



DOI: 10.17512/bozpe.2021.2.12

Construction of optimized energy potential  
Budownictwo o zoptymalizowanym potencjale energetycznym

ISSN 2299-8535 e-ISSN 2544-963X



## The role of public utility buildings in the academic campus space using the example of the Czestochowa University of Technology

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**Abstract:** The attempt to create cultural spaces within urban areas is an important element of the urbanization process in contemporary cities. The campus of the Czestochowa University of Technology is a particular example of functional-spatial shaping of an urban structure. Inscribed in the context of the urban structure of the city, it creates an efficiently functioning organism. Its integration with the wider context of urban space is ensured by two public utility buildings - symbols of the cultural space of the academic campus. The first of these is the 'Polytechnic Club' built in the 1960s, currently the Academic Centre of Culture and Sports. The second object is the complex of buildings of the Personal Academic Parish realized in 2009. These selected examples are separated by 50 years between construction. They present an open, direct architecture which gives the area a chance to function properly. The durability of these solutions strengthens the potential of the urban structure.

**Keywords:** architecture, cultural space, urban space

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Please, quote this article as follows:

Solkiewicz-Kos N., The role of cultural objects within the academic campus space on the example of Czestochowa University of Technology, Construction of Optimized Energy Potential (CoOEP), Vol. 10, No 2/2021, 99-104, DOI: <https://doi.org/10.17512/bozpe.2021.2.12>

### Introduction

The strategy of activities undertaken on the campus of the Czestochowa University of Technology refers to the existing environment, its past and present. It includes tasks which aim to creatively display the civilisation and cultural values of this place.

The public facilities found on the campus and the surrounding areas form an integral part of the campus itself. These facilities increase the safety of the university

space. They enhance its aesthetic values as well as give a sense of belonging to the academic community.

The article presents two examples of cultural objects. Each of them was built in different economic and social realities. A professional approach, offering the best architectural and functional-spatial solutions guarantees the timeless value of these buildings and meets the requirements of contemporary users.

The coherent spatial policy represented by the city and university authorities shows how effectively urban areas can be transformed, how special places can be created that are important for the identity of the city.

## **1. “Polytechnic Club” – Academic Centre of Culture and Sport**

The academic space of the Czestochowa University of Technology Campus is an important element of the urban structure of the city. Its spatial layout has timeless historical and cultural value. This does not change the fact that this space will always require updating and locating in the contemporary social reality (Braun, 1979).

An example of cultural continuity in the Czestochowa University of Technology area is the building of the Academic Centre of Culture and Sport. Built at the end of the 1960s, it was a response to the growing demands for access to culture and sport among the students of the technical university. Both the architecture of the building and its functional and spatial solutions refer to the best solutions of the modernism period, which consequently constitutes a timeless value of the building itself and its current programme offer (Giedion, 1968).

The building combines three main assumptions clearly differentiated in terms of size and height. These are: a sports hall, an auditorium and the "Politechnik" club hall (the so-called Marble Hall). The regular shape of the building, the rhythmic use of smooth surfaces as well as vertical and horizontal accents enrich and differentiate the architecture of the building while creating coherence of space, surfaces and structures.

From its inception to the present day, the “Polytechnic Club” – currently the Academic Centre of Culture and Sports – has performed the functions for which it was established. The application of the latest technical and technological achievements, as well as formal and functional ones, has contributed to the timeless value of the building’s architecture, which, despite the passage of 46 years, has not lost its relevance. It is a place for meetings, information exchange, cultural and sporting events (Sołkiewicz-Kos, 2016).

The facility has also become a valuable platform for contact between the whole polytechnic community and the citizens of Czestochowa, introducing into the university space a zone of communication in the fields of sport, culture and education. This multifunctionality and the appropriately shaped structure of the building strengthen the integration of the academic community to this day, at the same time raising the quality level of the urban space (Gąsiorowski, 1999).

## 2. Cultural Facility – Personal Academic Parish Church

The need to create a pastoral centre for the academic community provided the impulse for the creation of a facility with this function. A complex of academic parish buildings was built in the immediate vicinity of the Czestochowa University of Technology dormitories.

The sacral complex was designed as a continuation of Kilińskiego Street, referring to the existing building conditions. The context of the surroundings made it necessary to create a simple compact mass with the main facade parallel to the street (Fig. 1).



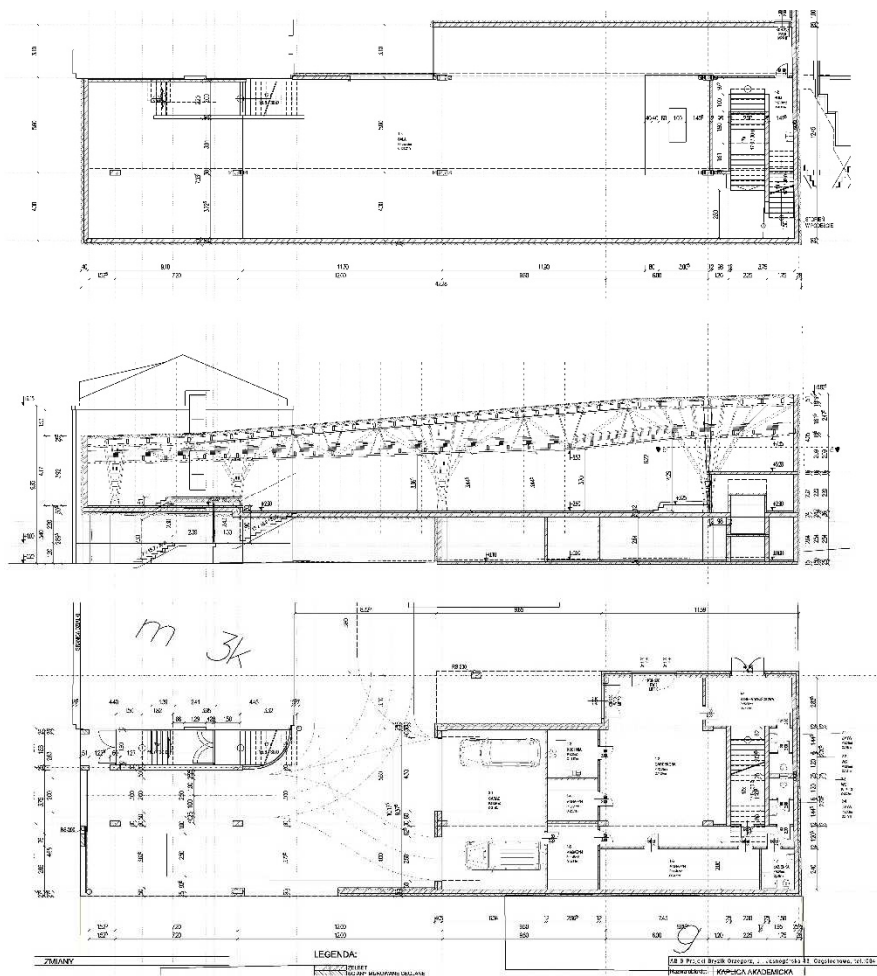
**Fig. 1.** Personal Academic Parish Church. Adapted parish building (left) and the newly designed chapel building (right) (source: photo by Nina Solkiewicz-Kos)

The religious complex consists of the existing, adapted parish building and the newly designed chapel building with facilities. Architect Grzegorz Bryzik (lead designer) attempted to create a sacred building within a tight urban zone. His design for the chapel with facilities has become a strong symbol of the cultural space of the Czestochowa University of Technology campus and the surrounding urban area. Together with the adapted and modernised parish building (designed by arch. Stanisław Oset) it creates a new quality of space. The unique functional-spatial proposal of the whole sacral premise is based on the maximum development of the narrow urban plot. The design of the chapel and the parish building introduce a modern elegant aesthetics to the existing urban layout. An additional advantage is the solution of the ground floor zone, which is an integral part of the entire spatial solution. The extension of the existing parish building with a projected academic chapel was intended to create suitable conditions for conducting academic pastoral ministry.

## 2.1. Structural, functional and material solutions

The structural and technical solutions of the academic chapel building reflect the formal and functional solutions. Free development of the plot's area is ensured by a grid of columns and binders supplemented in the rear part of the courtyard by a system of load-bearing walls. The free space includes a parking zone with garage stalls, a staircase and the adjacent arcade zone with figural sculptures. An accent emphasizing the main entrance zone to the chapel. The fragment of the arcade with the figural sculptures has a homely and inviting character. This is a form of compensation for the lack of a square and a wider perspective.

At the back of the plot, a sacristy room has been designed, connected to the chapel space by a staircase. In this way, maximum use is made of the floor space of the building for the nave and chancel (Fig. 2).



**Fig. 2.** Personal Academic Parish Church. Second floor plan (top figure), longitudinal section (middle figure), ground floor plan (bottom figure) (source: materials provided by the project author)

The building is designed in a three-nave system perpendicular to Kilińskiego Street. The three-nave division of the chapel emphasises the space of the presbytery with the altar, mensa and rostrum. The central part of the nave is crowned in the upper zone by a belt of wooden windows which raise the roof structure above the side naves. Its construction is supported by branching wooden pillars, which like the boughs of trees penetrate the structure of the roof. The form of the wooden pillars subtly separates the main nave from the side naves (Fig. 3).



Fig. 3. Personal Academic Parish Church (*source: materials provided by the project author*)

All the wooden elements were made in good quality wood (1st class). Their colour has been achieved by treatment with substances which do not change the natural colour of the wood. The entire wooden structure was painted with laser lacquers leaving the texture of wood visible. Elements made of wood create a warm, friendly atmosphere in the interior, which is surrounded by plastered walls in light colours.

The interconnected wooden pillars, window frames and roof structure are both structural and finishing elements. They are a subtle form of interpenetrating architectural detail that enriches the interior of the chapel and determines its character.

The entire interior is complemented by symbolic, individually designed stone details: mensa, pulpit, baptismal font. The use of simple, noble materials emphasises the symbolic character of the interior. Its architecture creates favourable conditions for prayer for all groups of the faithful and creates opportunities to participate in various forms of religious life (Pieńkowski, 1981).

## 2.2. Acoustic and lighting issues in the church interior

In addition to aesthetics, two technical issues have an influence on the perception of a sacred interior: acoustics and lighting.

Good acoustics is an important feature of the sacred interior. The surfaces of walls and ceilings should have a rough texture. Great attention is paid to the ceilings, which should be shaped as a grid or coffered ceiling. Wood is a particularly favourable material for achieving good acoustics in interiors (Pieńkowski, 1981).

The acoustics in the interior of the academic chapel are supported by the designed wooden grid. The wooden slats in the form of a grid, laid between the main purlins of the roof, concentrate and disperse the sound waves and have a positive effect on the chapel's acoustics.

The lighting solution is, besides acoustics, an important technical issue in the interior of the chapel. It is important to illuminate the interior of the chapel with daylight. The applied solution should ensure proper perception of its individual elements. The designed horizontal strip of windows in the roof area diffuses the daylight reflecting it from the bright walls of the chapel. Reflected light, i.e. indirect light, is the best form of illumination of the sacral interior (Pieńkowski, 1981).

## Conclusions

The development strategy of the Czestochowa University of Technology campus is an integral part of the city's spatial policy, in which cultural spaces play a special role. They constitute an area of particular aesthetic and functional values. Their way of development emphasises the importance of the city and is an example of contemporary cultural and social economic processes.

Despite the passage of time, the Campus area allows for changes that meet the expectations of the academic community. At the same time it preserves and maintains those elements of the socio-cultural structure which constitute a platform connecting the community gathered around the academic centre with the inhabitants of the city.

The adopted solutions for cultural facilities and public spaces on the Campus are the result of comprehensive and long-term actions aimed at revitalising, developing and increasing the significance of urban areas.

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