	Academic week 3	Register resits	Academic week 3		Academic week 17 / project final		Exam January	13-1-2020	17-1-2020	3
4	20-1-2020	24-1-2020	Academic week 4		Academic week 4		Academic week 4		Academic week 18 / project final			20-1-2020	24-1-2020	4
5	27-1-2020	31-1-2020	Academic week 5	Resits trim 1 /Yr 1	Academic week 5	Resits trim 1 /Yr 2	Academic week 5		Academic week 19 / project final			27-1-2020	31-1-2020	5
6	3-2-2020	7-2-2020	Academic week 6	Resits trim 1 /Yr 1	Academic week 6	Resits trim 1 /Yr 2	Academic week 6		Graduation Internship week 1			3-2-2020	7-2-2020	6
7	10-2-2020	14-2-2020	Academic week 7	Resits trim 1 /Yr 1	Academic week 7	Resits trim 1 /Yr 2	Academic week 7		Graduation Internship week 2			10-2-2020	14-2-2020	7
8	17-2-2020	21-2-2020	Academic week 8		Academic week 8		Academic week 8		Graduation Internship week 3			17-2-2020	21-2-2020	8
9	24-2-2020	28-2-2020	Spring Break		Spring Break		Spring Break		Graduation Internship week 4			24-2-2020	28-2-2020	9
10	2-3-2020	6-3-2020	Academic week 9		Academic week 9		Academic week 9		Graduation Internship week 5			2-3-2020	6-3-2020	10
11	9-3-2020	13-3-2020	Academic week 10		Academic week 10		Academic week 10		Graduation Internship week 6			9-3-2020	13-3-2020	11
12	16-3-2020	20-3-2020	TEST WEEK		TEST WEEK		TEST WEEK		Graduation Internship week 7			16-3-2020	20-3-2020	12
13	23-3-2020	27-3-2020	TEST WEEK		TEST WEEK		TEST WEEK		Graduation Internship week 8			23-3-2020	27-3-2020	13
14	30-3-2020	3-4-2020	Academic week 1		Academic week 1		Internship 1		Graduation Internship week 9			30-3-2020	3-4-2020	14
15	6-4-2020	10-4-2020	Academic week 2		Academic week 2		Internship 2		Graduation Internship week 10			6-4-2020	10-4-2020	15
16	13-4-2020	17-4-2020	Academic week 3	Register resits	Academic week 3	Register resits	Internship 3	Register resits	Graduation Internship week 11			13-4-2020	17-4-2020	16
17	20-4-2020	24-4-2020	Academic week 4	Register resits	Academic week 4	Register resits	Internship 4	Register resits	Graduation Internship week 12			20-4-2020	24-4-2020	17
18	27-4-2020	1-5-2020	May Holiday		May Holiday		Internship 5		Graduation Internship week 13			27-4-2020	1-5-2020	18
19	4-5-2020	8-5-2020	Academic week 5		Academic week 5		Internship 6		Graduation Internship week 14			4-5-2020	8-5-2020	19
20	11-5-2020	15-5-2020	Academic week 6	Resits trim 2 /Yr 1	Academic week 6	Resits trim 2 /Yr 2	Internship 7	Resits trim 2 /Yr 3	Graduation Internship week 15			11-5-2020	15-5-2020	20
21	18-5-2020	22-5-2020	Academic week 7	Resits trim 2 /Yr 1	Academic week 7	Resits trim 2 /Yr 2	Internship 8	Resits trim 2 /Yr 3	Graduation Internship week 16			18-5-2020	22-5-2020	21
22	25-5-2020	29-5-2020	Academic week 8	Resits trim 2 /Yr 1	Academic week 8	Resits trim 2 /Yr 2	Internship 9	Resits trim 2 /Yr 3	Graduation Internship week 17/ hand-in			25-5-2020	29-5-2020	22
23	1-6-2020	5-6-2020	Academic week 9		Academic week 9		Internship 10		Graduation Internship week 18/preperation			1-6-2020	5-6-2020	23
24	8-6-2020	12-6-2020	Academic week 10		Academic week 10		Internship 11		Exam June			8-6-2020	12-6-2020	24
25	15-6-2020	19-6-2020	TEST WEEK		TEST WEEK		Internship 12		Exam June			15-6-2020	19-6-2020	25
26	22-6-2020	26-6-2020	TEST WEEK	Register resits	TEST WEEK	Register resits	Internship 13		Exam June			22-6-2020	26-6-2020	26
27	29-6-2020	3-7-2020	study week	Register resits	Study week	Register resits	Internship 14					29-6-2020	3-7-2020	27
28	6-7-2020	10-7-2020	RESIT WEEK		RESIT WEEK		Presentations					6-7-2020	10-7-2020	28
29	13-7-2020	17-7-2020	Week for finalization		RESIT WEEK		Presentations		16/7 Graduation ceremony			13-7-2020	17-7-2020	29
30	20-7-2020	24-7-2020	Summer holiday		Summer holiday		Summer holiday					20-7-2020	24-7-2020	30
31	27-7-2020	31-7-2020	Summer holiday		Summer holiday		Summer holiday					27-7-2020	31-7-2020	31
32	3-8-2020	7-8-2020	Summer holiday		Summer holiday		Summer holiday					3-8-2020	7-8-2020	32
33	10-8-2020	14-8-2020	Summer holiday		Summer holiday		Summer holiday					10-8-2020	14-8-2020	33
34	17-8-2020	21-8-2020	Summer holiday		Summer holiday		Summer holiday					17-8-2020	21-8-2020	34
35	24-8-2020	28-8-2020	Summer holiday		Summer holiday		Summer holiday		Exam August			24-8-2020	28-8-2020	35
36	31-8-2020	4-9-2020	Introduction		Summer holiday		Internship 1					31-8-2020	4-9-2020	36
37	7-9-2020	11-9-2020	Academic week 1		Academic week 1		Internship 2					7-9-2020	11-9-2020	37

International Spatial Development 2019 - 2020: year 1

Trimester 1

Name	Osiris-code	ECTS	Page
LAB1: Explore your Environment	BISD1.LAB1-18P	6	10
Introduction into Built Environment	BISD1.ISD1-18C	3	11
Facts, Figures & Tools for BE	BISD1.TOOLS1-19T	4	12
Visualisation	BISD1.VIS1-18T	2	13
Government & Society	BISD1.GOV1-18C	2	14
Prof. Communication & Cross Cultural Awareness 1	BISD1.PCAC1-18T	2	15
	Subtotal	**19**	

Trimester 2

Name	Osiris-code	ECTS	Page
LAB2: Design with a Dutch Touch	BISD1.LAB2-18P	6	17
Planning systems & Instruments	BISD1.GOV2-18C	3	18
Statistics	BISD1.STATIS-18C	3	19
Living in Cities	BISD1.ISD2-18C	2	20
Toolbox Urban and Traffic design	BISD1.TOOLS2-18T	2	21
Handdrawing & Adobe Illustrator	BISD1.VIS2-18T	2	22
Prof. Communication & Cross Cultural Awareness 2	BISD1.PCAC2-18T	2	23
	Subtotal	**20**	

Trimester 3

Name	Osiris-code	ECTS	Page
LAB3: SUMP	BISD1.LAB3-18P	6	25
The Urban System: Landuse & Mobility	BISD1.ISD3-18C	3	27
Modelling: Introduction	BISD1.TOOLS3-18C	3	28
Autocad I	BISD1.VIS3-18T	2	29
European Cooperation	BISD1.GOV3-18C	2	30
GIS Basics	BISD1.GIS1-19T	3	31
Mentoring 1	B1.MENTOR1-18*	2	32
	Subtotal	**21**	
	Total	**60**	

International Spatial Development 2019 - 2020: year 2

Trimester 1

Name	Osiris-code	ECTS	Page
LAB4: Transformation of Built Environment	BISD2.LAB4-18P	6	36
Functions & Transitions	BISD2.ISD4-18C	3	37
Financial Aspects of Spatial Development	BISD2.TOOLS4-18T	2	38
Photoshop 2D	BISD2.VIS4-18T	2	39
Quantitative Research	BISD2.RES1-18C	2	40
Environmental Psychology	BISD2.HUMAN1-18C	2	41
Indesign & Portfolio development	BISD2.MAN1-18T	2	42
	Subtotal	**19**	

Trimester 2

Name	Osiris-code	ECTS	Page
LAB5: Water in Built Environment	BISD2.LAB5-18P	6	44
Climate, Geography and Water	BISD2.ISD5-18C	3	45
3D-Visualisation	BISD2.VIS5-18T	3	46
Mentoring 2	B2.MENTOR2-18*	3	47
Qualitative Research	BISD2.RES2-18C	2	48
Process Management & Stakeholder Part.	BISD2.MAN2-18T	2	49
Free elective 1	BIP2.FREE1-01	1	50
Free elective 2	BIP2.FREE2-01	1	51
	Subtotal	**21**	

Trimester 3

Name	Osiris-code	ECTS	Page
LAB6: Smart Cities	BISD2.LAB6-18P	6	53
Big Data Analysis	BISD2.TOOLS5-18T	3	54
Urban Sociology	BISD2.HUMAN2-18C	3	55
Smart Cities & Communities	BISD2.ISD6-18C	2	56
Augmented and Virtual Reality	BISD2.VIS6-18T	2	57
Project Management	BISD2.MAN3-18T	2	58
Political Philosophy	BISD2.GOV4-18C	2	59
	Subtotal	**20**	
	Total	**60**	

International Spatial Development 2019 - 2020: year 3

Trimester 1

Name	Osiris-code	ECTS	Page
Internship 1	BIP3.IS1-18	20	63
	Subtotal	**20**	

Trimester 2

Name	Osiris-code	ECTS	Page
Energy Transition	BISD3.LAB7-18P	6	65
Storytelling	BISD3.VIS7-18T	3	66
Applied Research	BISD3.RES3-18C	3	67
Energy Management	BISD3.ISD7-18C	2	68
Entrepreneurship	BISD3.ENT-18T	2	69
SimGame	BBE3.SIMUL-18C	1	70
Free elective 1	BIP3.FREE1-18	1	71
Free elective 2	BIP3.FREE2-18	1	72
Free elective 3	BIP3.FREE3-18	1	73
	Subtotal	**20**	

Trimester 3

Name	Osiris-code	ECTS	Page
Internship 2	BIP3.IS2-19	20	75
	Subtotal	**20**	
	Total	**60**	

International Spatial Development 2019 - 2020: year 4

Semester 1

Name	Osiris-code	ECTS	Page
Modern Business in a Changing World	BMBC.19MINOR	30	77
Retrofitting the sprawled city	BRSC.18MINOR	30	78
Kennislab Dynamics Urbanism	BKLDU.19MINOR	30	79
Minor Smart City, Color your Future	BSCCF.19MINOR	30	80
Minor Crowd Safety	ACS.19MINOR	30	81
External Minor	BEXT.19MINOR	30	-

Semester 2

Name	Osiris-code	ECTS	Page
Graduation Thesis	B4.SC-18*	30	84

International Spatial Development

Year 1

International Spatial Development
2019 - 2020: year 1

	Initiating and supervising	Designing	Specifying	Realising	Controlling	Monitoring, assessing and evaluating	Conducting research	Communicating and cooperating	Managing and innovating	Working integrally
Trimester 1										
LAB1: Explore your Environment	1	1	1				1			1
Introduction into Built Environment			1			1	1	1		
Facts, Figures & Tools for BE		1	1				1			
Visualisation		1	1					1		
Government & Society	1								1	1
Prof. Communication & Cross Cultural Awareness 1								1		
Trimester 2										
LAB2: Design with a Dutch Touch		1	1				1	1		
Planning systems & Instruments	1						1			
Statistics							2			
Living in Cities	1	1	1							
Toolbox Urban and Traffic design		1					1			
Handdrawing & Adobe Illustrator		1	1					1		
Prof. Communication & Cross Cultural Awareness 2								1		
Trimester 3										
LAB3: SUMP	1	1						1		
The Urban System: Landuse & Mobility	2		2				2			2
Modelling: Introduction	1				1		1	1		
Autocad I		1								
European Cooperation		1						1	1	
GIS Basics			1			1	1			
Mentoring 1								1	1	

International Spatial Development

Year 1

Trimester 1

OSIRIS-code:	BISD1.LAB1-18P
Course name:	LAB1: Explore your Environment
Study load:	6 EC (=168 hours)
Coordinator:	Jolijn van Baarsen - van den Berg
Lecturer(s):	Jolijn van Baarsen - van den Berg, Serah-Ingrid Calitz, Zhan Goosen, Peter Sanders, Menno Slijboom, Leigh Stevens
Learning objective(s):	Upon completion of this study component you are able to: - explore your environment focused on spatial planning, mobility and design; - understand the influence of your future profession on the built environment; - do research by design in an area in Breda; - get to know each other and learn to cooperate in a project.
Content description:	In this study component, the following content is covered: - the area of attention lies north of the central station of Breda. This former industrial area will change in the near future because of the influences of new developments in the direct vicinity of the railway and bus station; You will: - explore the field of the built environment by research, field trips and design; - develop a spatial vision for the future of area; - elaborate the vision into a detailed urban and mobility plan; - design your own future for Havenkwartier; - in this project you will get acquainted to themes related to ISD: (research by) design, sustainable mobility and flexible use.
Language:	EN
Teaching activity:	Project
Examination:	Group assignment 50% Individual assignment 50% Process (obligatory)
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD1.ISD1-18C
Course name:	Introduction into Built Environment *)
Study load:	3 EC (=84 hours)
Coordinator:	Serah-Ingrid Calitz
Lecturer(s):	Serah-Ingrid Calitz, Michiel Mulderij
Learning objective(s):	Upon completion of this study component you are able to: - reproduce the history of BE (introduction); - distinguise the influence of urban planning in the five themes of ISD; - recognize the challenges for big cities and the future of built environment; - do research and demonstrate the history of a city in the USA; - use the information of the lectures for your own research.
Content description:	In this study component, the following content is covered: - citystructure, urban planning and typolgies; - history and cultural heritage; - international context; - reserach techniques; - oral and written communication.
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Written exam 75% Group assignment 25%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

*) Course is suitable as free elective

OSIRIS-code:	BISD1.TOOLS1-19T
Course name:	Facts, Figures & Tools for BE
Study load:	4 EC (=112 hours)
Coordinator:	Rien Smalheer
Lecturer(s):	Barbara van Schijndel, Rien Smalheer
Learning objective(s):	Upon completion of this study component you are able to: - choose between the most commonly used tools of the engineer of Spatial Development; - apply these tools to research and develop solutions regarding the lab assignment; - explain about urban typologies and how to categorize them; - insight in analytic tools for the BE (traffic counting, urban planning, functional design), applied in the LAB; - knowledge about core indicators for BE (standard measurements, volumes etc). - determine the capacity and design of a roundabout and a signalized intersection.
Content description:	In this study component, the following content is covered: - every week a different tool for design and spatial analysis will be explained and illustrated. These are commonly used tools in our professional area such as; - population analysis; - layer approach; - Lynch analysis; - standard measurements; - scaling and mapping; - desining a roundabout; - rounding an arc; - SWOT analysis; - capacity of a roundabout and a signalized intersection - functional analysis.
Language:	EN
Teaching activity:	Training
Examination:	Individual assignment 70% Computer exam 30%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD1.VIS1-18T
Course name:	Visualisation
Study load:	2 EC (=56 hours)
Coordinator:	Tomas Mahu
Lecturer(s):	Serah-Ingrid Calitz, Joris Klein, Tomas Mahu
Learning objective(s):	Upon completion of this study component you are able to: - use graphic components for easier data exploration, explanation and communication; - communicate clearly and effectively using imagery; - receive, give and share visual information; - identify the importance of visual information and how people process this information; - present data effectively to target groups; - define the required qualities for a good visualisation; - make substantiated choices for usage and design of visualised data.
Content description:	In this study component, the following content is covered: - imagery and visual thinking; - out of the box thinking and operating; - recognising the possibilities in configuration and design of (data)visualisation; - an understanding of visualising and how this tells a clear and un ambiguous message; - visual storytelling; - basic principals of (data)visualisation; - data-analysis using illustrative components; - different visualisation formats and techniques; - the essentials of functional and effective design.
Language:	EN
Teaching activity:	Training
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD1.GOV1-18C
Course name:	Government & Society
Study load:	2 EC (=56 hours)
Coordinator:	Zhan Goosen
Lecturer(s):	Zhan Goosen
Learning objective(s):	Upon completion of this study component you are able to: - better understand as to why such a thing as government exists and how it relates to society; - understand the concepts and relevance of 'Government' and 'Society'; - know the history of development of different types of government and systems of governance; - understand the interaction between government and society; - know and understand different levels of government (hierarchy); - learn different ways that governments cooperate with various institutions and civilians; - understand the different roles government can have in society; - gain a basic understanding of policy processes.
Content description:	In this study component, the following content is covered: - the principles behind government; - how government has evolved (history); - both philosophical and practical questions regarding government; - hierarchy in government; - collaboration and cooperation between governments; - the different roles that may be found in government (and semi-government); - policy and policy making.
Language:	EN
Teaching activity:	Lecture
Examination:	Written exam 80% Group assignment 20%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Other; literature based on internet will be detailed through LMS, published on LMS (Cumlaude)

OSIRIS-code:	BISD1.PCAC1-18T
Course name:	Prof. Communication & Cross Cultural Awareness 1
Study load:	2 EC (=56 hours)
Coordinator:	Leigh Stevens
Lecturer(s):	Leigh Stevens, Letty Zhu
Learning objective(s):	Upon completion of this study component you are able to: - describe the relationship between culture and communication; - summarize, compare, and evaluate standard frameworks for understanding culture; - explain aspects of verbal and nonverbal communication that may differ between people of different cultures; - summarize the role of cultural patterns, verbal and nonverbal codes in the development of IC interpersonal relationships; - generate a list of obstacles to competent intercultural communication, with possible solutions; - exhibit communication skills that demonstrate (improved) competence in intercultural communication contexts; - develop and improve upon Academic Writing Skills in English in the context of the course subject.
Content description:	In this study component, the following content is covered: - understanding of own communication strengths and weaknesses in the context of culture; - reflection of own communication style and the impact it has on others (how one is perceived across cultures); - communication and Culture worldwide; - development and Improvement of academic writing skills.
Language:	EN
Teaching activity:	Training, Lecture
Examination:	Individual assignment 60% Group assignment 40%
Mark:	Marks, F, MO
Required literature:	James Neuliep. Intercultural Communication: A Contextual Approach. 6th Revised edition. Sage (ISBN 9781506390710)
Required other materials:	--

International Spatial Development

Year 1

Trimester 2

OSIRIS-code:	BISD1.LAB2-18P
Course name:	LAB2: Design with a Dutch Touch
Study load:	6 EC (=168 hours)
Coordinator:	Michiel Mulderij
Lecturer(s):	Jolijn van Baarsen - van den Berg, Serah-Ingrid Calitz, Zhan Goosen, Michiel Mulderij, Menno Slijboom
Learning objective(s):	Upon completion of this study component you are able to: - analyse a site by making drawings; - systematically gather relevant information out of given texts; - design based on spatial analysis; - design within a different climate and culture; - design for different target groups; - design on different scales; - design by making models.
Content description:	In this study component, the following content is covered: - African megacity; - the lab assignment is situated in a large city in Africa, with rapidly urbanizing societies and upcoming economies. You will design a sustainable plan for a neighbourhood in this city; - research: in a team you will research the current social and spatial issues of the neighbourhood and its context by making scale models, analytical drawings and reading relevant texts; - masterplan: in a team you will define an argued solution for this specific case which will result in a Master plan; - developmentplan: individually you will elaborate a part of the location into a Development plan.
Language:	EN
Teaching activity:	Project
Examination:	Group assignment 50% Individual assignment 50% Process (obligatory) 0%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD1.GOV2-18C
Course name:	Planning systems & Instruments *)
Study load:	3 EC (=84 hours)
Coordinator:	Zhan Goosen
Lecturer(s):	Zhan Goosen
Learning objective(s):	Upon completion of this study component you are able to: - understand different approaches to spatial planning and easily get familiar with the planning system of several different countries; - recognize the purpose and general system behind spatial planning; - do research and analyses and thereby gain abstract insight into how to improve planning systems around the world.
Content description:	In this study component, the following content is covered: - different planning systems; - the purpose or aim of them; - the government behind them, the hierarchy and relation to different levels of government and their respective planning tools; - some history of planning; - civil / legal protection in spatial planning; - procedures.
Language:	EN
Teaching activity:	Training, Lecture
Examination:	Individual assignment 50% Group assignment 50%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

*) Course is suitable as free elective

OSIRIS-code:	BISD1.STATIS-18C
Course name:	Statistics
Study load:	3 EC (=84 hours)
Coordinator:	Elly Khademi
Lecturer(s):	Elly Khademi
Learning objective(s):	Upon completion of this study component you are able to: - apply and interpret the basic concepts of descriptive statistics; - apply the basic concepts of probability; - distinguish between and apply discrete and continuous probability distributions; - apply binomial, Poisson, and normal distributions to calculate probabilities; - apply and interpret correlation and regression analysis using Excel;
Content description:	In this study component, the following content is covered: - descriptive Statistics/ data analysis including graphical presentations, measures for average, dispersion, and shape for probability distributions; - probability calculations; - expected values and combinatorial theory; - binomial distribution; - poisson distribution; - normal distribution; - trend curves, correlation and regression.
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Written exam 80% Individual assignment 20%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Lecture presentations; I Hate Statistics account by BUAS; One book will be announced later

OSIRIS-code:	BISD1.ISD2-18C
Course name:	Living in Cities *)
Study load:	2 EC (=56 hours)
Coordinator:	Serah-Ingrid Calitz
Lecturer(s):	Serah-Ingrid Calitz
Learning objective(s):	Upon completion of this study component you are able to: - recognize different types of cities and identify the interaction between their history and global trends and influences so that you can relate that to your development processes; - identify and reproduce urban planning principles and connect these with the people living in cities; - understand the life of people in terms of housing and emotional engagement with their living environment; - identify the interaction between global influences and local living environments > hard skills versus soft skills; - empathize with different situations so you will be able to operate in the best way for everybody who's involved in urban development processes.
Content description:	In this study component, the following content is covered: - in this course you will learn about the people, societies and the development of cities all over the world. The course is based on two different appaerances of city development, which can be by organic growth or planning idealists. Main topics are; - economy based planning; - social and informal urbanism; - sustainable development; - political issues and community building; - living with water, dealing with climate change; - this module is a follow up of ISD1, with a focus on society and people living in cities with their local challenges and global influences.
Language:	NL
Teaching activity:	Hoorcollege
Examination:	Schriftelijk tentamen 50% Groepsopdracht 50%
Mark:	Cijfers, NVD, GK
Required literature:	P. Kageyama. For the Love of Cities: The Love Affair Between People and Their Places. Creative Cities Productions (ISBN 9780615430430)
Required other materials:	--

*) Module is geschikt als invulling voor profileringsruimte

OSIRIS-code:	BISD1.TOOLS2-18T
Course name:	Toolbox Urban and Traffic design
Study load:	2 EC (=56 hours)
Coordinator:	Rien Smalheer
Lecturer(s):	Serah-Ingrid Calitz, Rien Smalheer
Learning objective(s):	Upon completion of this study component you are able to: - to apply your deepened knowledge and skills on different aspects of traffic and urban typology as a tool for design.
Content description:	In this study component, the following content is covered: - traffic systems; - traffic calculations; - dimensions; - urban typologies; - drawing techniques; - modelmaking.
Language:	EN
Teaching activity:	Training
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	graft. architecture activism. Birkhäuser De Gruyter (ISBN 9783035610239)
Required other materials:	--

OSIRIS-code:	BISD1.VIS2-18T
Course name:	Handdrawing & Adobe Illustrator
Study load:	2 EC (=56 hours)
Coordinator:	Tomas Mahu
Lecturer(s):	Serah-Ingrid Calitz, Tomas Mahu
Learning objective(s):	Upon completion of this study component you are able to: - express yourself visually using hand drawing techniques; - make perspective drawings from different angles; - use Adobe Illustrator to support the development of your drawings; - convert drawings to vector images; - independently create artwork using Adobe Illustrator.
Content description:	In this study component, the following content is covered: - visual communication; - the most commonly used tools in Adobe Illustrator; - the most commonly used tools for drawing; - making readable handdrawings and illustrator artwork; - digitalizing handsketches to vector based images; - how to make an image communicate in a self- explanatory manner; - the most commonly used digital formats; - implementing perspectives, stroke weights, colors, gradients, abstracting and other imagery; - improving perception; - composition analysis.
Language:	EN
Teaching activity:	Training
Examination:	Individual assignment 50% Individual assignment 50%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD1.PCAC2-18T
Course name:	Prof. Communication & Cross Cultural Awareness 2
Study load:	2 EC (=56 hours)
Coordinator:	Leigh Stevens
Lecturer(s):	Leigh Stevens, Letty Zhu
Learning objective(s):	Upon completion of this study component you are able to: - exhibit communication skills that demonstrate (improved) competence in intercultural communication contexts; - further develop Academic Writing skills in English in the context of the course subject; - understand of ones own leadership strengths and areas of development; - give and receive 'effective' feedback - Learn how to develop rapport and trust (across cultures); - successfully confront others, deal with resistance, differences of opinion and engage in conflict situations; - adapt and connect to people who hold different views and beliefs (individual and cultural); - understand the basic research skills.
Content description:	In this study component, the following content is covered: - skilled based activities to challenge, engage and develop leadership skills; - communication compentencies; - basic research skills in regards to culture and communication; - development of knowledge from PCAC 1.
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Group assignment 60% Individual assignment 40%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

International Spatial Development

Year 1

Trimester 3

OSIRIS-code:	BISD1.LAB3-18P
Course name:	LAB3: SUMP
Study load:	6 EC (=168 hours)
Coordinator:	Hidde Westerweele
Lecturer(s):	Peter Sanders, Ineke Spapé, Jeroen Weppner, Hidde Westerweele
Learning objective(s):	Upon completion of this study component you are able to: - State what the CIVINETS do, in a way that becomes clear what the role of the CIVINETS is in Sustainable Urban Mobility Planning. - Repeat the differences between traditional transport planning and Sustainable Urban Mobility Planning (SUMP), in a way that becomes clear what the advantages of SUMP are compared to traditional transport planning. - Express your interests regarding the dynamic world of sustainable urban mobility, in a way that becomes clear what triggers your interest in this topic; - Demonstrate that you are able to work together in a group following the project-based education principles. - Analyse a city with the HOS- and STEEP method in order to bring insight into the possibilities for sustainable mobility; - Resume the role of the EU in Sustainable Urban Mobility Planning (SUMP) by using your knowledge from the EU cooperation course and the excursion to Brussels, in a way that becomes clear what the relationship between the EU and SUMP is. - Apply the eleven steps of the SUMP cycle in a way that you can prepare an urban mobility strategy that builds on a clear vision for the sustainable development of an urban area; - Construct an implementation plan including three measures to enhance sustainable mobility in a city, in a way that it becomes clear how the city can implement the three measures and what they need to take into account when doing so;
Content description:	In this study component, the following content is covered: - spatial planning and design - sustainable urban mobility planning - implementation plan with sustainable mobility measures - hardware, orgware and software - international city planning - active mobility
Language:	EN
Teaching activity:	Project
Examination:	Group assignment 50% Individual assignment 50% Process (obligatory) 0%
Mark:	Marks, F, MO
Required literature:	--

Required other materials:	Reader, e-book, www.eltis.org, published on LMS (Cumlaude); www.sumps-up.eu

OSIRIS-code:	BISD1.ISD3-18C
Course name:	The Urban System: Landuse & Mobility
Study load:	3 EC (=84 hours)
Coordinator:	Paul van de Coevering
Lecturer(s):	Paul van de Coevering
Learning objective(s):	Upon completion of this study component you are able to: - describe the key characteristics and drivers of travel behaviour from a psychological, economical and geographical perspective; - identify the characteristics and components of traffic systems and the key importance of accessibility for society; - describe the linkages between different components of transport systems such as land-use and infrastructure; - evaluate the impact of transportation on the environment and identify the potential of sustainable transportation initiatives.
Content description:	In this study component, the following content is covered: - general introduction into mobility and the transport system; - the determinants of travel behaviour and behavioural theories; - the different perspectives on accessibility; - the role of accessibility for society and the links with land use and the environment; - traffic safety; - transport policy; - appraisal methods for transport policies.
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Written exam 60% Group assignment 40%
Mark:	Marks, F, MO
Required literature:	Van Wee, B., J.A. Annema and D. Banister. The Transport System and Transport Policy: An Introduction. Edward Elgar Publishing Limited, Cheltenham, UK (ISBN 9781781952047)
Required other materials:	--

OSIRIS-code:	BISD1.TOOLS3-18C
Course name:	Modelling: Introduction
Study load:	3 EC (=84 hours)
Coordinator:	Elly Khademi
Lecturer(s):	Elly Khademi
Learning objective(s):	Upon completion of this study component you are able to: - explain the general concept of modelling and also different types of models in the basic level for various contexts; - explain and recognize the different standard types of transport models and their application in transport planning and modelling context; - explain the concept of 4-step model in the basic level of transport planning and modelling context; - explain the next generation of travel demand models including discrete choice and activity-based models, and identify the differences with 4-step models in the basic level of transport planning and modelling context; - apply the gain knowledge of modeling an 4-step models for classifying different available transport modeling software in strategic, tactic, and operational level by doing a research. - manage to write an academic standard report and to make standard presentation about their research on transport modeling software.
Content description:	In this study component, the following content is covered: - what is a model and modelling?; - physical, Mathematical and Process models; - why we really use transport model; - transportation Models and Their Application; - introduction to 4-step Model of Travel Demand; - first step: Trip Generation and second step: Trip Distribution; - third and fourth fteps: Modal split and network assignment; - the future of transport modelling.
Language:	EN
Teaching activity:	Lecture
Examination:	Written exam 70% Individual assignment 30%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	All required materials will be provided by lecturer via LMS (Cumlaude)

OSIRIS-code:	BISD1.VIS3-18T
Course name:	Autocad I
Study load:	2 EC (=56 hours)
Coordinator:	Rien Smalheer
Lecturer(s):	Rien Smalheer
Learning objective(s):	Upon completion of this study component you are able to: To use the drawing program Autocad and Infraworks in a basic way to create accurate professional drawings which are used to communicate in the field of built environment.
Content description:	In this study component, the following content is covered: - several Autocad commands; - layout Autocad; - infrastructure models; - road layouts including marking; - masterplan, development plans.
Language:	EN
Teaching activity:	Training, Training
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD1.GOV3-18C
Course name:	European Cooperation *)
Study load:	2 EC (=56 hours)
Coordinator:	Don Guikink
Lecturer(s):	Don Guikink
Learning objective(s):	Upon completion of this study component you are able to: - understand the role of the EU in the European governance structure; - understand the leading concepts in European cooperation (like subsidiarity, cohesion, solidarity, communal vs intragovernmental, etc); - understand the financial and regulatory mechanisms of the EC related to Built Environment; - understand the EU policies regarding built environment; - know how the EU institutes are organised around built environment; - prepare a simple EU proposal.
Content description:	In this study component, the following content is covered: - organisation of the European Union and the institutes of the EU with the member states, specifically around spatial development; - cooperation principles and structures in the EU and how they work in reality; - production of a proposal on an actual European topic following the procedures of EU project aqcuisition.
Language:	EN
Teaching activity:	Lecture
Examination:	Written exam 70% Group assignment 30%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Reader, e-book, http://publications.europa.eu/webpub/com/eu-what-it-is/en/, published on LMS (Cumlaude)

*) Course is suitable as free elective

OSIRIS-code:	BISD1.GIS1-19T
Course name:	GIS Basics *)
Study load:	3 EC (=84 hours)
Coordinator:	Barbara van Schijndel
Lecturer(s):	Barbara van Schijndel
Learning objective(s):	Upon completion of this study component you are able to: - use Excel in order to import files into a GIS-project - explain what Geographical information systems are; - make thematic maps; - process data in a geodatabase; - link external data to a geodatabase; - use analyse and processing tools.
Content description:	In this study component, the following content is covered: - understanding the working and usefulness of GIS; - introduction to cartography: coordinate systems, projection methods, communication with maps; - making thematic maps using given datasources; - processing geodata in a geodatabase; - linking external data to a geodatabase; - using commonly used analyse tools.
Language:	EN
Teaching activity:	Training, Lecture
Examination:	Written exam 50% Individual assignment 50%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Reader, e-book, Geographic Information System Basics, published on LMS (Cumlaude)

*) Course is suitable as free elective

OSIRIS-code:	B1.MENTOR1-18*
Course name:	Mentoring 1
Study load:	2 EC (=56 hours)
Coordinator:	Ilse Hens
Lecturer(s):	Ilse Hens
Learning objective(s):	Upon completion of this study component you are able to: - reflect on your academic career and on yourself as a starting professional; - understand that you are responsible for your own course of study; - use the right study approach and study skills.
Content description:	In this study component, the following content is covered: - introduction to the study programme and the professional field; - excursion week; - acquaintance with the professional field; - better insight into your qualities and your areas for improvement; - feedback; - independance; - study progress; - planning activities; - learn to study; - self directness; - individual meetings (also non-study related matters); - evaluations.
Language:	EN
Teaching activity:	Training, Fieldtrip
Examination:	Individual assignment 100%
Mark:	P, F, MO
Required literature:	--
Required other materials:	--

International Spatial Development

Year 2

International Spatial Development
2019 - 2020: year 2

	Initiating and supervising	Designing	Specifying	Realising	Controlling	Monitoring, assessing and evaluating	Conducting research	Communicating and cooperating	Managing and innovating	Working integrally
Trimester 1										
LAB4: Transformation of Built Environment		2	1				2	2		2
Functions & Transitions						1	2			
Financial Aspects of Spatial Development		2	2							
Photoshop 2D		2	2					2		
Quantitative Research							2			
Environmental Psychology		1						2		1
Indesign & Portfolio development		2	2					2		
Trimester 2										
LAB5: Water in Built Environment		1	2				2	2	2	2
Climate, Geography and Water			2				2			
3D-Visualisation		2	2					2		
Mentoring 2								2	2	
Qualitative Research			2				2	2		
Process Management & Stakeholder Part.	2						2	2		2
Free elective 1	2								2	
Free elective 2	2								2	
Trimester 3										
LAB6: Smart Cities		2	2				2	2	3	
Big Data Analysis							2			
Urban Sociology	2						3			
Smart Cities & Communities	2						2	2	2	2
Augmented and Virtual Reality								2		
Project Management								2	1	1
Political Philosophy							2			1

International Spatial Development

Year 2

Trimester 1

OSIRIS-code:	BISD2.LAB4-18P
Course name:	LAB4: Transformation of Built Environment
Study load:	6 EC (=168 hours)
Coordinator:	Loek Hellebrekers
Lecturer(s):	Loek Hellebrekers, Rocco Reukema
Learning objective(s):	Upon completion of this study component you are able to: - research, develop and design a plan on different scale; - research the site spatially, socially, mobility and policy oriented; - develop an integrated vision and urban plan based on the outcome of the analyses; - make a financial and development strategy; - cooperate on a project.
Content description:	In this study component, the following content is covered: The lab is about the transformation of a former industrial site into a dynamic part of the city. Questions that need to be answered: - What will be the new identity of this area? - How does it fit in the regional vision? - What are the TOD opportunities for the station area? - How do you make sure this area really does become an integrated part of the city? - How do you deal with the history of the area and the existing buildings? - How will sustainability be realised in the new plan? - What is the development strategy and how can it be financed?
Language:	EN
Teaching activity:	Project
Examination:	Group assignment 50% Individual assignment 50% Process (obligatory) 0%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD2.ISD4-18C
Course name:	Functions & Transitions *)
Study load:	3 EC (=84 hours)
Coordinator:	Rocco Reukema
Lecturer(s):	Rocco Reukema
Learning objective(s):	Upon completion of this study component you are able to: - understand the added value and project risks involved in urban function transitions; - analyze existing area's that have been undergoing transitions; - create knowledge about branding, development over time, stakeholders involvement, regulations and strategies; - apply the knowladge about functions and transitions into the Studio assignment.
Content description:	In this study component, the following content is covered: - gentrification; - project risk; - cultural heritage; - stakeholders analyses; - branding; - strategies over time; - regulations.
Language:	EN
Teaching activity:	Training, Lecture, Fieldtrip
Examination:	Group assignment 70% Written exam 30%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

*) Course is suitable as free elective

OSIRIS-code:	BISD2.TOOLS4-18T
Course name:	Financial Aspects of Spatial Development
Study load:	2 EC (=56 hours)
Coordinator:	Marcel van Wietingen
Lecturer(s):	Marcel van Wietingen
Learning objective(s):	Upon completion of this study component you are able to: - understand the financial aspects of a land development plan and to calculate the costs, revenues and phasing of a land development plan; - construct the underlying calculation of a land development plan taking into consideration the various financial aspects in relation to different solutions concerning design and infrastructure.
Content description:	In this study component, the following content is covered: - use of space; - costs; - revenues; - phasing; - cost increase; - interest; - calculation;
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Written exam 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD2.VIS4-18T
Course name:	Photoshop 2D
Study load:	2 EC (=56 hours)
Coordinator:	Tomas Mahu
Lecturer(s):	Tomas Mahu
Learning objective(s):	Upon completion of this study component you are able to: - further express youself visually with usage of Adobe Photoshop; - explore the impact of (using) different visual aids; - make an image communicate in a self- explanatory manner; - enhance your insight in depth perception, framing and visual communication; - give direction to and visualize your products.
Content description:	In this study component, the following content is covered: - the most commonly used tools in Photoshop; - analyzing and reproducing effects in light, colour and distortion; - how to create strong compositions; - recognizing and understanding the impact of an image; - non-verbal communication; - the importance of storytelling in a single picture; - bringing dead facts to life.
Language:	EN
Teaching activity:	Training
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD2.RES1-18C
Course name:	Quantitative Research
Study load:	2 EC (=56 hours)
Coordinator:	Elly Khademi
Lecturer(s):	Elly Khademi
Learning objective(s):	Upon completion of this study component you are able to: - design a research project, both conceptual as technical; - select methods/techniques for answering research questions; - design a questionnaire; - conduct a questionnaire; - analyse the quantitative data and conduct some statistical test;
Content description:	In this study component, the following content is covered: - how to set up a research project? (Steps in desiging a quantitative research project); - research strategy: Quantitative research designs (survey and experiment, sample or population, probability sampling and non-probability sampling); - data collection techniques; - quantitative analysis I (descriptive statistics, variables & levels of measurement); - quantitative analysis II (summary measures and SPSS); - quantitative analysis III (inferential or inductive Statistics (estimation: point and interval)); - quantitative analysis IV (inferential or inductive Statistics (hypothesis testing, directional hypothesis, ...)); - quantitative analysis V (inferential or inductive Statistics (2-Sample hypothesis testing: t test and) - SPSS)); - association between interval-ratio variables (correlation and linear regression).
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Group assignment 100%
Mark:	Marks, F, MO
Required literature:	Ben Baarda. Research. This is it! : guidelines how to design, perform and evaluate quantitative and qualitative research. 2e druk. Noordhoff Uitgevers (ISBN 9789001816964),
Required other materials:	Book that will be announced later.

OSIRIS-code:	BISD2.HUMAN1-18C
Course name:	Environmental Psychology *)
Study load:	2 EC (=56 hours)
Coordinator:	Robert van Dongen
Lecturer(s):	Robert van Dongen
Learning objective(s):	Upon completion of this study component you are able to: - apply knowledge about the human mind to the way people interact with their environment and vice versa; - understand the basics of the way the human brain works, the link between environment, perception and behaviour; - understand different concepts regarding environmental psychology; - do research on a specific topic and deliver a mini lecture about it.
Content description:	In this study component, the following content is covered: - a basic model about the way the environment interacts with the human mind; - the link between environment, perception and behaviour; - the concepts of preference, orientation and navigation, attention, stress and restoration and personal space; - the connection between health and the built environment; - pro-environmental behaviour.
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Written exam 75% Group assignment 25%
Mark:	Marks, F, MO
Required literature:	Steg, de Groot (eds). Environmental Psychology, an introduction. Wiley (ISBN 9781119241089)
Required other materials:	--

*) Course is suitable as free elective

OSIRIS-code:	BISD2.MAN1-18T
Course name:	Indesign & Portfolio development
Study load:	2 EC (=56 hours)
Coordinator:	Tomas Mahu
Lecturer(s):	Tomas Mahu, Leigh Stevens
Learning objective(s):	Upon completion of this study component you are able to: - create different media with usage of the computer program Adobe InDesign; - design with the basics in typography, lay-out and overall visual design; - develop a good portfolio to showcase your work and to help to demonstrate your skills; - understand the importance of your portfolio's content and its presentation and apply this on your own.
Content description:	In this study component, the following content is covered: - the most commonly used tools of Adobe InDesign; - creating of papersizes, masterpages, margins and guidelines; - placing text, images, illustrations and photos in a consistent lay-out; - interchangeability of documents and the uniform saving of work- and output files; - cropping, rotating, scaling and mirroring of images; - understanding, reproducing and creating good design elements; - making your portfolio stand out; - categorise and selecting content and jargon.
Language:	EN
Teaching activity:	Training
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

International Spatial Development

Year 2

Trimester 2

OSIRIS-code:	BISD2.LAB5-18P
Course name:	LAB5: Water in Built Environment
Study load:	6 EC (=168 hours)
Coordinator:	Robert van Dongen
Lecturer(s):	Robert van Dongen, Zhan Goosen, Michiel Mulderij
Learning objective(s):	Upon completion of this study component you are able to: - to deal with the complex issue of watermanagement in both urban and rural areas. Apart from inventory, analysis and vision, you'll have to design integral solutions, as well as detailed plans on how to deal with water issues in urban areas.
Content description:	In this study component, the following content is covered: - possible solutions to prevent and accommodate water in cities; - all dimensions of problems with water in cities: flooding, drought, drinking water, sea-level rise, sewerage, pollution; - water management; - climate change; - river catchment areas; - design solutions to deal with water management issues.
Language:	EN
Teaching activity:	Project
Examination:	Group assignment 50% Individual assignment 50% Process (obligatory) 0%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD2.ISD5-18C
Course name:	Climate, Geography and Water *)
Study load:	3 EC (=84 hours)
Coordinator:	Marcel van Wietingen
Lecturer(s):	Marcel van Wietingen
Learning objective(s):	Upon completion of this study component you are able to: - name and to recognise the underlying aspects of watermanagement. This concerns the changing climate and aspects of the international landscape.
Content description:	In this study component, the following content is covered: - climate change; - global warming; - precepitation; - landscape; - water management.
Language:	EN
Teaching activity:	Lecture
Examination:	Computer exam 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Reader, e-book, OECD: Water Governance in the Netherlands: Fit for the future?, published on LMS (Cumlaude)

*) Course is suitable as free elective

OSIRIS-code:	BISD2.VIS5-18T
Course name:	3D-Visualisation
Study load:	3 EC (=84 hours)
Coordinator:	Tomas Mahu
Lecturer(s):	Serah-Ingrid Calitz, Tomas Mahu
Learning objective(s):	Upon completion of this study component you are able to: - create technically correct, self-explanatory and visual atractive imagery; - combine different computerprograms; - model, develop and render imagery; - translate a concept to a perspicuous storyboard; - lay the foundation for complex stationary or moving visuals.
Content description:	In this study component, the following content is covered: - developing a storyboard; - visual communication; - modelling and rendering; - creating more complex visual impressions; - expanding Photoshop knowledge; - implementing and combining graphics software.
Language:	EN
Teaching activity:	Training
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	B2.MENTOR2-18*
Course name:	Mentoring 2
Study load:	3 EC (=84 hours)
Coordinator:	Ilse Hens
Lecturer(s):	Ilse Hens
Learning objective(s):	Upon completion of this study component you are able to: - learn about skills and interests; - learn about strong and weak points; - see possibilities and constraints; - make a well considered choice for a work placement; - give feedback; - share experiences.
Content description:	In this study component, the following content is covered: - feedback; - PDP; Personal Development Plan; - identify ambitions, goals and capacities; - international excursion; - guest lectures from the workfield (only ISD, attendance rate 85%); - workplacement preperations; - individual meetings; - placement workshops.
Language:	EN
Teaching activity:	Training, Fieldtrip
Examination:	Individual assignment 100%
Mark:	P, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD2.RES2-18C
Course name:	Qualitative Research
Study load:	2 EC (=56 hours)
Coordinator:	Elly Khademi
Lecturer(s):	Elly Khademi
Learning objective(s):	Upon completion of this study component you are able to: After the course 'Qualitative Research' students have experienced how an organized and structured approach contributes to a methodologically sound execution of research. You know how to structure and prepare research (design & strategy) and will master basic knowledge on quantitative and qualitative research and more in-depth knowledge on qualitative ways of data collection and analysis - Basic knowledge: understanding the difference between qualitative and quantitative research. - Define and focus research based on literature study (pre-research) and developing a research design - Select valid methodologies for data collection based on your research questions and develop a research strategy - Prepare different qualitative research methodologies for data collection and understand analysis methodology - Discuss and account for your methodological approach on quality, validity, objectivity, verifiability and reproducibility
Content description:	In this study component, the following content is covered: - design of a qualitative research project; - understanding of the difference between quantitative and qualitative research; - qualitative research techniques such as an interview, focus groups and participatory research - analysis of results and conclusions from research.
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Group assignment 50% Written exam 50%
Mark:	Marks, F, MO
Required literature:	Ben Baarda. Research. This is it! : guidelines how to design, perform and evaluate quantitative and qualitative research. 2e druk. Noordhoff Uitgevers (ISBN 9789001816964)
Required other materials:	--

OSIRIS-code:	BISD2.MAN2-18T
Course name:	Process Management & Stakeholder Part.
Study load:	2 EC (=56 hours)
Coordinator:	Loek Hellebrekers
Lecturer(s):	Loek Hellebrekers
Learning objective(s):	Upon completion of this study component you are able to: - understand and implement project, program and process management; - know the differences and the ways to work with these management styles; - implement stakeholder participation within your projects.
Content description:	In this study component, the following content is covered: - projects; - processes; - programs; - participation; - collaboration; - communication.
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Group assignment 50% Individual assignment 50%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BIP2.FREE1-01
Course name:	Free elective 1
Study load:	1 EC (=28 hours)
Coordinator:	Suzanne van Rijswijk
Lecturer(s):	Ilse Hens, Suzanne van Rijswijk
Learning objective(s):	Upon completion of this study component you are able to: - make a choice for an activity for your personal development; extra on your CV; - develop your skills on a self-chosen topic; - write a plan for your development on self-chosen learning objective.
Content description:	In this study component, the following content is covered: The design and planning of your free electives, under two conditions; 1. for each credit, you must choose an activity that requires 28 hours of work; 2. you have to be able to explain why the activity is a valuable addition to your curriculum. What will you learn and which competencies will you develop? Examples; - course at an other education in- or outside BUAS (if you are on ISD you can follow a course at ILT); - assignments and / or study trips, organized by teachers / employees from BUAS; - dutch speaking students can also choose courses of the Dutch Free Electives. For more information, see LMS (Cumlaude), Info Sources.
Language:	EN
Teaching activity:	
Examination:	Individual assignment 100%
Mark:	P, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BIP2.FREE2-01
Course name:	Free elective 2
Study load:	1 EC (=28 hours)
Coordinator:	Suzanne van Rijswijk
Lecturer(s):	Ilse Hens, Suzanne van Rijswijk
Learning objective(s):	Upon completion of this study component you are able to: - make a choice for an activity for your personal development; extra on your CV; - develop your skills on a self-chosen topic; - write a plan for your development on self-chosen learning objective.
Content description:	In this study component, the following content is covered: The design and planning of your free electives, under two conditions; 1. for each credit, you must choose an activity that requires 28 hours of work; 2. you have to be able to explain why the activity is a valuable addition to your curriculum. What will you learn and which competencies will you develop?. Examples; - course at an other education in- or outside BUAS (if you are on ISD you can follow a course at ILT); - assignments and / or study trips, organized by teachers / employees from BUAS; - dutch speaking students can also choose courses of the Dutch Free Electives. For more information, see LMS (Cumlaude), Info Sources.
Language:	EN
Teaching activity:	
Examination:	Individual assignment 100%
Mark:	P, F, MO
Required literature:	--
Required other materials:	--

International Spatial Development

Year 2

Trimester 3

OSIRIS-code:	BISD2.LAB6-18P
Course name:	LAB6: Smart Cities
Study load:	6 EC (=168 hours)
Coordinator:	Nina Nesterova
Lecturer(s):	Serah-Ingrid Calitz, Elly Khademi, Nina Nesterova
Learning objective(s):	Upon completion of this study component you are able to: - explore theory and examples of smart cities and make this abstract topic relevant to ISD - select valid methodologies to explore smart cities topics and conduct your research - discuss and account for your findings and decisions on why these measures are smart - apply the knowledge about smart cities in a practical assignment or case - work as a professional team which is self organizing and responsible - integrate findings in a group product
Content description:	In this study component, the following content is covered: - Exploration and research phase - Problem analysis phase - Searching for solution phase - Integration phase - Final presentation and hand in product
Language:	EN
Teaching activity:	Project
Examination:	Group assignment 50% Individual assignment 50% Process (obligatory) 0%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD2.TOOLS5-18T
Course name:	Big Data Analysis *)
Study load:	3 EC (=84 hours)
Coordinator:	Elly Khademi
Lecturer(s):	Elly Khademi
Learning objective(s):	Upon completion of this study component you are able to: - explain what is big data, and why it has been so important nowadays; - explain what is open data; - find and apply different source of open data in The Netherlands; - explain and apply basic concepts in research and data analysis; - apply data analysis (descriptive analysis) to answer a research question; - manage to write a standard report and make a proper presentation about data analysis.
Content description:	In this study component, the following content is covered: - what is big data? and what is Open data?; - a common language for research data analysis including: a statement of the research question, research strategy, the instrument (questionnaire, unobtrusive measures), gathering the data, analyzing the data, drawing conclusions regarding the hypothesis; - quantitative data analysis including: getting to know the data bank, identifying the variables, and variable types; - results visualization and interpretation and how do you report research data?
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Group assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Handouts, articles, magazines, , published on LMS (Cumlaude)

*) Course is suitable as free elective

OSIRIS-code:	BISD2.HUMAN2-18C
Course name:	Urban Sociology
Study load:	3 EC (=84 hours)
Coordinator:	Zhan Goosen
Lecturer(s):	Zhan Goosen, Babet Hendriks
Learning objective(s):	Upon completion of this study component you are able to: - have gained an understanding of the nature and background of urban development; - have gained an understanding of the reasons and objectives of community and district development; - have conducted research projects concerning specific urban development projects; be able to analyse a project and to draw up and present a research report (together with a group of students).
Content description:	In this study component, the following content is covered: - acquiring an understanding of the development of modern cities, and more specifically, of communities and districts; - look for an answer to the question of what liveability and citizenship mean to a city/district. In this process, they will consider insights from different views of urban and social development (e.g. organic urban development, or 'temporary use'), under the influence of mobility and new technologies (including digital technologies). For this purpose, the students will draw on insights of urban development theorists, as well as on their own research; - study methods and organisational forms which give shape to urban development, and examine which interventions in communities and districts are either successful or unsuccessful; - understanding of the backgrounds and nature of urban development, and they will be able to analyse an urban development project – in broad outline. Moreover, students will have an understanding of the various methods that are used to manage urban development.
Language:	EN
Teaching activity:	Training
Examination:	Group assignment 50% Individual assignment 50%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD2.ISD6-18C
Course name:	Smart Cities & Communities *)
Study load:	2 EC (=56 hours)
Coordinator:	Loek Hellebrekers
Lecturer(s):	Zhan Goosen, Loek Hellebrekers
Learning objective(s):	Upon completion of this study component you are able to: - understand how Smart Cities are defined; - use practical examples within these definitions; - assess the value, use and utility of the characteristics of Smart Cities; - understand the use and utility of big data and IoT, which is used for the implementation of smart city solutions.
Content description:	In this study component, the following content is covered: - smart Cities Introduction; - smart Environment; - smart People; - smart mobility; - smart Living; - smart Government; - big Data & IoT.
Language:	EN
Teaching activity:	Lecture
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

*) Course is suitable as free elective

OSIRIS-code:	BISD2.VIS6-18T
Course name:	Augmented and Virtual Reality
Study load:	2 EC (=56 hours)
Coordinator:	Joris Klein
Lecturer(s):	Serah-Ingrid Calitz, Joris Klein
Learning objective(s):	Upon completion of this study component you are able to: - to model a 3D urban Design in 'autocad and sketchup'; - to create a design, evaluate and adjust to achieve optimal spatial quality and shading; - use 'virtual reality' as a tool for communication within the field of Build Environment; - use 'augmented reality' as a tool to project the virtual model in the real wold; - become self learning and share your knowledge with fellow students.
Content description:	In this study component, the following content is covered: - 3D modeling in autocad and sketchup; - modeling based on spatial quality and shading; - use of blocks / 3D warehouse; - rendering and plugins to create realistic artist impressions; - creating a movi out of the 3D model; - making a walkthrough with VR-glasses; - projecting the 3D model in the real world by means of 'augmented reality'; - online tutorials to become self learning and creating a learning community.
Language:	EN
Teaching activity:	Training
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD2.MAN3-18T
Course name:	Project Management
Study load:	2 EC (=56 hours)
Coordinator:	Zhan Goosen
Lecturer(s):	Zhan Goosen, Rien Smalheer
Learning objective(s):	Upon completion of this study component you are able to: - determine management aspects of a project; - make a Risk Analysis and execute Risk Management; - mention organisational aspects; - make a specification of a structure; - make an agumentation with pros and cons on the choice of contract type.
Content description:	In this study component, the following content is covered: - project Management; - IPM model; - stakeholder Management; - risk Analysis; - risk Management; - contracts.
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Written exam 70% Group assignment 30%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	videos on internet

OSIRIS-code:	BISD2.GOV4-18C
Course name:	Political Philosophy *)
Study load:	2 EC (=56 hours)
Coordinator:	Robert van Dongen
Lecturer(s):	Robert van Dongen
Learning objective(s):	Upon completion of this study component you are able to: - place the ideas of some 'great thinkers' in the context of current spatial development issues and understand their main views on the topic of government and politics; - put the different GOV-courses in the first two years of ISD into perspective and form your own opinion on the role of government in general, and spatial development specifically.
Content description:	In this study component, the following content is covered: - justifying government and what would our world look like without it; - different ways of organizing government; - liberty and restrictions on liberty; - theories on distribution of property, equality, justice.
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	Wolff, Jonathan. An Introduction to Political Philosophy. 3rd Revised edition. Oxford University Press (ISBN 9780199658015)
Required other materials:	--

*) Course is suitable as free elective

International Spatial Development

Year 3

International Spatial Development
2019 - 2020: year 3

	Initiating and supervising	Designing	Specifying	Realising	Controlling	Monitoring, assessing and evaluating	Conducting research	Communicating and cooperating	Managing and innovating	Working integrally
Trimester 1										
Internship 1	1	2	2	2	1	2	2	2	1	2
Trimester 2										
Energy Transition	3						3	3	3	2
Storytelling		2						2		
Applied Research							3			
Energy Management	3						3			2
Entrepreneurship								2	2	
SimGame	2	2	2	3	1	2	2	3	2	2
Free elective 1	2								2	
Free elective 2	2								2	
Free elective 3	2								2	
Trimester 3										
Internship 2	2	3	3	2	1	3	3	3	2	3

International Spatial Development

Year 3

Trimester 1

OSIRIS-code:	BIP3.IS1-18
Course name:	Internship 1
Study load:	20 EC (=560 hours)
Coordinator:	Sjef de Jong
Lecturer(s):	Sjef de Jong
Learning objective(s):	Upon completion of this study component you are able to: - tackle a practical problem- with control and feedback- to report and present; - admission for internship; You have to arrange your own internship, bearing in mind that the internship and assignment have to be approved by the internship coordinator. The terms and conditions to be admitted to the internship are mentioned in the Teaching and Examination Regulations Built Environment and Logistics and the internship manual.
Content description:	In this study component, the following content is covered: - you will be working on the job during 14 weeks and carry out an assignment for the company or institution; - you report the results in a report and explain these results during graduation; - you mention your learning experiences in a process report.
Language:	EN
Teaching activity:	Internship
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Reader, e-book, internship manual, published on LMS (Cumlaude)

International Spatial Development

Year 3

Trimester 2

OSIRIS-code:	BISD3.LAB7-18P
Course name:	Energy Transition
Study load:	6 EC (=168 hours)
Coordinator:	Barbara van Schijndel
Lecturer(s):	Daniëlle Mourits, Barbara van Schijndel
Learning objective(s):	Upon completion of this study component you are able to: - explore the spatial consequences of renewable energy on different scales and in different environmental circumstances; - find solutions for closing energy cycles at a local scale; - translate the local citizens goals towards energy production, consumption, exchange and storage into a research model and an advice; - explore the different opportunities for energy production and storage in an international context.
Content description:	In this study component, the following content is covered: - The production, storage, conversion, transport and production of energy on different scales - focussing on local and neighborhood scale. - The different stakeholders involved in the energy transition to renewables - The costs and spatial impact of the energy transition
Language:	EN
Teaching activity:	Project
Examination:	Group assignment 50% Individual assignment 50% Process (obligatory) 0%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Other, website ETM, Published on LMS (Cumlaude); Handouts, articles, magazines, later bekend gemaakt, published on LMS (Cumlaude)

OSIRIS-code:	BISD3.VIS7-18T
Course name:	Storytelling
Study load:	3 EC (=84 hours)
Coordinator:	Levi Lanser
Lecturer(s):	Levi Lanser
Learning objective(s):	Upon completion of this study component you are able to: - become aware of and define the audience for whom the story is intended; - develop your understanding and skills in telling a powerful story; - develop your skills in animation / film technology.
Content description:	In this study component, the following content is covered: - man and story: you will explore how to reach or influence people and you will research the different types of storytelling techniques; - analysis: In this phase we will look at film fragments, discuss and analyse them; - animation: The animation / film will be a narrative and visual translation of your solution for the lab assignment.
Language:	EN
Teaching activity:	Training
Examination:	Group assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BISD3.RES3-18C
Course name:	Applied Research
Study load:	3 EC (=84 hours)
Coordinator:	Zhan Goosen
Lecturer(s):	Zhan Goosen
Learning objective(s):	Upon completion of this study component you are able to: - design a research project including conceptual design and technical research design; - apply the knowledge from qualitative research in conducting a research project; - apply the knowledge from quantitative analysis in conducting a research project.
Content description:	In this study component, the following content is covered: - designing a research project step by step; - setting up the research objective and research framework; - research issues and definition of concepts; - research materials, strategies and planning; - applying knowledge in qualitative and quantitative analysis into practice.
Language:	EN
Teaching activity:	Lecture, Project
Examination:	Individual assignment 50% Group assignment 50%
Mark:	Marks, F, MO
Required literature:	Piet Verschuren and Hans Doorewaard. Designing a research project:second edittion. Boom Lemma (ISBN 9789059315723)
Required other materials:	--

OSIRIS-code:	BISD3.ISD7-18C
Course name:	Energy Management *)
Study load:	2 EC (=56 hours)
Coordinator:	Barbara van Schijndel
Lecturer(s):	Barbara van Schijndel
Learning objective(s):	Upon completion of this study component you are able to: - explain the need for energy transition to renewables; - describe the different ways of consumption and production or renewables and their spatial impact; - take into account the specific needs for energy transportation and storage and their spatial effects; - describe different change strategies like trias energetica, LES and die Wende; - find examples of succesful integration of renewable energy in the (urban) landscape and examples of energy efficient urban design and explain how they work.
Content description:	In this study component, the following content is covered: - energy landscapes: history and the need for change; - the spatial impact of transition to renewables; - using the Energy Transition Model; - energy systems and systems theory; - stakeholders, legislation and economics of energy; - energy efficient urban design and planning; - the positive and negative consequences of different energy transition strategies.
Language:	EN
Teaching activity:	Lecture, Training
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Other, Website ETM e.a., published on LMS (Cumlaude); Handouts, articles, magazines, published on LMS (Cumlaude)

*) Course is suitable as free elective

OSIRIS-code:	BISD3.ENT-18T
Course name:	Entrepreneurship
Study load:	2 EC (=56 hours)
Coordinator:	Leigh Stevens
Lecturer(s):	Leigh Stevens, Hidde Westerweele
Learning objective(s):	Upon completion of this study component you are able to: - discover and develop personal intra/entrepreneurial skills in a team and individually (awareness); - set up a business plan based on thinking up new concepts that are related to the domain Built Environment; - discover and identify all aspects related to starting up new business; - integrate management, marketing, production and financial knowledge in relation to entrepreneurship.
Content description:	In this study component, the following content is covered: - introduction to entrepreneurship / intrapreneurship; - concept development, idea creation, market exploration; - setting up a business plan, based on the business model canvas or lean canvas; - becoming acquainted with the lean Startup and business model canvas-method; - present orally and in written an elaborated business model.
Language:	EN
Teaching activity:	Training
Examination:	Group assignment 70% Individual assignment 30%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BBE3.SIMUL-18C
Course name:	SimGame
Study load:	1 EC (=28 hours)
Coordinator:	Frank van den Eeden
Lecturer(s):	Frank van den Eeden, Mark van Eijk, Loek Hellebrekers, Elly Khademi, Daniëlle Mourits, Suzanne van Rijswijk, Rien Smalheer
Learning objective(s):	Upon completion of this study component you are able to: - de complexiteit van ruimtelijke-, mobiliteits, en stedenbouwkundige ontwikkelingen op stedelijk niveau, in het bijzonder met de politiek/bestuurlijke, inhoudelijke, juridische, organisatorische en besluitvormings-technische dimensie daarvan te verklaren; - te beschrijven hoe diverse actoren besluitvormingsprocessen doorlopen; - juridisch instrumentarium voor planvorming te hanteren; - onderhandelingen uit te voeren vanuit een specifiek belang.
Content description:	In this study component, the following content is covered: - de ontwikkeling van een denkbeeldige stad; - besluitvormingsprocessen; - onderhandelingen. Er wordt gebruik gemaakt van een simulatie: gedurende drieënhalve dag verplaats je je in een rol zoals het ambtelijke apparaat, het bedrijfsleven, een bewonersgroepering of een woningcorporatie.
Language:	NL
Teaching activity:	Training
Examination:	Groepsopdracht 100%
Mark:	VD, NVD, GK
Required literature:	--
Required other materials:	Reader, dictaat, e-book, reader professioneel simulatiespel, via LMS (Cumlaude)

OSIRIS-code:	BIP3.FREE1-18
Course name:	Free elective 1
Study load:	1 EC (=28 hours)
Coordinator:	Suzanne van Rijswijk
Lecturer(s):	Ilse Hens, Suzanne van Rijswijk
Learning objective(s):	Upon completion of this study component you are able to: - make a choice for an activity for your personal development; extra on your CV; - develop your skills on a self-chosen topic; - write a plan for your development on self-chosen learning objective.
Content description:	In this study component, the following content is covered: The design and planning of your free electives, under two conditions: 1. for each credit, you must choose an activity that requires 28 hours of work; 2. you have to be able to explain why the activity is a valuable addition to your curriculum. What will you learn and which competencies will you develop? Examples: - Course at an other education in- or outside BUAS (if you are on ISD you can follow a course at ILT); - Assignments and / or study trips, organized by teachers / employees from BUAS; - Dutch speaking students can also choose courses of the Dutch Free Electives.
Language:	EN
Teaching activity:	
Examination:	Individual assignment 100%
Mark:	P, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BIP3.FREE2-18
Course name:	Free elective 2
Study load:	1 EC (=28 hours)
Coordinator:	Suzanne van Rijswijk
Lecturer(s):	Ilse Hens, Suzanne van Rijswijk
Learning objective(s):	Upon completion of this study component you are able to: - make a choice for an activity for your personal development; extra on your CV; - develop your skills on a self-chosen topic; - write a plan for your development on self-chosen learning objectives.
Content description:	In this study component, the following content is covered: The design and planning of your free electives, under two conditions: 1. for each credit, you must choose an activity that requires 28 hours of work; 2. you have to be able to explain why the activity is a valuable addition to your curriculum. What will you learn and which competencies will you develop? Examples: - Course at an other education in- or outside BUAS (if you are on ISD you can follow a course at ILT); - Assignments and / or study trips, organized by teachers / employees from the BUAS; - Dutch speaking students can also choose courses of the Dutch Free Electives.
Language:	EN
Teaching activity:	
Examination:	Individual assignment 100%
Mark:	P, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BIP3.FREE3-18
Course name:	Free elective 3
Study load:	1 EC (=28 hours)
Coordinator:	Suzanne van Rijswijk
Lecturer(s):	Ilse Hens, Suzanne van Rijswijk
Learning objective(s):	Upon completion of this study component you are able to: - make a choice for an activity for your personal development; extra on your CV; - develop your skills on a self-chosen topic; - write a plan for your development on self-chosen learning objectives.
Content description:	In this study component, the following content is covered: The design and planning of your free electives, under two conditions: 1. for each credit, you must choose an activity that requires 28 hours of work; 2. you have to be able to explain why the activity is a valuable addition to your curriculum. What will you learn and which competencies will you develop? Examples: - Course at an other education in- or outside BUAS (if you are on ISD you can follow a course at ILT); - Assignments and / or study trips, organized by teachers / employees from BUAS; - Dutch speaking students can also choose courses of the Dutch Free Electives.
Language:	EN
Teaching activity:	
Examination:	Individual assignment 100%
Mark:	P, F, MO
Required literature:	--
Required other materials:	--

International Spatial Development

Year 3

Trimester 3

OSIRIS-code:	BIP3.IS2-19
Course name:	Internship 2
Study load:	20 EC (=560 hours)
Coordinator:	Sjef de Jong
Lecturer(s):	Sjef de Jong
Learning objective(s):	Upon completion of this study component you are able to: - after the internship you are able to tackle a practical problem- with control and feedback- to report and present; Admission for internship: You have to arrange your own internship, bearing in mind that the internship and assignment have to be approved by the internship coordinator. The terms and conditions to be admitted to the internship are mentioned in the Teaching and Examination Regulations Built Environment and Logistics and the internship manual.
Content description:	In this study component, the following content is covered: - you will be working on the job during 14 weeks and carry out an assignment for the company or institution; - you report the results in a report and explain these results during graduation; - you mention your learning experiences in a process report.
Language:	EN
Teaching activity:	Internship
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Reader, e-book, internship manual, published on LMS (Cumlaude)

International Spatial Development

Year 4

Semester 1

OSIRIS-code:	BMBC.19MINOR
Course name:	Modern Business in a Changing World
Study load:	30 EC (=840 hours)
Coordinator:	Rik Ligthart
Lecturer(s):	Sannie van Boxtel, Natasja Brilmayer, Erik van Diffelen, Bas Groot, Rik Ligthart, Jan Willem Proper
Learning objective(s):	Upon completion of this study component you are able to: - successfully plan, execute, and evaluate change initiatives
Content description:	In this study component, the following content is covered: - Change Management - Project Management - Learning & Development - Strategy & Innovation - Behavior
Language:	EN
Teaching activity:	Project, Lecture, Training
Examination:	Group assignment 50% Individual assignment 50%
Mark:	Marks, F, MO
Required literature:	J. Kotter. Leading Change. Harvard Business School Publishing (ISBN 9781422186435)
Required other materials:	--

OSIRIS-code:	BRSC.18MINOR
Course name:	Retrofitting the sprawled city
Study load:	30 EC (=840 hours)
Coordinator:	Paul van de Coevering
Lecturer(s):	Paul van de Coevering, Zhan Goosen, Ed Ravensbergen, Ineke Spapé
Learning objective(s):	Upon completion of this study component you are able to: - assess the current situation in your international case study area with the STEEP and SWOT analysis tools; - create integrated concepts with hardware, software and orgware interventions for the redevelopment and revitalization of your case study area which are grounded in theory and are alligned with the results of your SWOT analysis; - create a detailled integrated plan to tackle societal issues related to urban sprawl and car dependency in your case study area; - provide a coherent storyline from the SWOT analysis to concepting and the specific measures; - conduct targeted Urban Guerilla tactics in practice.
Content description:	In this study component, the following content is covered: - in depth analysis of a case study area in North America; - differences in land use and transportation networks between European and Northern American cities; - societal challenges related to urban sprawl and a car dependent culture; - hardware, software and orgware measures and their synergies; - designing and planning from masterplan to detailed street designs; - urban Guerilla tactics and connection with hardware, software orgware measures; - effective presentation skills; poster presentations, videos, brochures and other means of conveying your message.
Language:	EN
Teaching activity:	Training
Examination:	Group assignment 50% Individual assignment 50%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	--

OSIRIS-code:	BKLDU.19MINOR
Course name:	Kennislab Dynamics Urbanism
Study load:	30 EC (=840 hours)
Coordinator:	Marc Holvoet
Lecturer(s):	Marc Holvoet
Learning objective(s):	Upon completion of this study component you are able to: - Antwoorden te formuleren op de vraag uit de stad aan de hand van een helder onderzoek en proces met de relavante partijen uit dezelfde stad, wijk en buurt - Innovatief omgaan met de opgave en de stad voorzien van nieuwe inzichten en doorkijken in de toekomst. - De opgave in een integraal perspectief plaatsen en inzichtelijk maken waar de kernopgaven liggen voor de verschillende relevante vakgebieden van de stad - Disciplines en stakeholders verbinden - Proces en ontwerp/onderzoek verbinden.
Content description:	In this study component, the following content is covered: In het kennislab wordt onderzocht wat de rol van stedenbouwers en planologen wordt in het nieuwe vakgebied. Stedenbouwers en planologen bewegen zich in het spanningsveld tussen: ruimte/mobiliteit, overheid/ institutionele wereld, mens /buurt, netwerken/digitalisering. In dat spanningsveld moet de professional een plek vinden. De afgelopen jaren was zichtbaar hoe de individuele burger steeds meer in het centrum van de belangstelling kwam te staan. Natuurlijke of organische ontwikkeling heeft in het beleid intrede gedaan, er wordt nadrukkelijker gekeken naar de positie en de belangen van mensen en stakeholders. Daar liggen belangrijke onderzoeksvragen; wat is de positie van de individuele mens binnen de gebiedsontwikkeling en is dat een nieuwe rol? Wat zijn de kernopgaven waar de staat voor staat en hoe gaan de (nieuwe) partijen hiermee om. Wat worden de nieuwe posities van de stakeholders in de stad?
Language:	NL
Teaching activity:	Atelier met begeleiding
Examination:	Individuele opdracht 100%
Mark:	Cijfers, NVD, GK
Required literature:	--
Required other materials:	--

OSIRIS-code:	BSCCF.19MINOR
Course name:	Minor Smart City, Color your Future
Study load:	30 EC (=840 hours)
Coordinator:	Peter Kole
Lecturer(s):	Pauline van Beusekom, Paul van de Coevering, Lizanne Hessels, Ruud Hornman, Peter Kole, Nina Nesterova, Rien Smalheer, Marcel van Wietingen
Learning objective(s):	Upon completion of this study component you are able to: - create a integral future proof vision on a city / urban area, where knowledge and ideas around spatial development and planning-, mobility- and logistics get applied, analyzed and evaluated jointly.
Content description:	In this study component, the following content is covered: - basics of spatial development and planning, mobility and logistics, - Smart City, -Mobility and -City Logistics, - future trends and developments related to spatial development and planning-, smart mobility and smart logistics, - change management and behavioral change.
Language:	EN
Teaching activity:	Project, Lecture, Training
Examination:	Group assignment 70% Individual assignment 30% Process (obligatory)
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Handouts and others

OSIRIS-code:	ACS.19MINOR
Course name:	Minor Crowd Safety
Study load:	30 EC (=840 hours)
Coordinator:	Justin van de Pas
Lecturer(s):	Mark van Eijk, Justin van de Pas, Jeroen Weppner

Learning objective(s): Upon completion of this study component you are able to:

- Clear understanding of important concepts of Crowd Management and application of crowd modelling
- Ability to discuss application of crowd safety management (with concepts such as planning, licensing and operations) and its relevance to the wider legal, organisational, regulatory and risk management framework
- Ability to discuss appropriate risk assessment methodologies for crowd safety, how this impacts on legislation and guidance, and/or which areas of crowd safety need improvement
- Demonstrating understanding of core principles and applications of the tools. Providing some detail of use of models, information they provide and how this assists in the risk analysis of crowd dynamic.
- Clear understanding of important concepts within mobility and urban design by applying and analysing integtal alignment, design and planning processes and urban and spatial design.
- Ability to discuss the application of crowd simulations by analysing crowd simulations, applying measuring and monitoring tools, queing theories and crowd simulations.
- Ability to discuss application of stakeholder analysis, procedures and permits and law and regulations.
- Ability to discuss appropriate risk assessment methodologies for crowd safety, how this impacts on legislation and guidance, and/or which areas of crowd safety need improvement
- Communicate the information about the tools to users and/or team, with the goal to communicate with the audience
- Analysing an event or venue, including four core modelling elements.
- Recognise group behavior and understanding causality
- (Deep) Researching and correct referencing
- Use clear graphics.

Content description: In this study component, the following content is covered:

Crowd safety,
creating and offering a safe environment on areas where crowds gather for various possible reasons (public/private areas)

- Background and the dynamics
- Modelling and monitoring
- Design and organise
- Decisions making process and adequate response

(Event) logistics & Mobility,
creating and offering an infrastructure that is safe, comfortable and ideal to meet the predetermined objectives of the visitor.

- Process Management
- Process capacity calculations
- Area design
- Mobility and Accessibility
- Calamities

Crowd simulations,

- Determining variables (input - circulation – output)
- Designing and running simulations
- Simulation analysis and improvements (advice)

Overcrowding and communication,

- Analyse the concept of overcrowding
- Mass Communication
- Risk perception
- Terrorism

Law, responsibilities and procedures,

- Procedures and permits
- Responsibilities and liabilities
- Law and regulations

Language:	EN
Teaching activity:	Project
Examination:	Group assignment 40% Individual assignment 60% Process (obligatory) 0%
Mark:	
Required literature:	Still, G.Keith. Introduction to Crowd Science. (ISBN 9781466579644),
Required other materials:	Portal APEL-Course->Introduction to Crowd Science

International Spatial Development

Year 4

Semester 2

OSIRIS-code:	B4.SC-18*
Course name:	Graduation Thesis
Study load:	30 EC (=840 hours)
Coordinator:	Sjef de Jong
Lecturer(s):	Sjef de Jong
Learning objective(s):	Upon completion of this study component you are able to: - to tackle, to report and to present a practical problem as a starting professional.
Content description:	In this study component, the following content is covered: You have to arrange your own internship and assignment. The internship coordinator measures the assignment on size, complexity and draft. During the graduation process you will work on location; Coordinators; - ILE/ILN: Sjef de Jong / André Gijsberts; - BE: Monique van Herpen.
Language:	EN
Teaching activity:	Thesis
Examination:	Individual assignment 100%
Mark:	Marks, F, MO
Required literature:	--
Required other materials:	Reader, e-book, graduation manual, published on LMS (Cumlaude)

Description competences

01 Initiating and supervising
From a bird's-eye view and a broad market orientation, you point out and list problems for the relevant tasks for society. You can formulate the prerequisites, requirements and objectives. You can describe, monitor and adjust the process.

02 Designing
The design can be a plan, model, memorandum of advice, spatial or technical design. You create the design on the basis of a set programme of requirements, you examine various solutions and variants and make a well-founded choice.

03 Specifying
You create a specification with regard to formulating ambitions, prerequisites and feasibility in such a way that it gets the product moving in the right direction.

04 Realising
You implement a design by preparing, maintaining, monitoring and adjusting its realisation.

05 Controlling
You draw up a control & maintenance plan for preserving the realised quality.

06 Monitoring, assessing and evaluating
You can monitor and assess the achieved results objectively. Afterwards, you can adjust and make proposals for improvement and bring them forward.

07 Conducting research
You can analyze a problem and identify the question.
You can set up, carry out and assess practice-based research as an iterative process.
You make use of suitable methods and techniques and have a critical, investigative and entrepreneurial attitude.

08 Communicating and cooperating
You communicate profession-oriented information to the industry, colleagues and target groups to be determined (customers, commissioners, parties concerned). You can communicate both internally and externally in a way that suits the target group. Communicating comprises the entire spectrum in which information is received, given and shared. You aim at cooperating and constructively liaising with parties concerned and target groups.

09 Managing and innovating
You guide and steer processes to achieve objectives. You are self-directing and can reflect on own performance. You are proactive, take initiative, and can think and work 'out of the box'.

10 Working integrally
On the basis of your own expertise or area of specialisation you can cooperate with people with a different expertise or area of specialisation to find a solution for a complex issue.

Description of the competence levels

Level	Character of assignment	Character of context	Degree of dependency
I	- Simple - Structured - Applies well-known methods	- Familiar - Simple - Monodisciplinary	- Steering guidance
II	- Complex - Structured - Uses well-known in varying situations	- Familiar - Complex - Monodisciplinary practice-based	- Coaching guidance
III	- Complex - Unstructured - Uses methods in new situations	- Unfamiliar - Complex - Multidisciplinary practice-based	- Independent - Guidance for coaching if necessary

Games

Media

Hotel

Facility

Built Environment

Logistics

Tourism

Leisure & Events

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