

Course information system		Year of study 2024-2025
<b>Study Programme</b>	Applied Geo-information	
<b>Course unit code</b>	AG2403	
<b>Course unit title</b>	Smart Cities	
<b>Location</b>	's-Hertogenbosch	
<b>Coordinator</b>	Erik Dietvorst	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	30	
<b>Moment of delivery</b>	Year 2                      Semester 2	
<b>Prerequisites</b>	<ul style="list-style-type: none"> <li>• Basic knowledge about the use of geographical information systems (GIS) is necessary. If required, teaching materials are available to update your knowledge</li> <li>• Enrolling students are able to demonstrate a high ability to work independently: they are able to make decisions and put together their own curriculum.</li> <li>• The relevance of the applicant's background will be assessed during an intake interview with the coordinator of the course, based on a letter of motivation and CV.</li> <li>• English skills at level B2. (more information can be found via the Common European Framework of Reference for Languages).</li> </ul>	
<b>Application deadline</b>	1 November 2024	
<b>Content</b>	<p>How can technology make a smart contribution to the (future) challenges of particular cities, both nationally and internationally? In this programme we look at major developments in cities and challenges we face in keeping the city liveable and attractive. The aim is to provide insight in the major challenges faced by selected cities using geo-information and data.</p> <p>As part of the programme, you will work on a number of individual assignments, and an interdisciplinary project with fellow students. In the project, you and your colleagues will work on a real-life urban challenge in a selected city.</p> <p>Topics covered are:</p> <ul style="list-style-type: none"> <li>• World urbanization</li> <li>• 3D geo information/Digital Twins</li> <li>• Citizen participation</li> <li>• Virtual Reality</li> <li>• Creating Dashboards</li> <li>• Sensor technology</li> </ul> <p>In addition, <i>Smart Cities</i> has one or more field trips abroad to view and experience the topics in the real world.</p> <p>During the programme, you are also free to select a combination of different elective courses. Examples are:</p> <ul style="list-style-type: none"> <li>- Remote Sensing (satellite image interpretation)</li> <li>- Spatial Decision Modelling</li> <li>- LIDAR (point clouds)</li> <li>- Serious Gaming</li> </ul>	
<b>Learning outcomes</b>	During the exchange programme <i>Applied Geo-information: Smart Cities</i> students will learn how to use various analytical tools and methods to	

	gain insights in urban challenges, and how to translate their findings into tangible information products for the end-user.						
<b>Mode of delivery</b>	Face-to-face						
<b>Schedule</b>	The programme lasts 20 weeks (excluding holidays) with a study load of 40 hours per week. You are expected to be present at least 16 hours a week for the learning community (lectures and practicals). You plan the remaining 24 hours independently with your fellow students for your project, your individual assignment or to work on your elective courses.						
<b>Learning activities and teaching methods</b>	<b>Method</b>						<b>Study load (hours)</b>
	lectures						<b>11</b>
	practicals						<b>39</b>
	instructional lectures						<b>7</b>
	project						<b>20</b>
	Field trip						<b>40</b>
	<b>Total</b>						<b>117</b>
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination</b>	<b>Resit</b>
<i>No details available yet</i>							
<b>Remarks</b>	The assignments and project work cover 20 ECTS. For the remaining 10 ECTS, you are free select your own combination of elective courses.						
<b>Recommended or required reading (literature)</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code</b>			
Will be provided during the course							
<b>Remarks</b>	<i>Applied Geo-information Science</i> is a study programme offered at HAS green academy. During this 4-year bachelor's program, students use perception of space and location to clarify economic, social and sustainability issues. Geographical thinking plays a key role, as do knowledge of geo-data, geo-IT, graphic design and new media. Students learn how to use innovative and creative approaches in order to clarify developments, trends and complex processes.						