Architectural peculiarities of the residential spaces of theological educational institutions as based on the example of the Lviv Theological Seminary

Abstract
The article analyzes the architectural peculiarities that are common for residential space of theological educational institutions led by the Christian churches of the Byzantine rite, as based on the example of the architectural and space-planning organization of the Lviv Theological Seminary of the Ukrainian Greek Catholic Church, outlines the major factors that prevailingly influence the formation of theological seminary residential space, and provides recommendations for designing residential spaces of theological educational institutions in Ukraine.

Keywords: theological education, theological seminary, residential space, sacred architecture, temple, chapel

1. Introduction
For around forty years of the post-war period, the Ukrainian Greek Catholic Church (UGCC) was banned by the Soviet totalitarian regime. Some of the UGCC churches were ruined, others were transferred under the control of different denominations, seminaries and academies were closed, priests and theologians were persecuted or did underground work. No wonder that such circumstances were not favourable for high-quality theological education and preparation of priests. The educational infrastructure of the Ukrainian Greek Catholic Church, including theological education and theological buildings and temples, was irretrievably lost.

The revival of theological education and theological institutions became possible only after Ukraine had acquired its independence and the activity of the UGCC had been restored. The period of church revival witnesses the problem of providing newly built temples with young well-educated priests. Consequently, the necessity of building new theological educational institutions becomes topical. At this stage, it is crucial to establish a balanced theological and educational structure of the seminary type [1], which would most effectively perform the function of theological education, as well as the function of ensuring all conditions for the spiritual and daily living of its students.

Today, the Ukrainian Greek Catholic Church plays an important role in the social and political life of Ukraine. New temples are being built and local parish communities of many cities, towns and villages are constantly growing. The theological and enlightening mission of the Church should be based on well-educated human resources, the qualitative preparation of which goes far beyond the educational programs that go in line with the complex challenges of the modern Ukrainian society. It is also required to change significantly the approaches to architectural, space-planning and functional organization of theological educational institutions and introduce the advanced technologies into the process of their design, construction and engineering maintenance.

The current article is the first one to provide the detailed analysis of the problem of creating a comfortable residential space within theological educational complexes and provide real-life recommendations for its project design. The building complex of the most recently constructed Ukrainian centre of theological education at Khutorivka Street in Lviv, which houses the Lviv Theological Seminary and the theological faculty of the Ukrainian Catholic University, serves as the basis for the research.

2. The purpose of this publication
The purpose of the research is to analyze the architectural features that are common for residential space of theological educational institutions led by the Christian churches of the Byzantine rite in Ukraine, outline the major factors that prevailingly influence the formation of theological seminary residential space, highlight the modern tendencies of space-planning structure and aesthetic decoration of residential buildings, facilities and spaces of theological seminaries, and provide recommendations for designing residential spaces of theological educational institutions in Ukraine.

3. The analysis of recent researches and publications
The architecture of theological educational institutions in Ukraine has been researched by a wide range of scholars, including architects, art historians, historians, priests, and theologians. Among them, it is necessary to emphasize the contribution of scholars from the National University “Lviv Polytechnic” V. I. Proskuryakov, a PhD, and R. Z. Stotsko, a PhD candidate, [1][2][4], who study the development of the building architecture that is peculiar for theological educational institutions of the Ukrainian Greek Catholic Church. The scholarly architect O.I. Zhovkva explores the principles of architectural and space-planning decisions of the Orthodox theological educational institutions in Ukraine, as well as the architecture of the modern Ukrainian protestant educational institutions. The architecture of monasteries, which can also be defined as the centers of theological education, has been researched in the scholarly works of L. Ya. Chen. The scholar B. M. Khikhlashch researches the architectural complexes of the Baslian monasteries that were common in Podillya region back in the XVIII century. Oleksand Lesyk, a PhD and a professor of architecture, investigated the historical and architectural features of monasteries in the Volyn region.

The architecture of theological school buildings in Ukraine is inseparably connected with the sacred architecture in general. There are numerous researches dedicated to the topic. For instance, Yaroslav Taras researches the sacred wooden architecture in Ukraine of the X-XXI centuries; R. Halysyuk describes the Ukrainian church architecture and the monumental and decorative art of the foreign communities [5]; V. Church, Ya. Kravchenko delve into the role of the church ensemble in the space-planning organization of the Hutul settlements back in the XVII-XVIII centuries; O. O. Lesyk-Bodnarchuk studies the topic of the professional architectural activity within the temple construction process in the Volyn region [9]; Yu. I. Kryvoruchko investigates the theological foundations of the sacred architecture [6]; M. B. Yatskiv explores the principles of light organization in the church environment; V. I. Turchyn studies the bearers of traditions in the sacred architecture of Ukraine [10]; R. Hoidets describes the genesis of dome structure in the Ukrainian church architecture; B. S. Cherkes researches the traditions and self-identity in the contemporary Ukrainian church architecture; S. Linda works on problems of the contemporary sacred architecture development in Ukraine; Yu. Ya. Dubyk explores the sacred architecture restoration; V. Yaremchuk researches the church building process in the Western Ukraine; V. Shevchuk explores the church building constructions; M. Obinnya works on the problems of national identity in the contemporary church architecture; A. S. Ivchenko describes the most famous temples in Ukraine; the problems of theological and educational space organization were studied in the researches carried out by the scholar L. O. Shuldan.

Apart from the scholarly architects, these were historians and theologians who dedicated their researches to the questions dealing with the study of Ukrainian theological schools. Among them, we can name the following figures: M. Prystaj, who researches the history of the Lviv Greek Catholic Theological Seminary; Y. Rozhko, who delves into the history of the theological faculty of the Ukrainian Greek Catholic University. The study of the history of the Orthodox theological institutions in the Volyn region back in the X-XX centuries; I. Mytko, who describes the activity of the Ostrov Slavic, Greek and Latin academy; O. Hrytsiv, who is famous for the research of Y. Slipyi life path; M. Marusyn, who studies the process of preparing priests in Ukraine; M. Marynovych, who investigates the idea of self-identity and mission of the Ukrainian Catholic University [2]; Ye. Akser, who explores the topic of theological education and the modern epoch; M. Eterovych who describes the role of the Ukrainian Catholic University for the Church and the society; F. Diord, who focuses on the idea of the Catholic University; T. D. Khochubey, who researches the theological schools in Ukraine from the historical point of view; V. V. Vynolovych, who is famous for the study of the theological educational institutions; the father Mykola Lahohycky, who explores the topic of theological education in Ukraine, its modern state and perspectives for development; V. O. Baluhy, who answers the topical questions of religious studies and theological thought; I. L. Sidinych, who works on the processes of theological and moral education of children in the schools of the independent Ukraine; Hanna Yermak, who focuses on peculiarities of theological and moral education of youth in educational institutions of the Orthodox Church in the south of Ukraine back in XIX-early XX centuries.

4. The main part
Theological educational institutions of seminary type combine two functions, which are (1) theological-educational and (2) housing. The close integration of both functions is one of the major features of educational process in these institutions. Theological and educational processes are actively conducted not only in temples, classrooms or libraries, but in residential buildings of students as well, be-
cause theological education is a notion that goes beyond the limits of time and space [1]. Educational process in a theological seminary presupposes that students and senior priests reside on the territory of an institution. It is advisable to design such residential buildings following the style of a monastic settlement. Residential complex of a theological seminary should meet a range of theological-educational and housing requirements. Unlike secular educational institutions, where dormitories for students might be located at a few kilometers distance from the main educational space, residential buildings of a theological seminary should border directly with a temple, chapels, libraries and learning classrooms. A residential building complex should be separated from main educational spaces by other constructions or recreational areas (an administrative building, a dining hall building, a recreational and sports area, etc.).

The major factors that influence the architectural and space-planning organization of a seminary residential building are the following: (1) calculation of the required quantity of residential and complementary buildings; (2) spatial and visual connection with a seminary temple; (3) availability of an internal chapel; (4) arrangement of residential rooms for senior priests and confessors; (5) shortest routes to libraries, gyms, dining halls; (6) availability of welfare and amenity spaces [3]. Ill. 1 and ill. 2 visualize the Lviv Theological Seminary design at Khutorivka Street (architects: Ye. Datsys-hyn, Yu. Horalevych, R. Stotsko, O. Khamar, Yu. Verkhola). The project design presupposed construction of a residential building in the shape of a semi-circle behind the educational and administrative complex and the seminary temple, which would be connected with other complexes with the help of covered walkways [4]. Such a location and shape of a residential building corresponds to the main requirements for a theological seminary, which are the following: a residential building closes a part of the seminary territory and creates an inner courtyard; a seminary temple is easily viewed from bedrooms, recreational areas and a chapel; a chapel of the residential complex is located at the same axe with the temple; from the rooms of senior priests and confessors, one can easily view the inner courtyard, the temple and the territory adjacent to the temple; corridors of the residential buildings are connected with the academic complex, the sports complex and the dining hall. The chapel of the Lviv Theological Seminary residential building is designed and constructed in the center of the building at the same axe with the temple. The sanctuary is semi-circular and its stained glass windows are directed at the temple. The external part of the chapel has a semi-cylindrical shape, an access balcony, and a domed top (ill. 3). The chapel is adjacent to a large recreational hall and is separated from it by a sliding glass partition, thus, the spaces of the chapel and the hall might be united in case the necessity arises. Therefore, the option of conducting more large-scale liturgical services in the chapel of the residential building becomes possible. At the backward façade, the recreational hall is semi-cylindrical in its shape and has a terrace balcony and an exit to the outside (ill. 4). Thus, the residential building has a walk-through near the hall and the chapel in the direction of the temple and the seminary garden. Bed-sitting rooms (so called sections) for seminarians are located on the two floors of the residential buildings and are suitable for a varying quantity of students. As based on the specificity of the theological and educational process, sections for seminarians are divided into three types: (1) bed-sitting room for three persons (ill. 5); (2) bed-sitting room for two persons (ill. 6); (3) bed-sitting room for one person (ill. 7). A section for three persons is suited for seminarians of the first and second years of studying. A section for two persons is given to seminarians of the third and fourth years of studying. Meanwhile, students of the sixth year of studying and those who work on their diploma papers live in sections for one person. Bed-sitting rooms were designed at the rate of 7 m² for one seminarian (residential area) and 3-4 m² of supporting area (a corridor, a wardrobe, and a bathroom). In the design of the section for three persons, bathrooms are divided into a toilet (includes a toilet and a wash basin) and a shower. The sections for 1-2 persons are equipped with bath/shower combinations (includes a toilet, a wash basin, and a shower). Bed-sitting rooms for senior priests are designed at each floor of the Lviv Theological Seminary residential building. They are located on both sides of the chapel and have an exit to the main hall. Ill. 8 presents the interior of senior priests’ room. In the Lviv Theological Seminary residential building, right next to the sections for seminarians and senior priests, there is a living section for the rector, which includes a wardrobe, a living room, a work-room that also serves as a library, a bedroom, a kitchen, and a bathroom [2]. The Lviv Theological Seminary residential building is supposed to house 200 seminarians and, therefore, has the following sections: 16 bed-sitting sections for 3 persons; 16 bed-sitting sections for 2 persons; 20 bed-sitting sections for 1 person; one chapel; 4 bed-sitting sections for senior priests and confessors;
The specificity of the educational process and the spiritual life in a seminary determines the range of peculiarities to be considered during the process of designing a canteen. Architects dealing with the design project of the Lviv Theological Seminary divided the areas of food consumption into the following ones: a dining hall for seminarians; a dining hall for lecturers and administrative staff, and a dining hall for maintenance staff. The main dining hall for seminarians is designed as based on the following functional requirements: the whole space of a hall should be as much visually accessible as possible (i.e. columns, pillars, piers, etc., should be avoided); the satisfactorily level of the dining hall acoustics should be ensured with the help of necessary calculations of ceilings, walls, window aperture and other constructions. Ill. 11 and ill. 12 show the interior of the main dining room and the interior of the cafeteria. While designing the kitchen working spaces, architects took into account the fact that their square should be twice larger that the square of the main dining hall for seminarians. The working spaces for the kitchen of the full circle of food preparation include the following composing parts: a cold kitchen department, a hot kitchen department, a pastries manufacture department, a greens processing department, a final processing department, a bread cutting room, a canteen dish washing room, a cooking battery washing room, a food waste storeroom, a packing materials storeroom, a charging room, a chief’s office, a wardrobe with a shower, bathrooms, a room for maintenance staff, a dry-food storeroom, a clean-linen storeroom, and a dirty-linen storeroom. The cafeteria for 25-30 people is located at the ground floor of the administrative-educational building near the main entrance. Next to it, there is a room for meetings of seminarians with their parents, who can spend some time in the cafeteria. The cafeteria is served by a small final processing department with a sink.

The educational process and recreation of seminarians include an active participation in physical education and sports. Therefore, the design of the seminary residential environment presupposed the construction of a sports complex, which would be connected with the residential building with the help of a covered walkway. At the same time, the sports gym is designed not to have windows directed at the inner courtyard, where the temple is located. The outdoor sports grounds of the seminary are separated from the inner courtyard by the residential building, which serves as the noise protection. Moreover, the project design presupposed a fast and unimpeded passage to the first-aid post and the sanitarium (ill. 13).

Explication of the canteen and the cafeteria location scheme:
(1) church; (2) administrative and educational building; (3) canteen complex; (4) cafeteria; (5) residential building; (6) sports complex; (7) household building; (8) access ways; (9) main entrance.
While designing the indoor sports facilities (sports complex) of the Lviv Theological Seminary, architects adhered to the following list of rooms and the correlation between the square and the quantity of seminarians: a gym – 250 m² per 100 people (but no less than 400 m²), a locker room – 25 m² per 100 people (there should be arranged two rooms that are equal in size); a bathroom with showers – 20 m² per 100 people (there should be arranged two bathrooms with showers adjacent to the locker rooms); an instructor’s office – 10 m² per 100 people; a room for coaches – 20 m² per 100 people; a sports equipment storeroom – 25 m² per 100 people; an area with seats for spectators – 35 m² per 100 people; a cleaning inventory store – 5 m² per 100 people; an air ventilation chamber – 15 m² per 100 people.

To ensure the possibility of the full-fledged physical education and the active leisure time at the theological seminary territory, a pitch with a running track and tribunes, a basketball (and a volleyball) sports ground and two tennis courts are being constructed (ill. 13). ill. 14 depicts the main façade of the Lviv Theological Seminary building complex. Left to the main entrance, there is a canteen building complex and right to it you can see a sports complex. Both the canteen and the sports complexes are the inseparable components of the integrated residential space of a seminary and make it as much convenient, comfortable and functional as possible.

Conclusions
Architectural and space-planning organization of the residential area that is peculiar for theological educational institutions of seminary type is significantly different from dormitories of secular institutions, academies and universities. First of all, residential buildings, facilities and spaces of theological institutions are designed following the example of a monastery. The major factors that prevalingly influence the architectural and space-planning organization of the theological seminary residential space are the following: (1) calculation of the required quantity of residential and complementary buildings; (2) spatial and visual connection with a seminary temple; (3) availability of an internal chapel; (4) arrangement of residential rooms for senior priests and confessors; (5) shortest routes to libraries, gyms, dining halls; (6) availability of welfare and amenity spaces. The conducted research has proven that the residential environment of the Lviv Theological Seminary at Khutorivka Street in Lviv, fully corresponds to the modern requirements that are set for the organization of education, recreation and accommodation and can serve as an example to be followed during the process of designing new theological and educational complexes in Ukraine.

BIBLIOGRAPHY