The article examines the structure of professional training of prospective engineers in higher technical educational institutions in the context of implementation of the value approach. The analysis of scientific views on the problem of the implementation of the value approach in the training of technical specialists proved the strengthening of the value orientation of the educational process. The article reveals the relevance of the search for educational paradigms focused on the training of highly qualified specialists in the technical sphere, bearers of national culture, and leaders of humanistic values.

We characterize modern trends in the education of technical specialists from the point of view of the formation of a professional and valuable attitude towards the engineering profession. The value approach is the basis of the training of prospective engineers, which is based on universal, national, cultural, and professional values. The essence, content, and structure of professional training of prospective engineers with the aim of forming professional value orientations are highlighted. Professional training of engineering specialists is considered as a process of integration of fundamental natural-scientific, humanitarian, and technical knowledge with the ability to carry out specific developments, ensuring their practical implementation in the production process.

Value-oriented training of prospective engineers in higher technical educational institutions acts as a tool for value transformations of the individual and a means of making relevant decisions. The professional and value orientations of the prospective engineering specialist, which are formed in the process of humanitarian, engineering-theoretical, technological, practical, managerial, scientific-research, economic, economic-legal, and environmental components of training, are substantiated. The article proves the effectiveness of the harmonious combination and development of the researched training components in order to prepare a universal educated specialist in the technical field, a highly moral, spiritually developed, active, conscious citizen of his state.

**Keywords:** higher technical educational institutions, professional training, prospective specialists of the engineering profile, value approach, personal values, professional value orientations.

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ЦІННИСНИЙ ПІДХІД ДО ПРОФЕСІЙНОЇ ПІДГОТОВКИ МАЙБУТНІХ ІНЖЕНЕРІВ

Н. О. Романчук

У статті досліджується структура професійної підготовки майбутніх інженерів у вищих технічних закладах освіти у контексті реалізації ціннісного підходу. Здійснений аналіз наукових поглядів на проблему реалізації ціннісного підходу у підготовці фахівців технічного профілю засвідчив посилення ціннісної спрямованості освітнього процесу. Показано актуальність пошуку освітньо-наукових парадигм, орієнтованих на підготовку висококваліфікованих фахівців технічної сфери, носіїв національної культури, провідників гуманістичних цінностей.

Характеризуються сучасні тенденції в освіті фахівців технічного профілю з точки зору формування професійно-ціннісного становлення до професії інженера. Ціннісний підхід покладено в основу підготовки майбутніх інженерів, яка спрямовується на загальнолюдських, національних, культурних і професійних цінностях. Висвітлено сутність, зміст, структуру професійної підготовки майбутніх інженерів з метою формування професійно-ціннісних орієнтацій. Професійна підготовка фахівців інженерного профілю розглядається як процес інтеграції фундаментальних природничо-наукових, гуманітарних, технічних знань з уміннями здійснювати конкретні розробки, забезпечуючи їх практичне втілення у виробничому процесі.

Ціннісно-орієнтована підготовка майбутніх інженерів у вищих технічних закладах освіти виступає інструментом ціннісних трансформацій особистості та засобом прийняття обґрунтованих рішень. Обґрунтовуються професійно-ціннісні орієнтації майбутнього інженерного фахівця, які формуються в процесі гуманітарної, інженерно-теоретичної, технологічної, практичної, управлінської, науково-дослідницької, економічної, господарсько-правової та екологічної складових підготовки. Доводиться ефективність органічного поєднання та розвитку досліджених компонентів з метою підготовки всебічно обізнаного фахівця технічної сфери, високо морального, духовно розвиненого, активного, свідомого громадянина своєї держави.

Ключові слова: заклади вищої технічної освіти, професійна підготовка, майбутні фахівці інженерного профілю, ціннісний підхід, особистісні цінності, професійно-ціннісні орієнтації.

Introduction of the issue. Modern socio-economic realities, the need to rebuild and modernize industrial production actualize the problem of training highly qualified, competent, competitive engineering specialists who are responsible and nationally conscious leaders, capable of effective teamwork at the level of European and world standards. Therefore, the development of the spiritual and intellectual capabilities of society aimed at the social, economic, and cultural revival of the state is a relevant current strategy for the performance of higher technical educational institutions regarding the training of prospective specialists of the engineering profile.

State educational reforms in Ukraine are aimed at building the future of the country, oriented towards the European and global educational space. Such transformations cannot be pursued in isolation from the system of moral values and cultural orientations, which requires a strategically

Постановка проблеми. Сучасні соціально-економічні реалії, необхідність відбудови та модернізації промислово-виробничого простору актуалізують проблему підготовки висококваліфікованих, компетентних, конкурентоспроможних інженерних фахівців, які є відповідальними та національно свідомими керівниками, здатними до ефективної діяльності в трудовому колективі на рівні європейських та сітових стандартів. Відтак, актуальною стратегією діяльності вищих технічних навчальних закладів щодо підготовки майбутніх фахівців інженерного профілю є розвиток духовних, інтелектуальних сил суспільства, спрямованих на соціальне, економічне, культурне відродження держави.

Державні реформи у сфері освіти в Україні спрямовані на розбудову майбутнього країни, орієнтованої на європейський та сітовий особистій простір. Такі трансформації не можуть відбуватися
defined axiological orientation of the educational process and consideration of both current realities and perspectives. The high-priority values for Ukraine have historically been and remain the following: values of humanism, human dignity, patriotism, democracy, social initiative and responsibility, national self-awareness [3: 439].

Professional training of prospective engineers in higher technical educational institutions is an important stage in the formation of their personality and is characterized not only by mastering professionally important knowledge, skills, and abilities, but also by significant changes in the system of their value orientations. At the time when society appeals to universal values, the priority task of training prospective engineers in higher technical educational institutions is the formation of their professional and value orientations, which ensure the stability of both the individual and society as a whole.

**Current state of the issue.** Value issues are studied both in the works of foreign scientists (M. Weber, A. Maslow, G. Allport, T. Parsons, K. Rogers, V. Frankl, E. Fromm, etc.), and native ones (V. Andrushchenko, I. Beh, T. Butkivska, M. Boryshevskyi, T. Kyriienko, V. Klymenko, N. Logvinova, S. Maksimenko, O. Svtichnyi, O. Sukhomlynska, O. Yatsenko, etc.). In the modern pedagogical discourse, the patterns of the functioning and development of the value-meaningful sphere of the individual are processed. According to the conclusions of the researchers, it is the student years that are important in the formation of value orientations of the individual, which form an axis of consciousness on the basis of values, which determines the level of stability and consistency of actions, the orientation of interests and needs. Therefore, for modern professional education, it becomes crucial to strengthen the value orientation of the training of prospective specialists.

Value orientations of the individual help to distinguish the positive from the negative both in the internal and external world, and therefore are the basis for solving the problem of choice. The formation of value orientations, according to I. Beh, is related to the motivational sphere of the individual.
Only as a result of upbringing, which is based on "I-motivation", that is, the core of the personality, stable self-worth moral and spiritual orientations of the individual can be formed [2].

The issues of the content of engineering education, theoretical provisions, and features of the training of prospective technical specialists in higher technical educational institutions are investigated by S. Artyuht, O. Baranets, N. Bryukhanova, P. Darvall, E. Zeyer, O. Kovalenko, Zh. Martin, A. Meletsinek, A. Nizovtsev, Yu. Pazynich, N. Tymkiv, and others. Modern pedagogical technologies of professional training of prospective engineers are investigated by O. Baranets, K. Gomoyunov, O. Padalka, S. Sysoeva; the organization of independent educational activities became the subject of study by I. Bendera, N. Golub, and V. Tyurina. The researchers focus on the multifaceted nature of the profession of an engineer, who is expected to not only make the right technical decisions, design and adjust the operation of devices, but also implement their own ideas in practice, be a researcher, organize the teamwork, and be a leader.

Outline of unresolved issues brought up in the article. Despite the increasing intensity of research into the theoretical and methodological foundations of the education of prospective engineers, the problem of implementing professional value orientations in the process of their training in higher technical educational institutions remains relevant and disputable.

Aim of research. Current state of the system of higher technical education, oriented to the European and global space, requires the professional development and growth of the prospective engineer not only as a highly qualified specialist in the technical field, but also as a bearer of socio-cultural values. Therefore, we see the purpose of our article in clarifying the structure of the professional training of prospective engineering specialists, clarifying the concept of professional and value orientation, and researching the specifics and pedagogical foundations of their formation in the process of training in higher technical educational institutions.

Results and discussion. The current stage of the development of the national system of
higher technical education is characterized by deep processes that lead to qualitative changes in the training of prospective engineering professionals based on humanistic basis and principles. In the conditions of globalization, digitalization, and updating of industrial production technologies, the effective functioning of an engineering specialist is possible provided that universal, national, professionally important value orientations are formed, which will ensure the stability of their personal and professional development, social mobility, creative personal position in professional activities, flexibility to transformations in industrial industry. These factors determine a transition from a traditional, knowledge-oriented paradigm of education to a value-oriented paradigm that meets the current demands and development needs of both society and prospective engineering specialists.

The definition of value as a worldview principle determines the ways of perception and evaluation of reality by the individual, the concept of the formation of meaning and understanding in the process of communication. Value as a worldview principle means the procedure of establishing a logical emphasis, differentiating the essential and important from the changing and unstable processes or phenomena. Values are the cause and purpose of active human actions; therefore, they make up the motivational sphere of the individual [8]. The idea of values as an evolutionary mechanism of transformation into a single standard for evaluating objects and processes, determining the criteria for their relationship with each other, with a certain standard, unites society and forms public opinion. The phenomenon of value also means individual moral and emotional satisfaction from the maintaining of valuable ideals and principles.

Adoption of universal and professional values is the basis of the implementation of the value approach, which is one of the main methodological principles of training prospective engineering professionals in higher technical educational institutions [7]. The implementation of a value approach in the process of training prospective engineers involves the formation of a system of value orientations that set the general orientation of the technical and vocational training. This approach characterizes the values of processes, which provide to the different stages of training and professional activities based on the humanistic principles and principles. In the conditions of globalization, digitalization, and production technologies updating, the effective functioning of an engineering specialist is possible provided that universal, national, professionally important value orientations are formed, which will ensure the stability of their personal and professional development, social mobility, creative personal position in professional activities, and flexibility to transformations in industrial industry. These factors determine a transition from a traditional, knowledge-oriented paradigm of education to a value-oriented paradigm that meets the current demands and development needs of both society and prospective engineering specialists.
interests, needs, aspirations of the individual, a clear hierarchy of individual preferences, a motivational program of activities that determines the overall level of readiness of a prospective specialist in the technical sphere to implement life plans and professional strategies.

Formation and pursuing of social and public values of equality, justice, national dignity, moral and ethical values of decency, honesty, conscience, honor, tolerance, mutual assistance, benevolence, responsibility in relationships as a result form value orientations of the personality of the prospective specialist in the technical sphere.

Value orientations are the basis of the motivational and value sphere of the personality of prospective engineers, reflect the fact of their inclusion in social relations, which is characterized by the unity of self-regulation and awareness of personal and professional self-development. The professional and value orientations of prospective graduates of higher technical educational institutions are currently an indicator of their readiness for professional activity and an active role in public life.

The profession of an engineer, by its objective and communicative essence, combines innovative ideas, interdisciplinary knowledge, and features of the environment with individual capabilities of synthesizing information for the development of a new objective reality. Given the modern requirements for specialists in the technical field, the prospective engineer must be a designer, an organizer of the teamwork; developer of scientific and technical documentation, technical and technological projects, plans and regulations; the manager of the production process, the developer of measures to improve production efficiency and environmental protection. Other important professional and valuable characteristics of engineering specialists include the ability to use the means of production, management, practical, constructive-technological, research activities; the ability to introduce the achievements of modern science and production into the production process; the ability to use regulatory and reference, ієрархію індивідуальних переваг, мотиваційну програму діяльності, що визначає в цілому рівень готовності майбутнього фахівця технічної сфери до реалізації життєвих планів та професійних стратегій.

Формування й дотримання соціально-громадських цінностей рівності, справедливості, національної гідності; морально-етичних цінностей порядності, чесності, совісті, честі, толерантності, взаємодопомоги, доброзичливості, відповідальності у стосунках у результаті утворюють ціннісні орієнтації особистості майбутнього фахівця технічної сфери.

Ціннісні орієнтації є основою мотиваційно-ціннісної сфери особистості майбутніх інженерів, відображають факт їх включення у соціальні зв’язки, що характеризується єдністю саморегуляції й усвідомлення особистісного, професійного саморозвитку. Професійно-ціннісні орієнтації майбутніх випускників закладів вищої технічної освіти виступають наразі індикатором їх готовності до майбутньої професійної діяльності та активної ролі у суспільному житті.

Професія інженера за своєю предметною і комунікативною сутністю поєднує інноваційні уявлення, міждисциплінарні знання та ознаки середовища із власними особистісними можливостями синтезу інформації для розробки нової предметної реальності. З огляду на сучасні вимоги до фахівців технічної сфери, майбутній інженер має бути проектантом, організатором роботи колективу; розробником науково-технічної документації, техніко-технологічних проектів, планів і регламентів; керівником виробничого процесу, розробником заходів підвищення ефективності виробництва та охорони навколишнього середовища. До інших важливих професійно-ціннісних характеристик інженерних фахівців відносяться: уміння користуватися засобами виробничої, управлінської, практичної, конструктивно-технологічної, дослідницької діяльності; уміння впроваджувати у виробничий процес досягнення сучасної науки і виробництва; вміння використовувати нормативно-довідкову, науково-технічну, виробничу інформацію [4].
The field of application of engineering knowledge is the processes of cognition, development, operation, development, communication and transformation of technical means and technologies for various industries and spheres of human activity. The structuring of the process of engineering training corresponds to a certain period of socio-economic development of society, which is currently characterized by increased attention to personality and value attitudes, which is due to the trend of increasing the importance of individual in the history of society. Therefore, the transformations that take place in the process of professional training of prospective engineering specialists should be related to the orientation of human and life values.

The dominant role in these transformational processes is given to the humanization of professional training: from natural and technical disciplines to philosophy, sociology, law, etc. According to this approach, professional training includes the following aspects: approval of the concept of humanistic education; the introduction of the irrational component of human spirituality – universal scientific knowledge; ensuring people-centeredness of disciplines of technical profile [1].

We consider the professional training of engineering workers in higher technical educational institutions as a specifically organized psychological and pedagogical process, which comprises the development of professionally important personality qualities of the prospective specialist in the technical sphere; and aimed at assimilation of professionally necessary knowledge, mastery of important skills of organization of technological processes of industrial production, work skills of a leader of a team of employees; and has the goal of forming a complete personality of a competent specialist in the technical field. The effectiveness of training is ensured by orientation to universal, spiritual, national values; on creative activity in the work team; for self-realization and self-development both their and subordinates in the process of organizing production, scientific and technical, production information [4].

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which requires the adoption of a value-based approach to the training of prospective engineers.

V. Petruk emphasizes the importance of the specialist’s professional and value orientations, motives for his activity, general culture, style of interaction with others, awareness of the world around him and himself in the world, the value attitude of the individual of the prospective engineer to solving professional tasks, who defines a competent specialist through his willingness to mobilize his own resources, organized into a system of knowledge, skills, abilities and personal qualities, necessary for the effective performance of professional tasks in both typical and non-standard situations [5].

Therefore, we define professional value orientations as a basic structural component of the general professional training of an engineering specialist due to his readiness for professional activity according to high moral and spiritual norms and values.

The peculiarity of the professional activity of engineering specialists is related to the solution of complex scientific, technical, organizational, management tasks, which determines the need for prospective engineers to develop skills and abilities to predict the consequences (social, economic, environmental) of their own decisions. The professionalism of a modern specialist in the technical field is determined by his training in the industry, namely: organizational and managerial, design and construction, operational and technological, and scientific and research. Other important components of the professional training of prospective specialists in the technical field are psychological, managerial, economic, and legal [6].

Based on the study of the theoretical foundations and practical experience of the organization of professional training of prospective engineers in higher technical educational institutions, we determine the following organizational and content components of their training: humanitarian, engineering-theoretical, technological, practical, managerial, scientific-research, economic, economic-legal and environmental training. The
implementation of the specified components of training involves the formation of prospective engineering professionals with appropriate professional and value orientations for activity in the field of industrial production.

The characterized components of the professional training of the prospective engineer are attributed to the system of values of the general culture of the individual – legal, psychological, pedagogical, economic, ecological, aesthetic. Therefore, the goal of humanitarian training of a student of a higher technical educational institution is the formation of an intelligent specialist in the technical field who respects the rights and opinions of the people around him.

**Humanitarian training** involves the mastering of prospective engineering specialists with the acquisitions of philosophical, psychological, and pedagogical sciences about the regularities of the functioning and development of the individual, the formation of his role, his place in the national and world cultural environments. Humanitarian training involves the formation of basic value orientations, such as goodness, nobility, wisdom. Love for the Motherland, people, respect for national symbols, traditions, and language are necessary characteristics of a holistic, value-oriented personality of an engineering specialist. We also define national dignity, honesty and decency, observance of socially significant and professionally important norms of behavior as important professional values. The general culture of the engineer, the culture of appearance, the culture of communication and behavior are also significant.

Value orientations are directly related to activity, act as its update and regulator. Therefore, it is important in the process of **engineering-theoretical training** of prospective engineers, which involves the formation of professional knowledge, skills, and abilities based on knowledge of laws, principles, and models of the industry, to form a valuable attitude to the engineering profession, conscientiousness in the performance of professional duties, responsibility for one’s actions and actions

відповідних професійно-ціннісних орієнтацій майбутньої діяльності в галузі промислової виробництва.

Охарактеризовані компоненти професійної підготовки майбутнього інженера віднесені до системи цінностей загальної культури особистості – правової, психологічної, педагогічної, економічної, екологічної, естетичної. Відтак, метою гуманітарної підготовки студента закладу вищої технічної освіти є формування інтелігентного фахівця технічної сфери, який поважає права і думку оточуючих людей.

**Гуманітарна підготовка** передбачає оволодіння майбутніми інженерними фахівцями надбаннями філософської, психолого-педагогічної наук про закономірності функціонування та розвитку особистості, становлення її ролі, місця в національному, світовому культурному середовищах. Гуманітарна підготовка передбачає формування базових ціннісних орієнтацій, таких як добро, благородство, мудрість. Любов до Батьківщини, народу, повага до національної символіки, традицій, мови є необхідними характеристиками цілісної, ціннісно-орієнтованої особистості інженерного фахівця. Також важливими професійними цінностями визначаємо національну гідність, чесність та порядність, дотримання суспільно значущих та професійно важливих норм поведінки. Значущими також є загальна культура інженера, культура зовнішнього вигляду, культура спілкування і поведінки.

Ціннісні орієнтації безпосередньо пов’язані з діяльністю, виступають її оновою і регулятором. Тому важливо в процесі **інженерно-теоретичної підготовки** майбутніх інженерів, яка передбачає формування професійних знань, умінь, навичок на основі пізнання закономірностей, принципів та моделей галузі виробництва, формувати ціннісне ставлення до професії інженера, сумлінність у виконанні професійних обов’язків, відповідальність за свої дії та вчинки перед собою, колегами, державою. Набуття майбутнім інженером професійно-ціннісних орієнтацій є важливим не лише для виробництва, а й для самого фахівця, так як допомагають у
in front of oneself, colleagues, the state. The prospective engineer’s acquisition of professional value orientations is important not only for production, but also for the specialist himself, as they help in making the right decisions.

In the process of **technological training**, which involves mastering by students of higher technical educational institutions the technologies of industrial processing of materials and products, such important professional value orientations as cooperation, trust, mutual assistance, self-criticism of oneself and the results of one’s work, demanding oneself, initiative and self-confidence. **Practical training** of prospective engineers involves mastering the skills of implementing technological processes of industrial production of high-quality goods. Independence in decision-making and responsibility for the results of one’s work; industriousness aimed at satisfying one’s own requests and needs, the family, the state - these are the value orientations that are formed during the practical training of prospective engineering specialists.

**Management training** involves the formation of culture and management skills of the workforce; the ability to formulate and solve strategic and tactical tasks of industrial production; skills of the social organization of work, which meets modern market requirements based on the competition of technical ideas, high-quality goods, and services. The goal of management training is the formation of such motivations for activity, features, and qualities of a person, which are characteristic of an educated, creative, highly moral person and ensure the individual formation of the spiritual values of an engineer. Professional value orientations that must be formed in the prospective engineer as an employee and head of a team of employees are: humanity, respectful attitude towards others, benevolence in relations in the work team, reasonable demands, justice, mutual understanding, compassion, the ability to come to the rescue.

In the process of **scientific-research training** of prospective engineering specialists, they are involved in fundamental research in the field of
modern industrial production, mastering the skills to apply innovations in engineering science during professional activity. Therefore, important professional and value orientations, which are formed in students of engineering specialties in the course of their research activities, are the scientific culture of the prospective engineer, respect for the results of scientists’ work; integrity, decency in applying the results of scientific research of colleagues.

The dynamics of the economic and social relations of the country and the world dictates the need for engineering specialists to have knowledge not only in the specialized field, but also to understand the laws and principles of the functioning of economic systems; having the skills and abilities to integrate economic principles and economic thinking into one’s own professional activity. Mastering such knowledge, skills, and abilities enables specialists in the technical field to take into account economic factors in their work and predict the economic consequences of their own activities. Economic training of prospective engineers ensures the formation of their economic culture of professional activity in the conditions of a market economy since the economic feasibility of production depends on the engineering decision of the technical worker. The system of values that should be formed during the implementation of economic training includes the economic literacy of the professional engineering specialist, his economic culture, rational economic behavior.

The system of state legal regulations, laws, rules is the basis of the economic-legal training of the prospective engineer, during which the legal and legal foundations of his professional activity are formed. Legal knowledge and beliefs, which are guided by a specialist in the technical field in the course of his professional activity, are the basis of law in a modern civilized society, the foundation of the formation of a legal state. Appropriate professional value orientations include: respect for private property rights; lawful behavior; compliance with the legality of actions and deeds of both one’s own and
those of one’s subordinates.

In the process of ecological training of specialists of the "man-machine-environment" system, knowledge about the influence of production technologies and technical systems on the surrounding world and human health takes place. Professionally important values that are formed in the process of ecological training of prospective engineers are harmony with nature, respectful attitude to the natural resources of the state, responsibility for the ecological consequences of the production process. Ecological training of prospective engineers should ensure the recognition of the values of life, health, and environmental benefits as priority universal human values.

The preparation of a comprehensively knowledgeable specialist in the technical field, a highly moral, spiritually developed, active, conscious citizen of his country is ensured by an organic combination and development of the researched training components. The structure of value-oriented professional training of prospective engineering specialists is given in Table 1.

Table 1. Structure of value-oriented professional training of prospective engineers

<table>
<thead>
<tr>
<th>Components of training</th>
<th>Meaning of component</th>
<th>Professional value orientations</th>
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<tbody>
<tr>
<td>Humanitarian</td>
<td>Philosophical, psychological, and pedagogical knowledge of the regularities of the functioning and development of the personality, the formation of its role, its place in the national and world cultural environments.</td>
<td>Goodness, nobility, wisdom; love for the Motherland, the people; respect for national symbols, traditions, language; respect for human rights and freedoms, national dignity, honesty and decency, compliance with norms of behavior</td>
</tr>
<tr>
<td>Engineering-theoretical</td>
<td>Mastering engineering knowledge based on knowledge of principles, patterns, and models of the production industry</td>
<td>Valuable attitude to the engineering profession, conscientiousness in the performance of professional duties, responsibility for one’s actions and deeds before oneself, colleagues, and the state</td>
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<td>-------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Technological</td>
<td>Mastering knowledge of technologies of industrial processing of materials and products</td>
<td>Cooperation, trust, mutual assistance, self-criticism of oneself and the results of one’s work, demanding oneself, initiative and self-confidence</td>
</tr>
<tr>
<td>Practical</td>
<td>Mastering the skills of practical implementation of technological processes of industrial production of high-quality goods</td>
<td>Independence in decision-making and responsibility for the results of one’s work; industriousness aimed at satisfying one’s own requests and needs of the family and the state</td>
</tr>
<tr>
<td>Managerial</td>
<td>Formation of culture and management skills of the labor team; the ability to formulate and solve strategic and tactical production tasks; skills of social organization of work</td>
<td>Humanity, respectful attitude towards others; benevolence in team relations; reasonable demands, justice, mutual understanding, compassion, the ability to help</td>
</tr>
<tr>
<td>Scientific-research</td>
<td>Involvement of students in fundamental research in the field of modern industrial production, mastering the skills to apply innovations of engineering science in the course of professional activities</td>
<td>Scientific culture of the prospective engineer, respect for the results of scientists’ work; integrity, decency in applying the results of scientific research of colleagues</td>
</tr>
<tr>
<td>Economic</td>
<td>Mastering the knowledge of laws and principles of functioning of economic systems; skills and abilities to integrate economic principles and economic thinking into professional activity</td>
<td>Economic literacy, economic culture, rational economic behavior</td>
</tr>
<tr>
<td>Economic-legal</td>
<td>Mastering the knowledge of state legal regulations, laws, rules, which constitute the legal and legal basis of the engineer’s activity</td>
<td>Observance of private property rights; lawful behavior; compliance with the legality of actions and deeds of both one’s own and those of one’s subordinates</td>
</tr>
</tbody>
</table>
Ecological

Mastering the knowledge about the influence of production technologies and technical systems on the surrounding world and human health

Harmony with nature, respectful attitude to the state’s natural resources, responsibility for the environmental consequences of the production process

The result of the implementation of the components of professional value training of prospective engineers is the formed ability to understand, respect and appreciate human dignity, fundamental rights and freedoms of people, cultural diversity, democratic social principles. The formation of professional value orientations, which ensure the effectiveness of the innovative and creative activity of an engineer in social, economic, and cultural contexts, occurs through the awareness and acceptance by prospective engineering specialists of universal and professionally important ideals and values. In the process of professional formation of a specialist in the technical sphere, values are supplemented, acquiring personal significance.

Conclusions and research perspectives. Therefore, the training of a highly qualified, competent specialist in the engineering field as a result of training in a higher technical educational institution involves the orientation of the educational process to the development of students not only of key professionally important competencies, but also to the formation of value attitudes in order to effectively solve tasks in the course of innovative activities in the field of industrial production. This requires a change in value orientations in the education of prospective engineers, namely giving priority to the values of freedom, equality, solidarity, tolerance, respect for nature and responsibility.

The professionalism and success of the prospective specialist in the engineering profile, as evidenced by the results of our research, are determined by the level of professional education, experience, individual abilities, a motivated desire for continuous self-education and self-development, a creative and professional-valued attitude to professional activity. Value orientations are an important...
characteristic of the prospective engineer’s personality, and their formation is one of the tasks of professional training of engineers in higher technical educational institutions. The effectiveness of the professional activity of prospective specialists in the technical sphere is ensured by thorough engineering education, which combines abstract and theoretical provisions and concrete tasks of industrial production, which in turn requires the implementation of a systematic approach to the organization of professional training (humanitarian, engineering-theoretical, technological, practical, managerial, scientific – research, economic, economic-legal and environmental) of prospective specialists of a technical profile.

The awareness of the individual as the highest value of the educational process conditioned the orientation of the training of prospective engineers on universal, spiritual, national values, their creative activity in the work team, which, as a result, ensures self-realization and self-development of both their own and their subordinates in the process of organizing work. The formation of professional value orientations of prospective engineers aims not only at European and world integration, but also at ensuring a high standard of living in the country, development of the economy, culture, quality education, and preservation of the ecosystem.

REFERENCES (TRANSLATED & TRANSLITERATED)


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