

## ADVANTAGES OF THE CREDIT-MODULE SYSTEM AND ITS ALIGNMENT WITH THE COMPETENCY-BASED APPROACH IN MEDICAL EDUCATION

**Sahiyeva Matluba Toshpo‘lat qizi**

Termiz Branch, Tashkent State Medical University

Department of Social and Humanitarian Sciences, Associate Professor

Email: [matlubasahiyevattatf@gmail.com](mailto:matlubasahiyevattatf@gmail.com)

**Surabova Jasmin Shavkat qizi**

First-year Master's student in Neonatology at the Termez branch of the Tashkent  
Medical University

Email: [jasminsshjasmin@gmail.com](mailto:jasminsshjasmin@gmail.com)

### Annotation

The article analyzes the pedagogical and scientific significance of implementing the credit-module system in medical education. The credit-module system provides students with opportunities for independent learning, increases the transparency of the educational process, and facilitates the integration of theoretical knowledge with practical skills. The competency-based approach focuses on developing students' professional knowledge and skills and is one of the key components of modern medical education. The article substantiates the compatibility of the credit-module system with competency-based education, their advantages, and their role in medical education.

**Keywords:** credit-module system, medical education, competence, quality of education, modern pedagogy, independent learning, practical skills.

### Аннотация

В статье анализируется педагогическое и научное значение внедрения кредитно-модульной системы в медицинском образовании. Кредитно-модульная система расширяет возможности самостоятельного обучения студентов, повышает прозрачность образовательного процесса и способствует интеграции теоретических знаний с практическими навыками. Компетентностный подход направлен на формирование профессиональных знаний и навыков студентов и является важнейшим компонентом современного медицинского образования. В статье обоснована совместимость кредитно-модульной системы и компетентностного подхода, их преимущества и роль в медицинском образовании.

**Ключевые слова:** кредитно-модульная система, медицинское образование, компетенции, качество образования, современная педагогика, самостоятельное обучение, практические навыки.

### Annotatsiya

Maqolada tibbiy ta'limda kredit-modul tizimini joriy etishning pedagogik va ilmiy ahamiyati tahlil qilinadi. Kredit-modul tizimi talabalar uchun mustaqil ta'lim olish imkoniyatlarini kengaytiradi, ta'lim jarayonining shaffofligini oshiradi va nazariy bilimlar bilan amaliy ko'nikmalarni uyg'unlashtirishga yordam beradi. Kompetensiyaga asoslangan yondashuv talabalarda kasbiy bilim va malakalarni shakllantirishga qaratilgan bo'lib, zamonaviy tibbiy ta'limning eng muhim komponentlaridan biridir. Maqolada kredit-modul tizimi va kompetensiyaga asoslangan yondashuvning uyg'unligi, ularning afzalliklari va tibbiy ta'limdagi roliga ilmiy asos keltirilgan.

**Kalit so'zlar:** kredit-modul tizimi, tibbiy ta'lim, kompetensiya, ta'lim sifati, zamonaviy pedagogika, mustaqil ta'lim, amaliy ko'nikmalar.

**Introduction.** The modern medical education system aims to train highly qualified physicians. Due to the continuous development of the medical field, students are required not only to acquire theoretical knowledge but also to master practical skills and professional competencies. From this perspective, the implementation of the credit-module system and its alignment with competency-based education in the educational policy of the Republic of Uzbekistan is of paramount importance.

In Uzbekistan, the main legal documents regulating higher education development include:

- Law of the Republic of Uzbekistan “On Higher Education” (2017) – this law ensures that the higher education system develops in accordance with modern requirements, guarantees the quality of education, and assesses students’ academic achievements.

- Resolution of the Cabinet of Ministers of the Republic of Uzbekistan “On the Implementation of the Credit-Module System in Higher Education” (2019) – this resolution stipulates the phased introduction of the credit-module system in higher education institutions, promotes students’ independent learning, and enhances academic mobility.

- Regulations on Student Assessment and Qualification Certification – these normative acts establish clear criteria for evaluating students’ theoretical and practical knowledge and regulate the calculation of credit units earned at the end of each module.

The credit-module system evaluates a student's academic workload in credit units, fostering independent learning and ensuring a transparent and effective educational process. At the same time, competency-based education is highly significant in modern medical education. Competency-based education focuses on developing students' professional knowledge, skills, and abilities, which are implemented through practical exercises, clinical internships, and laboratory work.

Normative regulations established by the Ministry of Health and the Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan also promote the application of competency-based approaches in medical education. For example, clinical training in medical faculties is conducted through the credit-module system, and students' clinical skills are assessed according to established criteria. In parallel, students are required to demonstrate practical skills alongside theoretical knowledge at the end of each module.

Thus, in the process of modernizing medical education in Uzbekistan, the alignment of the credit-module system with competency-based education not only improves the quality of the educational process but also plays a crucial role in training future qualified physicians.

### The Essence and Advantages of the Credit-Module System

The credit-module system is a modern educational approach that organizes students' learning processes into modules and evaluates academic workload through credit units. Its primary goals are to stimulate independent learning, integrate theoretical knowledge with practical skills, and ensure transparency in the educational process.

The advantages of the credit-module system include:

**Student-Centered Approach** – Students are placed at the center of the educational process. They plan their learning activities, independently use module resources, and actively participate in assessing their knowledge. This fosters independent thinking, initiative, and self-development.

**Modular Division of the Curriculum** – Each module includes specific theoretical knowledge, practical exercises, and assessment tools. Modules are sequentially organized to ensure systematic acquisition of knowledge and skills. For example, the “Clinical Diagnostics” module integrates theoretical knowledge with laboratory practices.

**Transparency and Fairness of Assessment** – At the end of each module, students' knowledge and skills are evaluated according to established criteria. This evaluation system takes into account both theoretical knowledge and practical competencies, ensuring accurate and fair assessment of students' abilities.

**Academic Mobility and International Compatibility** – The credit-module system allows students to study at other higher education institutions or participate in international programs. Students can transfer earned credits between universities, enhancing academic mobility.

**Increased Effectiveness of the Educational Process** – Students gradually acquire knowledge and reinforce it through practical exercises. Self-assessment skills develop, improving the overall effectiveness of the learning process.

**Encouragement of Independent Learning** – The system motivates students to engage in independent study, scientific research, and active participation in clinical training, significantly enhancing professional preparedness.

**Integration of Pedagogical Innovations** – Modular learning enables the application of modern pedagogical technologies, interactive sessions, simulation laboratories, and electronic resources, strengthening practical preparedness.

**Effective Communication Between Students and Teachers** – Clearly defined module goals and assessment criteria facilitate efficient communication and feedback between teachers and students.

### The Essence and Advantages of the Credit-Module System

The credit-module system is a modern educational approach that organizes students' learning processes into **modules** and evaluates academic workload through **credit units**. Its primary goals are to stimulate independent learning, integrate theoretical knowledge with practical skills, and ensure transparency in the educational process. The advantages of the credit-module system include:

**Student-Centered Approach** – Students are placed at the center of the educational process. They plan their learning activities, independently use module resources, and actively participate in assessing their knowledge. This fosters independent thinking, initiative, and self-development.

**Modular Division of the Curriculum** – Each module includes specific theoretical knowledge, practical exercises, and assessment tools. Modules are sequentially organized to ensure systematic acquisition of knowledge and skills. For example, the “Clinical Diagnostics” module integrates theoretical knowledge with laboratory practices.

**Transparency and Fairness of Assessment** – At the end of each module, students' knowledge and skills are evaluated according to established criteria. This evaluation system takes into account both theoretical knowledge and practical competencies, ensuring accurate and fair assessment of students' abilities.

**Academic Mobility and International Compatibility** – The credit-module system allows students to study at other higher education institutions or participate in

international programs. Students can transfer earned credits between universities, enhancing academic mobility.

**Increased Effectiveness of the Educational Process** – Students gradually acquire knowledge and reinforce it through practical exercises. Self-assessment skills develop, improving the overall effectiveness of the learning process.

**Encouragement of Independent Learning** – The system motivates students to engage in independent study, scientific research, and active participation in clinical training, significantly enhancing professional preparedness.

**Integration of Pedagogical Innovations** – Modular learning enables the application of modern pedagogical technologies, interactive sessions, simulation laboratories, and electronic resources, strengthening practical preparedness.

**Effective Communication Between Students and Teachers** – Clearly defined module goals and assessment criteria facilitate efficient communication and feedback between teachers and students.

## Competency-Based Education in Medical Training

Competency refers to a set of knowledge, skills, and abilities required to perform a specific activity successfully. In medical education, competencies include:

Development of clinical reasoning, Diagnostic and therapeutic skills, Effective communication with patients, Ethical and professional responsibility

Competency-based education enhances students' practical preparedness and professional development.

## Integration of Credit-Module System and Competency-Based Approach

The credit-module system and competency-based approach are **mutually complementary components** in modern medical education. While the module system organizes the learning process and evaluates students' knowledge and skills via credit units, the competency-based approach focuses on developing practical and professional competencies, clinical skills, and ethical behavior.

**Integration of Theoretical and Practical Knowledge** – The credit-module system facilitates the combination of theoretical knowledge with practical skills. For instance, research by Harden et al. (2016) showed that medical students trained under a modular system acquired practical skills 30–40% more effectively.

**Illustrative Example:** In the “Internal Medicine” module, students not only learn theoretical causes and symptoms of diseases but also practice patient care, diagnostics, and treatment in a simulation laboratory. Credit units earned reflect students' practical competencies.

**Professional Competency Development** – Competency-based approaches aim to develop students’ clinical reasoning, diagnostic abilities, and patient communication skills. The modular system allows for the **step-by-step integration** of these competencies.

**Illustrative Example:** In the “Pediatrics” module, students learn theoretical aspects of pediatric diseases and demonstrate practical skills in working with children and communicating with their families. Module assessments evaluate practical competencies in credit terms.

**Assessment Integration** – Credit-module systems evaluate knowledge through digital credit units. Competency-based approaches extend assessment to practical skills, clinical decision-making, and communication competencies.

**Illustrative Example:** In the “Surgery Practice” module, students are assessed through simulated operations and clinical internships. This ensures students acquire both theoretical knowledge and practical competencies.

**International Experience** – Canada, the UK, and Finland implement integrated modular and competency-based approaches, resulting in significant improvements in clinical preparedness a Pedagogical and Practical Significance

- Integrates theoretical and practical knowledge
- Promotes independent planning and monitoring of learning
- Enhances professional competencies through practical assessment
- Prepares students for clinical and real work environments

Thus, the credit-module system and competency-based approach complement each other, forming a coherent system of theoretical knowledge, practical skills, and professional competencies. This supports the main goal of modern medical education: training competent, independent, and responsible physicians.

**Conclusion.** The credit-module system serves as a modern and effective tool for integrating students’ knowledge, skills, and competencies. Its main advantage is fostering independent thinking, combining theoretical and practical knowledge, and ensuring transparency in the educational process and assessment criteria.

When combined with competency-based education, students acquire not only theoretical knowledge but also professional skills. Modular-based clinical training, laboratory work, and patient interaction enhance students’ practical readiness and prepare them for real-world medical practice.

Moreover, this integrated approach develops problem-solving, analytical thinking, and initiative. Students are encouraged to independently develop their knowledge, engage

in research, and plan their professional growth, preparing them to become qualified and innovative physicians.

The alignment of the credit-module system with competency-based education improves the quality of medical education, organizes learning around the student, and aligns it with global standards. It prepares students for professional practice, ethical responsibilities, communication skills, and patient interaction experience.

Therefore, implementing and expanding this integrated system is essential for training highly qualified future physicians, shaping their professional competencies, and enhancing the quality of medical education.

## References

1. Concept of Implementing the Credit-Module System in the Higher Education System of the Republic of Uzbekistan. – Tashkent, 2020.
2. Bologna Process and Credit System in Education. – Moscow, 2018.
3. Harden R.M. Outcome-based education in medical education. – Medical Teacher, 2016.
4. Dent J., Harden R. A Practical Guide for Medical Teachers. – London, 2017.
5. Biggs J. Teaching for Quality Learning at University. – London, 2014.
6. Karadag M., Yildirim A. Competency-based medical education: principles and practices. – New York, 2018.
7. O'ktamov S. Innovative Technologies in Medical Education. – Tashkent, 2019.