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## PECULIARITIES OF TEACHING THE SUBJECT “METHODOLOGY OF MODERN SCIENTIFIC RESEARCHES WITH THE BASICS OF INTELLECTUAL PROPERTY IN TRAINING DESIGNERS”

### Abstract

*The purpose of the article is to present the peculiarity of training and teaching the subject “Methodology of modern scientific researches with the basics of intellectual property in training designers” according to the educational program “Design (by types)” for the second (Master’s) degree of higher education in Kyiv National University of Technology and Design. The Article defines the structure of educational subject, general competence of the subject and its place in the structural and logical scheme of training specialists; provides for the detailed content of topics; describes knowledge and skills acquired by the students in the course of studying the subject; presents the algorithm of studying the material of the subject. The Article suggests the main task of studying the subject: consideration of a wide range of issues of a modern process of design and development of competences with regard to possessing certain scientific and practical knowledge and methods of using ways of scientific researches in creative process. It is defined that the main purpose of theoretical research in design is development of the methods of implementation of particular project tasks and determination of the principles of using methods in development of design solutions of a wide range of items. It is defined that design is gradually becoming a field where together with intuition, talent of particular individuals, the theoretically reasoned methods become increasingly important.*

**Keywords:** design-activity; research methodology; scientific and design research; scientific researches; Master, Design (by types).

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## ОСОБЛИВОСТІ ВИКЛАДАННЯ ДИСЦИПЛІНИ МЕТОДОЛОГІЯ СУЧАСНИХ НАУКОВИХ ДОСЛІДЖЕНЬ З ОСНОВАМИ ІНТЕЛЕКТУАЛЬНОЇ ВЛАСНОСТІ ПРИ ПІДГОТОВЦІ ФАХІВЦІВ З ДИЗАЙНУ

### Анотація

*Метою статті є виклад особливості підготовки та викладання дисципліни «Методологія сучасних наукових досліджень з основами інтелектуальної власності» за освітньою програмою «Дизайн (за видами)» для другого (магістерського) рівня вищої освіти у Київському національному університеті технологій та дизайну. В роботі показано структуру навчальної дисципліни, наведено загальні компетентності дисципліни, її місце в структурно-логічній схемі підготовки фахівців, надано детальний зміст тем, описано знання та навички, які набувають студенти під час вивчення дисципліни, представлено алгоритм вивчення матеріалу дисципліни. В роботі сформульовано головне завдання вивчення дисципліни: розгляд широкого кола питань сучасного процесу проектування та формування компетенцій щодо володіння певними науковими та практичними знаннями та методами використання засобів наукових досліджень у творчому процесі. Окреслено, що основною метою теоретичного дослідження в галузі дизайн є розробка методик виконання тих чи інших проектних завдань та визначення принципів застосування методик при розробці дизайнерських рішень широкого кола виробів. Визначено, що проектування поступово перетворюється на галузь, де поряд з інтуїцією, талантом окремих особистостей все більше питомої ваги набувають теоретично обґрунтовані методи.*

**Ключові слова:** дизайн-діяльність; методологія досліджень; науково-проектне дослідження; наукові дослідження; магістр; Дизайн (за видами).

### 1. Statement of the problem

Creative process of the art design is gradually becoming a field where together with intuition, talent of particular individuals, the theoretically reasoned methods of creativity become increasingly important, as well as the objective assessment of aesthetic features. This trend will develop in continuous increase in the future. Even today the art design, industrial, fine, decorative and applied art, architecture, design are developing under conditions of scientific and technical progress making reference to its achievements as to the source of topics, materials of design means and approaches [1].

In analytical and theoretical works of numerous authors, the research of design process begins from the stage of its constructive form making [2]. Analysis of aesthetic and compositional features of an object is performed either superficially, or it is absent at all, and art and compositional form parameters are considered as original, preset primary data for further researches of the process of technical clothes designing.

The difference between theoretically reasoned and practical design is that they have different purpose in the end. If the task of practical design ensures creation of high-quality item, for the theoretically reasoned design the high quality of a project is not the only task assigned to it [3]. Its main purpose is to develop the method of completing particular design tasks and determine the principles of use of the methodology when developing design solutions of a wide range of items.

In conditions of Ukraine’s entering to Global and European Community, involvement in Bologna process, reformation of educational system and training of specialists becomes especially important. In this respect, the task

of forming human resources is particularly urgent, which would ensure further development of science and technology, contribute to the development of integration processes of higher education, closer cooperation of the university with academic institutions and the fields of economics, including in fashion industry [4].

The purpose of the Article is to present peculiarities of training and teaching the subject “Methodology of modern scientific researches with the basics of intellectual property” according to the educational program “Design (by types)” for the second (Master’s) degree of higher education in Kyiv National University of Technology and Design.

## 2. Presentation of basic material

Creative process is extremely diverse and complicated phenomenon of search for unity of form and content. Development of creative imagination, finding of unique ways of solving creative design tasks, overcoming of psychological inertia – these are possibilities of methods of design-activity.

Sometimes, when solving creative task the use of traditional methods of design does not provide interesting solutions. Accordingly, activation of the creative search in design is important and is targeted at development of creative design thinking of a designer and at intensification of the design process itself [5].

The Department of Design of Kyiv National University of Technology and Design trains the specialists of the second degree of higher education according to the educational program “Design (by types)”. For the students of qualification “Design (by types)”, the curriculum of training of Masters provides for studying the subject “Methodology of modern scientific researches with the basics of intellectual property”, the task of which is to consider a wide range of issues of the modern process of design and development of competences with regard to possessing certain scientific and practical knowledge and methods of using the ways of scientific researches in creative process.

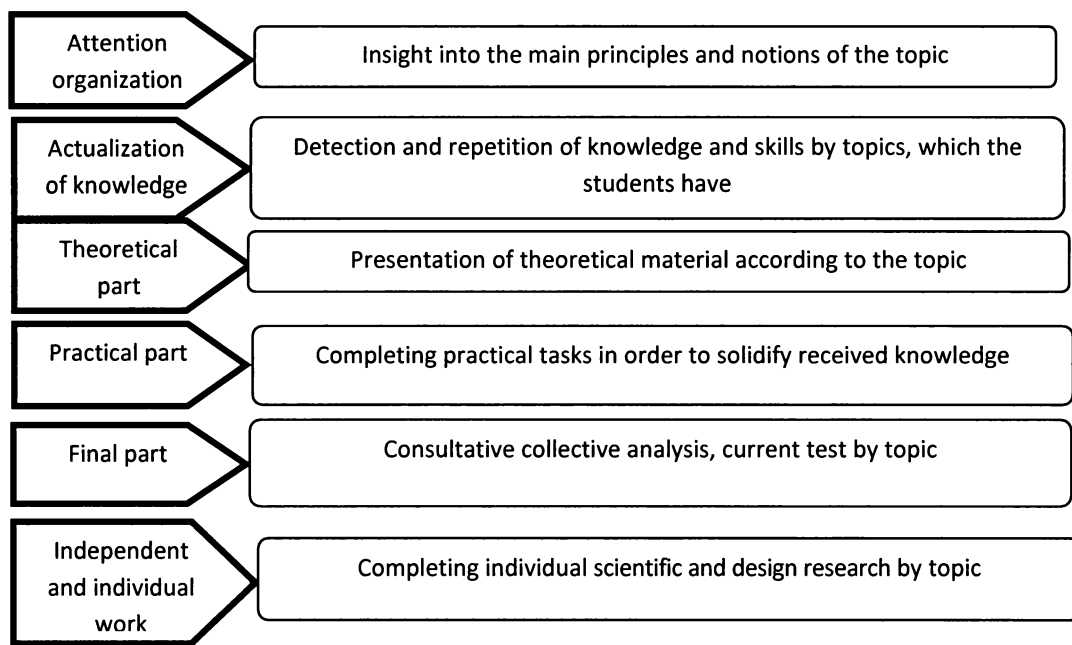
The subject “Methodology of modern scientific researches with the basics of intellectual property”, containing 6.0 credits of ECTS, is studied by the students at the 1<sup>st</sup> year, 1<sup>st</sup> term; it belongs to obligatory subjects of receivers of the academic degree “Master” of the educational and professional program “Design (by types)”. The subject is studied together with such subjects as business foreign language; modern technologies of design-activity (by types of design); designing (by types of design); design graphics (by types of design).

General competences of the subject “Methodology of modern scientific researches with the basics of intellectual property” of the second degree of higher education is having skills of use of synergic methodology in analytical and project activity and creativity, knowledge of fundamentals of modern field of design projecting (with different objects of professional activity). The professional competences of the subject are: ability to use methodology of scientific researches at theoretical and practical levels; having theoretical and methodical basics of education and professional training of designers in the synthesis with practical use of received knowledge in organization of educational process; planning of personal scientific and pedagogical activity; ability to ensure protection of intellectual property of works of fine arts and design.

Pursuant to the requirements of the scope of educational program “Design (by types)”, having studied the subject, the students should know: modern methods of carrying out theoretical and experimental scientific researches; principles of work with literature sources, building of oral and written presentations, rules of processing of research findings; basics of intellectual property right; know how to: choose the lines of scientific researches, search and process scientific information; use methods of processing of scientific researches and outcomes of an experiment; set a purpose and task of researches; search and analyse information from scientific sources; plan and carry out experimental and theoretical researches; know methods of analysis of their findings; create objects of intellectual property; have: skills to analyse sources of scientific information, set purposes and tasks of researches, determine and carry out necessary researches and analyse their findings, independently use received knowledge and implement them in production or educational process; skills to request security documents; be able to demonstrate: necessary theoretical and practical knowledge of methods of carrying out scientific researches, knowing to use the received findings of scientific research in practice; creative approach in creation of objects of intellectual property [6].

The program of the educational subject “Methodology of modern scientific researches with the basics of intellectual property” is composed of one informative module and four topics. In topic 1 “Notion of science and scientific activity”, features of methodology of scientific researches are discussed. Scientific methods and principles are researched. General methodology of scientific creativity is provided. International grants and scientific projects are determined. Topic 2 “Main stages of scientific research” outlines a concept of search and analysis of literature by the topic of scientific research, notion of bibliography, methodology of theoretical scientific researches. Methodology of experimental scientific researches and statistical processing of findings are analysed. Topic 3 “Publishing, approbation and implementation of findings of scientific researches” clarifies measures regarding systematization and processing of findings of carried out design research; introduces types of processing of findings of scientific and designing research; basic electronic databases EBSCO, ScienceDirect; scientific and metric bases Scopus, Web of Science, Index Copernicus and others; citation, Hirsch index; main types of implementation of findings of scientific researches in the field of design. The fourth topic “Basics of intellectual property” provides the legislative basis of Ukraine in legal protection of intellectual property; introduces the peculiarities of acquiring rights to inventions, useful models, industrial samples, trade mark; outlines a concept of intellectual property rights

management; protection of rights to objects of the right of intellectual property. General algorithm of studying the subject is described on Picture 1.



*Pic.1 Algorithm of studying the material of the subject “Methodology of modern scientific researches with the basics of intellectual property”*

Important practical results of studying the educational subject “Methodology of modern scientific researches with the basics of intellectual property” are independent determination of the line of scientific and design research, formulating the relevance of the topic, aim and task of the research, subject and object of the research, scientific novelty and practical significance of the research; processing of findings of scientific and design research (article) pursuant to the requirements of the professional scientific publication; preparation of a report and presentation containing the findings of the research. Completing practical task of requesting the patent for the industrial sample of the developed design product is equally difficult and important.

### 3. Conclusions

Thus, it is defined that the professional competence of modern designer is ability to understand and use cause-and-effect relations in development of design and modern kinds of art. The practical experience of training students of second degree of higher education in the field of design shows that the present demonstrates that it is important not only to have skills in development of design product, but also it is significant for modern designers to know types of objects of intellectual property, know basic methods of protection of intellectual property, know how to use in practice the rules of registering the rights of intellectual property.

### List of sources and literature used

- [1] Чупріна Н. В. Сучасні технології дизайн-діяльності : навч. посіб. / Н. В. Чупріна, Т. В. Струмінська. – К. : КНУТД, 2017. – 416 с.
- [2] Ергономіка і дизайн. Проектування сучасних видів одягу: навчальний посібник. / М. В. Колосніченко, Л. І. Зубкова, К. Л. Пашкевич та інші. – К.: ПП «НВЦ «Профі», 2014. – 386 с. – ISBN 978-966-2398-09-0.
- [3] Грищенко І. М. Науково-практичні засади формування фахових компетентностей дизайнерів костюма / Грищенко І. М., Колосніченко М. В., Ніколаєва Т. В. //Art and Design. – №2. – 2018. – С. 9-17. DOI:10.30857/2617-0272.2018.2.1.
- [4] Колосніченко М. Інформаційні технології навчання – шлях до підготовки конкурентоздатних фахівців з дизайну одягу [Текст] / М. Колосніченко, К. Пашкевич, Н. Остапенко // Вісник КНУТД. Спеціальний випуск. – Матеріали V Міжнародної науково-практичної конференції [«Ефективність організаційно-економічного механізму інноваційного розвитку вищої освіти»], (Київ, 2 жовтня 2015 р.) / М-во освіти і науки України, КНУТД. – К.: КНУТД, 2015. – С. 182–188.
- [5] Pashkevich, K., Yezhova, O., Kolosnichenko, M., Ostapenko, N., Kolosnichenko, E. Designing of the complex forms of women's clothing, considering the former properties of the materials. Man-Made Textiles in India. 2018, Vol. 46, Issue 11, P. 372-380.
- [6] Освітня програма «ДИЗАЙН (за видами)». Галузь знань 02 Культура і мистецтво. Спеціальність 022 Дизайн. Освітній ступінь «магістр». [Електронний ресурс]. URL: [https://knutd.edu.ua/files/ekts/2019/fd/022\\_mgd.pdf](https://knutd.edu.ua/files/ekts/2019/fd/022_mgd.pdf) (дата звернення: 01.10.2019).

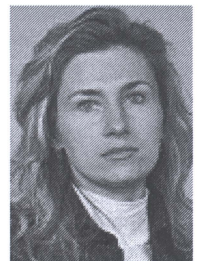
## References

- [1] Chuprina, N. V., Struminska, T. V. (2017) *Suchasni tekhnologii dyzain-dialnosti* (Modern technologies of design activity). navchalnyi posibnyk. Kyiv: KNUTD, 416 p. ISBN 978-966-7972-94-3 [in Ukrainian].
- [2] Kolosnichenko, M. V., Zubkova, L. I., Pashkevich, K. L. ta inshi. (2014). *Erhonomika i dyzain. Proektuvannia suchasnykh vydiv odiahu* (Ergonomics and design. Designing modern types of clothing). navchalnyi posibnyk. Kyiv: PP «NVTS «Profi», 386 p. ISBN 978-966-2398-09-0. [in Ukrainian].
- [3] Hryshchenko, I. M., Kolosnichenko, M.V., Nikolaieva, T.V. (2018). *Naukovo-praktychni zasady formuvannia fakhovykh kompetentnosti dyzaineriv kostiuma* (Scientific and practical bases of the development of professional competencies of the fashion designers), *Art and Design*, 2, 9-17. <https://doi.org/10.30857/2617-0272.2018.2.1>. [in Ukrainian].
- [4] Kolosnichenko, M., Pashkevich, K., Ostapenko, N. (2015). *Informatsiini tekhnologii navchannia – shliakh do pidhotovky konkurentozdatnykh fakhivtsiv z dyzainu odiahu* (Information technology education – the way to the preparation of competitive clothing designers) *Visnyk KNUTD. Spetsialnyi vypusk* (Bulletin of KNUTD. Special issue). – *Materialy V Mizhnarodnoi naukovo-praktychnoi konferentsii «Efektyvnist orhanizatsiino-ekonomichnoho mekhanizmu innovatsiinoho rozvytku vyshchoi osvity»* (Efficiency of the organizational and economic mechanism of innovative development of higher education), (Kyiv, 2015, October, 2). Kyiv: KNUTD, 182–188. [in Ukrainian].
- [5] Pashkevich, K., Yezhova, O., Kolosnichenko, M., Ostapenko, N., Kolosnichenko, E. (2018). Designing of the complex forms of women's clothing, considering the former properties of the materials. *Man-Made Textiles in India.*, Vol. 46, Issue 11, P. 372-380.
- [6] Osvitnia prohrama «DYZAIN (za vydamy)». Haluz znan 02 Kultura i mystetstvo. Spetsialnist 022 Dyzain. Osvitnii stupin «Magistr». URL: [https://knutd.edu.ua/files/ekts/2019/fd/022\\_mgd.pdf](https://knutd.edu.ua/files/ekts/2019/fd/022_mgd.pdf)



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