

## Teaching the principles of shaping space for spa treatment

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**ABSTRACT:** The teaching of a design of an urban complex must be based on understanding user needs, legal constraints, contemporary ideas of shaping and composing space, while respecting sustainable development and spatial order. Engaging local communities and developers is also essential. Discussed in this article is shaping space associated with spa treatment and it includes specialist problems that are significant for the improvement of this function. Although Poland is a country with significant spa treatment resources, the possibility exists of establishing new complexes. These could become the basis for the economic development of regions that have high environmental protection requirements. The evolution of the curriculum in the Faculty of Architecture at Cracow University of Technology (FA-CUT), Kraków, Poland, in terms of its adaptation to legal changes, contemporary demands and social needs is presented here.

### INTRODUCTION

The history of spa development is complicated because there has been dynamic development, as well as regression. Since the end of the 20th Century, there has been an increased interest in establishing new spa, wellness and fitness centres [1][2]; the latter have been specifically developed in Poland.

When compared with neighbouring EU countries, the number of spas in Poland is quite small, particularly accounting for the number of residents per spa resort [3] (see Table 1). At the same time, Poland is a country that has a wealth of natural medicinal resources, which are not fully accessible to the country's aging population.

Table 1: Spa resorts in EU countries and the number of residents per spa resort.

Country	Population in 2019	Number of spa resorts in 2017	Number of residents per spa resort
Austria	8,773,000	35	251,000
Czech Republic	10,165,000	30	355,000
France	66,990,000	107	626,000
Germany	82,790,000	350	237,000
Hungary	9,773,000	32	305,000
Italy	59,190,000	300	197,000
Lithuania	2,800,000	6	467,000
Poland	38,383,000	45	853,000
Portugal	10,213,000	44	232,000
Slovakia	5,432,000	21	258,000
Spain	46,489,000	128	379,000

In the 1990s, Polish spa resorts were regulated by an Act of 1966, which favoured huge sanatoriums for more than 200 people and, sometimes, even 500 patients [4]. Most Polish health resorts were established in the 18th and 19th Centuries. Their historical value was not always respected in the period between 1962 and 1978, a period of rapid development [5][6]. A new perspective on health resort complexes requires that technical university students are taught new spa resort design precepts fit for the contemporary needs of an aging society [7].

TEACHING IN THE FACULTY OF ARCHITECTURE AT CRACOW UNIVERSITY OF TECHNOLOGY (1994 to 2020)

In the first half of the 1990s, there were 36 active statutory health resorts in Poland. In most, therapies were administered in buildings built in the 19th and at the start of the 20th Century. These centres, in Soviet times, were associated with large sanatoriums and resort hotels. Modern treatment centres were opened in a handful of health resorts in the 1970s. These included Iwonicz, Szczawnica, Kołobrzeg and Ustroń. Today, they are considered to be substandard.

The teaching of health resort design classes began in 1994 as an elective module taught in the Faculty of Architecture at Cracow University of Technology (FA-CUT). This covered 30 contact hours over one semester during the fourth year of study. Students were obligated to undertake several elective modules.

The module was taught with the co-operation of the health resort town and municipality of Muszyna (see Table 2). Before the start of the module, a portion of the students would conduct a planning field survey of this town under the supervision of the author. This was intended to facilitate the spatial planning module. Two-week stays at the health resorts and trips to the nearby Krynica and Slovakian health resorts inspired interest in the essentials of designing the space of these towns, which differs in process from planning regular cities.

Table 2: Scope of teaching and number of students, FA-CUT, Stage I.

Period	Lectures	Classes	Number of students
Stage I: 1994-2005	<ul style="list-style-type: none"> <li>• Conditions of health resorts</li> <li>• History of health resorts in Poland</li> <li>• Designing health resorts in accordance with the principles of eco-development</li> <li>• User needs in a health resort</li> <li>• Health resorts and cities</li> <li>• Health resort architecture</li> </ul>	<ul style="list-style-type: none"> <li>• Field studies of health resorts around Kraków</li> <li>• Design of advertisement folders, merchandise and souvenirs for Polish health resorts</li> <li>• Participation in competitions jointly organised with health resort municipalities</li> </ul>	20-45

Co-operation with the local administration of Muszyna led to student competitions in 1994 for the design of three medicinal water pump rooms in Muszyna. The student submissions numbered 15 and the project that received second prize was realised as an actual project; the first prize submission was too costly for development.

Another competition was organised in 2001. The focus was a conceptual proposal of the development of health resort grounds in Zapopradzie, Muszyna. The results were partially utilised in the actual development of these areas. Some of the students presented designs for folders, souvenirs and gadgets for various health resorts, which were presented several times at Polish spa congresses. In this period, numerous diploma projects were created that focused on improving the quality of the space of existing health resorts; for instance that of Solec-Zdrój, and the restitution of no-longer-existing complexes, e.g. those in Latoszyn or Olsztyn.

After 2005, the subject matter and mode of teaching the classes were changed (see Table 3), for the following reasons:

- in July 2005, a long-awaited new health resort Act was passed [8]. As a consequence, many complexes had to amend spa statutes and limit the territories considered health resorts proper;
- in 2007, the FA-CUT started to offer two-cycle courses and the number of elective modules a student was obligated to pass was reduced to one, which led to a reduction in the number of participants and made possible small design assignments;
- in the years 2011 to 2014, the Institute of City and Regional Design co-operated with the V-4 Group countries (Poland, Hungary, Czech Republic and Slovakia) on grant projects. In 2009 to 2013, co-operation was intensified with the Faculty of Architecture of Slovak University of Technology in Bratislava, Slovakia, which included international student workshops [9] and the MEIA-EUC Erasmus IP project.

The amendment of the 2005 Act led to the necessity to modify the subject of lectures, particularly with respect to new treatment space design requirements, and the quality of development of treatment areas and urban public spaces with which these complexes are linked. In currently prevalent competitive urban development, information related to, and comparative studies of, foreign complexes proved key.

Therefore, several lectures were assigned to discussing the means of renovating European health resorts, particularly French, Italian and Austrian ones, as well those in V-4 Group countries. During lectures, the significance of specialist spa services in the spatial development of cities of varying sizes was highlighted [9], as were the new requirements concerning the eco-friendly design of architecture for the purposes of balneological treatment [10].

Table 3: Scope of teaching and number of students, FA-CUT, Stage II:

Period	Lectures	Classes	Number of students
Stage II - 2005-2013	<ul style="list-style-type: none"> <li>• Overview and typology of health resorts by location and treatment conditions</li> <li>• Characteristic of health resorts associated with cities of varying size</li> <li>• Links between the city and the health resort</li> <li>• Designing the space of European health resorts according to the principles of eco-development</li> <li>• Technical conditions that must be met in health resorts, as stipulated in the 2005 Act</li> <li>• Drafting health resort documentation [6]</li> </ul>	<ul style="list-style-type: none"> <li>• Field and comparative studies concerning the design of health resort treatment - examples of Polish, Slovakian and Hungarian health resorts</li> <li>• Analysis of possible changes in Polish health resorts with respect to improving spatial standards</li> </ul>	10-15

Some of the students participated in the international research and teaching efforts of the Institute, while simultaneously attending the elective module to participate in trips to study the design of Slovakian and Hungarian health resorts. During this period, numerous students prepared diploma projects focusing on health resorts, e.g. Muszyna, Piwniczna, Nałęczów, Żegiestów or Swoszowice, in co-operation with health resort town municipal administrations. The subject matter of health resort design was also prominently featured, in lectures and final projects, of postgraduate spatial planning study courses.

The modification of the teaching after 2013 (see Table 4) resulted from:

- Changes in international teaching co-operation, which had fewer opportunities for student trips abroad.
- An increase in the number of domestic local government and businesses engaged in co-operation with the University.
- The privatisation of numerous health resorts that changed the quality and aesthetics of therapeutic space.

Table 4: Scope of teaching and number of students, FA-CUT, Stage III.

Period	Lectures	Classes	Number of students
Stage III: 2014-2020	<ul style="list-style-type: none"> <li>• Lectures as in Table 3, supplemented by:</li> <li>• Critical and comparative analysis of complexes and structures in Polish and foreign health resorts</li> </ul>	<ul style="list-style-type: none"> <li>• Field studies of health resorts within the Kraków zone of influence (e.g. Swoszowice, Wieliczka, Bochnia) and private complexes (e.g. Solec, Swoszowice, Szczawnica)</li> <li>• Initial conceptual proposals for the remodelling and extension of various existing and future health resort towns prepared by three- or four-person student groups</li> </ul>	7 -10

No significant changes were made to the subject matter of the lectures. The only addition was the broader presentation of the latest projects in Polish and foreign health resorts. As a result of increased co-operation between the Faculty of Architecture and local government administrations, student assignments for the elective module focused on conceptual proposals for new health resorts, and proposals for improving the quality of public spaces both within health resorts and in the vicinity of therapeutic complexes.

#### CONTEMPORARY CURRICULUM FOR THE DESIGN AND PLANNING OF HEALTH RESORTS

Teaching design and planning of health resorts began in the Inter-Faculty Spatial Management Study Course at Cracow University of Technology (I-FSMSC CUT) in 2017. The curriculum allots 30 contact hours during the second semester (15 hours for lectures and 15 hours for the assignment) for the module (Table 5).

The curriculum included specialist matters associated with health resort infrastructure and technical requirements. The economic bases of health resorts used French [2] and Spanish examples [11].

Interest in health resorts was such that many students continued with this subject for their diploma projects. This implies the significance of associated specialist infrastructural issues concerning urban and municipal engineering, as well as geological and hydrotechnical matters.

Table 5: Scope of teaching and number of students, I-FSMSC CUT.

Period	Lectures	Classes	Number of students
2017-2020	<ul style="list-style-type: none"> <li>• Overview and typology of health resorts depending on location, technical conditions and technical infrastructure</li> <li>• Health resorts associated with cities of varying sizes and spatial linkages</li> <li>• Economic bases of European health resorts</li> <li>• Shaping the space of European health resorts according to sustainable development</li> <li>• Overview of health resort infrastructure</li> <li>• Health resort town development strategies</li> <li>• Documentation for establishing a new health resort as stipulated in the 2005 Act [8]</li> </ul>	<ul style="list-style-type: none"> <li>• Field studies in health resorts within the Kraków zone of influence and other health resorts of Lesser Poland</li> <li>• Conceptual proposal for a health resort development and urban design and a fragment of a complex</li> </ul>	12-18

## DISCUSSION AND CONCLUSIONS

In teaching technical university students, classes concerning localities with specialist functions often relate to an array of interlinked issues. In the case of health resorts, care for the quality of the environment has been a critical issue for centuries. Historically, these places were intended for the aristocracy and wealthy members of the bourgeoisie and was often designed by celebrated architects [5][7][12]. When designing health resorts, it is necessary to adopt the humanist perspective of the *customer*, who may be a disabled person which must be reflected in the spaces and furnishings. There are various considerations:

- protection and care of natural, environmental and landscape assets;
- protection of historical monuments and the culture of *spending time in a spa* [12];
- urban and architectural design concordant with sustainable development, the humanisation of space [13] and contemporary aesthetics;
- design of therapeutic spaces and infrastructure in accordance with the latest advances in medicine, taking account of the therapeutic profile of a health resort providing proper treatment and rest [14];
- equipping the town with proper technical infrastructure.

During the period of socialism in Poland, these localities were often damaged by excessive development employing large-scale standardised sanatoriums of little aesthetic value and brutal housing block developments. New therapeutic complexes should not copy these erroneous standards. Lectures should be based on history, foreign examples and theory. The design classes and seminars are influenced by contemporary trends, reflecting international student workshops, academic research and co-operation with local governments. This results in the module offering being attractive, which is important when teaching elective classes.

The final addressees of the graduates of universities are the society and individuals. It is important to adopt not only a technical stance, but also a humanist approach, being mindful of compositional, aesthetic, natural and landscape values of the designs and their surroundings, which are indispensable in the design and planning of health resorts.

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