

# Design and Practice of Ideological and Political Teaching in “Mechanical Principle” Course

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**Abstract :** This paper first analyzes the present situation of the course of mechanical principle, then enumerates the practical measures in the course of mechanical principle, clarifies the goal of the course, excavates the elements of the course and integrates the course into the teaching. For the follow-up curriculum ideological and political reform direction to provide ideas.

**Keywords :** Curriculum Ideological and Political; Mechanical Principle; Ideological and Political Elements

General secretary Xi Jinping made clear in the ideological and political work of the national colleges and universities in 2016 that we should persist in taking the moral education as the central link and integrate the ideological and political work throughout the whole process of education and teaching so as to achieve full education and all-round education, and strive to create a new prospect for the development of higher education in China<sup>[1]</sup>. At present, how to seamlessly integrate ideological and political education into the curriculum has become an inevitable point of teaching research in colleges and universities.

Mechanical principle is a basic professional course that students of mechanical and near machine major must master. It occupies a very important position in the training system of students' knowledge, ability and quality<sup>[2]</sup>. This course trains students to have the ability to apply the theory and modern design methods to solve practical engineering problems, and to cultivate students' creative thinking and innovative design ability. In teaching, ideological and political education should be carried out throughout the whole process of education and teaching, and the ideological and political elements should be closely linked with professional courses to form the same direction and collaborative effect.

## 1. Current situation of curriculum ideology and politics

### 1.1 Teachers do not have enough understanding of ideological and political education.

Before putting forward the curriculum ideology and politics, the general professional teachers believed that the teachers of specialized courses should teach professional courses well. Ideological and political education is the task of teaching ideological and political teachers, which has nothing to do with professional teachers, so there is a deviation in the understanding of ideological and political education. In the teaching of traditional mechanical principles, teachers mainly focus on the teaching of mechanical related principles and methods, generally do not involve the characters and stories related to these principles and methods. It can't arouse students' sense of identity, responsibility and honor to their profession.

### 1.2 Teachers lack the ability to design the teaching plan of ideological and political courses

High standards and new requirements for all teachers in colleges and universities of the construction of “curriculum ideology and politics”. In teaching, teachers should deeply analyze the characteristics and educational requirements of the course of mechanical principles, find out the political, spiritual, social and ecological civilization elements contained in the course, or refine the ideological and political elements. Some teachers can't master the choice path of ideological and political elements in the course of mechanical principle, and lack the ability of designing the course of ideological and political teaching scheme, which leads to the phenomenon of “two skins” in professional teaching and curriculum thinking.

## 2. Practice of ideological and political education in the teaching of mechanical principles

By studying, the teachers of the curriculum group understand the ideological and political connotation of “all courses have the function of educating people, all teachers have the responsibility of educating people” curriculum. It is necessary to make students

understand and accept “the truth of being a man and doing things ”,“ the requirement of socialist core values” and “the ideal and responsibility of realizing national rejuvenation ”.

### 2.1 Clear ideological and political objectives

The ideological and political objectives of the mechanical principles course include to cultivate students’ scientific spirit of pursuing truth, seeking truth from facts, daring to explore and practice; to develop good self-learning and information acquisition ability; to enhance students’ ability of innovative design; to communicate, communicate and cooperate with others; to enhance professional confidence and academic confidence, set up the lofty ambition of actively participating in the main battlefield of economic construction.

### 2.2 Mining ideological and political elements

Students should be cleverly ideological and political education in teaching, establish a correct outlook on life and values, to achieve good communication, communication, and the ability to cooperate with others. Some of the ideological and political elements are summarized in table 1.

**Table1.** Teaching points and ideological objectives

Key points of instruction	Ideological and political mapping and integration	Ideological and political objectives
Structural analysis of institutions	The organization has the restraint and the movement vice, as a university student should how self-discipline	Develop students’ ability to overcome difficulties
Movement analysis of institutions	Institutional speed has a implicated role, whether people in life have a variety of behavior chain effect	Develop students’ ability to communicate, communicate and cooperate with others
Connecting rod mechanism design	Community sports facilities, mostly using connecting rod mechanism, guide students to find problems and achieve innovation	Cultivate students’ ability to obtain information and improve students’ ability of innovative design
Design of gear mechanism, wheel train	In the past, people used shadows to judge time. How do they judge now? How to shift, reverse and move forward	Improve students’ understanding of industrial modernization and stimulate the sense of mission of learning

### 2.3 Integrating ideological and political education into teaching

Self-behavior is good, even if do not issue an order, people will also go to practice. If oneself is not correct, even if issue an order, everybody also won’t obey. Teachers arrive in the classroom a few minutes ahead of time, prepare for the class, each sentence in the classroom conveys positive energy, insists on giving students famous aphorisms, can solve all kinds of students’ problems in time and effectively after class. Strengthen attendance and other behaviors affect students’ behavior habits and shape correct outlook on life.

In the course of teaching, the introduction of the virus sampling robot developed by the “Zhong Nanshan team” to minimize the contact between medical personnel and the virus provides a strong guarantee for the prevention and control of the epidemic situation. Let students intuitively understand the importance of mechanical industry in engineering and life. At the same time, this paper introduces the great contribution made by academician Zhong Nanshan in the period of SARS, so that students can learn from the example. Cultivate students’ dedication and patriotism, and set up the lofty ideal of contributing their own strength to the great rejuvenation of the Chinese nation. Students are required to use their time after class to watch the documentary country heavy equipment and other theme documentaries related to professional courses , so that students can realize that equipment manufacturing industry is the pillar of national prosperity, the “mother of industry” and an important guarantee of national industrial security. And let students understand that the content of the course principles course is precisely the basis of the design and application of these mechanical equipment, so as to greatly stimulate students’ national pride and learning enthusiasm.

## 3. Conclusion

On the basis of studying other excellent cases of ideological and political reform and combining the nature and characteristics of the course of mechanical principles, the members of the course group have carried out some exploration and practice on the course of mechanical principles, guided students to establish a correct outlook on life and values, developed a rigorous and responsible work attitude and work philosophy, developed a sense of professional identity and responsibility, a sense of mission and honor to the country and society, and trained innovative mechanical engineering talents needed today, the future society and economy.

## References

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