Tendencies of the Christian educational institutions
architecture development as based on the example of the Catholic University of America in Washington

Abstract
The article analyzes the peculiarities of architectural and space-planning organization of campuses in Christian higher educational institutions as based on the example of the Catholic University of America in Washington, depicts the history of the university establishment process, outlines the development of its architecture within the perspectives of time and space, highlights the major tendencies that define the formation of architecture of buildings, facilities and spaces in contemporary higher educational institutions, which carry out their educational and scientific activities under the guidance of the Christian Catholic Church ideology.

Keywords: Catholic Church, education, science, architecture, temple, university, campus.

1. Introduction
The contemporary higher education is dynamic and flexible in its nature and can be characterized by an active implementation of brand-new educational methods and achievements of advanced informational technologies. Nonetheless, in most cases, education lacks a clear-cut ideological definition. While referring to ideology, we mean the spiritual ideology. The young generation of students, who live in the age of world globalization, face a lot of challenges and life temptations. Finding the right direction to go and figuring out the place to stay are the most important steps in the stormy sea of modern ideologies and worldviews. Having no well-established spiritual principles, students can easily fall under the influence of the contemporary ideological tendencies and pseudosciences. The absence of a steady spiritual core leads to the gradual loosening of consciousness and, as a result, degradation of a personality. The problem is more than topical in the situation when the informational space is oversaturated. The majority of young people look for the education which would go beyond the task of making them highly qualified specialists, but also take into account the everlasting Christian values and the Christian worldview. At the dawn of education, these were theological schools, seminaries, academies and universities that played the role of a cradle of education and science [2]. The most prominent examples of Christian universities located around the globe provide the justification for the assumption that theological-humanitarian and theological and natural sciences higher education is not a relic of the past, but an effective way to the genuine high-quality education and the advanced science. The larger is the number of such educational institutions, the sooner will come the moment of finding the common consent and resolving the global worldview and ideological deadlocks. The establishment of new theological-humanitarian and theological and natural sciences educational institutions is impossible without having a proper organization of the educational process and, what is more, without organization of the corresponding architectural environment, which includes the complex of buildings, facilities, spaces and territories. The architectural and space-planning organization of campuses in Christian universities is considerably different from the space-planning structure of purely secular higher educational establishments [3]. Recently, there have been conducted a lot of researches on the issue of
2. The aim of the publication

The aim of the publication is to analyze the characteristic features of the building complex architecture of the Catholic University of America (Washington, USA), which is a typical theological-secular higher educational institution, established by the Catholic Church in the USA, and to define the major tendencies of buildings, facilities, spaces and territories architecture development in theological-humanitarian and theological and natural sciences higher educational institutions.

3. The analysis of recent researches and publications

The architecture development of theological and theological-secular educational institutions has been researched by a wide range of Ukrainian scholars, architects, art historians, and historians. Among them, it is necessary to emphasize the study of O. N. Shevchuk, a PhD candidate [1, 2, 3, 4, 5], and O. I. Zhovkva, a PhD candidate, who have researched the architecture development of theological educational institutions of the Ukrainian Catholic University, Catholic Church and the Orthodox Churches. The works of scholars and architects focus on the following aspects: L. Shuldian studies the topic of educational institutions architecture [14]; O. Lesyk, Yu. V. Idak, B. M. Khikhlib, L. Ya. Chen analyze the architecture of monasteries, which together with other theological schools have always been the centers of theological education. Apart from that, R. Halyshych in his research describes the Ukrainian church architecture and the monumental and decorative art of the foreign communities, Tarasov T. researches the sacred wooden architecture in Ukraine of the X-XII c., O. O. Lesyk-Bodnarchuk researches the topic of the professional architectural activity within the temple construction process in the Volyn region, H. Yurchyshyn studies the treasuries of the sacred art in Ukraine of the XV-XII c., V. I. Turchyn analyzes the architectural and historical aspects of the sacred architecture of Ukraine [9], B. S. Cherkesh 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. Yaremch researches the church building process in the Western Ukraine, H. Shevchuk explores the building constructions of sacred objects, A. S. Ivchenko describes the most famous temples in Ukraine.

Having analyzed the current stage of research in the area of the Ukrainian theological school building architecture, we would like to emphasize that the topic has been investigated in details only by a limited number of architects and scholars. Thus, its coverage lacks profoundness and calls for the further study.

4. The main part

The necessity of having a higher theological institution in the United States of America has been repeatedly discussed at all levels of the US officials and the Catholic Church governance. At the Second Plenary Council of Catholic Bishops in Baltimore in 1886, it was decided to establish the Catholic University of America (CUA). On April 10, 1887, Pope Leo XIII issued an official permission to establish the university, the primary aim of which was to strengthen the positions of the Catholic Church in the USA. The university, located on the territory of 27 hectares, was opened in 1887. The territory bordered with the old military barracks. The educational process in the university started in November, 1889. At first, 22 students and 3 faculty members resided by the old academic, residential and administrative buildings. The CUA academic campus is located in a picturesque residential area of Brookland at Michigan Ave, at 5 km distance from the Capitol building (ill. 1). Today, the total area of the campus is equal to 78 hectares. The main architectural dominantly of the Catholic University of America is the Basilica of the Immaculate Conception, designed in the Roman style (ill. 2, 3, 4). In front of the Basilica through the green lawn, there is a building of the old library, designed in the traditional classical style (ill. 5). The lawn is the center of the university campus. It is surrounded by the new residential buildings. Together with the Basilica and the library, these old buildings create the unique ensemble of the traditional North American architecture of the XIX – early XX c. (ill. 6). In the CUA academic campus, there is also the Palace of Cardinals (ill. 6). The building of gray stone reminds the style of the Mediev Europe fortifications. The style of the main university building is the academic style of the Basilica, often used in the educational institutions not only in America, but also in Europe and Ukraine (Ukrainian Catholic University in Lviv) [2].

Academic campus of the Catholic University of America combines the traditional Christian values, the century-long history of the Catholic University of America, the extensive use of metal, glass and composite materials. Such space-planning and stylistic solutions appeal to young students, who eagerly spend here a lot of time while studying and having rest. The spacious lawn in front of the center is the common place for the scientific seminars, conferences, exhibitions, lectures and discussions, as well as for the concerts, theatre group performances and other events. Next to the Edward J. Prybyla University Center, there is the academic building of the center for architecture studies. It is designed in a minimalist style with simple geometric space-planning organization and semi-cylindrical roof. This functional building, which lacks any exaggerated decor, is comfortable for the creative workshops.

The new residential buildings of the universities are simple in terms of their space-planning organization and architectural outlook, but the functional solutions of the interior are well thought through. The spacious lawns and buildings provide the most comfortable conditions of students’ life, studying and recreation activities. The architectural and space-planning organization, as well as the stylistic and decorative finishing of the buildings, represents the unique ensemble of the architectural and space-planning aspects of the CUA academic campus, which is a typical higher educational institution not only in America, but also in Europe and Ukraine (Ukrainian Catholic University in Lviv) [2].

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a square or a recreational green territory.

Temple is the dominant building of the university campus and can be located in the following way: (a) on the central axe of the complex right at the main street; (b) on the central axe at the back of the complex; (c) in the geometric center of the complex; (d) aside from the central axe right at the main street; (e) aside from the central axe at the back of the complex.

Apart from the main temple, there are other chapels settled in the academic and residential buildings and the adjacent spaces.

University library building is visually and transitionally connected with the temple and creates one of the main axes of the complex.

Academic buildings are located around the temple and their main façades are turned to it. Administrative building is located at the main street near to the central entrance to the complex territory. Laboratory buildings are located at the periphery and have good transport connections with the streets of metropolis.

Residential buildings are located in green areas of the academic campus and ensure logistics with the academic buildings, library, food production unit and household unit. Usually, architects, while designing the complex, ensure visual connection of the residential buildings with the temple building.

All buildings of the academic campus should have well-developed entrances, turn-around areas and parking lots.

From the viewpoint of the architectural and space-planning organization of its campus, the Catholic University of America belongs to the theological-secular educational institutions of the open type [1]. The university campus territory does not have any fence, the buildings are located freely and do not create a closed structure; the temple is available for the city parishioners. This type of architectural and space-planning organization of campuses is common for the Catholic universities and reflects the theological and educational ideology of the Catholic Church, which is focused on the idea of openness, the ecumenical dialogue and the priority of human values [7]. For many decades, the successful educational and scientific activities of the Catholic University of America have been proving the continuity of the Christian worldview and the scientific-educational advance of the mankind, and the inseparability of the traditional knowledge and the innovative ideas. The complex architecture by itself emphasizes the connection of spiritual and material, traditional and modern, eternal and unexplored. The connection of old building styles with the modern building design does not trigger the feeling of dissonance, but underlines the continuity of knowledge and experience, the constant flow of time and the human desire of reaching new horizons in education and science.

Conclusions

Theological education used to be and currently remains the foundation of secular education, which is based on the principles of human values and the Christian worldview. Together with the purely theological and the purely secular higher educational institutions, there exist the theological-humanitarian and the theological and natural sciences universities, which function as the symbiosis of religious and secular education. The Catholic University of America is the bright example of this type of universities. The theological and educational ideology of the university is reflected in the architectural and space-planning organization of its academic cam-
of the academic campus and ensure logistics with academic buildings, library, food production unit and household unit. All buildings of the academic campus should have well-developed entrances, turn-around areas and parking lots.

Architectural and space-planning organization of the Catholic University of America academic campus is common for the Catholic universities and reflects the theological and educational ideology of the Catholic Church, which is focused on the idea of openness, the ecumenical dialogue and the priority of human values.

BIBLIOGRAPHY:

SOURCES AND AUTHORS OF IMAGES USED IN THE ARTICLE
ill. 1. Panorama of the Catholic University of America academic campus // Catholic University of America [Electronic Resource]. – Mode of access: URL: https://www.cua.edu/ – Title from the screen.
ill. 2. Basilica main façade // Catholic University of America [Electronic Resource]. – Mode of access: URL: https://www.cua.edu/ – Title from the screen.
ill. 3. Basilica of the National Shrine of the Immaculate Conception flank façade // Catholic University of America [Electronic Resource]. – Mode of access: URL: https://www.cua.edu/ – Title from the screen.
ill. 5. University library // Catholic University of America [Electronic Resource]. – Mode of access: URL: https://www.cua.edu/ – Title from the screen.
ill. 7(a). Panorama of the Center // Catholic University of America [Electronic Resource]. – Mode of access: URL: https://www.cua.edu/ – Title from the screen.
ill. 7(b). Main façade // Catholic University of America [Electronic Resource]. – Mode of access: URL: https://www.cua.edu/ – Title from the screen.
ill. 7(c). Interior fragment // Catholic University of America [Electronic Resource]. – Mode of access: URL: https://www.cua.edu/ – Title from the screen.