# **Exploration and Practice of Ideological and Political Courses in Medical Biochemistry and Molecular Biology**

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**Abstract:** Developing ideological and political construction of courses is of great significance to colleges and universities. Biochemistry and Molecular Biology is the basic and main course in the curriculum system of medical colleges and universities. Its curriculum connotation and knowledge points contain the close relationship between natural science and ideological and political essentials. This paper takes the classroom teaching of Medical Biochemistry and Molecular Biology as an example, relying on the Wisdom Tree platform and combining online and offline teaching, the "curriculum ideological and political" content is integrated into the curriculum, striving to improve the quality of classroom ideological and political teaching and stimulate students' interest in learning, which is reflected in daily classroom teaching and open online teaching.

#### 1. Introduction

Biochemistry and molecular biology is a bridge between basic medicine and clinical science. It is the most essential understanding of medicine at the molecular level, and its theory and technology are widely used. In the National Conference on Ideological and Political Work of Colleges and Universities held in December 2016, it was clearly pointed out that "the foundation of colleges and universities lies in moral cultivation and cultivating people", and the ultimate goal of education is to cultivate people with both virtue and ability"[1]. Ideological and political theory courses are the key courses to implement the fundamental task of moral cultivation and cultivating people. Therefore, the "moral cultivation" as the central link, the ideological and political work throughout the whole process of education and teaching, to achieve the whole process of education, all-round education ", "ideological and political work throughout education. The whole process of teaching creates a new situation for the development of China's higher education cause. This course of biochemistry and molecular biology contains rich ideological and political education elements, and is closely combined with clinical practice and daily life, which is beneficial to students vivid and concrete grasp of knowledge and feel the essence of thought [2,3]. This paper explores the implementation plan of ideological and political reform in the course of biochemistry and molecular biology ideological and political education elements in the science curriculum are integrated into the educational function of "curriculum ideological and political education", so as to realize the same direction of "knowledge teaching" and "value leading" and form a synergistic effect, aiming at cultivating high-quality, strong professional, moral and excellent modern medical talents.

## 2. The Importance and Necessity of Ideological and Political Development in Biochemistry and Molecular Biology

Medical biochemistry and molecular biology is an important professional basic course for medical students. This course is an interdisciplinary subject developed on the basis of organic chemistry and physiology <sup>[4]</sup>. It is closely related to medicine, organic chemistry, physiology, physical chemistry, analytical chemistry and other disciplines, and is one of the fastest developing frontier disciplines in

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biology. Medical biochemistry and molecular biology play an important role in basic medicine and clinical medicine. It mainly studies the chemical composition of life and its changes in life activities, and clarifies the nature of life phenomena such as the chemical composition of organisms, their chemical changes in life activities and their regulation rules from the molecular level. For medical students to learn other basic medical and professional courses to lay a solid foundation. With the development of modern medicine, the connotation and extension of theoretical knowledge of biochemistry and molecular biology have also developed to a new height, which is closely related to ecological environment, historical environment, social environment, international environment and medical humanistic environment. If the course is taught according to the traditional teaching methods, it is easy to appear the phenomenon of "reading from the script", which leads to boring classroom content, low enthusiasm of students, and poor teaching effect. On the contrary, if we can actively explore the beneficial ideological and political elements contained in the course content of biochemistry and molecular biology and their ideological and political education function, and imperceptibly integrate them into every link of classroom teaching, optimize the course teaching design, and strive to realize the organic unity of ideological and political education and professional knowledge education, it will not only enrich the teaching content, but also increase the interest of the class<sup>[5]</sup>. In addition, it can expand the thinking and vision of medical students, improve their feelings of home and country, let students naturally establish good socialist core values in the process of learning, actively spread the positive energy of love for the party, patriotism, and positivity, promote the overall improvement of students' comprehensive quality, and realize the important function of professional courses to cultivate morality and cultivate people and value.

### 3. Biochemistry and Molecular Biology Integration Course Ideological and Political Way

The core idea of ideological and political education in curriculum is to integrate ideological and political education into every link and aspect of curriculum teaching and reform, so as to realize the fundamental task of cultivating virtues and cultivating people. To strengthen the systematic construction of ideological and political education in curriculum, we must make overall design of "how to reform" and strive to build a reform system of ideological and political education in curriculum. We should pay attention to follow the law of education and teaching, accurately grasp the ideological and political characteristics of the curriculum, and revise the professional syllabus, personnel training program and curriculum teaching plan. We will pay attention to step-by-step decomposition and categorization, and ensure that each stage and curriculum has prominent priorities, is connected in an orderly way, does not fight disorderly wars, and gathers strength together. With the development of diversified teaching modes, especially under the conditions of advocating blended teaching, higher requirements are put forward not only for the quality and ability of teachers and students, which promotes the rapid development and further integration of teaching and learning, but also for the ways and methods of ideological and political education integration.

### 3.1. Optimize Curriculum Ideological and Political Teaching Content

"Curriculum ideology and politics" is to integrate professional knowledge and skills with valuable elements and connotations into the original teaching reasonably, rather than changing the original curriculum teaching design. At the same time, ideological and political content should be avoided forcibly implanted, which is not easy for students to accept and seems more abrupt. Ideological and political elements should be organically integrated into knowledge without leaving any trace, without causing the sense of "propaganda" or "preaching". It can be presented in the form of videos, pictures and documents to show real cases, celebrities and touching deeds, and contain ideological and political elements to touch the hearts of students. According to the different course content, different teaching strategies are selected to integrate into the course ideology and politics, such as online and offline mixed teaching, problem-based teaching (PBL), case-based teaching (CBL), etc. Clinical molecular biology test technology courses are very difficult, so the design cases should be combined with clinical, close to life, and selected appropriately. At the same time, the selection of teaching objectives should comply with authenticity, typicality, novelty and pertinence. The ideological and

political teaching design of the course is carried out around the main line of "students' understanding of the course - main technical knowledge of the course - clinical application of technology - clinical significance".

### 3.2. The Establishment of Curriculum Ideological and Political Database

The establishment of the curriculum ideological and political case database can effectively assist the teachers to complete the curriculum ideological and political teaching objectives <sup>[6]</sup>. According to the characteristics and advantages of the medical laboratory discipline, the3. Improve the teaching effect evaluation system of curriculum ideology and politics education objectives of the medical laboratory major can be deeply studied, the ideological value and spiritual connotation contained in the curriculum knowledge system can be deeply excavated and refined, and the knowledge and humanity of the curriculum can be increased, and the leading, The Times and the openness of the curriculum can be improved. The ideological and political case base of biochemistry and molecular biology curriculum is established based on the "Three-oriented" talents as training requirements.

### 3.3. Improving the Teaching method of "Curriculum Ideology and Politics" -- Giving Overall Consideration to both Online and Offline

In the era of "Internet +", various learning platforms have come one after another, making it more convenient for students to obtain network resources through the Internet. Through the network platform, massive information impacts the vision of students, while acquiring knowledge, they are easy to be misled by wrong ideas on the network, which has a negative impact on their own values, which also brings great challenges for us to do a good job of ideological and political education in the curriculum, therefore, ideological and political education can not only be limited to classroom teaching, online teaching is also essential [7].

Teachers make full use of the characteristics of online and offline hybrid teaching, push relevant knowledge online through wisdom tree, QQ group and other platforms, combine the ideological and political elements related text, pictures, animation and other information, organize students to use online platform for after-class discussion. For example, the first chapter "Introduction", based on the development history of biochemistry and molecular biology, especially the contributions made by Chinese scientists, guides students to share their academic idol stories online, talk about what kind of person they want to be, and arouse students enthusiasm for scientific research and pride for the motherland. At the same time, through the offline classroom teaching teacher guidance, students speak, so as to understand thoroughly. Connect teaching in class and after class. In the communication process of teaching and learning, humanistic quality and moral education should be increased and students' own quality should be influenced at the same time.

### 4. Improve the teaching effect evaluation system of curriculum ideology and politics

Curriculum ideological and political education is concentrated on the ideological level of students, that is, it cannot be touched or grasped, and the learning effect can only be reflected in the bits and pieces of learning life, so the formulation of the evaluation system of curriculum ideological and political teaching effect should be both comprehensive and objective. At the same time, as a medical student, the evaluation of the learning effect of ideological and political education should not only stay on campus, but also be reflected in family life and clinical work, which can be evaluated mainly through the following four ways: (1) classroom teachers visit counselors or organize student representatives to hold discussions; (2) Evaluation of independent learning time and academic performance; (3) Call back to the student's parents to see whether the student plays a positive and optimistic role in family life; (4) Clinical internship visits doctors and patients in the department to examine the professional ethics of students. The overall evaluation includes whether the learning objectives are clear, whether the learning attitude is serious, whether the learning method, knowledge acquisition, professional identity, patriotism and professionalism are obtained.

### 5. Summary

In general, the Medical Biochemistry and Molecular Biology course contains rich ideological and political elements in the curriculum. In the course design, we will continue to dig deep into the materials, consolidate the ideological and political materials according to the knowledge points, and design ideological and political cases that are suitable for the knowledge points and easy to accept; Effectively combine with knowledge points in classroom teaching, focusing on observing students' acceptance and feedback for content adjustment; After the course, students are guided to think positively and summarize, and understand the teaching effect through questionnaires and discussions. Integrating curriculum ideology and politics into the teaching practice of medical biochemistry and molecular biology can organically integrate ideological and political education with the learning of professional knowledge, the cultivation of ability and the guidance of value, and the two complement each other, and can achieve the effect of spring breeze and rain, moisturizing and silent. Continuously improve the ideological and political education system of the curriculum, give full play to the role of the online platform in disseminating advanced ideology and culture, form a diversified ideological and political teaching mode, guide medical students to establish a correct world view, outlook on life, and values, prepare professional quality and medical ethics in actual clinical testing, and truly give play to the educational function of curriculum ideology and politics.

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