



Appendix B6

Module Handbook of Communication Engineering



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The collection of module handbooks or module descriptions can also be used as reference by students. It should contain following information in each module:

Module 1 Mathematics & Physics Fundamentals

Module name:	Mathematics & Physics Fundamentals			
Module level, if applicable				
Code, if applicable				
Subtitle, if applicable				
Courses, if applicable	Higher Mathematics Part 1	Higher Mathematics Part 2	Probability Theory and Stochastic Process	Linear Algebra
Semester(s) in which module is taught	1	2	3	2
Courses, if applicable	Complex Function	College Physics (A)	College Physics Experiment (A)	
Semester(s) in which module is taught	3	2	3	
Person responsible for Module	PAN Xianbing (Assoc. Prof.)			
Lecturer	<p>Associate Professor: PAN Xianbing , DAI Jun, JIANG Guanmin, XIE Guoya, LIAO Qili</p> <p>Lecturer: YANG Xiaoxue, JIN Yanhong, LV Lijuan, BIAN Mengke, HU Chunxia, ZHANG Zhufeng, CUI Haisheng, YU Yan, DEN Ya, ZHONG Bo, HE Jing.</p> <p>Assistant: WANG Meng, WANG Hao</p>			
Language	Chinese			
Relation to curriculum	Compulsory			
Type of teaching, contact hours	<p>Higher Mathematics Part 1</p> <p>Average theoretical class hours per week: 4 hours</p> <p>Average weekly Q&A and homework time: 8 hours</p> <p>Average lecture time per semester: 2 hours</p> <p>Average exam preparation time per semester: 14 hours</p> <p>Average semester mathematics knowledge competition and abroad exchange</p>			



	<p>learning training hours: 16 hours Average mathematics seminar and math experience class per semester: 16 hours</p> <p>Higher Mathematics Part 2 Teaching theoretical class on average every week: 5 hours Average weekly Q&A and homework time: 6 hours Average lecture time per semester: 2 hours When preparing for the test course: 16 hours Average Mathematical Modeling Training per semester and International Exchange Learning Training: 16 hours</p> <p>Linear Algebra Weekly lectures in theoretical class: 2 hours Average weekly Q&A and homework time: 1 hours Average teacher open class per semester: 2 hours Average expert lectures per semester: 2 hours Preparing for the test course: 8 hours</p> <p>Probability Theory and Stochastic Process: Teaching theoretical class on average every week: 3 hours Average weekly Q&A and homework time: 2 hours Course study method workshop: 2 hours Preparing for the test course: 8 hours</p> <p>Complex Function: The weekly average theoretical teaching: 2 hours Average weekly Q&A and homework time: 1 hours The semester's teacher demonstration: 2 hours Course Study method workshop: 2 hours Average semester's examination preparation: 8 hours</p> <p>College Physics (A) Weekly in-class theoretical teaching: 3 hours Average weekly Q&A and homework time: 3 hours Course study method workshop: 8 hours Preparing for the test course: 16 hours</p> <p>College Physics Experiment (A) Weekly in-class theoretical teaching: 2 hours Course experiment report per week: 0.5 hours Average weekly Q&A: 0.5 hours Preparing for the course test: 12 hours</p>
Workload	<p>Higher Mathematics Part 1: Workload=240 hours, instructional hours=64 hours , self-study hours=176 hours</p> <p>Higher Mathematics Part 2: Workload=210 hours instructional hours=80 hours , self-study hours=130</p>



	<p>hours</p> <p>Linear Algebra: Workload=60 hours, instructional hours=32 hours, self-study hours=28 hours</p> <p>Probability Theory and Stochastic Process: Workload=90 hours, instructional hours=48 hours, self-study hours=42 hours</p> <p>Complex Function: Workload=60 hours, Contact hours= 32 hours, Self-study duration = 28 hours</p> <p>College Physics (A): Workload=120 hours, in-class teaching hours=48 hours, self-study hours=72 hours</p> <p>College Physics Experiment (A): Workload=60 hours, in-lab work hours=32 hours, self-study hours=28 hours</p>
Credit points	<p>Higher Mathematics Part 1: 8</p> <p>Higher Mathematics Part 2: 7</p> <p>Linear Algebra: 2</p> <p>Probability Theory and Stochastic Process: 3</p> <p>Complex Variable Function: 2</p> <p>College Physics (A): 4</p> <p>College Physics Experiment (A): 2</p>
Requirements according to the examination regulations	<p>College Physics Experiment (A): in-class performance (20%), in-lab performance (50%), experiment report (30%)</p> <p>Other courses: assignments+professional performance (40%), semester final exam (60%)</p>
Module objectives (capability)/expected learning outcomes	<p>Higher Mathematics Part 1</p> <ol style="list-style-type: none"> 1. Grasp the basic knowledge and basic theory of the one-dimension function calculus; 2. Develop skillful and accurate basic computing ability, strong abstract thinking ability, logical reasoning ability and spatial imagination ability; 3. With certain mathematical modeling ideas, students can apply the modeling ideas to the whole process of asking questions, analyzing problems and solving problems. 4. Understand the relationship between advanced mathematics knowledge and its professional ideas and practical skills, 5. Apply mathematical ideas, concepts, methods to understand and summarize; develop general ability to solve related professional courses and engineering technical problems; 6. Use mathematical thinking to solve the practical problems in the work, enhance understanding and interest in mathematics, and adapt to the needs of social and economic development. <p>Higher Mathematics Part 2</p>



	<p>Systematic learning through advanced mathematics 2 requires students to</p> <ol style="list-style-type: none">1. Master the application of definite integrals, basic concepts, basic computational skills such as ordinary differential equations, vector algebra and spatial analytic geometry, multivariate function calculus, and infinite series;2. Improve students' proficient and accurate basic computing skills, enhance good abstract thinking and logical reasoning abilities, and strong spatial imagination.3. Gain the ability to solve practical problems encountered in summarizing abstract engineering techniques with mathematical ideas, concepts, and methods, and they this problem. <p>Probability Theory and Stochastic Process</p> <p>Through the teaching of this course, students should master the basic concepts of probability theory and mathematical statistics, understand its basic theories and methods, so that students can initially grasp the basic ideas and methods of dealing with random events, training students to use probabilistic statistical methods to analyze and solve The ability of practical problems.</p> <p>Linear Algebra</p> <p>Through the learning of linear algebra courses, students can:</p> <ol style="list-style-type: none">1. Acquire the basic knowledge and basic theory of linear algebra;2. Master the necessary mathematical calculation skills and use mathematics software to perform complex calculations of linear algebra;3. Use mathematics methods to analyze problems and solve problems (including solving practical problems), and the problem-solving ability is further cultivated, trained, and improved;4. Broaden their knowledge of mathematics, and provide necessary learning for students to follow-up related professional courses and postgraduate study;5. Provide students with applicable mathematical methods and calculation methods for scientific research and practical work;6. Meet the basic requirements of the follow-up course for IoT engineering majors on linear algebra,7. Calculate the determinant, calculate the rank of the matrix, combine the linear equations into the product of the matrix and the rank of the matrix, and determine the linear correlation of the vector group. <p>Complex Function:</p> <ol style="list-style-type: none">1. Understand and grasp the concept and expression of plural numbers and corresponding operations.2. Understand the definition of complex function and analytic function.3. Able to determine the analytic and singular points of functions and the limit and continuity of complex function.
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4. Grasp all kinds of integral formulas and corresponding calculation of complex function.
5. Understand the complex series and its convergence and divergence, and expand the function to Taylor series and Laurent series.
6. Understand the concept of the residue and the corresponding calculation.
7. Understand Fourier transform and Laplace transform.

College Physics (A)

Course objectives (capacities):

1. Through the study of this course, students can work on the content and methods of physics, concepts and physical images, the working language of physics, the history, current status, and frontiers of the development of physics, and their role in scientific development and social progress. There is a relatively comprehensive understanding of such aspects as a whole, a comprehensive and systematic understanding of the various forms of movement studied by physics, and the connections between them, and the ability to apply them initially.
2. Emphasize the teaching of physics ideas, scientific thinking methods, and scientific viewpoints. By introducing the methodology and epistemology of scientific research, students are inspired to innovate and innovate, and cultivate students' scientific literacy.
3. Be familiar with the representation and application of vector and calculus in physics. Understand the application of physics in natural sciences and engineering technology, and the interpenetration of related sciences
4. Through the study of scientific thinking methods and research methods, students have the ability to comprehensively use physics knowledge and mathematics knowledge to solve practical problems, improve the ability to find problems, analyze problems, solve problems, and develop innovative qualities. It lays a good foundation for students to further study professional knowledge, and also lays the foundation for future social science and technology work and scientific research work.
5. Through this course, students will establish a scientific materialist world outlook, methodology, and epistemology, have the ability to independently analyze and deal with related issues, and have strong self-learning and ability to absorb new knowledge.

Expected learning outcomes:

1. Through the seventh chapter of the electrostatic field learning, students master the concept of the electric field strength and potential of the electrostatic field and the superposition principle of electric field strength and principle of potential superposition, master the integration relationship between electric potential and electric field strength, and can calculate the electric field in some simple problems. Strength and potential. Understand



	<p>the laws of electric fields—Gauss theorem and Ampere loop theorem. Understand the conditions and methods for calculating electric field strength by Gauss' theorem, and use Gauss's theorem to calculate uniformly charged spheres, uniform charged spheres, uniformly charged cylindrical surfaces, uniformly charged cylinders, and uniform The distribution and potential distribution of the charged plane in space. Grasp the calculation method of the capacitor capacitance, and use the energy storage formula to calculate the electrostatic field energy of the capacitor.</p> <p>2. Through the learning of a steady magnetic field, students master the concept of magnetic induction, understand Biot-Savart's law, and can calculate the magnetic induction around a straight current carrying wire and the magnetic field on the axis of the current-carrying annular conductor. The magnetic induction. Understand the law of stable magnetic field—Gaussian theorem of magnetic field and Ampere loop theorem. Understand the conditions and methods for calculating magnetic induction using Ampere's loop theorem, and use Ampere's loop theorem to calculate an infinitely long uniform current-carrying cylindrical surface and cylinder. Internal and external magnetic field distribution, magnetic field distribution in long straight current-carrying solenoids and in circular solenoids. Understanding Ampere's law and Lorentz force formula to understand the concept of magnetic moment, can calculate the simple geometry of current-carrying conductors and current-carrying planar coils in a uniform magnetic field or in a non-uniform magnetic field generated by an infinitely long straight current conductor. Force and moment can analyze the force and movement of point charge in a uniform electromagnetic field. Understand the magnetization phenomenon of the medium and its microscopic interpretation and ferromagnetic properties.</p> <p>3. Through electromagnetic induction and electromagnetic field learning, students understand the concept of electromotive force, master the law of Faraday's electric field induction, and understand the essence of electromotive force and induced electromotive force, and can simultaneously use Faraday's law of electromagnetic induction and the definition of electromotive force. Calculate dynamic electromotive force. Learn the concepts of capacitance, self-inductance, mutual inductance, magnetic energy density, eddy current, etc., and understand the physical meaning of Maxwell's equations and the propagation of electromagnetic waves.</p> <p>4. Through the study of wave-optics, students mastered the concept of optical path and the relationship between optical path difference and phase difference. They can analyze the conditions of single-slit diffraction and Bob's interference and understand the working principle of Michael's interferometer. To understand the Huygens Fresnel principle and to understand the half-wavelength method for analyzing the distribution of Fraunhofer diffraction fringes on a single seam, the influence of the width</p>
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and the width of the slit on the distribution of diffraction fringes is analyzed. Understanding the grating diffraction formula will determine the position of the grating diffraction line. It will analyze the influence of the grating constant and wavelength on the distribution of the diffraction line of the grating and understand the resolution of the optical instrument. Understand natural light and polarized light, understand Brewster's law and Marius' law, and learn how to obtain and test linearly polarized light.

College Physics Experiment (A)

Course objectives (capacity):

Physics experiment is the beginning of systematic acceptance of experimental methods and experimental skills training for college students. It is a course to train students' abilities. Its training aims at three aspects:

1. Knowledge: It enables students to master basic experimental methods, basic experimental skills and basic theories of experiments, and to understand new techniques and knowledge of modern physics experiments;
2. 2.Abilities: To develop students' comprehensive experiments Ability, experimental design ability and ability to study physical laws, ability of comprehensive analysis, ability of creative thinking, ability of summarizing expression;
3. Qualities: cultivate students' sense of innovation, scientific way of thinking, scientific attitude of seeking truth from facts, rigorous work Style and study exploration spirit.

Expected learning outcomes:

In the successful study of module courses, students will deepen their understanding of physics as an experimental science, master the basic theory and methods of physical experiments, and deepen the understanding of physics-related theories. Improve the ability to solve practical problems. Students should be able to obtain the following learning outcomes:

1. In the introduction class, master the basic measurement methods of physical experiments, the calculation of uncertainty and the commonly used data processing methods.
2. In the basic layer experiment, the verification experiment was mainly arranged. The verification experiment matures the specification, it enables the student to quickly grasp a large amount of knowledge in a short period of time, so that the students lay a solid foundation of experimental knowledge and skills to prepare for future innovation. Teachers play a leading role in the classroom, regulate the students' experimental process, and cultivate good scientific experiment habits. Through this stage of learning, students can learn the basic use of experimental instruments and tools, the use of two kinds of data processing methods, ie, the difference method and the mapping method, learn to correctly represent and evaluate the results, and learn to correctly write experimental reports.



	<p>3. In the enhancement layer experiment, the arrangement of comprehensive experiments is the transition of students' design experiments. According to the requirements specified in the experimental project, the experimental principles, experimental conditions, and implementation plans were written out. According to the experimental instruments, the correct use of the instruments was explained. In the classroom, the teachers only played the role of mentoring so as to exert their learning initiative. Through this stage of learning, students can learn the self-design of the experimental report, master the debugging methods for strange instruments, learn how to troubleshoot the experiment, and quantify the experiment.</p> <p>4. In the design and innovation layer experiment, arrange experiments with comprehensive application properties or certain design tasks. Its project content has been carefully selected and is scientific, comprehensive, typical, exploratory and feasible. According to the tasks and requirements proposed by the experiment, students choose their own experimental methods and instruments to conduct experiments and write relatively complete experimental reports or scientific papers. Through this stage of learning, students should learn how to find data, how to use tools, how to improve and innovate in experiments, experience the relationship between theory and practice, and experience the spirit of science and science.</p>
<p>Recommended prerequisites</p>	<p>Master the basic knowledge of elementary mathematics, especially functions, probabilities, vectors, etc., and have the basic knowledge of middle school physics and the ability to use mathematical theory to analyze problems.</p>
<p>Content</p>	<ul style="list-style-type: none"> ● Higher Mathematics Part 1 <ol style="list-style-type: none"> 1. Functions, Limits, and Continuity 2. One-differential function calculus and its application 3. One-function integral calculus ● Higher Mathematics Part 2 <ol style="list-style-type: none"> 1. Geometric applications and physical applications of definite integrals 2. Differential equation 3. Vector and Spatial Analytic Geometry 4. Multivariate function differential calculus 5. Multivariate Function Integral 6. Infinite series ● Linear algebra <ol style="list-style-type: none"> 1. Determinant 2. Matrix 3. Vector group and its linear correlation 4. Linear equations ● Probability Theory and Stochastic Process <ol style="list-style-type: none"> 1. Events and Probability



	<ol style="list-style-type: none"> 2. Random variables 3. Multidimensional random variables 4. The numeric characteristics of random variables 5. Preliminary process of randomization <ul style="list-style-type: none"> ● Complex Function <ol style="list-style-type: none"> 1. The complex and complex function 2. The analytic function 3. The integral of complex function 4. The progression 5. The retention ● College Physics (A) <ol style="list-style-type: none"> 1. Electrostatic field 2. Stable magnetic field 3. Electromagnetic induction electromagnetic field 4. The volatility of light ● College Physics Experiment (A) <ol style="list-style-type: none"> 1 Introduction 2. Measurement error theory and data processing basics 3. Basic physical experiment 4. Modern physics experiment 5. Design Physics Experiment 																																	
<p>Examination requirements and forms of examination</p>	<p>Higher Mathematics (1), Higher Mathematics (2), Probability Theory and Stochastic Process, Complex Function, Linear Algebra, College Physics (A): closed written examination</p> <p>College Physics Experiment (A): In the form of examination, the average score of each experiment is used as the score of university physics experiments and submitted to the Academic Affairs Office. Experimental scores: Excellent, Good, Medium, Passing, Failing 5. The quantification criteria are as follows:</p> <table border="1" data-bbox="549 1464 1315 1655"> <thead> <tr> <th colspan="3">excellent</th> <th colspan="2">Good</th> <th colspan="2">medium</th> <th colspan="2">Pass</th> <th colspan="2">failed</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>95</td> <td>90</td> <td>85</td> <td>80</td> <td>75</td> <td>70</td> <td>60</td> <td>60</td> <td>40</td> <td>20</td> </tr> <tr> <td>A+</td> <td>A</td> <td>A-</td> <td>B+</td> <td>B</td> <td>B-</td> <td>C+</td> <td>C</td> <td>C-</td> <td>D</td> <td>E</td> </tr> </tbody> </table>	excellent			Good		medium		Pass		failed		100	95	90	85	80	75	70	60	60	40	20	A+	A	A-	B+	B	B-	C+	C	C-	D	E
excellent			Good		medium		Pass		failed																									
100	95	90	85	80	75	70	60	60	40	20																								
A+	A	A-	B+	B	B-	C+	C	C-	D	E																								
<p>Media employed</p>	<p>Blackboard, multimedia teaching equipment, related mathematics physics software</p>																																	
<p>Reading list</p>	<ol style="list-style-type: none"> 1. <i>Advanced Mathematics</i> First Volume, Department of Mathematics, Tongji University, People's Posts and Telecommunications Press, 2016.8 (first edition) 2. <i>The complete solution to the higher number problem</i> First volume, Department of Mathematics, Tongji University, People's Posts and Telecommunications Press, 2016.9 (first edition) 3. <i>Advanced Mathematics</i> First Volume, Huang Lihong et al., Fudan 																																	



University Press, 2010.7 (3rd Edition)

4. Fu Lizhen et al., *Advanced Mathematics Tutoring*, Northwestern Polytechnical University Press, 2007
5. *Advanced Mathematics* (2nd) Tongji University 6th Edition
6. *Mathematical Analysis*, the fourth edition of the Department of Mathematics, East China Normal University
7. *Analytic Geometry* Qiu Weisheng
8. *Ordinary Differential Equations*, Wang Gaoxiong et al.
9. *Linear Algebra and Its Applications*, edited by Pan Xianbing, Tsinghua University Press
10. *Linear Algebra*, Tongji University, Higher Education Press.
11. *Discrete Mathematics*, Qu Yanling, Yan Suyun, Zhang Liang, Higher Education Press, July 2013, fifth edition
12. *Discrete Mathematics*, Zuo Xiaoling, Economic Science Press, September 2009
13. *Discrete Mathematics and Its Applications*, Guo Jian, Li Junyi, China Electric Power Press, May 2010
14. *Discrete Mathematics*, Li Bin, Sichuan University Press, second edition, January 2005
15. *Probability Theory and Mathematical Statistics*, Pan Xianbing, 16. Yan Yanhong, Xiong Ou, Chief Editor, Tsinghua University Press.
16. *Probability Theory and Stochastic Process*, edited by Chen Liuxin, Tsinghua University Press.
17. *Probability Theory, Stochastic Processes and Mathematical Statistics*, edited by Wang Yuxiao, Liu Jinzhang, and Beijing University of Posts and Telecommunications Press.
18. Zhang Sanhui. *College Physics*. Beijing: Tsinghua University Press, 1999.
19. Wu Baishi. *University Physics Foundation*. Beijing: Science Press, 2007.
20. Cheng Shouqi. *General Physics*. Beijing: People's Education Press, 1980
21. Zhao Kaihua. *Electromagnetics*. Beijing: People's Education Press, 1978
22. Ma Wenwei. *Physics*. Beijing: Higher Education Press, 2000.
23. Xie Guoya. *University Physics Tutorial*. Jilin: First Edition Jilin University Press, 2015 Physics Experiment (A):
24. Ma Wenwei. *Physics* [M]. Fifth Edition, upper and lower volumes. Beijing: Higher Education Press, 2009.
25. Zhou Dianqing. *College Physics Experiment* [M]. Wuhan: Wuhan University Press 2002.
26. Jia Yurun, *University Physics Experiment* [M]. Shanghai: Fudan University Press, 1987.
27. Cheng Zhengwei. *College Physics Experiments* [M]. Beijing: Higher Education Press, 2002
28. Wu Yonghua et al. *College Physics Experiments* [M]. Beijing: Higher Education Press 2001



Last modified date	2018.12.28
Explanation of the module (reason)	<p>The mathematical basic modules aim to</p> <ol style="list-style-type: none">1. Enable students to master the basic knowledge of mathematics, physics and other natural sciences;2. Develop rigorous logical thinking, abstract thinking, analysis and calculation, and practical ability;3. Deepen students' understanding of natural sciences, improve their scientific literacy, and solve scientific and technological problems.4. Lay a solid foundation for future professional research.



Module 2 Computer Science Fundamentals

Module name	Computer Science Fundamentals		
Module level, if applicable			
Code, if applicable			
Subtitle, if applicable			
Courses, if applicable	College Computer (Experiment included)	C Language Programming (Experiment included)	Applied Technology of Database (Experiment included)
Semester(s) in which module is taught	1	2	4
Person responsible for Module	ZHI Honglei (Senior Engineer)		
Lecturer	<p>Associate Professor: ZHI Honglei, ZHEN Xianfeng, XIONG Zhuang, LIANG Lanhua, JIANG Bing, WANG Liyan, YAN Huifeng, WANG Ning, ZHANG Ling</p> <p>Senior Engineer: ZHI Honglei, LIN Zejin</p> <p>Lecturer: LIU Ying, XIAO Ming, Zhang Hua</p> <p>Assistant: FANG Xiaoyan, LIU Xiaojuan</p>		
Language	Chinese		
Relation to curriculum	Compulsory		
Type of teaching, contact hours	<p>College Computer: Average theoretical lesson hours per week: 2 hours Average time for teaching experimental classes every week: 1 hour Average weekly Q&A and homework time: 7 hours Average lecture time per semester: 2 hours Average exam preparation time per semester: 12 hours Average semester preparation test report 6 hours</p> <p>C Language Programming: Average theoretical lesson hours per week: 2 hours Average time for teaching experimental classes every week: 1 hour Average weekly Q&A and homework time: 4 hours Average lecture time per semester: 2 hours Average exam preparation time per semester: 4 hours</p>		



	<p>Average semester preparation test report 2 hours</p> <p>Applied Technology of Database:</p> <p>Average theoretical lesson hours per week: 2 hours</p> <p>Average time for teaching experimental classes every week: 1 hour</p> <p>Average weekly Q&A and homework time: 2 hours</p> <p>Average lecture time per semester: 2 hours</p> <p>Average exam preparation time per semester: 6 hours</p> <p>Average semester preparation test report 2 hours</p>
Workload	<p>College Computer: Workload=180 hours, instruction hours=48 hours, self-study hours= 132 hours</p> <p>C Language Programming: Workload=120 hours, instruction hours=48 hours, self-study hours= 72 hours</p> <p>Applied Technology of Database : Workload=90 hours , instruction hours=48 hours, self-study hours=42 hours</p>
Credit points	<p>College Computer: 6</p> <p>C Language Programming: 4</p> <p>Applied Technology of Database: 3</p>
Requirements according to the examination regulations	<p>College Computer: Attendance+Assignment: 20%, experiment 20%, examination 60%</p> <p>C Language Programming: Attendance+Assignment: 20%, experiment 20%, examination 60%</p> <p>Applied Technology of Database Attendance+Assignment : 20% , experiment 20%, examination 60%</p>
Module objectives (capability)/expected learning outcomes	<p>Course objectives (capabilities):</p> <p>The foundation of computer science focuses on cultivating students to master the basic knowledge of computers. Meanwhile, they have the basic skills in the operation and use of computer.They can use office automation software to accomplish tasks related to them to meet and adapt to the requirements of information society for the basic qualities of undergraduates. In addition, C language programming is also used to train students to master the basic concepts and methods of program design, to understand the programming files of general application programs, and to have preliminary programming and programming development capabilities.At the same time establish the basic concepts of the database, basic understanding of the basic principles and basic applications of the database.</p> <p>Expected learning outcomes:</p> <ul style="list-style-type: none"> ● College Computer: <ol style="list-style-type: none"> 1. Grasp the basic knowledge of computers, have basic computer culture awareness, and have the basic skills of operating and using computers; 2.Use office automation software Word, Excel, PPT to complete its



	<p>related tasks;</p> <p>3. Master common computer application software and master computer use;</p> <ul style="list-style-type: none"> ● C language programming: <ol style="list-style-type: none"> 1. Grasp the basic theory, basic programming method, basic content and main application fields of C language; 2. Have the ability to communicate and express, innovate to learn, and analyze and solve problems independently; 3. Own the strong comprehensive analyzing skills and problem solving skills and programming skill of high quality. ● Applied Technology of Database: <ol style="list-style-type: none"> 1. Grasp the three-tier mode and two-level image structure of the database system; 2. Have the ability to implement related relational operations; ability to determine relational patterns and paradigm decomposition; 3. Have the ability to create, delete, modify, rename, and other operations of the database; 4. According to the requirements given, write the corresponding SQL statement to achieve the basic operation of the data table; 5. Have the ability to draw E-R diagrams; database design for a small system; 6. Have the ability to design a small management information system; 7. Have the ability to use views, indexes, and cursors to implement related operations 8. Can take certain measures to ensure the security and integrity of the database; can backup and restore the database; 9. Have the ability to create and apply simple functions, stored procedures, and triggers.
<p>Recommended prerequisites</p>	<p>Basic knowledge of Mathematics and University Computer Basics and analyzing problems by using mathematical theory</p>
<p>Content</p>	<ul style="list-style-type: none"> ● College Computer <ol style="list-style-type: none"> 1. Basic computer knowledge 2. Computer operating system 3. Use of Word 2010 documents 4. Excel 2010 use and operation 5. Use of PowerPoint 2010 Slides 6. Computer Network and Internet Applications 7. Common Tool Software Introduction ● C Language programming <ol style="list-style-type: none"> 1. Introduction to C language 2. Select structural programming 3. Cycle structure programming



	<p>4. Functions</p> <p>5. Array</p> <p>6. Pointers</p> <p>7. Structures, unions</p> <p>8. Compiling the preprocessing, file</p> <p>● Applied Technology of Database</p> <p>1.Database overview</p> <p>2.Relational database</p> <p>3. The basic operation of the database</p> <p>4 basic operation of the data table</p> <p>5. Database Design</p> <p>6. Comprehensive Example - Library Management System</p> <p>7. Views, Indexes, and Cursors</p> <p>8. Database Security Protection</p> <p>9. SQL programming</p>
Examination requirements and forms of examination	<p>College Computer: closed written examination</p> <p>C language programming: closed written examination</p> <p>Applied Technology of Database: closed written examination</p>
Media employed	Blackboard, multimedia teaching equipment, related mathematics physics software
Reading list	<p>1. Wang Hong Lei. "University Computer Foundation" (Windows 7 + Office 2010) [M]. Xi'an Jiaotong University Press, 2016.8</p> <p>2. Wang Ning. "Guiding the Basic Experiments of University Computer" (Windows 7+Office2010) [M]. Xi'an Jiaotong University Press, 2016.8</p> <p>3. Jianhua Gao. Computer Application Basic Course [M]. Shanghai: East China Normal University Press, 2015.</p> <p>4. Zhang Qing, Yang Zuqiao. University Computer Foundation Training Course [M]. Xi'an Jiaotong University Press, 2014.</p> <p>5. Wu Qing. Office software advanced application Office[M]. Zhejiang University Press, 2012.</p> <p>6. Liu Daming, Nie Yongping. C Language Programming [M]. Higher Education Press, 2012.</p> <p>7. Tan Haoqiang. C program design [M]. Beijing: Tsinghua University Press, 2012.</p> <p>8. Liu Ying, Wang Ning, Yang Xuemei. C Language Programming [M]. Chongqing University Press, 2017.8</p> <p>9. Wang Shan, Sa Shibiao. An Introduction to Database Systems[M]. Beijing: Higher Education Press, 2006.</p> <p>10. Li Chunxi. Database Principles and Applications——Based on SQL Server 2012[M]. Beijing: Tsinghua University Press, 2012.</p> <p>11. Li Ping, Huang Kewang, Huang Nengqi. SQL Server 2012 Database Application and Training [M]. Beijing: Mechanical Industry Press, 2015.</p>



	<p>12. He Yujie. Database System Tutorial (2nd Edition)[M]. Beijing: People's Posts and Telecommunications Press, 2015.</p> <p>13. Yuan Lina, Wang Gang, Luo Qiong. Principles and Applications of Data Systems (SQL Server 2012)[M]. Beijing: People's Posts and Telecommunications Press, 2015.</p>
Last modified date	2018.12.28
Explanation of the module (reason)	<p>The module is designed to cultivate students' cultural awareness of computer basics and have the basic skills of operation and use of computers. At the same time, it develops students' basic ability of program design to solve practical application problems through program analysis, design, programming, and knowledge of databases. The initial mastery also lays a good foundation for the students to further study the follow-up professional knowledge, employment and work.</p>



Module 3 Engineering Fundamentals

Module name	Engineering Fundamentals			
Module level, if applicable				
Code, if applicable				
Subtitle, if applicable				
Courses, if applicable	Basics of Circuit Analysis (Experiment included)	Basics of Electronic Circuit (Experiment included)	Digital Circuit and Logic Design (Experiment included)	Communication Electronic Circuit
Semester(s) in which module is taught	2	3	3	4
Courses, if applicable	Signal and System (Experiment included)	Digital Signal Processing (Experiment included)	Microprocessor System Structure and Embedded System Design (Experiment included)	
Semester(s) in which module is taught	4	5	4	
Person responsible for Module	TANG Linjian (Assoc. prof.)			
Lecturer	<p>Professor: MAO Qijian, ZHANG Demin Associate professor: XU Xiao, ZHANG Yuan, LI Weidong, XI Bing, TANG Yan, LI Wenjuan, ZHAO Ruiyu, HU Junjun, YANG Xiaofei, WANG Wei, YUAN Lin Senior Engineer: WANG Yongping, WANG Jun Lecture: LI Meili, JIANG Baoan, HU Rong, TAN Lirui, ZHANG Xuelian, WANG Qiang, WANG Baozhu, CAO Lihua, CAO Wenjing, FEI Li Assistant: ZHENG Qiuju, GUO Yanfang, HE Jie, HUO Jialu, YANG Huiping, YANG Lijiao</p>			
Language	Chinese			
Relation to curriculum	Compulsory			
Type of teaching,	Basics of Circuit Analysis:			



<p>contact hours</p>	<p>The weekly average theoretical teaching hours: 3.5 hours The weekly Q&A hours: 2 hours The weekly homework and experiment report hours: 2 hours The average lecture hours per semester: 2 hours Average examination preparation hours per semester: 13 hours Basics of Electronic Circuit: The weekly average theoretical teaching hours: 3.5 hours The weekly Q&A hours: 2 hours The weekly homework and experiment report hours: 4 hours The average lecture hours per semester: 2 hours Average examination preparation hours per semester: 16 hours Average knowledge competition and producing per semester: 8 hours The average of seminar and experience per semester: 2 hours Digital Circuit and Logic Design: The weekly average theoretical teaching hours: 4.5 hours The weekly Q&A hours: 2 hours The weekly homework and experiment report hours: 5 hours The average lecture hours per semester: 2 hours Average examination preparation hours per semester: 14 hours Average knowledge competition and producing per semester: 8 hours The average of seminar and experience per semester: 2 hours Communication Electronic Circuit: The weekly average theoretical teaching hours: 2 hours The weekly Q&A hours: 0.5 hour The weekly homework hours: 0.5 hours The average lecture hours per semester: 2 hours Average examination preparation hours per semester: 10 hours Signal and System: The weekly average theoretical teaching hours: 4 hours The weekly Q&A hours: 2 hours The weekly homework hours: 5 hours The average lecture hours per semester: 2 hours Average examination preparation hours per semester: 17 hours Digital Signal Processing: The weekly average theoretical teaching hours: 2.5 hours The weekly Q&A hours: 2 hours The weekly homework and experiment report hours: 6 hours The average lecture hours per semester: 2 hours Average examination preparation hours per semester: 10 hours Microprocessor System Structure and Embedded System Design: The weekly average theoretical teaching hours: 5.5 hours The weekly Q&A hours: 3 hours The weekly homework and experiment report hours: 4 hours</p>
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	<p>The average lecture hours per semester: 2 hours Average examination preparation hours per semester: 13 hours Average knowledge competition and producing per semester: 8 hours The average of seminar and experience per semester: 2 hours</p>
Workload	<p>Basics of Circuit Analysis: Workload=135 hours, Contact hours= 56 hours, Self-study hours = 79 hours Basics of Electronic Circuit: Workload=180 hours, Contact hours= 56 hours, Self-study hours = 124 hours Digital Circuit and Logic Design: Workload=210 hours, Contact hours=72 hours, Self-study hours = 138 hours Communication Electronic Circuit: Workload=60 hours, Contact hours=32 hours, Self-study hours =28 hours Signal and System: Workload=195 hours, Contact hours=64 hours, Self-study hours = 131 hours Digital Signal Processing: Workload=180 hours, Contact hours=40 hours, Self-study hours = 140 hours Microprocessor System Structure and Embedded System Design: Workload=225 hours, Contact hours=88 hours, Self-study hours = 137 hours</p>
Credit points	<p>Basics of Circuit Analysis: 4.5 Basics of Electronic Circuit: 6 Digital Circuit and Logic Design: 7 Communication Electronic Circuit: 2 Signal and System: 6.5 Digital Signal Processing: 6 Microprocessor System Structure and Embedded System Design: 7.5</p>
Requirements according to the examination regulations	<p>Assignment, performance and experiment 40%; Final examination 60%</p>
Module objectives (capability)/expected learning outcomes	<p>Module objective: The purpose of this module is to make students master the basic knowledge of circuit analysis, electronic circuit, digital circuit and logic design, microprocessor system structure and embedded system design, so as to lay a solid foundation for the learning professional application course. The students have the ability to analyze, calculate and design all kinds of circuits, to grasp various theoretical analysis methods of signal and system, to analyze the realization mechanism of microprocessor and have the ability to design, debug and maintain accordingly. Besides, they can use relevant knowledge to develop and design simple application systems.</p> <p>Expected learning outcomes:</p> <ul style="list-style-type: none"> ● Basics of Circuit Analysis, Basics of Electronic Circuit, Digital



	<p>Circuit and Logic Design and Communication Electronic Circuit:</p> <ol style="list-style-type: none"> To master the basic theory and method of circuit analysis. To master the basic principles and main characteristics of the semiconducting, operational amplifier and logic devices. To master the circuit principle of typical electronic circuit (analog, digital, radio frequency). To have the method of analysis, calculation and design. To be familiar with the main performance index and optimization method to improve the ability of solving practical problems. <ul style="list-style-type: none"> ● Signal and System and Digital Signal Processing: ● Signal and System and Digital Signal Processing: <ol style="list-style-type: none"> Can accurately describe the characteristics of the signal and the system; Can analyse the relationship about input and output of signal and system in the time domain. The principle of signals can be explained in frequency domain and complex frequency domain. To solve simple engineering problems by frequency domain analysis. To have a basic knowledge of digital signal processing. To be familiar with the basic principles of digital signal processing, and be able to apply it to communication engineering. To be able to read technical papers of digital signal processing, and provide support for studying advanced engineering applications. <ul style="list-style-type: none"> ● Microprocessor System Structure and Embedded System Design: <ol style="list-style-type: none"> To have the basic necessary theoretical knowledge of SCM Control for the application and technology of electronic communication. To have engaged in basic skills in the design of SCM Control. To have the ability to install and maintain the SCM Control circuit. To have the preliminary design and debug abilities about microprocessor control production line. To lay a certain foundation for students to learn professional knowledge and occupation skills, improve the overall quality, enhance the basis of ability to adapt to the change of the occupation and the obtain the ability to keep on learning.
<p>Recommended prerequisites</p>	<ol style="list-style-type: none"> The basic knowledge of mathematics and physics, the ability to analyze problems with mathematical and physical theories. College computer, C language programming, to have the the basic ability of programming.
<p>Content</p>	<ul style="list-style-type: none"> ● Basics of Circuit Analysis: <ol style="list-style-type: none"> Basic concepts and laws of the circuit Equivalent transform analysis method General analysis methods and network theorems for linear networks The transient analysis of dynamic circuits The analysis of sinusoidal steady-state circuit



6. The analysis of the circuits including coupled inductor and ideal transformer
7. The frequency response characteristics of linear circuits
8. The surveying and mapping of the volt - ampere characteristics of the circuit elements
9. The experimental study of the controlled source
10. The verification of the superposition principle;
11. The verification of Thevenin's theorem
- **Basics of Electronic Circuit:**
 1. The semiconductor devices
 2. The analysis method of amplifying circuit
 3. The frequency response of amplifying circuit
 4. The integrated operational amplifier and its basic applications
 5. The negative feedback amplifying circuit
 6. The power amplifier circuit
 7. The DC regulated power supply
 8. The amplifier of single transistor with common emitter
 9. The emitter follower
- **Digital Circuit and Logic Design:**
 1. Digital logic technology
 2. Logic gate circuit
 3. Combinational logic circuits
 4. Integrated trigger
 5. The sequential logic circuit
 6. Semiconductor memory
 7. Pulse circuit
 8. The experiment of digital circuit and logic design
 9. The basic understanding of digital signals
 10. The design of combinational logic circuit - adder
 11. The design of combinational logic circuit - decoder
 12. The design of combinational logic circuit - data selector
 13. The design and test of trigger
 14. The design and test of sequential logic circuits - asynchronous counter
 15. The design and test of sequential logic circuits - synchronous counter
 16. The design and test of pulse unit circuit -555 time based circuit and its application
- **Communication Electronic Circuit:**
 1. Overview
 2. High frequency small signal resonant amplifier
 3. High frequency resonant power amplifier
 4. Sinusoidal oscillator
 5. The modulation and demodulation of amplitude
 6. The modulation and demodulation of angle



	<p>7. Feedback control and whole machine line</p> <ul style="list-style-type: none"> ● Signal and System <ol style="list-style-type: none"> 1. The overview of signal and system 2. The time domain analysis of continuous signal and system 3. The frequency domain analysis of continuous signal and system 4. The complex frequency domain analysis of continuous signal and system 5. The Z domain analysis of discrete signal and system ● Digital Signal Processing <ol style="list-style-type: none"> 1. Signal and system analysis 2. Discrete Fourier Transform 3. The structures for digital system 4. The design of IIR digital filter 5. The design of FIR digital filter ● Microprocessor System Structure and Embedded System Design <ol style="list-style-type: none"> 1. The hardware structure and working principle of singlechip AT89C51 2. The instruction system of singlechip 3. The program design foundation of singlechip 4. The extension technology of singlechip system 5. The internal structure of S3C2410A 6. The embedded system program design and operating system 7. The application of singlechip and embedded system
<p>Examination requirements and forms of examination</p>	<p>Basics of Circuit Analysis: closed written examination Basics of Electronic Circuit: closed written examination Digital Circuit and Logic Design: closed written examination Communication Electronic Circuit: closed written examination Signal and System: closed written examination Digital Signal Processing: closed written examination Microprocessor System Structure and Embedded System Design : open-book written examination</p>
<p>Media employed</p>	<p>multimedia , blackboards/ whiteboard, relevant experiment platform</p>
<p>Reading list</p>	<ol style="list-style-type: none"> 1. Li hansun. Fundamentals of Circuit Analysis [M]. Higher Mathematics Press 2. Wu Dazheng. Circuit Foundation [M]. Published by Xi'an Electronic and Science University press. 3. Tong Sibai, Hua Chengying. Analog electronic technology foundation [M]. Beijing: Higher Education Press, 2015. 4. Kang Huaguang, etc. Electronic Technology Foundation[M]. Beijing: Higher Education press, 2012. 5. Huang Di, Li Zhongqiu, etc. Analog Electronic Technology Application [M]. Beijing: Electronic Industry Press, 2012. 6. Zou Hong, Digital Circuit and Logic Design (Second Edition) [M]. Beijing: Posts & Telecom Press, 2017.



	<p>7. Wang Yuyin, Logic Design of Digital Circuit (Third Edition) [M]. Beijing: Higher Education Press, 1999.</p> <p>9. Wang Weidong. High Frequency Electronic Circuit. Beijing: Electronic Industry Press, 2008.</p> <p>10. Yang Xiaofei, He Feng. Signals and Systems (Second Edition) [M]. Beijing: Science Press, 2014.</p> <p>11. Shen Yuanlong, Zhou Jingquan. Signals and Systems (Second Edition) [M]. Beijing: People's Posts and Telecommunications Press, 2009.</p> <p>12. Zheng Junli. Signals and Systems (Third Edition) [M]. Beijing: Higher Education Press, 2011.</p> <p>13. Gao Xiquan, Ding Yumei, Digital Signal Processing (Second Edition) Study Guide[M], Xi 'an University of Electronic Science and Sechnology Press, 2001.</p> <p>14. Cheng Peiqing, Digital Signal Processing [M], Tinghua University Press, 2001.</p> <p>15. Oppenheim, Alan V. and Ronald W. Schafer. Digital Signal Processing [M]. Prentice Hall, 1975.</p> <p>16. Wun Ziqi etc. 51 Single-chip microprocessor C language innovation course [M]. Beijing: Beihang University Press, 2011.</p> <p>17. Wan Long etc . The Principle and Application of single-chip microprocessor [M]. Beijing: Tsinghua University Press, 2011.</p> <p>18. Xu Yinghui etc. ARM9 Embedded System Design -- Based on S3C2410 and Linux [M]. Beijing: Beihang University Press, 2014.</p> <p>19. Hou Dianyong, The Foundation of Embedded System Development -- C Language Programming based on ARM9 Microprocessor [M] . Beijing : Tsinghua University Press, 2015.</p>
Last modified date	2018.12.28
Explanation of the module (reason)	The purpose of this module is to make students have the basic knowledge and basic capabilities of circuit analysis, electronic circuits, digital circuit and logic design, signal and system analysis, microprocessor system structure and embedded system design, so as to make a good foundation for the subsequent professional courses.



Module 4 Engineering fundamentals Practice

Module name	Engineering fundamentals Practice		
Module level, if applicable			
Code, if applicable			
Subtitle, if applicable			
Courses, if applicable	Course Project (Digital Circuit and Logic Design)	Course Project (Microprocessor System Structure and Embedded System Design)	Electric Fitting Practice
Semester(s) in which module is taught	3	4	5
Person responsible for Module	XI Bing (Assoc. prof.)		
Lecturer	Associate professor: XI Bing , WANG Wei Senior Engineer: WANG Xin, QI Zhigang, MENG Jiawen Lecturer: WANG Baozhu, WANG Qiang, FEI Li, FENG Wenguo, GUO Shuang, CHEN Li, XIAN Juan Engineer: TAN Xiang Assistant: DONG Niya, CHEN Junlin		
Language	Chinese		
Relation to curriculum	All courses in this module are compulsory.		
Type of teaching, contact hours	Course Project (Digital Circuit and Logic Design): The weekly average laboratory class teaching hours: 1 hour The approximately weekly Q&A and completion of design report hours : 1 hour Course Project (Microprocessor System Structure and Embedded System Design): The weekly average laboratory class teaching hours: 1 hour The approximately weekly Q&A and completion of design report hours : 0.9 hour Electric Fitting Practice: The weekly average laboratory class teaching hours: 0.5 hours The approximately weekly Q&A, completion of design and report hours: 1.4 hour		
Workload	Course Project (Digital Circuit and Logic Design):		



	<p>Workload=30 hours, Contact hours= 16 hours, Self-study hours = 14 hours</p> <p>Course Project (Microprocessor System Structure and Embedded System Design): Workload=30 hours, Contact hours= 16 hours, Self-study hours = 14 hours</p> <p>Electric Fitting Practice: Workload=30 hours, Contact hours= 8 hours, Self-study hours = 22 hours</p>
Credit points	<p>Course Project (Digital Circuit and Logic Design): 1</p> <p>Course Project (Microprocessor System Structure and Embedded System Design): 1</p> <p>Electric Fitting Practice: 1</p>
Requirements according to the examination regulations	<p>Usual performance: 20%, Experiment operation 50%, Experiment Report 30%</p>
Module objectives (capability)/expected learning outcomes	<p>Module objective:</p> <ol style="list-style-type: none"> To build up the students' practical cooperation ability, work ability, observation ability, analysis ability and creative ability by the practices. To cultivate scientific attitude, theory with practical and pragmatic style. To be with a basic technical developing ability of software and hardware independently. To be able to identify and use the common devices correctly, master the electrical reading method of electrical schematic diagram and circuit board installation diagram; to understand basic welding and assembly technology; to have the ability of manufacturing testing and fault analysis and processing with simple electrical device. <p>Expected learning outcomes:</p> <p>After successful learning of this module, students will consolidate the understanding of the principles about typical digital circuits, the analyzing calculation and the design methods, the main performance indicators and the improvement ways, and improve the ability to solve the practical problems. Students should be able to obtain the following learning results:</p> <ol style="list-style-type: none"> Ability to solve practical problems about digital circuits. After the course project, students are able to have: <ol style="list-style-type: none"> The basic ability of electronic equipment design and development. The ability to read the picture of electronic circuits. The ability to analyze and calculate electronic circuits. The preliminary design ability of electronic circuits The basic ability of designing, installing, debugging and maintaining for electronic equipment. To learn to identify and correct the use of common electrical components. Be able to understand simple electrical schematic diagram, circuit board installation diagram.



	<p>5. To master the technology of artificial welding and assembl.</p> <p>6. To master the manufacturing and debugging methods and procedures of simple electrical installations.</p> <p>7. To learn to analyze and solve the fault of simple electrical installations.</p>
Recommended prerequisites	<p>1. Be familiar with the basic concepts of circuit analysis, digital circuit analysis and design, to analyze and master the structure of the circuit and the internal working principle of the integrated chip by using the knowledge of circuit analysis and electronic circuit.</p> <p>2. To have the basic knowledge of circuit analysis, electronic circuit and digital circuit; to be able to analyze single-chip processor and its peripheral circuit by using the basic knowledge of circuit</p> <p>3. Be familiar with the structure of microprocessor system and the principle of embedded system; have the ability of C language or assembler programming.</p>
Content	<p>●Course Project (Digital Circuit and Logic Design):</p> <p>1. To give out the subject of the course project.</p> <p>2. To analyze the project and search for relevant information.</p> <p>3. To design the circuit diagram according to the requirement of the subject.</p> <p>4. To explain the circuit diagram to the teacher and get relevant materials.</p> <p>5. The circuit can be built on the experimental box or bread board according to the circuit diagram.</p> <p>7. The problems and faults of the circuit are found under the guidance of the teacher.</p> <p>8. To check and accept the practical results by teacher.</p> <p>●Course Project (Microprocessor System Structure and Embedded System Design):</p> <p>1. The assignment and explanation of the subject for the course project.</p> <p>2. To look up the relevant information and carry out the design plan.</p> <p>3. To check the design plan and main program code writing.</p> <p>4. The program compilation and software simulation debugging.</p> <p>5. The hardware circuit connection is done on the experiment box.</p> <p>6. To download the program to run and debug, in order to meet the basic functional requirements.</p> <p>7. To modify the program for functional improvement and acceptance test.</p> <p>●Electric Fitting Practice:</p> <p>1. The assignment of the electric fitting practice.</p> <p>2. To make reasonable layout according to the circuit diagram and assembly drawing.</p> <p>3. The circuit board welding;</p> <p>4. Debugging and fault analysis.</p>
Examination requirements and	Comprehensive evaluation of actual operation and experimental report



forms of examination	
Media employed	PPT multimedia courseware, projectors, laser pens, the description of actual circuits, blackboards/whiteboard, relevant experiment platform, etc.
Reading list	<ol style="list-style-type: none"> 1. Zou Hong, Digital Circuit and Logic Design (Second Edition) [M]. Beijing: Posts & Telecom Press, 2017. 2. Li Li etc . Basic Experimental Guidance for Practical Electronic Technology. Chongqing: The University of Chongqing Press, 2017. 3. Li Guangjun etc. Microprocessor System Structure and Embedded System Design [M]. Beijing: Electronic Industry Press, 2011. 4. Translation by Chen Shuhui etc. Embedded System Architecture, Programming and Design (3rd Edition) [M]. Beijing: Tsinghua University Press, 2017. 5. Zuo Xiangang, Liu Yanchang, Jia Meng. Microcontroller Principle and C Language Programming [M]. Xi'an: Xidian University Press, 2016. 6. Tong Sibai, Hua Chengying. Analog electronic technology foundation [M]. Beijing: Higher Education Press, 2015. 7. Liu Ning Creative Electronic Design and Production [M]. Beijing: University of Arms and Astronautics Press, 2010.
Last modified date	2018.12.28
Explanation of the module (reason)	This module is designed to train students' practical design and hands-on ability in digital circuit and logic design, microprocessor and embedded system design. With the help of the knowledge of the previous modules, students can carry out typical circuit design, programming, testing and installation. It deepens and consolidates the understanding and mastery of the engineering basic knowledge and has the strong ability of designing and developing the electronic design, microprocessor and embedded system design by the training of the course projects. It provides the foundation for following course study.



Module 5 Engineering Principle

Module name	Engineering Principle			
Module level, if applicable				
Code, if applicable				
Subtitle, if applicable				
Courses, if applicable	Survey of the Communication Engineering	Electromagnetic Field and Electromagnetic Waves	Communication Principles	Experiment (Basics of Communication Technology)
Semester(s) in which module is taught	1	5	5	5
Person responsible for Module	HU Junjun (Assoc. prof.)			
Lecturer	<p>Associate professor: HU Junjun , LI Wenjuan, XI Bing, WANG Wei, YI Hongwei, ZHAO Ruiyu, GAO Fei, CAI Kai, LIU Hong</p> <p>Senior Engineer: WANG Xin, QI Zhigang, WANG Yongping, MENG Jiawen</p> <p>Lecturer: WANG Baozhu, WANG Qiang, FEI Li, LIU Jinting, FENG Wenguo, GUO Shuan, CHEN Li, LI Xingpei, LIU Wenjing, CHEN Yun</p> <p>JIANG Baoan, LAI Xiaolong, LI Meili, CAO Lihua</p> <p>Engineer: TAN Xiang</p> <p>Assistant: DONG Niya, CHEN Junlin</p>			
Language	Chinese			
Relation to curriculum	All courses in this module are compulsory.			
Type of teaching, contact hours	<p>Survey of the Communication Engineering: The weekly average theoretical teaching hours: 0.5 hours The weekly Q&A and homework hours: 0.5 hours The average of seminar per semester: 2 hours The average of Final report: 12 hours</p> <p>Electromagnetic Field and Electromagnetic Waves: The weekly average theoretical teaching hours: 2 hours The weekly Q&A and homework hours: 7 hours The average of seminar per semester: 2 hours Average examination preparation hours per semester: 4 hours</p>			



	<p>Communication Principles: The weekly average theoretical teaching hours: 3.5 hours The weekly Q&A and homework hours: 10 hours The average open class for teachers per semester: 4 hours The average expert lecture hours per semester: 4 hours Average examination preparation hours per semester: 16 hours</p> <p>Experiment (Basics of Communication Technology): The weekly average laboratory class teaching hours: 1 hour The weekly Q&A hours: 0.5 hour The approximately weekly average hours for completion of design report : 2.2 hours</p>
Workload	<p>Survey of the Communication Engineering: Workload=30 hours, Contact hours= 8 hours, Self-study hours = 22 hours</p> <p>Electromagnetic Field and Electromagnetic Waves: Workload=150 hours, Contact hours=32 hours, Self-study hours = 118 hours</p> <p>Communication Principles: Workload=240 hours, Contact hours=56 hours, Self-study hours =184 hours</p> <p>Experiment (Basics of Communication Technology): Workload=60 hours, Contact hours= 16 hours, Self-study hours = 44 hours</p>
Credit points	<p>Survey of the Communication Engineering: 1 Electromagnetic Field and Electromagnetic Waves: 5 Communication Principles: 8 Experiment (Basics of Communication Technology): 2</p>
Requirements according to the examination regulations	<p>Except the course “Experiment about Basics of Communication Technology”: Homework, performance 40%; final examination or final report 60%.</p> <p>Experiment (Basics of Communication Technology): Usual performance: 20%, Experiment operation 50%, Experiment Report 30%</p>
Module objectives (capability)/expected learning outcomes	<p>Module objectives:</p> <p>Survey of the Communication Engineering:</p> <ul style="list-style-type: none"> ● To be conducted to familiarity with the program of communication engineering, understand the historical evolution of communication. ● Be known of the various applications of communication. ● To know about the basic task of communication, basic terminology, basic composition of communication network and basic theory of communication system. ● Be familiar with the composition and access ways of telephone terminal, mobile terminal, computer terminal and TV terminal. ● Be familiar with the composition and characteristics of cable transmission system, optical fiber transmission system, wireless transmission system, microwave transmission system, satellite



transmission system, mobile transmission system and access system, and understand the trend of transmission network.

Electromagnetic Field and Electromagnetic Waves:

- To let the students know the basic laws of the electromagnetic field, and explain the physical meaning of the Maxwell equation, and calculate the intensity and intensity of the electric field and the magnetic field in the electrostatic field, the constant current field and the constant current magnetic field.
- The propagation characteristics of the radio wave can be chosen according to the wave propagation mode and the signal fading can be solved.
- The principle and electrical parameters of the basic oscillator antenna have been learned and the basic ability to analyze the commonly used antennas;
- The variety of the antenna, the selection of the commonly used antenna and the ability of application.

Communication Principles:

- To make the students master the calculation of mean self-information, the bit rate, the information rate, and the error rate.
- To be able to understand the characteristics and determination methods of the stationary random process.
- To be able to describe the single symbol discrete channel with two different ways and calculate the channel capacity of some special channels.
- To understand several usual processes of amplitude modulation, FM and demodulation and know their characteristics and applications.
- To be able to judge if the Intercode interference can be eliminated according to the transmission function of the system; to understand several commonly used systems without intersymbol interference and explain the difference between them.
- To understand the modulation principle and anti noise performance of 2ASK, 2FSK, 2PSK and 2DPSK.
- To understand the sampling theorem and code a certain sampling value with the A Law 13 Segments.
- To master several commonly multiplexing technologies and multiple access technology principle by the contrastive ways and then understand the frame structure of PCM30/32 system.

Experiment (Basics of Communication Technology):

It aims to cultivate students' ability of work independently, hands-on, observational, analytical and creative through scientific experiments, and to set up a serious scientific attitude and realistic and pragmatic style.

Expected learning outcomes:

After successful study of the module, the students will be able to:



	<ol style="list-style-type: none"> 1. Be familiar with the program of communication engineering and clarify the learning objective. 2. The characteristics of the electromagnetic field can be analyzed flexibly by the concept of gradient, divergence and curl, and the basic theory of electromagnetic field is used to analyze the characteristics of the wave propagation. The basic principle of the antenna is analyzed by the basic theory of the electromagnetic field, and the basic principle of the antenna is used to analyze the working principle and the electrical parameters of the commonly antenna. 3. To know the composition of the communication system, the measurement of information and the calculation of the performance index of the communication system; to master the principle of the linear modulation (AM, DSB, SSB) and nonlinear modulation (FM) and the analysis of the anti noise performance; to master the composition and design criteria of the single digital baseband transmission system; to be familiar with the basic principle of the binary digital modulation system; to master the sampling theorem of analog signals, the quantization of sampling signals, the principle of A Law 13 line coding and decoding, the basic concept of pulse coding modulation; to be familiar with the multiplexing and multiple access technology. 4. To improve the ability of analyzing the actual communication system
<p>Recommended prerequisites</p>	<ol style="list-style-type: none"> 1. The mathematical knowledge about higher mathematics, linear algebra and probability theory. 2. The theory and knowledge of college physics. 3. The basic ability of signal and system analysis.
<p>Content</p>	<ul style="list-style-type: none"> ●Survey of the Communication Engineering: <ol style="list-style-type: none"> 1. The basic concept, development and application of communication 2. The framework and concept of the program 3. The learning characteristics and methods in universities' ●Electromagnetic Field and Electromagnetic Waves <ol style="list-style-type: none"> 1. The basic principle of electromagnetic field and electromagnetic wave 2. Wave propagation 3. The basic principle of antenna 4. The working principle of common antenna ●Communication Principles <ol style="list-style-type: none"> 1. The basic concepts of communication : the definition, system model, measurement of information, and performance index of communication system. The composition of communication system; 2. The concept and classification of signals, the statistical properties of random variables, stationary random processes and Gauss stochastic processes, mathematical models and capacity of channels. 3. The principle and anti noise performance of amplitude modulation (AM), the principle and anti noise performance of bilateral band modulation (DSB),



	<p>the principle and anti noise performance of single side band modulation (SSB), the principle and anti noise performance of the FM (FM).</p> <p>4. The digital baseband signal and its spectrum characteristics, the common code pattern for baseband transmission, the characteristics of baseband transmission without intersymbol interference, the eye diagram and the concept of time domain equalization.</p> <p>5. The principle and performances comparison of 2ASK, 2FSK, 2PSK and 2DPSK, the multilevel digital modulation system.</p> <p>6. The sampling theorem, the quantization of analog signal, PCM.</p> <p>7. the concept of frequency division multiplexing and time division multiplexing, the frame structure of PCM30/32 system, the concept of multiple access technology</p> <p>•Experiment (Basics of Communication Technology)</p> <ol style="list-style-type: none"> 1. The overview and high frequency small signal amplifier 2. LC and crystal oscillator 3. Amplitude modulation and diode detection 4. Frequency modulation and orthogonal frequency discrimination 5. Digital phase-locked loop 6. Analog multiplier mixer 7. The modulation and demodulation of ASK and FSK 8. The time division multiplexing and demultiplexing
<p>Examination requirements and forms of examination</p>	<ol style="list-style-type: none"> 1. Survey of the Communication Engineering: final summary report 2. Electromagnetic Field and Electromagnetic Waves: closed written examination 3. Communication Principles: closed written examination 4. Experiment (Basics of Communication Technology): Comprehensive evaluation of actual operation and experimental report
<p>Media employed</p>	<p>PPT multimedia courseware, projectors, laser pens, the description of actual circuits, blackboards/whiteboard, relevant experiment platform, etc</p>
<p>Reading list</p>	<ol style="list-style-type: none"> 1. Li Weidong, Cai Kai. Electromagnetic Wave Propagation and Antenna [M]. Beijing: Blue Sky Press, 2016. 2. Yang Rugui. Electromagnetic Field and Electromagnetic Wave (Second Edition) [M]. Beijing: Higher Education Press, 2007. 3. Jiangqing, Lvyi etc. Communication Principle and Technology [M]. Beijing: Beijing University of Posts and Telecommunications Press, 2012. 4. Fan Cangxin, Cao Lina. Communication Principle (6th Edition) [M]. Beijing: National Defense Industry Press, 2010. 5. Sun Huinan. Communication Principle [M]. Beijing: Posts and Telecommunications Press, 2014. 6. Jiangqing. Communication Principle Learning Guidance [M]. Beijing: Posts and Telecommunications Press, 2007. 7. WeChat public number. NPI mercenary army.



	<p>8. Ke Hengyu, Gong Ziping. Theoretical Basis of Electromagnetic Field [M]. Beijing: Posts and Telecommunications Press, 2011.</p> <p>9. Li Wenjuan , Li Meili , Zhao Ruiyu , Chen Lin , Xian Juan . Communication Principle and Technology [M] . Xi'an : Xidian University Press, 2016.</p> <p>10. Li Weidong, Jiang Baoan. Communication Electronic Circuit [M]. Xi'an: Xidian University Press, 2017.</p> <p>11. The experimental instruction for communication technology basis</p>
Last modified date	2018.12.28
Explanation of the module (reason)	The module is designed to enable students to master the basic principle of communication engineering completely, and obtain the basic analytical and practical ability of communication engineering.



Module 6 Engineering Applications

Module name	Engineering Applications	
Module level, if applicable		
Code, if applicable		
Subtitle, if applicable		
Courses, if applicable	Modern Information Network and Innovation	Principles of Telecommunication Transmission
Semester(s) in which module is taught	6	6
Person responsible for Module	YU Ting (Lecturer/Engineer)	
Lecturer	<p>Professor: HU Qing, HE Fangbai Associate professor: YI Hongwei, TANG Linjian, HU Junjun, ZHAO Ruiyu Senior Engineer: DENG Huayang, ZHOU Zhonglun, YI Hongwei Lecturer: YU Ting, LI Meili, LIU Wenjing, WANG Baozhu, LIU Jinting, GONG Xuejiao, LAI Xiaolong, YU Xiaomei, FENG Wenguo, GUO Shuan, CHEN Li, LI Xingpei Engineer: WANG Weixin Assistant: DONG Niya, WANG Mingyue, HUO Jialu, CHEN Xin ZHENG Qiuju, GUO Yanfang</p>	
Language	Chinese	
Relation to curriculum	All courses in this module are compulsory.	
Type of teaching, contact hours	<p>Modern Information Network and Innovation: The weekly average theoretical teaching hours: 4.5 hours The weekly Q&A and homework hours: 18 hours The average lecture hours per semester: 6 hours Average examination preparation hours per semester: 24 hours Principles of Telecommunication Transmission: The weekly average theoretical teaching hours: 2.5 hours The weekly Q&A and homework hours: 8 hours The average lecture hours per semester: 4 hours Average examination preparation hours per semester: 8 hours</p>	
Workload	<p>Modern Information Network and Innovation: Workload=390 hours, Contact hours= 72 hours, Self-study hours = 318</p>	



	<p>hours</p> <p>Principles of Telecommunication Transmission: Workload=180 hours, Contact hours= 40 hours, Self-study hours = 140 hours</p>
Credit points	<p>Modern Information Network and Innovation: 13</p> <p>Principles of Telecommunication Transmission: 6</p>
Requirements according to the examination regulations	<p>Homework, performance 40%; final examination 60%</p>
Module objectives (capability)/expected learning outcomes	<p>Module objectives</p> <p>This module aims at comprehensively and systematically understanding the realization principle and performance about various typical networks in the communication industry today. To ensure that the comprehensive mastery and systematic analysis ability for various communication systems should be built up.</p> <p>Intended learning outcomes:</p> <ul style="list-style-type: none"> ● Modern Information Network and Innovation: <ol style="list-style-type: none"> 1. To master the basic concepts of the current main communication networks. 2. To master the network architecture of all kinds of communication networks. 3. The basic realization principles of various communication networks are analyzed by means of the basic technical knowledge obtained in leading courses. 4. The students are able to give a systematic and detailed description and understanding of the main traffic processes for all kinds of communication networks. 5. The students can explain the principles of wireless technology, IP technology, NGN technology, IMS and other communication technologies and the applications in communication networks. 6. The present situation of the modern information network and the characteristics of the next generation communication network are understood by researching and studying the commonness of all kinds of communication networks so as to build up a good theoretical and practical basis for the learning of the subsequent courses. ● Principles of Telecommunication Transmission <ol style="list-style-type: none"> 1. To master the basic concepts and basic models of telecommunication transmission, be able to calculate and analyze the main characteristics of transmission including attenuation and bandwidth. 2. To be familiar with the basic analysis methods of metal transmission lines, master basic analysis process, familiar with the application of metal



	<p>transmission lines.</p> <ol style="list-style-type: none"> 3. To master the analysis methods of waveguide transmission lines, the basic characteristics of common waveguides and their applications in engineering. 4. To master the main transmission characteristics of optical fiber and be familiar with its basic application in practical engineering. 5. To master the calculation of wireless transmission loss, familiar with common interference and noise. 6. It is possible to design simple microwave circuits and calculate relevant parameters. 7. To master the model of COS231 and Hata, make simple budget with the links and familiar with the generality and individuality of 2G to 4G mobile communication system
<p>Recommended prerequisites</p>	<ol style="list-style-type: none"> 1. Familiar with the basic composition and realization principle of communication system. 2. Basic theoretical analysis ability of electromagnetic field and electromagnetic wave. 3. The basic analytical ability of the signal system 4. The ability of analyzing and calculating related problems with mathematical methods.
<p>Content</p>	<p>●Modern Information Network and Innovation:</p> <ol style="list-style-type: none"> 1. An overview of the communication network 2. The telephone communication network 3. The digital mobile communication network 4. Data communication and computer network 5. Radio and television networks 6. The support network 7. The access network 8. NGN and IMS <p>●Principles of Telecommunication Transmission:</p> <ol style="list-style-type: none"> 1. The basic concept of telecommunication transmission 2. The theory of metal transmission line 3. The theory of waveguide transmission line 4. The transmission theory of dielectric optical waveguide 5. The theory of wireless transmission 6. The characteristics of the transmission channel for microwave communication 7. The characteristics of mobile communication channel
<p>Examination requirements and forms of examination</p>	<p>open written examination</p>



Media employed	PPT multimedia courseware, projectors, laser pens, blackboards/whiteboard, on line network tools, etc.
Reading list	<ol style="list-style-type: none"> 1. Zhang Zhongquan. Modern Switching Technology [M]. Beijing: Posts and Telecommunications Press, 2009.3 2. Mao Jingli. Broadband IP network [M]. Beijing : Posts and Telecommunications Press, 2010.1 3. Liu Jinhu. Modern Communication Network Technology [M]. Beijing: Electronic Industry Press, 2014.6 4. Zhao Li. Modern Communication Network and its Key Technologies [M]. Beijing: National Defense Industry Press, 2011.6 5. Zhang Yunlin. Signalling System of Communication Network [M]. Beijing: Peking University press, 2009.9 6. Xin Yanchen. Data Communication and Computer Network [M]. Beijing: Posts and Telecommunications Press, 2011.9 7. Sun Xia, Liu Jinting etc. The Principle of Telecommunication Transmission [M]. Xi'an: Xidian University Press, 2017. 8. Hu Qing etc. The Principle of Telecommunication Transmission [M]. Beijing: Electronic Industry Press, 2009.
Last modified date	2018.12.28
Explanation of the module (reason)	The purpose of this module is to provide the comprehensive and systematic introduction to the implementation principles of various practical systems in the field of communication so as to ensure students to have a more comprehensive ability to understand and analyze various communication systems.



Module 7 Advanced Engineering Technology

Module name	Advanced Engineering Technology		
Module level, if applicable			
Code, if applicable			
Subtitle, if applicable			
Courses, if applicable	Mobile Communication Principle and Technology	The Technology of IoT and 5G	The Principle and Technology of Telecommunication Cloud
Semester(s) in which module is taught	7	7	7
Courses, if applicable	Fiber-optical Communication Principle and Technology	Optical Fiber Cable Engineering and Measurement Technology	Multimedia Communication Technology
Semester(s) in which module is taught	7	7	7
Courses, if applicable	Wideband Access Technology	Next Generation Network Principle and Technology	Technical English
Semester(s) in which module is taught	7	7	7
Person responsible for Module	YI Hongwei (Assoc. prof.)		
Lecturer	<p>Professor: HU Qing, He Fangbai Associate professor: YI Hongwei, HU Junjun, ZHAO Ruiyu, GAO Fei Senior Engineer: DENG Huayang, ZHOU Zhonglun, WANG Jun, WANG Yongping, MENG Jiawen Lecturer: LI Meili, LIU Wenjing, GUO Shuan, TAN Lirui, GONG Xuejiao LAI Xiaolong, YU Ting, YU Xiaomei, ZENG Guoqing Engineer: WANG Weixin Assistant: DONG Niya, WANG Mingyue, HUO Jialu, HE Jie, CHEN Xin ZHENG Qiuju, GUO Yanfang</p>		
Language	Chinese		
Relation to	Elective		



curriculum	
Type of teaching, contact hours	<p>Mobile Communication Principle and Technology, The Technology of IoT and 5G and The Principle and Technology of Telecommunication Cloud: (selection one)</p> <p>The weekly average theoretical teaching hours: 2.5 hours The weekly Q&A and homework hours: 8 hours The average lecture hours per semester: 6 hours Average examination preparation hours per semester: 6 hours</p> <p>Fiber-optical Communication Principle and Technology, Optical Fiber Cable Engineering and Measurement Technology and Multimedia Communication Technology (selection one) :</p> <p>The weekly average theoretical teaching hours: 3.5 hours The weekly Q&A and homework hours: 7 hours The average lecture hours per semester: 6 hours Average examination preparation hours per semester: 6 hours</p> <p>Wideband Access Technology, Next Generation Network Principle and Technology and Technical English: (selection one) :</p> <p>The weekly average theoretical teaching hours: 2 hours The weekly Q&A and homework hours: 5 hours The average lecture hours per semester: 2 hours Average examination preparation hours per semester: 6 hours</p>
Workload	<p>Mobile Communication Principle and Technology, The Technology of IoT and 5G and The Principle and Technology of Telecommunication Cloud: (selection one) :</p> <p>Workload=180 hours, Contact hours= 40 hours, Self-study hours = 140 hours</p> <p>Fiber-optical Communication Principle and Technology, Optical Fiber Cable Engineering and Measurement Technology and Multimedia Communication Technology (selection one) :</p> <p>Workload=180 hours, Contact hours= 56 hours, Self-study hours = 124 hours</p> <p>Wideband Access Technology, Next Generation Network Principle and Technology and Technical English: (selection one) :</p> <p>Workload=120 hours, Contact hours= 32 hours, Self-study hours = 88 hours</p>
Credit points	<p>Mobile Communication Principle and Technology, The Technology of IoT and 5G and The Principle and Technology of Telecommunication Cloud: (selection one) : 6</p> <p>Fiber-optical Communication Principle and Technology, Optical Fiber Cable Engineering and Measurement Technology and Multimedia Communication Technology (selection one) : 6</p> <p>Wideband Access Technology, Next Generation Network Principle and Technology and Technical English: (selection one) : 4</p>



<p>Requirements according to the examination regulations</p>	<p>Mobile Communication Principle and Technology , The Technology of IoT and 5G and The Principle and Technology of Telecommunication Cloud: (selection one) :</p> <p>Homework, performance 40%; final examination 60%</p> <p>Fiber-optical Communication Principle and Technology , Optical Fiber Cable Engineering and Measurement Technology and Multimedia Communication Technology (selection one) :</p> <p>Homework, performance 30%; experiment report 10%, final examination 60%</p> <p>Wideband Access Technology , Next Generation Network Principle and Technology and Technical English: (selection one) :</p> <p>Homework, performance 40%, final examination or final report 60%</p>
<p>Module objectives (capability)/expected learning outcomes</p>	<p>Module objectives</p> <p>Based on the current situation and trend of the development of communications, this module sets up the mainstream and the latest professional and technical courses, and students choose related courses according to their interests and future employment plans. By learning and mastering the frontier and the latest professional knowledge and skills in the field of communication, we will enhance the competitiveness of employment.</p> <p>Expected learning outcomes:</p> <ul style="list-style-type: none"> ● Mobile Communication Principle and Technology: <ol style="list-style-type: none"> 1. To master the relevant theoretical knowledge of mobile communication. 2. To be familiar with related technologies, principles and applications involved in mobile communications. 3. To know the structure, system characteristics, traffic implementation principles and development trend of mobile communication systems well. ● The Technology of IoT and 5G <ol style="list-style-type: none"> 1. To master the architecture of the IoT 2. To be familiar with the key technologies of the IoT (automatic identification technology, technology of bar code, RFID, sensor technology, positioning technology, etc.) 3. To understand the classification and development prospects of the IoT 4. To understand the comprehensive application of IoT with big data, cloud computing, big data mining, multi-sensor datafusion etc. 5. To be familiar with the evolution background of mobile communication, LTE network architecture with its key technologies 6. To be familiar with the key indicators of 5G mobile communication, the evolution of core network, the architecture of RAN and evolution. 7. To know the key technologies of 5G ● The Principle and Technology of Telecommunication Cloud <ol style="list-style-type: none"> 1. To master the concept, principle and implementation technology of cloud computing



	<ol style="list-style-type: none"> 2. To be familiar with the main products and tools of cloud computing 3. To master the principles and application of cloud computing 4. To understand the main research hotspots and application fields of cloud computing 5. To be familiar with the development trend and prospect of cloud computing 6. To be master the open source tools such as Apache Hadoop, and understand well the application and implementation of distributed file system, distributed computing and distributed database. <p>● Fiber-optical Communication Principle</p> <ol style="list-style-type: none"> 1. To master the basic principles, characteristics and analysis methods of all components of optical fiber communication system. 2. To master the performance and key designing elements of optical fiber communication system 3. To know the basic principles, engineering applications and maintenance of optical cable, the common optical fiber communication devices and SDH/MSTP/DWDM/OTN/PTN equipment. 4. To understand the basic process and steps of optical communication system design, and lay the foundation for the future employment of optical fiber communication engineering. <p>● Optical Fiber Cable Engineering and Measurement Technology</p> <ol style="list-style-type: none"> 1. To understand the design principles and methods of optical cable and cable lines. 2. To be familiar with the design procedures and steps of optical cable engineering 3. To know the basic methods of fault judgement and elimination. 4. To have certain analysis and solving ability for the problems in the optical cable engineering <p>● Multimedia Communication Technology</p> <ol style="list-style-type: none"> 1. To master the basic concepts and theories of multimedia communication. 2. To be familiar with the basic realization method of multimedia communication. 3. To master the architecture of multimedia system. 4. To be able to analyze the multimedia communication technology. 5. To understand the designing method of multimedia communication system. 6. To know the frontiers and trends of this technology. <p>● Wideband Access Technology</p> <ol style="list-style-type: none"> 1. To mastered the latest developments in broadband access network technology. 2. To understand the two general standard framework of broadband access network, namely, the G.902 and Y.1231 3. To focus on the basic concepts, structure, characteristics, technical
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	<p>principles, technical standards and typical applications of various broadband access technologies based with IP access.</p> <ol style="list-style-type: none"> 4. To understand the user access network management system and its control and management protocols. 5. Through above introduction, the students can fully understand the concepts and basic principles of various access technologies, and can plan the access network according to the actual access environment and the access requirements, and improve students' practical application ability for access network. <p>● Next Generation Network Principle and Technology</p> <ol style="list-style-type: none"> 1. To understand the basic concept of NGN 2. To master the architecture and features of NGN 3. To be familiar with the implementation principle and performance analysis of NGN 4. To understand the functions of the interfaces and protocols in NGN 5. To understand the principle of traffic implementation of NGN 6. To understand the practical applications and development trend of NGN <p>● Technical English</p> <ol style="list-style-type: none"> 1. To reading and understanding the English articles about computer networks, digital and data communications, optical fiber communications, mobile communications, switching technology, IP television and access network technology 2. To master the new technology in the areas of information and communication 3. To extend professional knowledge and accumulate the vocabulary for technical English 4. To have the ability to translate and read technical English materials. 5. While improving the ability of technical English, the professional knowledge is expanded and the good foundation for future work and study is laid.
<p>Recommended prerequisites</p>	<ol style="list-style-type: none"> 1. To have the basic knowledge of mathematics and physics, and using mathematical theory to analyze related problems. With basic knowledge of communication, relevant charts and models can be used to analyze problems. 2. To be familiar with the basic structure and realization principles of various communication networks and computer networks. 3. To have the basic theoretical analysis ability of electromagnetic field and electromagnetic wave. 4. To have the basic knowledge and application of computer and database and certain analytical understanding ability. 5. To have the ability to use mathematical methods to analyze and calculate related problems.



Content	<ul style="list-style-type: none"> ● Mobile Communication Principle and Technology: <ol style="list-style-type: none"> 1. The overview of mobile communication 2. The model of wave propagation and loss in mobile channel 3. The coding and modulation technology 4. The technology of anti channel fading 5. The networking technology 6. 2G mobile communication system 7. 3G mobile communication technology 8. The LTE mobile communication system 9. The overview of 5G mobile communication ● The Technology of IoT and 5G: <ol style="list-style-type: none"> 1. The overview of the Internet of things 2. The perception recognition technology 3. The network communication technology 4. The data processing technology of IoT 5. The comprehensive application of the IoT 6. The mobile communication development and LTE mobile communication system 7. 5G overview and the network architecture 8. The key technologies of 5G ● The Principle and Technology of Telecommunication Cloud <ol style="list-style-type: none"> 1. The overview of cloud computing 2. The cloud service 3. The cloud users 4. The architecture and standardization of cloud computing 5. The main support technology of cloud computing 6. The applications of the public cloud platform 7. The private cloud platform building 8. The existing problems in cloud computing; 9. The application of cloud computing ● Fiber-optical Communication Principle and Technology <ol style="list-style-type: none"> 1. Introduction 2. The optical fiber transmission principle and characteristics; 3. The basic optical fiber communication components 4. The optical fiber communication system and design; 5. SDH optical synchronization digital transmission network; 6. DWDM/OTN optical transmission network; 7. The PTN packet transmission network ● Optical Fiber Cable Engineering and Measurement Technology <ol style="list-style-type: none"> 1. Introduction 2. The structure of fiber; 3. The common instruments for optical fiber digital communication 4. The construction procedures of optical fiber communication engineering
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	<ol style="list-style-type: none"> 5. The design investigation of engineering 6. The route retest for optical cable 7. The matching method of optical cable 8. The connection of optical cables 9. The requirements of communication equipment to the construction of equipment room ● Multimedia Communication Technology <ol style="list-style-type: none"> 1. Introduction to multimedia communication technology 2. The necessity and feasibility of multimedia information processing. 3. Audio information processing technology; 4. Image information processing technology; 5. Multimedia data format; 6. Multimedia communication network environment; 7. Multimedia user access; 8. Multimedia communication terminal 9. Multimedia communication synchronization; 10. Distributed multimedia applications <ul style="list-style-type: none"> ● Wideband Access Technology <ol style="list-style-type: none"> 1. Introduction; 2. The standard architecture of access network 3. The Ethernet access technology 4. The optical fiber access technology 5. The copper wire access technology 6. The HFC access technology 7. The WLAN access technology 8. The WiMAX access technology 9. The wireless metropolitan area access technology and wireless wide area access technology; ● Next Generation Network Principle and Technology <ol style="list-style-type: none"> 1. Introduction; 2. The main protocols used in the NGN 3. The main equipment of the softswitch network 4. The service provisioning of the NGN 5. The bearer network of the NGN 6. The applications of softswitch technology; 7. IP multimedia subsystem (IMS) ● Technical English <ol style="list-style-type: none"> 1. The Principle of PCM 2. Asynchronous Serial Data Transmission 3. The ISO Networking Standards 4. Internet 5. Cloud Computing 6. Introduction to Optical Fiber Communication
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	<ol style="list-style-type: none"> 7. Synchronous Digital Hierarchy 8. WDM 9. GSM 10. 4G 11. Circuit Switching and Packet Switching 12. Multimedia 13. IPTV 14. ADSL 15. EPON 16. Current Situation and the future in the Telecommunication World
Examination requirements and forms of examination	<ol style="list-style-type: none"> 1. Mobile Communication Principle and Technology: open-book written examination 2. The Technology of IoT and 5G: open-book written examination 3. The Principle and Technology of Telecommunication Cloud : open-book written examination 4. Fiber-optical Communication Principle and Technology : open-book written examination 5. Optical Fiber Cable Engineering and Measurement Technology : close-book written examination 6. Multimedia Communication Technology : open-book written examination 7. Wideband Access Technology: close-book written examination 8. Next Generation Network Principle and Technology : close-book written examination 9. Technical English: close-book written examination
Media employed	PPT multimedia courseware, projectors, laser pens, blackboards/whiteboard, on line network tools, etc.
Reading list	<ol style="list-style-type: none"> 1. Cai Tao etc. Translation . Principle and Application of Wireless Communication [M]. Beijing: Electronic Industry Press, 2011. 2. Song Zeng, Hui Cong, Zhang Fan. Mobile Communication Technology (Second Edition) [M]. Beijing: Beijing Institute of Technology Press, 2017. 3. Sha Xuejun, Wu Xuanli, He Chengguang. The Principle, Technology and System of Mobile Communication [M]. Beijing: Electronic Industry Press, 2013. 4. Fan Boyong etc. LTE Mobile Communication Technology [M]. Beijing: Posts and Telecommunications Press, 2015. 5. Zhu Chengmin. 5G: Mobile Communication after 2020 [M]. Beijing: Posts and Telecommunications Press, 2016. 6. Zhang Xia. The Technology and Application of IoT[M]. Beijing: Tsinghua University Press 2017.9 7. Puddle Jumper. Talk to 5G[M]. Beijing: Electronic Industry Press,



	<p>2015.12</p> <p>8. Yang Fengyi. 5G Wireless Network and Key Technologies [M]. Posts and Telecommunications Press, 2017.2</p> <p>9. Liu Yunhao. Introduction to Physical Network [M]. Beijing: Science Press, 2017.1</p> <p>10. Liu Peng. Cloud Computing [M]. Beijing: Electronic Industry Press, 2015.7</p> <p>11. Ye Wei. Software Revolution in the Internet Age - SaaS Architecture Design [M]. Beijing: Electronic Industry Press, 2009.9</p> <p>12. (USA) Miller. Cloud Computing [M]. Beijing: Machinery Industry Press, 2009.4</p> <p>13. Hu Qing, Liu Hong, Zhang Demin, Yang Xiaobo. Optical Fiber Communication System and Network [M]. Beijing: Electronic Industry Press, 2014.9</p> <p>14. Joseph C. Palais . Optical Fiber Communication [M]. Beijing: Electronic Industry Press, 2015.6</p> <p>15. Wang Hui, Yu Hong, Wang Ping. Optical Fiber Communication [M]. Beijing: Electronic Industry Press, 2014.1</p> <p>16. Li Ligao. Communication Optical Cable Eengineering [M]. Beijing: Posts and Telecommunications Press, 2011.</p> <p>17. Yin Shuhua. Optical Fiber Communication Engineering and Engineering Management [M]. Beijing: Posts and Telecommunications Press, 2010.</p> <p>18. Liu Youxin. Optical Fiber Cable and Engineering Application [M]. Beijing: Posts and Telecommunications Press, 1999.</p> <p>19. Zhang Yinfa. Design, Building and Maintenance of Optical Cable Line Engineering [M]. Beijing: Electronic Industry Press, 2002.</p> <p>20. Wang Ruyan . Multimedia Communication Technology [M] . Xi'an: Xidian University Press, 2004.</p> <p>21. Zhang Xiaoyan etc. Multimedia Communication Technology [M]. Beijing: Posts and Telecommunications Press, 2009.</p> <p>22. Lei Weili, Ma Lixiang etc. Access Network Technology [M]. Beijing: Tsinghua University Press, 2006.</p> <p>23. Zhang Zhongquan. The Technology of Access Network [M]. Beijing: Posts and Telecommunications Press, 2003.</p> <p>24. ITU-T Y.1231: IP Access network Architecture, 2000.</p> <p>25. IEEE 802.3-2002: CSMA/CD Access Method and Physical Layer</p>
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	<p>Specifications</p> <p>26. IEEE 802.3ah-2004: Ethernet for Subscriber Access Networks</p> <p>27. Zhang Zhijiang. The Principle and Application of IMS Technology [M]. Beijing: Electronic Industry Press, 2007.</p> <p>28. Zhang Zhijiang. The Fusion and Opening NGN based on IMS [M]. Beijing: Posts and Telecommunications Press, 2007.</p> <p>29. Zhang Youhua etc. Communication English [M]. Beijing: Posts and Telecommunications Press, 2014.</p> <p>30. Zhang Shiyun etc. Information and Communication Technology English [M]. Chongqing: Chongqing press, 2005.</p> <p>31. Selected articles in English magazines.</p>
Last modified date	2018.12.28
Explanation of the module (reason)	<p>This module aims at setting up a number of practical mainstream and latest professional and technical courses, based on the current situation and trend of the development of communication , so that students can choose related courses according to their interests and future employment plans. The students who are going to choose their careers are related to the core of the frontiers communication engineering. Their competitiveness of employment will be enhanced by improving professional knowledge and skills.</p>



Module 8 Comprehensive Internship

Module name	Comprehensive Internship		
Module level, if applicable			
Code, if applicable			
Subtitle, if applicable			
Courses, if applicable	Enterprise internships	Internship of Mobile Communication	Internship of Switching Technology
Semester(s) in which module is taught	7	7	7
Courses, if applicable	Internship of Wideband Access Technology	Network and Security Technology Internship	Internship of Optical Fiber Communication
Semester(s) in which module is taught	7	7	7
Person responsible for Module	YU Ting (Lecturer/Engineer)		
Lecturer	<p>Professor: HU Qing Associate professor: YI Hongwei Senior engineer: WANG Jun, ZHOU Zhonglun, DENG Huayang, WANG Yongping Lecturer: LAI Xiaolong, FENG Wenguo, YU Xiaomei, LI Meili, YU Ting, LIU Wenjin, GONG Xuejiao, ZHANG Xuelian, TAN Lirui, WANG Baozhu, CAO Wenjing Engineer: WANG Weixin Assistant: WANG Mingyue, HUO Jialu, HE Jie</p>		
Language	Chinese		
Relation to curriculum	Elective		
Type of teaching, contact hours	<p>Enterprise internships: to obey the enterprise management in 4 weeks The weekly average theoretical teaching time: 3 hours The weekly average experiment preparing time: 2 hours The weekly average Q&A and report preparing time: 6 hours The average lecture hours per semester: 4 hours</p>		



Workload	Workload=180 hours, Contact time= 48 hours, Self-study time = 132 hours
Credit points	6
Requirements according to the examination regulations	<p>Enterprise internships: Internship Report 100%</p> <p>Laboratory internships: Practical operation 40%, attendance 20%, experiment report 40%</p>
Module objectives (capability)/expected learning outcomes	<p>Module objectives(capabilities): The basic task of engineering internship is to carry out basic training of students' practical skills of production (science research) to improve students' ability to analyze and solve problems. The purpose of engineering internship is to cultivate strict working attitude and professional ethics, to consolidate, deepen and expand the knowledge learned in the theoretical course, and further broaden the horizons, to cultivate the ability of independent operations and maintenance, namely improve professional skills, to cultivate the comprehensive ability to observe, analyze and solve practical problems, so as to increase the professional quality, to be familiar with the frame structure, circuit composition and working principle of communication equipment, to learn the testing methods of various performance indicators through the actual operation and maintenance of some typical communication equipment, transmission and network system, to learn to use the common communication instrument correctly, and be able to test out the specified data exactly. In this module, either enterprise internships or laboratory internships is set up for students to choose. The following is applicable to laboratory internships.</p> <p>Intended learning outcomes: After the learning of module course, students are to grasp the following expected learning outcomes:</p> <ol style="list-style-type: none"> 1. After completing the operation of the mobile communication experiment, the students can connect the theory of mobile communication with the reality, have a further understanding of the actual mobile communication network, be able to finish the data configuration of the TD-LTE base station and apply the basic network planning and optimization tools. 2. Through completing the operation of switching technology experiments, students can connect the theory of switching theory with reality, have a further understanding of the program control switching technology, and can carry out data configuration of the program control switching machine to realize different communication functions. 3. Through the operation of network and security technology experiment, the students can connect the theory of network security technology with reality, get a further understanding of the network security technology in the communication network, and can carry out the data configuration of switching machine and firewall. 4. Through the operation of the broadband access technology, the students can



	<p>connect the broadband access theory with the reality, obtain a further understanding of the access network, and can carry out the data configuration of the broadband access equipment to complete the communication.</p> <p>5. Through the operation of optical fiber communication experiment, the students can connect the optical fiber communication theory with the reality, have a further understanding of the optical transmission network, can carry out the data configuration of the optical transmission equipment, so as to master the use of the instruments in the common optical transmission network.</p>
<p>Recommended prerequisites</p>	<p>Through the study of the previous professional courses, the students already have a deep understanding of the communication system, understand the functions and realization principles of the communication system, and have the basic theoretical knowledge for the practical operation of communication equipment and network.</p>
<p>Content</p>	<p>●Internship of Mobile Telecommunication</p> <ol style="list-style-type: none"> 1. Introduction to optimization tools of mobile telecommunication and operation presentation 2. Test of network services, and produce analysis report and statement of output test 3. Introduction to TD-LTE simulation software and the installment and connection of hardware equipment 4. Introduction to LTE network structure and equipment 5. Configuration of LTE network management <p>●Internship of Switching Technology</p> <ol style="list-style-type: none"> 1. A review of the theoretical basis of the switch. 2. The introduction to SM module system of SPC switch. 3. The hardware configuration of SPC Switch. 4. The data configuration for basic local call <p>●Internship of Network and Security Technology</p> <ol style="list-style-type: none"> 1. The configuration of the switch VLAN aggregation. 2. The experiment of the configuration of switch QinQ. 3. The experiment of the configuration of the firewall Web management. 4. The configuration of firewall IPSEC uses IKE to build SA. 5. The configuration of the firewall GRE tunnel. 6. The configuration of the binding of MAC and IP address. 7. The configuration of the firewall bi-directional NAT <p>●Wideband Access Technology Internship</p> <ol style="list-style-type: none"> 1. The product positioning, hardware structure, function structure, software structure and networking application of MA5600. 2. The operation configuration of commonly used commands of MA5600. 3. The inter-configuration of the VLAN of MA5600 <p>●Internship of Optical Fiber Communication</p> <ol style="list-style-type: none"> 1. SDH ring network and the point to point traffic configuration of 2Mb/s.



	<p>2. 2Mb/s traffic error test in SDH ring network.</p> <p>3. To test optical fiber fault points by use of the OTDR</p>
Examination requirements and forms of examination	Comprehensive evaluation of actual operation and experimental report
Media employed	PPT multimedia courseware, projectors, laser pens, the description of actual circuits, blackboards/whiteboard, relevant experiment platform and equipment, etc.
Reading list	<p>The internship guidebook</p> <p>The internship outline</p>
Last modified date	2018.12.28
Explanation of the module (reason)	<p>This module set up an elective course for the students to choose: enterprise internship or laboratory internship. The purpose of this module is to make students understand the design method, the technical parameters, the performance and the development of the related products in the implementation process of the enterprise engineering, system and equipment, so as to further verify and consolidate the theoretical knowledge and cultivate students' professional skills in practice.</p>



Module 9 Bachelor Thesis

Module name	Bachelor Thesis
Module level, if applicable	
Code, if applicable	
Subtitle, if applicable	
Courses, if applicable	Graduation Project (Thesis)
Semester(s) in which module is taught	8
Person responsible for Module	Li Meili (Lecturer)
Lecturer	All professional teachers
Language	Chinese
Relation to curriculum	Compulsory
Type of teaching, contact hours	Average weekly tutoring time: 6 hours Average weekly writing and revision of thesis: 44 hours Preparation for (thesis) oral defense: 10 hours
Workload	Workload=810 hours, Contact time= 96 hours, Self-study time = 714 hours
Credit points	27
Requirements according to the examination regulations	The tutor score accounts for 30% of final score. The reviewer score accounts for 30% of final score. The defense score accounts for 40% of final score.
Module objectives (capability)/expected learning outcomes	Module objectives (capabilities): The bachelor's thesis is a compulsory course to cultivate the comprehensive application ability of professional knowledge for all of the students of communication engineering after studying the basic courses and professional courses related to the communication engineering. The supervisor of graduation thesis gives a topic or project of this major. During the prescribed time, the students should find out the references related to the project, analyze the existing problems, and then solve the problems. Finally, write the thesis and complete the defense within the specified time. After the process, the students' knowledge, the depth of knowledge, the application of theory, practical methods to deal with the problem, the ability of experiment, the level



	<p>of foreign language, the level of computer application, the writing and oral expression ability will be comprehensively developed.</p> <p>Intended learning outcomes</p> <ol style="list-style-type: none"> 1. To enhance the ability of integrating their knowledge and ability of working independently according to their actual conditions. 2. To cultivate the ability of finding information and self-studying independently. 3. To improve the ability of oral expression and practical operation 4. To cultivate the ability of identifying, analyzing and solving problems
Recommended prerequisites	Successful completion all professional courses and computer technology courses of the major
Content	<p>●Graduation Project (Thesis):</p> <ol style="list-style-type: none"> 1. The supervisor give a subject or project 2. Students independently choose a topic or project, find out relevant technical information, conduct analysis and research on them, and make achievements. 3. Students compose the graduation thesis independently. 4. Successful completion of the graduation defense within the prescribed time.
Examination requirements and forms of examination	<ol style="list-style-type: none"> 1. Submit the bachelor's paper. 2. The project or thesis is required to be completed within the time specified in the program. 3. The paper materials for project or thesis should completely conform to the relevant regulations of the college. 4. In the defense, the student should clearly introduce the main contents and design results of the paper within the prescribed time, and answer the questions of defense teacher correctly.
Media employed	Face to face tutorship, relevant experiment platform and equipment
Reading list	Provided by the supervisor according to different project or thesis.
Last modified date	2018.12.28
Explanation of the module (reason)	This module aims to help students to integrate the knowledge and skills, propose solutions, solve practical problems, and complete design tasks. Each student should independently complete his graduation design tasks under the guidance of his tutor and successfully pass his defense. The purpose of graduation thesis is to comprehensively train our students.



Module 10 English

Module name	English			
Module level, if applicable				
Code, if applicable				
Subtitle, if applicable				
Courses, if applicable	College English 1	College English 2	College English 3	College English 4
Semester(s) in which module is taught	1	2	3	4
Person responsible for Module	ZHANG Xunning			
Lecturer	CHEN Youmei, LI Jing, LI Leyan, LU Jingyi, NIE Yufei, QI Chunyu, SHUAI Yiqiong, XIAO Lin, YANG Jiawei, ZENG Zejun, ZHU Tao, YANG Fang, QU Meiyu, WU Yan, YUAN Yangchun, HUANG Zhong, DUAN Dandan, QIU Jiyang			
Language	English and Chinese			
Relation to curriculum	Compulsory			
Type of teaching, contact hours	Teaching theoretical class on average every week: 3 hours Weekly self-study hours per semester: 6 hours Weekly Q & A per semester: 2 hour Preparing for the test course per semester: 4 hours			
Workload	Teaching time: 192 hours Self-study time: 528 hours			
Credit points	24			
Requirements according to the examination regulations	Homework, performance: 30% Mid-term assessment: 10% Oral test: 10% Roll surface score: 50%			
Module objectives (capability)/expected learning outcomes	<p>Course objectives (capacity)</p> <p>College English teaching requirements are divided into three levels, namely, general requirements, higher requirements, and much more higher requirements. These three different levels of requirements are the standards of English proficiency that non-English major undergraduates in college should achieve through English learning and practice at the university level. General</p>			



requirements are the goals that each university graduate must achieve. College freshmen who meet or fail to meet the 7th level of the High School English Curriculum Standards can use the general requirements as a goal of English learning at the university level. Higher requirements and higher requirements are set for university freshmen who have ample ability to learn English and who have achieved a good foundation in English and have reached Grades 8 and 9 of the High School English Curriculum Standard. The three requirements include English language knowledge, application skills, learning strategies, and cross-cultural communication. The qualitative and quantitative description of the English teaching instruction reflects the guiding ideology of college English teaching, which emphasizes the cultivation of students' English listening and speaking ability. As well as English reading, translation, and other comprehensive application skills and professional English skills. General requirements are the basic requirements that non-English major graduates should meet. However, students should adjust their learning goals to higher requirements or higher requirements according to their own learning situations.

In the fourth semester, students are trained to combine the use of foreign languages with professional services to improve students' understanding of English and English. Combining language skills with information industry and business related professional knowledge learning, with language skills as the mainstay and professional knowledge as the supplement, combining course content, providing students with opportunities to communicate and practice as much as possible, and improving students' interaction in the information industry The ability to translate and the comprehensive qualities of foreign languages, as well as the cultural qualities and cross-cultural awareness in the business environment, help them to become complex foreign language talents, which is in line with the school's positioning in the School of Information Industry Business School and the development of a social backbone with a professional background. The leader's talent training objectives are to meet the needs of individual career development, social development, and economic construction in the future.

Expected learning outcomes

General requirements:

1) Listening Comprehension Ability: Can understand English in class, can understand daily English conversations and general subject lectures, can basically understand English-speaking countries in Slow English, speak at 130 words per minute, and can grasp its centrality. Hold the point. Can use basic listening skills to help understand.

2) Oral Expression Ability: Can communicate in English during the learning process and discuss topics. Be able to talk with people from English-speaking countries on everyday topics. I will be able to make short speeches on the topics I am familiar with after I have prepared them. The



speech will be relatively correct. Can use basic conversational strategies in conversations.

3) Reading Comprehension Ability: Basically read English articles in general subjects, reading speeds of up to 70 words per minute, reading materials at speeds of up to 100 words per minute, and basic reading Understand the domestic English newspapers and periodicals, master the central meaning, understand the main facts and relevant details. Ability to read materials that are commonly used in work and life. Can use effective reading methods in reading. Students are required to be able to learn to use proficiency on the basis of cognition, including oral expression and written expression.

4) Written expressive ability: Can use common application styles to complete general writing tasks, can describe personal experiences, events, perceptions, emotions, etc., can write 120 words of essays on general topics or outlines within half an hour, basic content Complete, proper wording, textual coherence. Appropriate writing skills can be used in general or applied writing.

5) Translation ability: English-Chinese translation of articles familiar with the subject with the help of a dictionary. English-Chinese translation speed is 300 English words per hour. Chinese-English-to-English translation speed is 250 characters per hour. Basically fluent translations can be used when translating. skill.

6) Recommended vocabulary: The total vocabulary to be mastered should reach 4,500 words and 700 phrases, of which 2,000 words are positive vocabulary, that is, students are required to be able to use it on a cognitive basis, including verbal and written expressions. Two aspects.

Higher requirements:

1) Listening Comprehension: Ability to basically understand conversations and lectures from people in English-speaking countries, and to understand Chinese-language broadcasts or TV programs with familiar subjects and longer texts. The speed of speech is about 150 words per minute. Can basically understand the professional courses taught by foreign experts in English. Can grasp its centrality and seize the main points.

2) Oral expression ability: Ability to conduct fluent conversations with people from English-speaking countries, to better master conversational strategies, to basically express personal opinions, emotional opinions, etc., to be able to basically state facts, events, reasons, etc., to express ideas clearly, Voice and intonation are basically correct.

3) Reading Comprehension Ability: Basically read articles in the English national newspapers and magazines. The reading speed is 80 words per minute. When you read a long material quickly, the reading speed reaches 120 words per minute. Skimming or reading. He can basically read the summary literature of his professional aspects and can correctly understand the central idea and grasp the main facts and related details.

4) Written expression skills: Ability to write daily application texts, write



English abstracts of your own professional papers, use reference materials to write reports and papers that are relevant to the profession, have a clear structure, and are rich in content. They can describe various charts and can A certain topic wrote a short essay of 160 words in half an hour. The content was complete, clear and straightforward.

5) Translation ability: Can translate articles familiar with the subject matter in the general newspapers and magazines in the United States with the help of a dictionary. It can extract the English popular science articles of the majors studied, and can write English papers for the majors studied. The English-Chinese translation speed is 350 English words per hour, and the Chinese-English translation speed is 300 Chinese characters. Basic fluency, meaning, and no major language errors.

6) Recommended vocabulary: The total vocabulary mastered should reach 5,500 words and 1200 phrases, of which 2,500 words are positive words.

Much more higher requirements:

1) Listening Comprehension Ability: Ability to understand long conversations, short essays, etc., and to understand points when their structure is more complicated and viewpoints are more implied. Can basically understand radio and television programs in English-speaking countries. Can understand the lectures of one's own profession, and master its main ideas and grasp the main points.

2) Oral expression ability: fluent and accurate conversations or discussions can be conducted on general or professional topics, and longer, harder texts or speeches can be summarized in concise language and can be read in international conferences and professional exchanges. Papers and participate in discussions.

3) Reading Comprehension Ability: Can read articles with a certain degree of difficulty, understand their significance, and use the dictionary to read English original books and articles in English-language newspapers and magazines. Can more smoothly read their own professional overview literature.

4) Written expressive ability: Can express individual's point of view more easily on the general theme, make the article structure clear, content rich, logic strong. He can write technical reports and papers in his specialty in English. Can write a 200-word explanation or dissertation within half an hour. The content is complete, the arts and culture are fluent and the ideology is clearly expressed.

5) Translation ability: Can translate English, American and American newspapers and periodicals with a certain degree of difficulty in popular science, culture, commentary and other articles, and can translate articles that reflect China's national conditions or cultural introductory. The English-Chinese translation speed is 400 English words per hour, and the Chinese-English translation speed is 350 Chinese characters per hour. The



	<p>translated content is accurate, and there is basically no mistranslation. The characters are fluent and fluent, and there are fewer language errors.</p> <p>6) Recommended vocabulary: The total vocabulary mastered should reach 6500 words and 1700 phrases, of which 3,000 words are positive words. In the above three levels of listening, speaking, reading, writing, and translation, it is necessary to pay special attention to the training and training of listening and speaking ability. The mastery of vocabulary is also the basis for improving the listening and speaking ability and the comprehensive application ability of English, especially active vocabulary, and it is necessary to arrange certain cross-cultural communication content in teaching to improve the overall quality of students.</p>
<p>Recommended prerequisites</p>	<p>The basic knowledge of vocabulary and grammar in junior high school English and the ability to use language knowledge for basic communication.</p>
<p>Content</p>	<p>●College English 1 Unit 1: Writing for Myself Unit 2: All the Cabbie Had Was a Letter Unit 3: Public Attitudes Toward Science Unit 4: Tony Trivisonno’s American Dream Unit 5: The Company Man Unit 6: A Valentine Story</p> <p>●College English 2 Unit 1: Learning, Chinese-Style Unit 2: A Life Full of Riches Unit 4: A Virtual Life Unit 5: True Height Unit 6: A Woman Can Learn Anything a Man Can Unit 7: The Glorious Messiness of English</p> <p>●College English 3 Unit 1: Mr. Doherty Builds His Dream Life Unit 2: The Freedom Givers Unit 3: The Land Of The Lock Unit 4: Was Einstein A Space Alien? Unit 5: Writing Three Thank-You Letters Unit 6: The Last Leaf</p> <p>●College English 4 Unit 1: Fighting with the Forces of Nature Unit 2: Smart Cars Unit 3: Get the Job You Want Unit 4: In Search of Davo’s Man Unit 5: A Friend in Need Unit 6: Old Father Time Becomes a Terror</p>



Examination requirements and forms of examination	Close test
Media employed	Multimedia, board
Reading list	<ol style="list-style-type: none"> 1. Li Yinhua, Chief Editor. A new edition of College English (Second Edition) Comprehensive Tutorial 1 Student Book (with web-based teaching resources) [M]. Shanghai: Shanghai Foreign Language Education Press, 2015. 2. Wang Minhua, Li Huiqin, Chen Meifang, Yan Sumei, Wei Yanlin, Li Yinhua, New Edition College English Second Edition (Twelfth Five-Year Plan): Listening and Speaking Tutorial 1 Student's Book (with CD) [M]. Shanghai: Shanghai Foreign Language Education Publishing Society, 2015. 3. Wang Xiuzhen, Fan Yi, Wang Yanhuo, Li Jiayun, Wu Fei, Guo Jingjing. New Edition of College English Second Edition (Twelfth Five-Year Plan): Reading Tutorials General Booklet 1 Student's Book [M]. Shanghai: Shanghai Foreign Language Education Press, 2015 . 4. Feng Shanping, Lu Yunyun, Chen Leyi, Zhang Shanshan, Chen Xiafang, Ruan Weifu, Zhou Wei, etc. The New Edition of College English Second Edition (New): Comprehensive Tutorial 1 Academic Test (with mp3 download) [M]. Shanghai: Shanghai Foreign Language Education Press, 2015. 5. Li Yinhua, Chief Editor. The new version of College English (Second Edition) Comprehensive Tutorial 2 Student's Book (with web-based teaching resources) [M]. Shanghai: Shanghai Foreign Language Education Press, 2015. 6. Wang Minhua, Li Huiqin, Chen Meifang, Yan Sumei, Wei Yanlin, Li Yinhua, New Edition of College English Second Edition (Twelfth Five-Year Plan): Listening and Speaking Tutorial 2 Student's Book (with CD) [M]. Shanghai: Shanghai Foreign Language Education Publishing Society, 2015. 7. Wang Xiuzhen, Fan Wei, Wang Yanhuo, Li Jiayun, Wu Fei, Guo Jingjing. The New Edition of College English Second Edition (Twelfth Five-Year Plan): Reading Tutorials General Booklet 2 Student's Book [M]. Shanghai: Shanghai Foreign Language Education Press, 2015 . 8. Feng Shanping, Lu Yunyun, Chen Leyi, Zhang Shanshan, Chen Xiafang, Ruan Weifu, Zhou Wei, etc.. The New Edition of College English Second Edition (New): Comprehensive Tutorials 2 Academic Tests (MP3 Download)[M]. Shanghai: Shanghai Foreign Language Education Press, 2015. 9. Li Yinhua, Chief Editor. The new edition of College English (Second Edition) Comprehensive Tutorial 3 volumes of student books (with online teaching resources) [M]. Shanghai: Shanghai Foreign Language Education Press, 2015. 10. Wang Minhua, Li Huiqin, Chen Meifang, Yan Sumei, Wei Yilin, Li Yinhua, The New Edition of College English Second Edition (Twelfth Five-Year Plan): Listening and Speaking Tutorial 3 Student's Book (with CD) [M]. Shanghai: Shanghai Foreign Language Education Publishing Society,



	<p>2015.</p> <p>11. Wang Xiuzhen, Fan Wei, Wang Yanhuo, Li Jiayun, Wu Fei, Guo Jingjing. New Edition of College English Second Edition (Twelfth Five-Year Plan): Reading Tutorials General Three Student Book [M]. Shanghai: Shanghai Foreign Language Education Press, 2015 .</p> <p>12. Feng Shanping, Lu Yunyun, Chen Leyi, Zhang Shanshan, Chen Xiafang, Ruan Weifu, Zhou Wei, etc.. The new edition of College English Second Edition (New): Comprehensive Tutorial 3 academic test (with mp3 download) [M]. Shanghai: Shanghai Foreign Language Education Press, 2015.</p> <p>13. Xie Xiaoyuan. Science and technology English translation skills and practice [M]. Beijing: National Defense Industry Press, 2010.</p> <p>14. Liu Yunteng, Wang Guanfu, and Chen Jie. The 21st Century University Business English Integration Tutorial Volume II [M]. Shanghai: Fudan University Press, 2009.</p> <p>15. Li Yinhua Editor-in-Chief. New version of College English (Second Edition) Comprehensive Tutorial 4 Student Book (with web-based teaching resources) [M]. Shanghai: Shanghai Foreign Language Education Press, 2015.</p> <p>16. Wang Minhua, Li Huiqin, Chen Meifang, Yan Sumei, Wei Yanlin, Li Yinhua, The New Edition of College English Second Edition (Twelfth Five-Year Plan): Listening and Speaking 4 volumes of student books (with CD) [M]. Shanghai: Shanghai Foreign Language Education Publishing Society, 2015.</p> <p>17. Wang Xiuzhen, Fan Wei, Wang Yanhuo, Li Jiayun, Wu Fei, Guo Jingjing. The New Edition of College English Second Edition (Twelfth Five-Year Plan): Reading Tutorials General Four-volume Student Book [M]. Shanghai: Shanghai Foreign Language Education Press, 2015 .</p> <p>18. Feng Shanping, Lu Yunyun, Chen Leyi, Zhang Shanshan, Chen Xiafang, Ruan Weifu, Zhou Wei et al. New Edition of College English Second Edition (New): Comprehensive Course 4 Academic Tests (MP3 Download)[M]. Shanghai: Shanghai Foreign Language Education Press, 2015.</p>
Last modified date	2018.12.28
Explanation of the module (reason)	This module is designed to enable students to master a foreign language and pass the CET-4; the ability to read professional materials and foreign language communication, as well as cross-cultural, international cooperation and communication skills.



Module 11 Professional Literacy and Engineering Management Capabilities

Module name:	Professional Literacy and Engineering Management Capabilities			
Module level, if applicable				
Code, if applicable				
Subtitle, if applicable				
Courses, if applicable	Guidance for College Students' Mental Health	Guidance for College Students' Career Development and Employment	The Key Ability of Career	Basics for College Students' Entrepreneurship
Semester(s) in which module is taught	1	2	5-6	1-2
Courses, if applicable	Innovation and Entrepreneurship Practice of College Students	Financial Management	Marketing	Human Resource Management
Semester(s) in which module is taught	7	3	4	5
Courses, if applicable	Management Science	Organizational Behavior	Enterprise Investment and Financing Management	Modern Advertising
Semester(s) in which module is taught	6	6	6	6
Person responsible for Module	SUN Xi(Assoc. Prof.), CHEN Zhonghua(Assoc. Prof.)			
Lecturer	<p>Associate Professor: CHEN Zhonghua, YANG Delong, ZHOU Zhaosha, WU Yancheng, WANG Xin, WU Qiangyi, YANG Longfeng, GUO Xin, TANG Lingyun, LI Kewei, XIE Yinping, SUN Yan, ZENG Yan,</p> <p>Lecturer: CHEN Yifang, FAN Baozhu, HU Jiating, JIANG Zhiqiang, LI Xiaoyan, CAO Yuxi, MAO Min, ZENG Mingzhu, WANG Lidong, XIAO</p>			



	<p>Xiaoling, ZHANG Ping, LI Kuimei, CHEN Xiaoman, CHEN Yifang, GAO Hongjia, REN Ruijuan, CHEN Tingting, YANG Min, HUANG Jinglong, Assistant: LIAO Yang, LU Boian, LI Yong, CAI Lin, TING Tsing, QIN You, HE Yan, ZHOU Tingting, YANG Kai, LI Qiao, ZHU Sheng, CHEN Jiao, ZHANG Dandan, LI Xiaoxuan, YI Peng, SUN Liangshun, FAN Chunyan, ZHOU Xinyang, LI Jia</p>
Language	Chinese
Relation to curriculum	Compulsory and elective
Type of teaching, contact hours	<p>Guidance for College Students' Mental Health: Weekly theoretical lectures: 1 hours</p> <p>Guidance for College Students' Career Development and Employment: Weekly theoretical lectures: 1 hours</p> <p>The Key Ability of Career: The weekly average theoretical teaching hours: 1 hours The weekly Q&A and homework hours: 2 hours The average lecture hours per semester: 4 hours Average examination preparation hours per semester: 8 hours</p> <p>Basics for College Students' Entrepreneurship: Weekly theoretical lectures: 1 hours</p> <p>Innovation and Entrepreneurship Practice of College Students: The weekly average theoretical teaching hours: 1 hours The weekly Q&A and homework hours: 0.5 hours The average lecture hours per semester: 2 hours Average examination preparation hours per semester: 4 hours</p> <p>Financial Management: The weekly average theoretical teaching hours: 2 hours The weekly Q&A and homework hours: 1.5 hours Average examination preparation hours per semester: 4 hours</p> <p>Marketing: The weekly average theoretical teaching hours: 2 hours The weekly Q&A and homework hours: 1.5 hours Average examination preparation hours per semester: 4 hours</p> <p>Human Resource Management: The weekly average theoretical teaching hours: 2 hours The weekly Q&A and homework hours: 1.5 hours Average examination preparation hours per semester: 4 hours</p> <p>Management Science, Organizational Behavior, Enterprise Investment and Financing Management, Modern Advertising (selection one) : The weekly average theoretical teaching hours: 2 hours The weekly Q&A and homework hours: 1.5 hours Average examination preparation hours per semester: 4 hours</p>



<p>Workload</p>	<p>Guidance for College Students' Mental Health: Workload=16 hours, Contact hours= 16 hours</p> <p>Guidance for College Students' Career Development and Employment: Workload=16 hours, Contact hours= 16 hours</p> <p>The Key Ability of Career: Workload=60 hours, Contact hours= 16 hours, Self-study hours =44 hours</p> <p>Basics for College Students' Entrepreneurship: Workload=16 hours, Contact hours= 16 hours</p> <p>Innovation and Entrepreneurship Practice of College Students: Workload=30 hours, Contact hours= 16 hours, Self-study hours = 14 hours</p> <p>Financial Management: Workload=60 hours, Contact hours= 32 hours, Self-study hours = 28 hours</p> <p>Marketing: Workload=60 hours, Contact hours= 32 hours, Self-study hours = 28 hours</p> <p>Human Resource Management: Workload=60 hours, Contact hours= 32 hours, Self-study hours = 28 hours</p> <p>Management Science, Organizational Behavior, Enterprise Investment and Financing Management, Modern Advertising (selection one) : Workload=60 hours, Contact hours= 32 hours, Self-study hours = 28 hours</p>
<p>Credit points</p>	<p>12.5</p>
<p>Requirements according to the examination regulations</p>	<p>Guidance for College Students' Mental Health: Homework + Performance + Classroom Attendance: 40% Course Paper Grades: 60%</p> <p>Guidance for College Students' Career Development and Employment Homework + Performance + Classroom Attendance: 30% Ending roll score: 70%</p> <p>Basics for College Students' Entrepreneurship Homework + Performance + Classroom Attendance: 30% Ending roll score: 70%</p> <p>The Key Ability of Career: Homework + Performance + Classroom Attendance: 30% Ending roll score: 70%</p> <p>Innovation and Entrepreneurship Practice of College Students: Homework + Performance + Classroom Attendance: 30% Ending roll score: 70%</p> <p>Financial Management: Homework + Performance 40% 60% of rolls</p> <p>Marketing: Homework + Performance 40% 60% of rolls</p> <p>Human Resource Management:</p>



	<p>Homework + Performance 40% 60% of rolls</p> <p>Management Science: Homework + Performance 40% 60% of rolls</p> <p>Organizational Behavior: Homework + Performance 40% 60% of rolls</p> <p>Enterprise Investment and Financing Management: Homework + Performance 40% 60% of rolls</p> <p>Modern Advertising: Homework + Performance 40% 60% of rolls</p>
<p>Module objectives (capability)/expected learning outcomes</p>	<p>1. Course objectives (capacity)</p> <p>1) to enable students to master self-exploration skills, psychological adjustment skills and psychological development skills;</p> <p>2) Enable students to establish self-consciousness in the development of mental health, understand their own psychological characteristics and personality traits, and be able to objectively evaluate their own physical conditions, psychological conditions, and behavioral capabilities.</p> <p>3) Make students understand the relevant theories and basic concepts of psychology, define the criteria and significance of mental health, and understand the psychological development characteristics and abnormal performance of people at the university stage;</p> <p>4) Guide students to realize the importance of defining their own development goals, thinking about the relationship between the ideal career in the future and the major they have learned, stimulating the self-consciousness of the career development of college students, establishing a correct outlook on employment, and guiding students to establish a career plan that suits their needs. Respond to the development of future careers, and strive to consciously increase employability and career management skills in the learning process;</p> <p>5) Cultivate students' ability to learn independently, connect theory with practice, discover new things, develop new ideas, and dare to innovate;</p> <p>6) It can improve students' knowledge structure and help students master the basic theories and knowledge of modern enterprise management, mainly including familiarizing with and mastering the knowledge and skills of basic functions such as human resource management, marketing, and financial management, and guiding and developing students' leadership skills (Including foresight, appeal, influence, control, etc.)</p> <p>7) Cultivate students to master the basic theories and methods of modern enterprise management, master basic functions such as human resource</p>



	<p>management, marketing, and financial management, and improve the ability to solve practical problems;</p> <p>2. Expected learning outcomes:</p> <ol style="list-style-type: none"> 1) Master the basic knowledge of self-adjustment; 2) Learning development skills, environmental adaptation skills, stress management skills, communication skills, problem solving skills, self-management skills, interpersonal skills and career planning skills; 3) Cultivate students' self-exploration skills, information search skills, management skills, career decision skills, job search skills, etc. 4) Correctly understand themselves, accept themselves, and be able to self-adjust or seek help in the face of psychological problems, and actively explore life conditions that suit themselves and adapt to society; 5) Guide students to actively study the relevant knowledge of innovation and entrepreneurship, and have the relevant capabilities and qualities of innovation and entrepreneurship; 6) Stimulate the entrepreneurial enthusiasm of college students and improve their awareness of innovation and entrepreneurship; 7) Correctly understand the concept of human resource management, master the basic principles and general methods of human resource management, and can be comprehensively applied to the analysis of practical problems, and have the ability to solve common HRM problems. 8) Be able to master the basic knowledge, basic theory and basic skills of modern marketing, and firmly establish a customer-centric marketing concept; 9) Through learning, students can make financial evaluations and make relevant knowledge and skills related to decision-making, such as investment decisions, fund-raising decisions and profit distribution decisions, in order to adapt to the needs of enterprises under new circumstances. 10) Correctly understand the concept of management, master the general laws, basic principles and general methods of management, and can be comprehensively applied to the analysis of practical problems, and initially have the basic capabilities of organizational behavior management, investment and financing management capabilities, and advertising planning implementation.
<p>Recommended prerequisites</p>	<ol style="list-style-type: none"> 1. Basic knowledge such as reading, writing, and mathematics; 2. Have the ability to study independently, ask questions, and analyze problems; 3. Have a certain ability of innovation and entrepreneurship thinking, more insightful insights, discovery of business opportunities for entrepreneurship, discovery of business opportunities, and business-level grass-roots business knowledge; 4. Have a basic innovation and entrepreneurial thinking, have a strong observation ability can distinguish life innovation;



	<p>5. Fundamental social practice ability, official ability and overall comprehensive ability to think about issues.</p>
<p>Content</p>	<ul style="list-style-type: none"> ●Guidance for College Students' Mental Health <ol style="list-style-type: none"> 1. Basic theory of mental health 2. Adaptation 3. Interpersonal communication 4. Emotional management 5. Self-awareness 6. Learning psychology 7. Love psychology 8. Telecommunications and Network Traps ●Guidance for College Students' Career Development and Employment <ol style="list-style-type: none"> 1. Career and professional awareness 2. Career development plan 3. Improve employability 4. Job search process guidance 5. Occupational adaptation and development 6. Entrepreneurship education ●The Key Ability of Career <ol style="list-style-type: none"> 1. Innovation to win the future 2. Development of innovative thinking 3. Entrepreneurs and Entrepreneurial Team 4. Grasping business opportunities 5. Raise venture capital 6. Start a business 7. Management of Startups 8. Internet and entrepreneurship ●Innovation and Entrepreneurship Practice of College Students <ol style="list-style-type: none"> 1. Technical innovation instruction 2. Guidance for papers, articles, topics, etc. 3. Various types of innovation and entrepreneurship contests, science and technology competitions, and skill competitions at all levels 4. Innovation and entrepreneurship training 5. Project incubation ●Financial Management <ol style="list-style-type: none"> 1. Introduction to financial management 2. Basic concepts of financial management 3. Financial analysis 4. Funding Management (I) 5. Funding Management (below) 6. Investment Management 7. Working capital management



	<p>8. Income Distribution Management</p> <ul style="list-style-type: none"> ●Marketing <ol style="list-style-type: none"> 1. Marketing and Marketing 2. Marketing Management Philosophy 3. Marketing environment 4. Analysis of Consumer Market and Purchase Behavior 5. Analysis of organizational market and purchase behavior 6. Marketing Research and Forecast 7. Planning Corporate Strategy and Marketing Management 8. Target Marketing Strategy 9. Competitive Marketing Strategy 10. Product Strategy 11. Pricing Strategy 12. Distribution Strategy 13. Promotion strategy ●Human Resource Management <ol style="list-style-type: none"> 1. Overview of human resources and human resources management 2. Job Analysis and Competency Model 3. Human resources planning 4. Employment recruitment 5. Training and Development 6. Performance Management 7. Compensation Management 8. Labor relations ●Management Science <ol style="list-style-type: none"> 1. Management and Management 2. Development of management ideas 3. Basic principles of management 4. The basic method of management 5. Ethics and Social Responsibility 6. Decision 7. Plan 8. Implementation of the plan 9. Organization design 10. Staffing 11. Organizational Change and Organizational Culture 12. Leaders and Leaders 13. Incentive 14. Communication 15. Control 16. Innovation ●Enterprise Investment and Financing Management <ol style="list-style-type: none"> 1. Invest big vision
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	<ol style="list-style-type: none"> 2. Unique investment products 3. Perspective of the investment market 4. Investment income and investment risk 5. Portfolio 6. Introduction to corporate finance 7. Capital Structure Theory and Corporate Capital Structure Optimization 8. Corporate equity financing 9. Corporate debt financing 10. Lease financing 11. Project financing 12. Attracting venture capital ●Modern advertising <ol style="list-style-type: none"> 1. Advertising overview 2. The origin and development of advertising 3. The theory of advertising theory 4. Advertising Strategy and Strategy 5. Advertising survey 6. Advertising creativity 7. Advertising copy 8. Advertising media 9. Advertising and Integrated Marketing Communication 10. Advertising effectiveness measurement 11. International Advertising ●Organizational Behavior <ol style="list-style-type: none"> 1. Overview of organizational behavior 2. Changing organizational environment 3. The basis of individual behavior 4. Incentive theory and application 5. Group processes and management in the organization 6. Behavioral decision-making and problem solving 7. Leadership Behavior and Management 8. The contemporary view of leadership 9. Organization Theory and Process 10. The foundation of the organizational structure 11. Organizational Change and Development
<p>Examination requirements and forms of examination</p>	<p>Guidance for College Students' Mental Health Course Paper Basics for College Students' Entrepreneurship Open-book exam Guidance for College Students' Career Development and Employment Unwind / examine The Key Ability of Career</p>



	<p>test</p> <p>Innovation and Entrepreneurship Practice of College Students</p> <p>test</p> <p>Financial Management</p> <p>Closed / written exam</p> <p>Marketing</p> <p>Open written exam</p> <p>Human resources management</p> <p>Closed written exam</p> <p>Management Science</p> <p>Closed written exam</p> <p>Enterprise Investment and Financing Management</p> <p>Open written exam</p> <p>Modern advertising</p> <p>Examination/advertising plan</p> <p>Organizational behavior</p> <p>Open written exam</p>
Media employed	Multimedia, movies, blackboards, etc.
Reading list	<ol style="list-style-type: none"> 1. Chen Yueping, Wu Huidong, Zhang Yanyun. Mental Health Education and Development of College Students [M]. Beijing: Beijing Normal University Press, 2017. 2. Zhang Jianhua, Zhang Ke. College Students' Psychological Health Course (Second Edition) [M]. Beijing: Science Press, 2014. 3. Tang Zhiwen. Contemporary College Students Mental Health Education [M]. Beijing: Beijing University of Posts and Telecommunications Press, 2013. 4. Shulan Wang, College Student Mental Health Course [M]. Xi'an: Shaanxi People's Education Press, 2014. 5. Li Ming, Zhang Xinmei, Chang Sufang, Su Huijun. College Students' Mental Health Education [M]. Beijing: Tsinghua University Press, 2013. 6. Wang Li, Cao Shuchun, Li Jing. College Students' Mental Health Theory and Practice [M]. Beijing: Higher Education Press, 2015. 7. Zhao Zhangwen. Financial Management[M]. Beijing: Science Press, 2011. 8. Wang Huacheng. Financial Management [M]. Beijing: China Renmin University Press, 2013. 9. Hai Bo, Jiang Yi. Financial Management[M]. Shanghai: Lixin Accounting Press, 2015. 10. Philip Kotler, Kevin Lath Keller, et al. Translated by Wang Yonggui. Marketing Management (14th Edition) [M]. Beijing: China Renmin University Press, 2012. 11. Sun Wei. Marketing (Second Edition) [M]. Beijing: Science Press, 2016. 12. Wu Jianan. Marketing (Fifth Edition) [M]. Beijing: Higher Education



	<p>Press, 2014.</p> <p>13. Guo Guoqing. General Theory of Marketing (Sixth Edition) [M]. Beijing: China Renmin University Press, 2014.</p> <p>14. Dong Keju. Introduction to Human Resource Management (Fourth Edition) [M]. Renmin University of China Press, 2016.</p> <p>15. Qiao Rui, Pan Zhiyong. Introduction to Human Resource Management [M]. People's Posts and Telecommunications Press, 2015.</p> <p>16. Robbins. Management [M]. Beijing: China Renmin University Press, 2009.</p> <p>17. Ji Dingzhong, Ge Yuanyue. Management (second edition)[M]. Beijing: Science Press, 2011.</p> <p>18. (U.S.) Boddy, (U.S.) Kane, (U.S.) Markus, Wang Changyun, Zhang Yongzheng. Investment Research (9th Edition)[M]. China Machine Press, 2015.</p> <p>19. Zhang Haibin. Investment Encyclopedia [M]. Peking University Press, 2008.</p> <p>20. Yang Hao, Yang Dazhao. Finance[M]. Shanghai: Shanghai University of Finance and Economics Press, 2013.</p> <p>21. Xiao Xiang. Corporate Finance[M]. Beijing: Tsinghua University Press, 2011.</p> <p>22. Zhang Changyu. International Direct Investment and Financing [M]. Beijing: China Renmin University Press, 2007.</p> <p>23. Yuan Shengjun. Advertising [M]. Beijing: People's Posts and Telecommunications Press, 2015.</p> <p>24. Wu Bailin. Advertising Planning: Practice and Case [M]. Beijing: Mechanical Engineering Press, 2016.</p> <p>25. Cui Wendan. Advertising [M]. Beijing: Mechanical Engineering Press, 2016.</p> <p>26. Lian Hao, Dou Junlin. Advertising [M]. Beijing: Higher Education Press, 2015.</p> <p>27. [American] Stephen P. Robbins, Organizational Behavior (12th ed.) [M]. Beijing: China Renmin University Press, 2008.</p> <p>28. Sun Jianmin, Li Yuan. Organizational Behavior [M]. Shanghai: Fudan University Press, 2005.</p>
Last modified date	2018.12.28
Explanation of the module (reason)	<p>The mental health course of college students helps students to understand the relationship between mental health and the development of individual talents, understand common psychological problems, master methods of psychological adjustment, and solve self-recognition, learning adaptation, interpersonal relationships, love psychology, emotional management, and the problems encountered during the growth process. Problems such as crisis prevention. In order to improve the psychological quality of college students,</p>



effectively prevent mental illness and psychological crisis, and promote the comprehensive development and healthy growth of college students.

Professional literacy courses develop students' self-exploration skills, information search skills, management skills, career decision skills, job search skills, etc.; have the ability to learn independently, connect theory with practice, discover new things, develop new ideas for innovation, and stimulate entrepreneurial enthusiasm for college students. Improve the awareness and skills of college students in innovation and entrepreneurship.

Leadership courses provide students with basic functional systems for understanding and mastering corporate operations management, namely human resources management, financial management, marketing, and other necessary knowledge so that students can become familiar with and understand the basic management principles and methods of modern enterprises.



Module 12 Humanities and Art

Module name:	Humanities and Art			
Module level, if applicable				
Code, if applicable				
Subtitle, if applicable				
Courses, if applicable	Music Drama	From a novel to a movie	The introduction of classical music	Appreciation of classic films
Semester(s) in which module is taught	1-4	1-4	1-4	1-4
Courses, if applicable	World Literature of Three Hundred Years	Creative Writing	Rhetoric and Persuasion	Classical Speech
Semester(s) in which module is taught	1	2	3	1-7
Courses, if applicable	Persuasion and Reasoning			
Semester(s) in which module is taught	1-6			
Person responsible for Module	LIU Hui(lecturer)			
Lecturer	Lecturer: LIU Hui, LI Dongmei, CHEN Xia, WU Yao, ZHONG Xin, TIAN Yijie, FANG Gang, PAN Yungui, LU Deng, BI Ran Assistant: SUN Shikuan, HAN Pengwei, LIU Huiqin, ZHAO Yu			
Language	Chinese			
Relation to curriculum	Compulsory and elective			
Type of teaching, contact hours	Weekly average teaching hours for each course : 2 hours			
Workload	From a novel to a movie : workload=32 hours, contact hours=32 hours Music drama: workload=32 hours, contact hours=32 hours			



	<p>The introduction of classical music, Appreciation of classic films(selection one) :</p> <p>workload=32 hours, contact hours=32 hours</p> <p>World Literature of Three Hundred Years:</p> <p>workload=32 hours, contact hours=32 hours</p> <p>Creative Writing :</p> <p>workload=32 hours, contact hours=32 hours</p> <p>Rhetoric and Persuasion :</p> <p>workload=32 hours, contact hours=32 hours</p> <p>Classical Speech, Persuasion and Reasoning (selection one):</p> <p>workload=32 hours, contact hours=32 hours</p>
Credit points	1 credit for each course
Requirements according to the examination regulations	<p>Homework, performance and attendance 40%</p> <p>Final exam 60%</p>
Module objectives (capability)/expected learning outcomes	<p>1. Module objectives (ability)</p> <p><i>The music drama</i> is designed to guide the learning of musical and opera charm from two aspects of theory and practice, so as to improve the students' artistic appreciation and practical ability.</p> <p><i>From the novel to the movie</i>, through the analysis of the appreciation of the novel and the film, the students can learn the correct values and the outlook on life from different excellent works. So as to achieve the goal of "moral education". The purpose of this course is also to analyze and appreciate the movie works adapted from novels from the perspective of sociology and folklore through the teacher's explanation of novels to movies. Improve the students' level of art cognition and appreciation.</p> <p><i>Introduction to classical music</i>, through teacher theory teaching, students listen to music works and discussions, to enable students to understand the basic elements of classical music, the music appreciation of the mastery of basic skills, understand the different music aesthetics, enhance students' aesthetic judgment and, for some of the students to achieve higher level of music with primary music to strengthen students' ability, emotional experience ability.</p> <p><i>The classic movie appreciation</i> aims to improve the students' ability to perceive the art and to guide the students to establish the ability to appreciate the film.</p> <p><i>World Literature of Three Hundred Years</i> aims to The understanding of literature is an important part of the progress of human civilization. Understanding the basic features of Western literature for the past three hundred years, its reasons, characteristics and civilization value, and understanding the basic clues of the development of world literature in the past three hundred years, the main literary phenomena of each period, the representative writers and works, so as to broaden the knowledge of the</p>



students, and enrich the knowledge of the students. The humanistic connotation of the students.

Creative Writing course aims to help students jump out of fossilized essay thinking under test-oriented education, cultivate their rich imagination, dare to innovate, and creatively use writing wisdom while daring to challenge and criticize boldly and find solutions to problems; to cultivate students' interest in writing, make students recognize the importance of writing ability for future work and life, and stimulate students' attention to their ability to express; to update the concept, develop a unique writing personality and expression habits; to train the most basic writing skills, teach students to write stories.

Rhetoric and Persuasion course aims to help the students to apply rhetoric theory to analyze the logic of expression and judgment and use it in speech, debate, negotiation and other occasions.

Classical Speech course aims to enable the students to know the function and development of speech, know what a classic speech is, its application and trends, as well as the role and significance of speech. enable the students to master the skills of speech and to be able to speak skillfully in public.

Persuasion and reasoning course aims to help the students know the basic theories, techniques and characteristics of persuasion and reasoning, then learn about the art of talk and persuasion, which can be applied to real life, learn about each other's psychology in order to have better communication; master the careful thinking and the logical organization and expression ability of language.

2. expected learning results:

In the successful learning of the module course, the students will master the expected results as follows:

- 1) Through the music drama study, it can improve the students' artistic appreciation and practical ability.
- 2) Through the study from the novel to the film, we can learn the correct values and the outlook on life from different excellent works. So as to achieve the goal of "moral education", improve the students' level of artistic cognition and appreciation.
- 3) Through the introduction of classical music learning, we can recognize different Western and Chinese music aesthetic standards, improve students' aesthetic judgement and judgement, and achieve some primary music creation ability for some music level students.
- 4) Learning through classic movies can improve the students' ability of perception of art and the ability to appreciate the film
- 5) Through learning World Literature of Three Hundred Yearstraining students to understand the progress of human civilization is not ability, literary appreciation and aesthetic interest, literary interest, to develop good reading habits, improve students' comprehensive writing ability and sustainable development ability.



	<p>6) In the study of Creative Writing course, the students can master the basic theories and methods of writing, and improve the ability of basic writing.</p> <p>7) In the study of Rhetoric and Persuasion course, the students can master the basic theories and methods of rhetoric and persuasion, using the theory of rhetoric to improve the ability of analytical expression and logical judgment, and to solve practical problems.</p> <p>8) In the study of Classical Speech course, the students will master the basic theories and methods of speech, improve the writing ability and speech skills, and solve practical problems.</p> <p>9) In the study of Persuasion and reasoning course, the student will master the basic theories, techniques and characteristics of persuasion and reasoning, then learn about the art of talk and persuasion, which can be applied to real life, learn about each other's psychology in order to have better communication; learn to observe carefully, think calmly, find the psychological points of the other party, and convince the other party; in the process of negotiating with the other party, we can eliminate the other's guard, change their prejudices, dissolve each other's dissatisfaction, shorten their psychological distance, find the angle and make a breach.</p>
<p>Recommended prerequisites</p>	<ol style="list-style-type: none"> 1. The ability to appreciate literature. 2. The ability to appreciate the film. 3. The ability to appreciate music. 4. Analysis and summary ability. 5. Students have a certain understanding of writing, with basic writing skills. 6. Students have a certain literary foundation, read a certain amount of literary works; reading a lot of extracurricular newspapers and books. 7. Students know basic knowledge of rhetoric and logic, have the ability to analyze problems using rhetorical theory, have basic knowledge of ancient rhetoric history of East and West, and basic knowledge of debate. 8. Students have a certain understanding of the speech and basic presentation skills. 9. Students have a certain ability to express themselves and have experience in speech contest.
<p>Content</p>	<ul style="list-style-type: none"> ● Musica Drama 1. performance characteristics of opera art 2. A brief history of the development of Opera Art 3. Art and works of Mozart's opera "the marriage of Figaro" 4. Art and works of Mozart's opera "the Magic Flute" 5. Art and works of Donizetti's Opera "love sweet" 6. Verdi's opera art and his works "the tea flower girl" 7. Puccini's opera art and his works "Turan Doctor" 8. of the musical: understanding the meaning of the musical, dividing the main types of the musical, and recognizing the characteristics of the musical.



9. musical creation features: understanding the musical creation script theme, theme, theme music and dance stage theme elements.
10. the difference and connection between the opera and the musical: the difference in the artistic expression and the artistic attribute of the musical and the opera.
11. the musical on the screen: to understand the phenomenon of the musical play from the stage to the screen, and to analyze the advantages and disadvantages behind the phenomenon.
- 12.the difference between Chinese operas and Chinese musicals: by appreciating Chinese dramas and Chinese local musical productions, we can make students understand Chinese ancient opera culture and distinguish the difference between Chinese dramas and Chinese musicals.
13. the development status of Chinese Musical: understanding the current situation and Prospect of musical play in the Chinese market.
- **From a novel to a movie**
 1. art categories
 2. the course of the development of novels and films
 3. different expressions of the novel and the film language
 4. The conversion of novels to films
 5. novels to the type of film adaptation
 6. adaptation of a novel
 - 7.The adaptation of novella
 8. adaptation of short stories
 - **The introduction of classical music**
 1. Introduction (rhythm, melody, musical instrument, singing, melody, fabric, harmony, strength)
 2. western classical music appreciation
 3. Chinese folk music and folk songs appreciation
 - **Appreciation of classic films**
 1. The film is art; the movie is the product of the development of science and technology; the film is a commodity; the film is entertainment; the movie is the "asymptote of real life"
 - 2.The definition of the lens; the definition and classification of the scene; two basic grammar: the language of film montage and long shot; scene, montage, long shots in the film specific expression function;
 3. the contents of the movie scene scheduling factors; the six kinds of motion mode of the camera: push, pull, shake, move, lift and drop.
 - 4.The color and tone of the film; the classification and function of the light in the film; the debate around the sound of the film; the classification and use of the sound in the film.
 - **World Literature of Three Hundred Years**
 1. Introduction
 2. Greek and Hebrew the source of Western Literature



	<p>3.Literature of the 18th Century 4.Literature of the 19th Century 5.Literature of the 20th Century</p> <p>● Creative Writing</p> <p>1. Introduction 2. Thoughts 3. Imagination 4.Character 5.Language 6.Story 7. Plan A Composition 8.Summary and review</p> <p>● Rhetoric and Persuasion</p> <p>1. Introduction 2. The Establishment and Development of Rhetoric 3.The Establishment of Logical Thinking 4.Debate Skills 5.Persuasion Logic 6.Summary and review</p> <p>● Classical Speech</p> <p>1. Introduction 2.Speech Skills 3. Classical Case Analysis ofSpeeches on Given Topic 4.Practice of Speech 5.Summary and review</p> <p>● Persuasion and reasoning</p> <p>1. Introduction 2.What is persuasion and reasoning 3.The skills of persuasion and reasoning 4.How to persuade skillfully 5.Persuasion and reasoning in social psychology 6.Advertising persuasion and attitude change 7.The art of speaking 8.The art of persuasion 9.Psychological persuasion 10.Summary and review</p>
<p>Examination requirements and forms of examination</p>	<p>●Music Drama Closed written Examination</p> <p>●From a novel to a movie Closed written Examination</p> <p>●The introduction of classical music Course thesis / quiz</p>



	<p>●Appreciation of classic films Course thesis / quiz</p> <p>●World Literature of Three Hundred Years Open written Examinations</p> <p>●Rhetoric and Persuasion Open written Examinations</p> <p>●Creative Writing Closed written Examination</p> <p>●Classical Speech Closed written Examination</p> <p>●Persuasion and Reasoning Closed written Examination</p>
Media employed	Media, Radio, Movie, Blackboard.
Reading list	<ol style="list-style-type: none"> 1. Luo Wei. Broadway musical [M]. Tsinghua University Press, 2013. 2. Mu Yu. History of Western Musical [M]. Shanghai Music Publishing House, 2004. 3. Mu Yu. Musical arts and industry [M]. Shanghai Music Publishing House, 2012. 4. Zhi Yan, etc. General History of Chinese Opera Musical [M]. Anhui Literature and Art Publishing House, 2014. 5. Chen Linxia. from novels to movies: a comprehensive study of film adaptation[M]. Beijing: China Social Sciences Publishing House, 2011. 6. Fu Minggen. from literature to film [M]. Beijing: China Social Sciences Press, 2011. Liu Yiguan. Classical music introduction (First Edition) [M]. Guangdong: Education Press, 2007. 7. Craig Wright. Listening to music [M]. Beijing: life. New knowledge bookstore, 2012. 8, Roger Kamiea (beauty). Listen to music and music appreciation course [M]. Beijing: World Book Inc Beijing company.2008. 9, Wei Tingge. Piano music appreciation [M]. science education and the artistic accomplishment of green apple e-book series. 10, Deng Ruizhuo, Liu Huihua. College students' music appreciation (First Edition) [M]. Chemical Industry Press, 2012. 11, Jin Jianmin. A brief history of Chinese music in adolescence [M]. Shanghai: Music Publishing House.2003. 12. Zheng Kelu. Foreign Literature History [M], Beijing: Higher Education Press, 1999. 13. Jin Yuanpu. Foreign Literature History [M], Shanghai: East China Normal University Press, 2000. 14. Zheng Kelu. Selected Works of Foreign Literature [M], Beijing: Higher Education Press, 2005.



	<p>15. Wu Xiaodong. The 20th Century Foreign Literature Theme [M], Beijing: Peking University Press, 2002.</p> <p>16. Wu Xiaodong. Selected Works of Foreign Literature in the 20th Century [M], Beijing: Peking University Press, 2002.</p> <p>17. Harold Bloom, translated by Jiang Ning kang. Western Canon [M], Nanjing: Yilin Press, 2005.</p> <p>18. Yuan Xingkai. History of Chinese Literature [M], Beijing: Higher Education Press, 1999.</p> <p>19. Yu Xianhao. Selected Ancient Chinese Literary Works [M], Beijing: Higher Education Press, 2003.</p>
Last modified date	2018.12.28
Explanation of the module (reason)	<p>The purpose of this module is to cultivate students' artistic and writing aesthetic sentiment, art and writing ability. It can also want to cultivate students' artistic creativity, infection, aesthetic and writing creativity, aesthetic and logical, to inherit and exert the cultural classics of various countries, to recognize the soft value of human arts, and to observe the past life classics. The purpose of the experiment is to create personal spiritual atmosphere and cultural details with the help of excellent spiritual civilization in a wider field.</p>



Module 13 Philosophy and Social Sciences

Module name	Philosophy and Social Sciences			
Module level, if applicable				
Code, if applicable				
Subtitle, if applicable				
Courses, if applicable	Positive Psychology	The Theory of Justice	Freud and Jung, Adler	Zen Culture
Semester(s) in which module is taught	3	4	7	7
Courses, if applicable	The Modern Process of European Civilization	American Social and Public Policy	International Conflicts in the Contemporary World	Economics
Semester(s) in which module is taught	6	1	2	5
Courses, if applicable	Chinese Public Policy and Urbanization	Russell and The History of Western Philosophy	American Democracy	The World Established by Socrates, Confucius and His Disciples
Semester(s) in which module is taught	6	5	5	3
Courses, if applicable	Information Technology and Society	Ethics in Life Science		
Semester(s) in which module is taught	5	6		
Person responsible for Module	ZHANG Yan(lecturer)			
Lecturer	Associate professor: Jin Guangmei Lecturer: ZHANG Yan, WANG Yan, LUO Lei, YANG Qian, ZHANG Sheng, LI Mei , WU Bingbing , CAI Xuantao , XING Jingwen , LI Jiao , ZHANG			



	Aichun Assistant: YAN Changyi, DENG Lulu , MU Dongmei , CHEN Mingbo , ZHOU Mi , YANG Mengya, CHEN Chunyan , ZHANG Tian, HUANG Yanguo , SUN Wei , LI Lulin
Language	Chinese
Relation to curriculum	Compulsory and elective
Type of teaching, contact hours	Average weekly theoretical class of each course: 2 hours
Workload	<p>Positive Psychology: workload=32 hours, contact hours=32 hours</p> <p>The Theory of Justice: workload=32 hours, contact hours=32 hours</p> <p>Freud and Jung, Adler/Zen Culture(selection one): workload=32 hours, contact hours=32 hours</p> <p>The Modern Process of European Civilization: workload=32 hours, contact hours=32 hours</p> <p>American Social and Public Policy: workload=32 hours, contact hours=32 hours</p> <p>International Conflicts in The Contemporary World: workload=32 hours, contact hours=32 hours</p> <p>Economics: workload=32 hours, contact hours=32 hours</p> <p>Chinese Public Policy and Urbanization: workload=32 hours, contact hours=32 hours</p> <p>American Democracy/Russell and The History of Western Philosophy (selection one): workload=32 hours, contact hours=32 hours</p> <p>The World Established by Socrates, Confucius and His Disciples: workload=32 hours, contact hours=32 hours</p> <p>Information Technology and Society: workload=32 hours, contact hours=32 hours</p> <p>Ethics in Life Sciences: workload=32 hours, contact hours=32 hours</p>
Credit points	1 credit for each course
Requirements according to the examination regulations	Assignment + class performance + notes: 40% Final exam (Paper): 60%



<p>Module objectives (capability)/expected learning outcomes</p>	<p>1. Course objectives (capacity)</p> <p>This module is mainly to cultivate students' patriotism and inspire students' sense of social responsibility, making students realize that the individual's future and destiny are always related to the prosperity and decline of the motherland, to urge students to understand the national conditions, live up to the times, shoulder the historic mission, and combine the values of their own life with the needs of the motherland. Starting with education, this module intends to cultivate students' sense of moral responsibility, and help students establish correct values.</p> <p>The "Positive Psychology" mainly introduce students that happiness is a capability which requires learning and training. It intends to make students understand the importance of positive attitude and healthy psychological quality, understand positive personality, optimism, emotional intelligence, reverse quotient, positive interpersonal relationship, time and goal management, love, etc., and know that the formation of positive attitude requires regular self-adjustments and success require perseverance.</p> <p>"Floyd and Jung, Adler" provides the basis of understanding the classical theories of Freud and Jung, Adler. Students can acquire the general three concepts of psychoanalytic school of Freud, Jung's analytical psychology school, and Adler's individual psychology school. Besides, they will learn to use psychology to analyze some phenomena in life and solve problems; to a certain extent, they are also able to establish correct moral values and values by learning the immortality of these masters who are independent, not afraid of authority and dare to explore.</p> <p>"Zen Culture" introduce students the basic theories of Buddhism and all aspects of Zen which were established on the basis of Buddhist. Its central content is the history of Zen Buddhism, the life and meditation of Zen patriarchs, Zen Buddhism, and Zen culture. This course helps students to establish correct values, cultivates students' sense of moral responsibility, broadens their cultural vision, and enriches their cultural perspective.</p> <p>"The Theory of Justice" enables students to master the theory of justice of Western thought, which includes theoretical content, background and criticism. The central content is the theories of justice, morality and political philosophy in different periods of Western history, providing ideological resources for students to research and judge issues such as social justice and fairness. The course can cultivate students' abstract thinking ability and critical thinking ability.</p> <p>"The Modern Course of European Civilization" helps students to understand the evolution of European civilization and the relationship between European civilization and other civilizations, providing a vision of globalization.</p> <p>"International Conflicts in The Contemporary World" improves students' sense of globalization. Students need to master the basic viewpoints, basic</p>
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theories, and basic methods of international politics and international relations, and apply these theories and methods to analyze the international conflicts in the contemporary world, including economic conflicts, political conflicts, military conflicts, diplomatic conflicts, cultural conflicts, conflicts of civilization, ethnic conflicts, and religious conflicts. Students can realize the basic trends, issues and characteristics of contemporary international politics and international relations, as well as China's position and role on the international stage.

“American Social and Public Policy” is to describe and explain the public policies of American society through the use of different models of political analysis. The course explains the formation and impact of U.S. social public policies. With the knowledge of the development of American public policy, students are able to use the relevant analysis methods to make a preliminary explanation of specific policy areas.

“Economics” helps students to understand and analyze economic phenomena in the real life with economic theories and analytical methods. It exercises students' ability of dialectical thinking and logical thinking.

“Chinese Social Policy and Urbanization” is a course that helps students understand the connotation of public policies, master the types of public policies, and clarify the main body of public policy, policy objects and policy environment. By comparing the development processes of cities between developed countries and China, students can identify the rules and characteristics of urbanization, and have a clear sense of urbanization research from the macro level to the micro level. The students can also understand the situation and issues of urbanization so that they will have better thoughts of employment and and make a reasonable choice of employment location.

“Russell and History of Western Philosophy” aims to use Russell's History of Western Philosophy as a basis to introduce students the main content of Western philosophy, the main philosophers and their thoughts, and the influence of philosophy on the western history.

“American Democracy” aims to make students understand the origins, changes, and status quo of American democracy. The content includes constitutional framework of the United States, the mechanisms of decentralization and counterbalance, the political participation and its mode of operation and limitations, and the establishment and operation of US government agencies and court systems.

“Socrates, Confucius and His Disciples Established World” aims to guide students to understand the basic contents of Western philosophy represented by Socrates and Chinese philosophy represented by Confucius. The course also compares the differences between Chinese and Western philosophy.

“Information Technology and Society” aims at cultivating students' rational thinking. On the one hand, they make reasonable use of information technology for their own use. On the other hand, they need to get rid of the



impediments brought about by information technology to be ideologically free people.

“Ethics in Life Sciences” aims to cultivate students' ability to think about human life sciences and ethical issues, discuss the relationship between life sciences and technology in contemporary society as well as the relationship with human life. The course also talks about the outlook of life science technology and the future, and the importance of life care.

2. Expected learning outcomes

Through the study of the module course, students are expected to have outcomes as follows:

1) Students who learn the course “Positive Psychology will master the basic theories and application methods of positive psychology, to improve their ability to solve practical problems, and develop a positive and optimistic attitude.

2) Through the study of “Classical Theories of Freud and Jung, Adler”, students will have an overall perception of the psychoanalytic school with Freud as the originator, Jung’s analytical psychology school and Adler’s individual psychology school.

3) Students can establish a good moral goal and pursue a healthy spiritual life by learning about the traditional culture developed on the basis of understanding Buddhist Zen thoughts in China .

4) Through the study of the courses “Modern Course of European Civilization” and “International Conflicts in The Contemporary World”, students will have a global perspective that enables students to master the basic viewpoints, basic theories, and basic methods of international politics and international relations, and apply these theories and methods to analyze the international conflicts in the contemporary world.

5) Through the study of “Economics”, students will learn to use economics-related theories and analytical methods to understand and analyze economic phenomena in real life, and during the analysis, they can exercise their dialectical thinking and logical thinking.

6) By studying “Chinese Social Policy and Urbanization”, students can understand the reality of urbanization and many issues, so that they will think about the direction of employment and make the reasonable choice of employment locations.

7) Through the study of “Russell and the History of Western Philosophy”, students can learn the historical context of western philosophy and understand the role of philosophy in promoting the development of Western civilization. On this basis, they will learn to use philosophical thinking and critical spirit to think independently.

8) Through the study of “American Democracy”, students will master the basic theories, basic categories, and basic knowledge of American democracy, understanding the nature and characteristics of American democracy, and raise



	<p>the awareness of political participation.</p> <p>9) Through the study of "The World Established by Socrates, Confucius, and His Disciples", students can understand the origin and differences of Chinese and Western philosophy, having a holistic understanding of Chinese and Western cultures to form a correct world outlook and values.</p> <p>10) Understanding the frontiers of the development of information technology and life sciences; through the analysis of specific cases, students will learn about the current information technology and the benefits that modern life science technology has brought to humanity, learning to view the issues dialectically .</p> <p>11) With the study of “Ethics in Life Sciences”, students can understand the impact of scientific progress on themselves, and recognize the importance of scientific and technological progress. This course will guide students to establish correct values, and encourage them to participate in the normative development of science to make society harmonious and progressive, finally making contribution to the sustainable development of human society.</p>
<p>Recommended prerequisites</p>	<p>Ability to read texts; the ability of using cases, theoretical analysis and judgment skills, cognitive abilities, self-awareness, the ability to recognize others and to analyze things; good language understanding and expression skills, basic knowledge of Buddhism and basic knowledge of Zen; knowledge of world history, the use of historical analysis and problem-solving capabilities; the basic knowledge and basic theories of the modern history of the world and contemporary international relations,, and the ability to analyze international hot issues with these knowledge and theories. Being concerned about the interests of current domestic affairs, a keen awareness of policy, urbanization and cognitive ability. The basic knowledge of the history of the East and the West, basic understanding of traditional Confucian culture and the ability to use logic to analyze problems. Understanding the basic processes of human growth and development and current medical treatments for diseases; a certain understanding of life and death. Learning about computer basics, communication principles, big data analysis, Internet+, and other related knowledge.</p>
<p>Content</p>	<p>●Positive Psychology</p> <ol style="list-style-type: none"> 1. understand positive psychology 2. Explore happiness 3. Perfect personality 4. Optimism and hope 5. Positive emotions 6. Insight into Emotional Intelligence 7. Reverse quotient 8. Setting goals, time management 9. Positive relationship



	<ul style="list-style-type: none">10. Thanksgiving11. Gender and Love●Freud, Jung and Adler<ul style="list-style-type: none">1. Introduction.2. Freud's Overview3. Universalism4. Subconsciousness theory5. Personality theory6. The analysis of the dream7. Anxiety and self-defense mechanisms8. Jung's Overview9. Jung's Personality Structure Theory10. Psychological type theory11. Jung's other theories12. Adler Overview13. Adler's Personality Dynamics Theory14. Adler's personality structure theory15. Adler's other theories16. Contrast summary●Zen Culture<ul style="list-style-type: none">1. Buddhist vocabulary and terminology, famous Buddhist shrines in China.2. The establishment, development and dissemination of Buddhism and the basic teachings of Buddhism.3. The history of Zen development, the main characters and major factions of Zen Buddhism.4. The manifestations of Zen in Chinese culture and the influence of Zen on Chinese culture.●The Theory of Justice<ul style="list-style-type: none">1. Introduction2. Logical fallacy3. God4. Reality5. Sophocles and Antigone6. Socrates and Apology7. Plato's Utopia8. Hobbes and Leviathan9. Locke and The Government10. Rousseau and The Social Contract Theory11. Moral Theory: Utilitarianism12. Moral Theory: Deontology13. Moral Theory: Virtue Ethics14. Rawls and The Theory of Justice
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	<p>15. Justice as Fair: Exploration of Justice Issues</p> <ul style="list-style-type: none">● The Modern Course of European Civilization<ol style="list-style-type: none">1. Introduction2. Ancient Greek civilization3. Ancient Roman civilization4. The origin of Christianity5. Byzantine civilization and subsequent Western kingdom6. Renaissance and religious reform7. Development of new routes8. Enlightenment9. The arrival of the industrial age10. Political Revolution in Europe11. Turmoil in the Order12. Dark clouds of war - World War II13. The intensification of the Cold War and the division of Europe14. European integration process● Economics<ol style="list-style-type: none">1. Supply and demand2. Marginal analysis3. Monopoly4. Market failure5. GDP6. Inflation7. Joblessness8. Economic Growth and Economic Cycle● American Social and Public Policy<ol style="list-style-type: none">1. Summary of the Theory of Social Public Policy in the United States2. American political system and policy model3. United States criminal justice4. U.S. Social Welfare System5. American Education Policy6. U.S. Economic Policy7. United States tax policy8. U.S. World Trade Policy9. U.S. Environmental Policy10. US Defense and Anti-Terrorism Policy● China's Public Policy and Urbanization<ol style="list-style-type: none">1. Introduction2. The nature and type of public policy3. Policy body, policy object and policy environment4. Policy model5. Policy development
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6. Policy implementation
 7. Policy Evaluation
 8. The end of the policy
 9. Urbanization
 10. The history of urbanization since China's founding
 11. Case Analysis of Urbanization
 12. City disease
 13. City Management
 14. Should urbanization be administratively or market-driven?
 15. Large cities or small towns
- International Conflicts in The Contemporary World**
1. The international community where war and peace, conflict and cooperation, opportunities and challenges coexist
 2. Sino-US relations and Taiwan issues
 3. Japan going to a political power
 4. The Sino-American Game Behind the South China Sea Problem
 5. The Korean Peninsula nuclear crisis
 6. The harm of international "terrorism" and anti-terrorism measures
- Russell and The History of Western Philosophy**
- 1 Introduction
 2. The dichotomy of Western philosophy
 3. The main branch of Western philosophy
 4. The nine schools of Western philosophy and their representatives
 5. Pre-Socratic philosophy
 6. Ancient Greek Philosophy
 7. Christian philosophy
 8. Political philosophy
 9. Rationalism
 10. Empiricism
 11. German Classical Philosophy
 12. Philosophy of Will
- American Democracy**
1. The Origin of American Democracy
 2. On the Constitution of the United States and the Operation of Its Democratic System
 3. On the decentralization and balance of American democracy
- The World Established by Socrates, Confucius and Their Disciples**
- 1 Introduction
 2. Confucius
 3. The Original Reading of The Analects Mencius
 5. Guide to the Confucian Classics "Four Books and Five Classics"
 6. The inheritance of Confucianism
 7. Pre-Socratic philosophy



	<ul style="list-style-type: none"> 8. Socrates 9. Socrates' defense 10. Platonic philosophy 11. Socrates' influence on later generations 12. Comparison of Chinese and Western Classical Philosophy ● Information Technology and Society <ul style="list-style-type: none"> 1. The concept and characteristics of information technology 2. The development of information technology 3. The development of the Internet 4. Impact on social development 5. Impact on economic growth patterns 6. Impact on technological progress 7. Impact on people's work, life and learning 8. The emergence of the digital divide 9. Information proliferation, information pollution. 10. Cybercrime 11. Personal Information Disclosure 12. Other aspects of negative influence 13. Narrowing the digital divide, dealing with the proliferation of information, and information pollution 14. Be alert to cybercrime 15. National level: Accelerating the introduction of the Personal Information Protection Act 16. Correct understanding of the impact of information technology on us ● Ethics in Life Sciences <ul style="list-style-type: none"> 1. Overview of bioethics 2. Human assisted reproductive technology and its ethics 3. Human embryonic stem cell research and ethics 4. Cloning technology and its ethics 5. Organ transplantation and its ethics 6. The Human Genome Project and its ethics 7. Transgenic technology and its ethics 8. Animal testing and its ethics 9. Human trials and its ethics 10. AIDS and its ethics 11. Ethical thinking on disease health 12. Euthanasia and hospice care
<p>Examination requirements and forms of examination</p>	<p>Positive Psychology: closed written exam The Theory of Justice: closed written exam Freud and Jung, Adler: course paper Zen Culture: course paper The Modern Course of European Civilization: closed written exam</p>



	<p>American Social and Public Policy: closed written exam International Conflict in The Contemporary World: Open written exam Economics: course paper Chinese Public Policy and Urbanization: Open written exam Russell and History of Western Philosophy: Open written exam, report American Democracy: closed written exam The World Established by Socrates, Confucius and His Disciples: closed written exam Information Technology and Society: closed written exam Ethics in Life Sciences: closed written exam</p>
Media employed	Multimedia, tea set, radio, movie, blackboard, etc.
Reading list	<ol style="list-style-type: none"> 1. Du Jiwen & Wei Daoru. The General History of Chinese Zen[M]. Nanjing: Jiangsu Ancient Books Publishing House, 1993. 2. Ying Wu & Zheng Xin. Zen Talks[M]. Chengdu: Bashu Publishing House, 2004. 3. Fang Litian. Zen Summary [M]. Beijing: Zhonghua Book Company, 2011. 4. Pan Guiming. History of Chinese Zen Buddhism[M]. Beijing: Today's China Press, 1992. 5. Liu Changjiu. Chinese Zen[M]. Guilin: Guangxi Normal University Press, 2006. 6. Shi Puji. Wudeng Huiyuan[M]. Chongqing: Chongqing Publishing House, 2008. 7. Huang Ketao. Zen Minzu Records [M]. Beijing: China Language Press, 2006. 8. Wu Xiangnan. Listen to Master Nan Huaijin taking about Buddhism[M]. Beijing: CITIC Press, 2009. 9. Wu Yansheng. Zen Poetry Realm [M]. Beijing: Zhonghua Book Company, 2001. 10. Han Bing. Taste Zen in Tea: Buddhism and Tea Ceremony [M]. Zhengzhou: Zhongzhou Ancient Books Publishing House, 2014. 11. Zhang Yuying. Zen and Art [M]. Hangzhou: Zhejiang People's Publishing House, 1992. 12. Lin Schled. Emotional world-Freud, Jung, Adler[M]. Inner Mongolia: Inner Mongolia People's Publishing House, 1998. 4. 13. Milton, translated by Shi Qijia, etc. Introduction to Psychoanalysis [M]. Beijing: China Light Industry Press, 2005. 2. 14. Carl Gustav Jung, translated by Gao Ming. Jung autobiography [M]. Nanchang: Jiangxi People's Publishing House, 2014. 10. 15. Alfred Adler, translated by Ma Xiaona. Inferiority and Transcendence [M]. Jilin: Jilin Publishing Group Co., Ltd., 2015. 5. 16. Alan Carr, translated by Ding Dan, etc. Positive Psychology (Second Edition) [M]. Beijing: China Light Industry Press, 2015.



17. Martin Seligman. Real Happiness[M]. Zhejiang: Zhejiang People's Publishing House, 2010.
18. Xiao Yongchun. The First Edition of Psychology of Happiness [M]. Shanghai: Fudan University Press, 2008.
19. Martin Seligman. Persistent Happiness[M]. Zhejiang: Zhejiang People's Publishing House, 2012.
20. Robert Solomon. The Big Question: An Introduction to Concise Philosophy. Guilin: Guangxi Normal University Press, 2014.
21. Stephen B. Smith. Political Philosophy. Beijing: Houlang Publishing Company, 2015.
22. Stephen B. Smith. Political Philosophy. Beijing: Houlang Publishing Company, 2015.
23. Yu Zhengliang. International Relations in the Era of Globalization. Shanghai: Fudan University Press, 2000.
24. Wang Jisi. Civilization and International Politics-Chinese Scholars' Comments on Huntington's Clash of Civilizations. Shanghai: Shanghai People's Publishing House, 1995.
25. Huntington. Clashes of Civilization and Reconstruction of the World Order. Beijing: Xinhua Publishing House, 1998.
26. Joseph S. Nye , Jr. Understanding International Conflict: Theory and History. Shanghai: Shanghai People's Publishing House, 2003.
27. Tao Wenzhao. The History of Sino-US Relations (1784~2013). Beijing: Foreign Language Press, 2013.
28. Shen Dawei. Entangled Power: The Future of Sino-U.S. Relations. Beijing: Xinhua Press, 2015.
29. Ju Yang. Global Game China-US Relations Change the World. Beijing: China Development Press, 2014.
30. Lin Shangli. Political Party Politics and Modernization: The History and Reality of Japan. Shanghai: Shanghai People's Publishing House, 1998.
31. Dai Xiaofu. Japan's Economic, Political and Social System. Shanghai: Shanghai University of Finance and Economics Press, 2002.
32. Chen Zheng. China and Japan in the 21st Century. Beijing: World Knowledge Press, 2006
33. Zheng Zemin. The Great Powers in the South China Sea: The United States, Japan, India, Russia and the South China Sea. Beijing: World Knowledge Press, 2010.
34. Paul Samuelson, translated by Xiao Shen. Economics[M]. Beijing: Commercial Press, 2013.
- 35.[US]Mankien, translated by Liang Xiaomin & Liang Li. Economic Principles[M]. Beijing: Peking University Press, 2013.
36. Robert Frank, translated by Lv Jia. Milk Cola Economics[M], Beijing: Renmin University of China Press, 2010.
37. He Xuefeng. Urbanized China Road. Beijing: Oriental Press, 2014



38. [US] Jane de Vries. Urbanization in Europe. Beijing: Commercial Press, 2015

39. [US] Thomas R. Dye. Understanding the Twelfth Edition of Public Policy. Beijing: Renmin University of China Press, 2013.

40. Fan Gang & Wu Liangcheng. Urbanization: A Collection of Public Policies. Beijing: China Economic Press, 2010.

41. [US] Richard Schaeffer. Sociology and Life. Beijing: World Book Publishing Company, 2010.

42. [US] D.C. Miller. Theory of Public Choice. Beijing: Social Sciences Press, 1994.

43. Bertrand Russell. History of Western Philosophy[M]. Beijing: Commercial Press, 1976.

44. Robert Solomon. The Big Problem—An Introduction to Concise Philosophy[M]. Guilin: Guangxi 42. Normal University Press, 2011.

45. Hegel. Lecture on History of Philosophy[M]. Beijing: Commercial Press, 1997.

46. John McClelland. Western Political History[M]. Beijing: CITIC Publishing House, 2014.

47. Zhao Dunhua. A Brief History of Western Philosophy[M]. Beijing: Peking University Press, 2001.

48. David B. Maglebee & Paul C. Wright. The People's Government: The Government and Politics of the United States[M]. Beijing: China Renmin University Press, 2014.

49. Ren Jiyu. History of Chinese Philosophy[M]. Beijing: People's Publishing House, 2010.

50. Li Shicen. Ten Lectures on Chinese Philosophy[M]. Changchun: Jilin Publishing Group Co., 2016.

51. Feng Youlan. History of Chinese Philosophy[M]. Beijing: Commercial Press, 1986.

52. [UK] Mike-Schonberger & [UK] Cooke. Era of Big Data[M]. Hangzhou: Zhejiang People's Publishing House, 2013.

53. Yorien Vanden-Horven, translated by Zhao Yinghuan, Song Jixin & Zhang Qinyi. Information Technology and Moral Philosophy[M]. Beijing: Science Press Co., Ltd., 2017.

54. Xu Xueyu. Information Technology and Economic and Social Development[M]. Xi'an: Xi'an Jiaotong University Press, 2010.

55. [US] Darell M. West, translated by Liao Yimin & Gao Shiji. The Next Wave: ICT-driven Social and Political Innovation[M]. Shanghai: Shanghai Far East Press, 2012.

56. Wu Nengbiao. Bioethics[M]. Beijing: Publishing Department of Science Press, 2015.

57. Fan Ruiping. Contemporary Confucian Bioethics[M]. Beijing: Peking University Press. 2011.



	<p>58. Guo Yongsong. Inquiry into Bioethics[M]. Zhejiang: Zhejiang University Press. 2009.</p> <p>59. Qiu Renzong. Bioethics[M]. Beijing: China Renmin University Press. 2010.</p> <p>60. Cheng Xinyu. Research on frontier issues of bioethics[M]. Hubei: Huazhong University of Science and Technology Press. 2012.</p>
Last modified date	2018.12.28
Explanation of the module (reason)	<p>Philosophy and social sciences are instruments that measure the meaning of human beings as a whole in the universe. It is a tool for measuring the progress of national civilization. The internationally broad philosophy and social sciences include not only philosophy but also many related liberal arts subjects, such as economics, psychology, law, arts, education, management, history, Chinese language and literature, sociology, anthropology, foreign language literature, politics, religion, logic, and ethics, etc.</p> <p>This module aims at cultivating students' rationality and molding belief, the establishment of values, the symbiosis between people and communities and the country, morality and well-being, political and economic, legal and other liberal qualities, and the broad vision and knowledge structure of human civilization. It helps students understand the cooperation and confrontation of civilizations and recognize contemporary China in the context of globalization. At the same time, students can learn about the relationship between life science technology, information technology and human life, seminars on scientific and technological advancement and ethical issues, and the combination and prospect of science and technology with the world today and the future world.</p>



Module 14 Political Thought and Moral Cultivation

Module name:	Ideological and Moral Cultivation				
Module level, if applicable					
Code, if applicable					
Subtitle, if applicable					
Courses, if applicable	Moral Education and Basics of Law	Basic Principles of Marxism	Introduction to Maoism and Theoretical System of Socialism with Chinese Characteristics	Outline of Modern Chinese History	Situation and Policy
Semester(s) in which module is taught	1	2	5	6	1/3/5/7
Person responsible for Module	DENG Yan (Assoc. Prof.)				
Lecturer	<p>Professor: LIU Zongyue Associate professor: DENG Yan, YANG Yong Lecturer: CHEN Jian, ZOU Jianping, SONG San, CHEN Jing, LU Zhilong, LI Yang, WU Yakun, MAO Guangcheng, NING xiaoke, BI Yujin, JING Yinxia Assistant: ZHANG Xingling, YANG GuiZhen, KONG Kunjie, REN Ruijuan, LIU Tao, LIANG Shaofeng, WANG Yan, LIAO Yang, FAN Xuejia, WANG Qin, GUO Fei , YANG Longfeng, JI Zhiyang</p>				
Language	Chinese				
Relation to curriculum	Compulsory				
Type of teaching, contact hours	<p>Moral Education and Basics of Law: The weekly average theoretical teaching hours: 2 hours Basic Principles of Marxism: The weekly average theoretical teaching hours: 2 hours Introduction to Maoism and Theoretical System of Socialism with Chinese Characteristics: The weekly average theoretical teaching hours: 4 hours The weekly practical activity hours: 2 hours</p>				



	<p>Outline of Modern Chinese History: The weekly average theoretical teaching hours: 2 hours</p> <p>Situation and Policy: The weekly average theoretical teaching hours: 0.5 hours The weekly average lecture hours a week: 1.5 hours</p>
Workload	<p>Moral Education and Basics of Law: workload hours=32 hours, teaching hours=32 hours;</p> <p>The Basic Principles of Marxism: workload hours=32 hours, teaching hours =32 hours;</p> <p>Introduction to Maoism and Theoretical System of Socialism with Chinese Characteristics: workload hours=96 hours, teaching hours =64 hours, practical activity hours = 32 hours;</p> <p>Outline of Modern Chinese History: workload hours=128 hours, teaching hours = 32 hours;</p> <p>Situation and Policy: workload hours=128 hours, teaching hours =32 hours, practical activity hours= 96 hours.</p>
Credit points	<p>Moral Education and Basics of Law: 1</p> <p>The Basic Principles of Marxism:1</p> <p>Introduction to Maoism and Theoretical System of Socialism with Chinese Characteristics: 3</p> <p>Outline of Modern Chinese History: 1</p> <p>Situation and Policy: 0</p>
Requirements according to the examination regulations	Homework, performance and Practice Teaching:50%, Exam results: 50%
Module objectives (capability)/expected learning outcomes	<p>1.Course objective(Ability)</p> <p><i>Moral Education and Basics of Law</i> aims to help students to fully realize that the university life is an important period of development of their lives , and cherish the good time of theuniversity, and help students establish correct outlook on world life and values, and promote their all-around development, to understand the basic spirit of China's socialist constitution and relevant laws and regulations,also truly help students to study, understand and abide by the lawand safeguard the legitimate rights and interests of the state and individual citizens and conscientiously fulfill their legal obligations.</p> <p><i>The Basic Principles of Marxism</i>aims to educate students systematically on the basic principles of Marxism. Through the study of the course content, it helps the students to grasp the basic views of dialectical materialism and historical materialism, set up a correct world outlook, outlook on life and values, learn to use scientific thinking methods and work methods to</p>



understand and deal with various practical problems;it also aims to help students to establish the ideal and belief of building socialism with Chinese characteristics for students and to consciously adhere to the basic theory, basic line and basic program of the party, to Cultivate students into a new generation with ideals, morality, culture and discipline, and to lay the necessary foundation for the great practice of socialism with Chinese characteristics.

Introduction to Maoism and Theoretical System of Socialism with Chinese Characteristics aims to mak ethe college students grasp the basic theory of Mao Zedong thought and the theory system of socialism with Chinese characteristics, and understand the historical process of the combination of the basic principles of Maxism and the reality of China by the Communist Party of China. It will enable students to firmly believe in the socialist road with Chinese characteristics under the leadership of the Communist Party of China, and consciously adhere to the basic theory, basic line and basic programme of the Communist Party of China.

Outline of Modern Chinese History aims to help students understand the historical process of modern Chinese social development and revolutionary development and its inherent laws. Enable students to understand modern Chinese to be theheroic hard exploration history of Chinese people’s struggle with high ideals and masses for salvation and realize the great rejuvenation of the Chinese nation .Under the leadership of the Communist Party, the people of all ethnic groups in Chinese have carried on the new democratic revolution, and won national independence and people's liberation history,also have carried on the construction and the reform of the socialist revolution, and made an extremely weak old China gradually become a thriving and prosperous preliminary, full of vigor and vitality of the socialist new Chinese history.

Situation and Policy aims to help students understand the political and economic situation of the country correctly, as well as the international environment and the background of the national reform and development, correctly understand the party's basic line, the major policy and policy, the correct analysis of the hot issues of social concern, the enthusiasm of the students' Patriotism, and the enhancement of their national self-confidence and society. Sense of responsibility, grasp the future, study diligently, accomplish talents and serve the country.

2.Learning expected results

In the successful learning of the module course, the students will master the expected results as follows:

1)Enables students to acquire theoretical application and practical operation ability, and enable students to acquire historical cognition and practical operation ability on the basis of feeling theory and experience emotion ,and enable students to observe social ethics, professional ethics and family virtues,alsoenable students to hold certain communicative ability.

2)Enables students to grasp the basic legal knowledge,enable students to



	<p>have good ideological and moral quality and legal quality, and enable students to set up the determination and confidence for the Chinese nation's great revival of the Chinese dream.</p> <p>3) To stimulate students' patriotism and fully understand the China revolution necessity, justice and progress and consciously inherit and develop people's China since modern patriotism, national spirit and revolutionary tradition, it's necessary to enhance their national pride and self-confidence and pride.</p> <p>4) Enables students to correctly understand the political and economic situation of the country, as well as the international environment and the background of the state's reform and development, and correctly understand the party's basic line, the major policy and policy, and correctly analyze the hot issues of social concern.</p>
<p>Recommended prerequisites</p>	<p>To make students satisfy the essential civic requirements; possess basic theoretical knowledge of high school political courses, and the ability to analyze and solve general problems by using Marx's basic knowledge.</p>
<p>Content</p>	<p><i>Moral Education and Basics of Law:</i></p> <ol style="list-style-type: none"> 1. The characteristics of university life, the basic concepts of ideology and morality, the basic content of socialist core values, and the significance of cultivating and practicing the core values of socialism. 2. The meaning and characteristics of ideals and beliefs, the importance of ideals and beliefs, the content and meaning of the common ideal of socialism with Chinese characteristics, the relationship between ideal and reality, personal ideal and social ideal. 3. Chinese spirit is the unity of the national spirit and the spirit of the times, the basic content of the national spirit, the patriotism and its times value, the spirit of the age and its main embodiment. 4. The main content of the outlook on life, the standard and evaluation of the value of life, the conditions for the realization of the value of life, and the concrete method of promoting the harmony of the life environment. 5. The origin and essence of morality, the function and function of morality, the historical development of morality, the contemporary value and basic spirit of Chinese traditional virtues, the main contents of Chinese revolutionary morality, the core and principles of socialist moral construction. 6. The basic contents of moral norms in public life, moral requirements in network life, moral norms in career life, moral norms in love and marriage and family, the basic contents of love view and marriage view and family virtue of college students. 7. The etymology and meaning of law, the nature and characteristics of law, the function of socialist law, the operation of socialist law, the basic principles and



systems established by our constitution, the substantive law departments in China, and the procedural legal departments in China.

8.The meaning and characteristics of the thought of the rule of law, the basic content of the thinking of the rule of law, the way to train the thinking of the rule of law, and the importance and basic requirements of respect for the authority of the law.

9.The concept of legal rights and obligations, the relationship between legal rights and legal obligations, the basic rights and basic obligations of citizens prescribed by the constitution, the relevant procedures and requirements of exercising rights according to law, remedies according to law, respecting others' rights and fulfilling obligations according to law.

The Basic Principles of Marxism:

1. The basic connotation of Marxism; the subjective and objective conditions of Marxism.

2.The concept and basic problems and existing forms of matter; materialism, idealism, knowability and agnosticism, consciousness; the concept and classification of contact; the concept and essence of development; the concept and relation of qualitative change and quantitative change; the basic content of dialectical negation.

3. Basic concepts: practice, knowledge, truth, value, necessity and freedom, the understanding of the world and the transformation of the world; the decisive role of practice in understanding; the essence and the law of development of cognition; the characteristics and testing standards of truth; the unity of truth and value; the understanding of the world and the transformation of the world.

4. Basic concepts: social existence, social consciousness, material production mode, productivity, production relations, economic base, superstructure, state, class and people. Historical materialism and idealism; the basic contradictions and movement rules of human society; the basic laws and dynamic systems of social development; the people are the creators of history and the decisive force for the development of history.

5. The basic contradiction of commodity economy on the basis of private ownership; the theory of labor value and its significance; the theory of surplus value and its significance; the basic contradiction and economic crisis of capitalism; the political system and ideology of capitalism.

6. The formation and characteristics of private monopoly capitalism; the characteristics and essence of state monopoly capitalism; the manifestations and consequences of economic globalization; the historical status of capitalism and its historical necessity for socialism.

7. The three stages of utopian socialism; the basic principles of scientific socialism; the long-term and arduous nature of socialist construction.

8. The basic concept: communism, the essential characteristics of communism, and the free and comprehensive development of human beings. Communist society is the necessity of historical development.



Introduction to Maoism and Theoretical System of Socialism with Chinese Characteristics:

1. The historical process and scientific connotation of the China-characterized Marxism , the formation process and historical status and main content of Mao Zedong thought; the formation process and main content of the theory system of socialism with Chinese characteristics; the scientific connotation of the ideological line of seeking truth from facts.

2. The national conditions of modern China and the characteristics of the times of the Chinese revolution; the road and basic experience of the new democratic revolution; the general line and the basic programme of the new democracy; the three magic weapons of the new democratic revolution.

3. The general line of the transition period, the theoretical basis and content; the theoretical basis for the establishment of the basic socialist system; the road of socialist transformation and historical experience suitable for the characteristics of China.

4. The experience and lessons of the preliminary exploration of the socialist construction road; the thought of mobilizing all positive factors to serve the cause of socialism; and correctly recognizing and dealing with the contradictions in the socialist society.

The formation and scientific meaning and main characteristics of the 5. stage theory of the primary stage of the Communist Party; the basic line and basic program of the party at the primary stage of socialism.

6. The essence of socialism and the proposal of "the Chinese dream"; the scientific connotation and significance of the theory of the essence of socialism; the fundamental task of socialism; the "three step" development strategy; the requirement of building a well-off society in an all-round way; the connotation of the Chinese dream.

7. The theoretical basis and practical basis for reform and opening up; the form, principle and pattern of opening to the outside world as well as the significance of strengthening international exchanges and cooperation; the main content, nature and purpose of the reform, and the relationship between reform, development and stability.

8. The basic economic system and distribution system in the primary stage of socialism, the socialist democratic political system with Chinese characteristics, the fundamental task of the socialist culture with Chinese characteristics, the scientific meaning of building a harmonious socialist society, and the strengthening of the construction of ecological civilization.

9. The formation and development process of the concept of "peaceful reunification" and "one country, two systems"; the successful practice process of "one country, two systems" in Hongkong and Macao as well as its basic content and significance; the principles for the work of Taiwan under the new situation.

10. Mao Zedong's analysis of the international situation after World War II;



	<p>Deng Xiaoping's new judgment on the theme of the times; the formation and development of the independent and peaceful foreign policy and the basic principles.</p> <p>11. To build the fundamental strength of the cause of socialism with Chinese characteristics; the modernization of national defense and the army; the content and basic tasks of the patriotic united front in the new period; the party's national policy and religious policy in the new period.</p> <p>12. The nature and purpose of the Communist Party of China; the basis and method of building a learning, service-oriented and innovative Marxism ruling party.</p> <p><i>Outline of Modern Chinese History:</i></p> <p>1.The process of Capital --imperialism aggression against China; the struggle of Chinese people resisting foreign armed aggression and fighting for national independence; the failure of anti aggression war and the awakening of national consciousness; the essence of imperialism.</p> <p>2.The rise and fall of the storm of peasants' struggle; the rise and fall of the Westernization Movement; the rise and death of the reform movement.</p> <p>3.The banner of modern national democratic revolution; the specific process of the revolution of 1911 and the establishment of the Republic of China; the failure of the revolution of 1911; the difference between bourgeois improvement and revolution; the necessity, justice, progress and limitations of bourgeois democratic revolution.</p> <p>4.The historical process of new culture and the 54 Movement; the further spread ofMarxism and the birth of the Communist Party of China; the historical conditions, characteristics and significance of the founding of the Communist Party of China, and the new situation of Chinese revolution.</p> <p>5.The hard exploration of the new road of revolution; the twists and turns in the exploration of the Chinese revolution; the opening of the rural revolutionaries to encircle the cities.</p> <p>6.Japan launched the war of aggression against China, from the partial war to the national war of resistance, the front of the Kuomintang and the war of resistance against Japan, the mainstay of the Chinese Communist Party in the war of resistance against Japan, the victory of the war of resistance against Japan and its reasons and significance.</p> <p>7.From peace and democracy to self defense, the Kuomintang government is surrounded by all the people, the cooperation between the Chinese Communist Party and the democratic parties, and the creation of the new China of people's democratic dictatorship.</p> <p>8.From the beginning of the transition from New Democracy to socialism; the socialist road is the choice of history and the people; the significance of the establishment of the basic socialist system.</p> <p>9.The Communist Party of China has made a good start in the exploration of</p>
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	<p>socialist construction, the setbacks experienced and the achievements made.</p> <p>10.The new situation of reform and opening up and modernization; cross century development of socialism Chinese characteristics; in the new historical starting point to promote China socialism; socialist development China features more extensive development prospects; unswervingly along the road of Chinese characteristic socialism forward.</p> <p><i>Situation and Policy:</i></p> <p>The content of this course is divided into four chapters, mainly including the temper endeavour of 5 years, the new changes in the international anti-terrorism situation and its influence, a comprehensive understanding of "The Belt and Road", the return of Hongkong in 20 years: Retrospect and prospect.</p> <p>1. The 5 years of great endeavor (change)</p> <p>Since the eighteen Party of the party, the Central Party Central Committee, with Comrade Xi Jinping as the core, has not forgotten the beginning of the first heart, and has led the people all over the country on the new long march of the Chinese nation's great revival of the Chinese dream, and has won a new great victory. In the past 5 years, the past and the future of the transition, the "five in one" calibration development coordinates, "four comprehensive" planning strategic layout, the new development concept to the era of power.</p> <p>2. New changes in international counter-terrorism situation and their impact (change)</p> <p>Under the joint attack of the international community, the international terrorist forces represented by the "Islamic state" have been hit hard. In the face of the new international counter-terrorism situation, the international terrorist forces are adopting new measures such as launching "wolf wolf" attacks and continuing to endanger the international community.</p> <p>3. A comprehensive understanding of "The Belt and Road" (change)</p> <p>Through which way can the Chinese dream of the great rejuvenation of the Chinese nation be realized? What great initiatives can be adopted in the crucial stage of China's rise to establish international discourse power? What is the role of the great rejuvenation of the Chinese nation in human civilization? "The Belt and Road initiative, is on the major problems and answer.</p> <p>4. Hongkong's 20 years of retrospect and prospect (change)</p> <p>In the past 20 years of returning to the motherland, Hongkong has achieved a universally recognized success in the practice of "one country, two systems" in the practice of "one country, two systems" in Hongkong.</p>
<p>Examination requirements and forms of examination</p>	<p>1.Moral Education and Basics of Law: closed written examination</p> <p>2.Basic Principles of Marxism: closed written examination</p> <p>3.Introduction to Maoism and Theoretical System of Socialism with Chinese</p>



	<p>Characteristics: closed written examination 4.Outline of Modern Chinese History: closed written examination 5.Situation and Policy: open written examination.</p>
Media employed	Multimedia teaching ,the traditional writing-on-blackboard teaching method
Reading list	<ol style="list-style-type: none"> 1. Marx, Engels, Marx Engels complete works [M]. Beijing: People's publication, 1982. 2. Mao Zedong Mao Zedong anthology [M]. Beijing: People's publishing house, 1991. 3. Deng Xiaoping Deng Xiaoping selected works [M]. Beijing: People's publishing house, 1994. 4. Jiang Zemin Jiang Zemin selected works [M]. Beijing: People's publishing house, 2006. 5. Hu Jintao. An important literature selection since the sixteen major years (part [G].): Beijing: Central Literature Publishing House, 2006. 6. Xi Jinping Xi Jinping talked about governing the country [M]. Beijing: Foreign Language Press, 2014.
Last modified date	2018.12.28
Explanation of the module (reason)	<p>According to the requirements of the Ministry of education and the Publicity Department from the implementation plan ,The Publicity Department and the Ministry of education of the CPC Central Committee suggestion on Further Strengthening and improving the ideological and political theory courses in universities,offers a series of courses on Ideological and moral cultivation for College Students.</p>



Module 15 The Practice of Moral, Intellectual, Physical and Aesthetics

Module name	The Practice of Moral, Intellectual, Physical and Aesthetics			
Module level, if applicable				
Code, if applicable				
Subtitle, if applicable				
Courses, if applicable	Military Theory and Training	Physical EducationI	Physical EducationII	Physical EducationIII
Semester(s) in which module is taught	1	1	2	3
Courses, if applicable	Physical EducationIV	Extension training	Competitive Sports	Campus activities and social practice
Semester(s) in which module is taught	4	1-7	1-7	1-7
Courses, if applicable	Volunteer Service	Art Accomplishment and Practice	Master Forum	Masters Lecture
Semester(s) in which module is taught	1-7	1-7	1-7	1-7
Person responsible for Module	ZHANG Yonggang, LI Yang, LI Shuangxiong			
Lecturer	<p>Professor: ZHAN Xinhui, HU Junxiu, LIU Yulin, HE Ming, HE Xiaozhou, HU Moolin, YU Hongjun, BI Feiyu, ZHANG Li, LIU Yutang, CAO Hui, JIANG Shixue, ZHANG Fan, KONG Fanjun, LI Dawu</p> <p>Associate Professor: REN Deli, LI Ping, LI Meng</p> <p>Lecturer: CHENG Guangtao, GUO Shuai, LIN Peize, LI Hualong, WANG Bichen, WANG Jin, LIU Fengyu, SONG Yang, ZHANG Tao, YU Qinghe, SHU Hong, CUI Qiaoyu, FU Zhonghu, GAN Su, HE Shunxiang, HU Xin, JIANG Hua, KANG Dandan, LI Hongjuan, LI Minglei, LIU Yulin, LIU Zhe, LIU Shasha, MA Yijun, WU Xiuyun, ZHANG Ting, ZHENG Qihong, ZHANG Yonggang, ZHENG Qihong, GAO Chuan, GONG Yuyang</p> <p>Assistant: WANG Pengjun, HE Ya, HUANG Jing, WU Jiao, ZHOU Zhenyu, CHEN Jianhui, CHENG Yan, FAN Mengmeng, SU Zehao, Shenqin, JIAO Xiaoya, LI Cong, HE Dejiang</p>			



	ZOU Xianda, XIANG Cheng, LIU Guangye, LUO Bo, LIANG Yingnan, ZHAO Jianping, LIU Yan, CHEN Hongqing, XU Shiyi, YIN Zhenhua,
Language	Chinese
Relation to curriculum	Compulsory and Elective
Type of teaching, contact hours	<p>Military Theory and Training: The weekly average theoretical and practical teaching hours: 2 hours</p> <p>Physical Education I- IV: The weekly average theoretical and practical teaching hours: 2 hours</p> <p>Extension training: The weekly average theoretical and practical teaching hours: 1 hours</p> <p>Competitive Sports: The weekly average theoretical and practical teaching hours: 3 hours</p> <p>Campus activities and social practice: The weekly average practical activity hours: 2 hours</p> <p>Volunteer Service: The weekly average practical activity hours: 2 hours</p> <p>Art Accomplishment and Practice: The weekly average practical activity hours: 2 hours</p> <p>Master Forum, Masters Lecture: (Selection one) The weekly average theoretical teaching hours: 2 hours</p>
Workload	<p>Military Theory and Training: workload hours=32 hours, teaching hours=32 hours;</p> <p>Physical Education I: workload hours=32 hours, teaching hours=32 hours;</p> <p>Physical Education II: workload hours=32 hours, teaching hours=32 hours;</p> <p>Physical Education III: workload hours=32 hours, teaching hours=32 hours;</p> <p>Physical Education IV: workload hours=32 hours, teaching hours=32 hours;</p> <p>Extension training: workload hours=16 hours, teaching hours=16 hours;</p> <p>Competitive Sports: workload hours=48 hours, teaching hours=48 hours;</p> <p>Campus activities and social practice: workload hours=32 hours, teaching hours=32 hours;</p> <p>Volunteer Service: workload hours=32 hours, teaching hours=32 hours;</p> <p>Art Accomplishment and Practice: workload hours=32 hours, teaching hours=32 hours;</p> <p>Master Forum, Masters Lecture: (Selection one)</p>



	workload hours=32 hours, teaching hours=32 hours;
Credit points	11
Requirements according to the examination regulations	<p>Physical Education I: Special Technology Assessment Ball Special Technology + Competition: 60% Attendance and performance assessment: 20% Quality assessment 1000 meters: 20%</p> <p>Physical Education II: Special Technology Assessment Ball Special Technology + Competition: 60% Attendance and performance assessment: 20% Quality assessment 1000 meters: 20%</p> <p>Physical Education III: Special Technology Assessment Ball Special Technology + Competition: 60% Attendance and performance assessment: 20% Quality assessment 1000 meters: 20%</p> <p>Physical Education IV: Special Technology Assessment Ball Special Technology + Competition: 60% Attendance and performance assessment: 20% Quality assessment 1000 meters: 20%</p> <p>Competitive sports: Performance and Attendance: 50% Assessment: 50%</p> <p>Extension Training: Performance and Attendance: 50% Assessment: 50%</p> <p>Masters Rostrum: Attendance and performance: 40% Course papers: 60%.</p> <p>Masters Lecture: Attendance and performance: 40% Course papers: 60%.</p> <p>Art Accomplishment and Practice: Homework + Performance + Experiment: 40% Roll surface performance: 60%</p> <p>Campus Activities and Social Practices: Performance and Attendance: 50% Assessment: 50%</p> <p>Volunteer Service: Performance and Attendance: 50% Assessment: 50%</p>
Module objectives (capability)/expected learning outcomes	<p>1. Course objectives (capacity)</p> <p>1) Physical Education courses enable students to further understand the basic knowledge of sports, develop good physical and health habits, develop</p>



physical and mental qualities of students, enhance physical fitness, and learn and master methods and methods for scientific physical exercise.

2) Quality development training is not a sports plus entertainment, nor is it a so-called "devil training." It is a brand-new experiential training model. Quality development training is based on games as the carrier, relying on sports, using training as the method, and comprehension as the purpose. Compared with traditional knowledge training and skills training, it has less teaching and indoctrination and more experience in some activities. Understanding and understanding, in the mountains and green waters, through the fun games, heuristic sports, interdependent environmental conditions and the trainer's classic commentary share, to promote communication and trust between people.

3) Art accomplishment and practice is an art education course for non-artistic students. It is one of the important measures for quality education in secondary education and an important means for the contemporary middle school students to achieve perfection and perfect personality. The purpose of the education in this course is not to create professional artists, but to cultivate a group of people who have a sense of beauty so that we, Guangxi Vocational College of Economics, can see the beauty from ordinary things, and we can also create things with ordinary things. The United States encourages secondary vocational students to establish a positive attitude towards life and use this positive attitude to face future studies, work, and life.

4) The teacher courses as an important complement to the training of the college's talents are designed to guide students in sorting out, expanding, and extending knowledge; to explore the laws and methods of knowledge development; to develop students' divergent thinking, and to use interdisciplinary knowledge and their research capabilities; Meet the diverse needs of students and cultivate innovative talents. Lectures and electives cover 13 subjects including philosophy, economics, law, pedagogy, literature, history, science, engineering, agronomy, medicine, management, arts, and military. It aims to comprehensively increase students' awareness of various disciplines, understand the development history, current status and future plans of various disciplines and fields, and examine their own characteristics and development plans, and focus on training.

5) Actively carry out meaningful and interesting brand campus cultural activities for the growth of college students, with the aim of exerting students' interests, enhancing students' participation, and exercising students' organizational and communication skills.

6) Volunteer service aims at the spirit of "dedication, friendship, mutual assistance, and progress". With the goal of "serving the school and serving the society", it organizes and leads the volunteer service activities of the whole school and sets up a special team of volunteer services to promote the full education. "Building" and working hard to build a campus atmosphere of



solidarity, friendship, and mutual help.

2. Expected learning outcomes:

1) The teaching of physical education courses allows participants to cultivate positive attitudes through activities, review themselves, explore their potential, enhance collaboration awareness, and learn to work in teams; thereby improving student cohesion and students' passion, while demonstrating a good spirit of solidarity and cooperation. Correctly handle competition and solidarity and cooperation.

Cultivate students' interest in sports and develop good exercise habits. Always maintain good interpersonal relationships with class teachers and students. Meet the requirements for the 2014 National Student Physical Fitness Health Standard.

2) Art Accomplishment and Practice focuses on the relationship between art education and quality education and the relationship between art education and people. Teachers embark on emotions and immerse themselves in emotions. They submerge the virtues and virtues subtly into the hearts of aesthetic subjects. Through cultivation and improvement of the keen perception, rich imagination and aesthetic understanding of college students, the students' minds are finally made. Constantly thick, emotionally enriched, sentiments continue to sublimate.

3) The three teacher forums and teacher classes are designed to allow students to grasp the cutting-edge information of various disciplines, have global thinking and overall awareness; have good communication expression and writing skills; develop thinking habits of independent thinking, courage, and creativity; have artistic appreciation Ability to master the basic methods and concepts of cultural creativity; leadership, leadership knowledge and leadership thinking.

4) Through the three dimensions of student club activities, departmental grassroots activities, and brand activity construction, we will carry out targeted development of interest, hobby, class, skills, and campus cultural courses that are meaningful for the growth of college students. Other practical courses to improve students' own quality.

5) As a service provider, the development of volunteer service activities will be promoted, and students will be guided to participate in volunteer service activities with various forms, rich contents, and profound meanings. The "1246+" volunteer service 2.0 new system will be built, based on Hechuan, and "going global" will be adhered to. Combining with "Please Come in", through the four main lines of "Citizen School, Warming Heart Project, Transferring Students in Action, and Three Summers in the Countryside", there are six "projects, detachments, propaganda, training, positions, and youth credit systems". In the direction, continue to cultivate the young students' love of dedication and sense of social responsibility.



<p>Recommended prerequisites</p>	<ol style="list-style-type: none"> 1. The most basic artistic appreciation and practical ability 2. Experiential first-time training, no physical illness 3. College students' basic qualities and self-awareness 4. Have basic humanistic knowledge and qualities, have the habit of thinking independently and daring to question, have basic logical thinking skills and appreciate aquatic products.
<p>Content</p>	<p>Sports</p> <p> ●Physical Education I</p> <ol style="list-style-type: none"> 1. Safety precautions for swimming lessons; overview of swimming activities; familiarity with water, understanding water fun; learning ventilation. 2. Learn to float and stand in water; learn to swim in the water. 3. Basketball: an overview of basketball; familiar with the practice of the ball; learning to dribble in place; learning to dribble between marches. 4. Basketball: Learn to pass your hands on the chest; learn to upload the ball with one hand; learn to change the direction of the ball. 5. Basketball: learn the technique of one-handed shooting; 6. Basketball: Learn to shoot with low hands (one-handed); 7. Introduce cross-step breakthrough technology; introduce the rules of the game; four fights and four confrontation exercises; 8. Review of movement, transmission, and casting techniques; dribble ball-pile exercises (test items); overview of medium and long-distance races; learning to run and standing start-ups 9. Dribbling around the piles to practice; Learn breathing methods in long-distance running; Learn physical distribution methods for middle and long distance running. Physical fitness training. 10. Basic technical training; Teaching small competition; Judging method learning; 1000/800M full running 11. Practice long-distance running: 1000/800M; ball activity. 12. Exam: basketball rewind (boys); ball activities. 13. Exam: 1000/800M; relax after exercise. 14. Exam: Basketball Match 15. Maneuver - make up test untested students 16. Maneuvering - Testing Untested Students <p> ●Physical Education II</p> <ol style="list-style-type: none"> 1. Be familiar with water-based; review floating, standing, and gliding movements in the water; learn the technical movements of the breaststroke legs (four technical movements: closing, tumbling, crouching, and gliding); quality exercises. 2. Review breaststroke technical movements; quality exercises. 3. Learn the technical exercises of the two legs and the breathing exercises; quality exercises. 4. Review the cooperation exercises of the technical actions of the lame and the breathing;



	<p>5. Football: Familiar with the practice of the ball; learning to dribble and change the direction of the dribble; physical exercises: flexible forces.</p> <p>6. Football: Learn to kick and stop the inside of the archer; Physical exercises: Flexibility.</p> <p>7. Football: Learn to kick the ball on the inboard side; Physical exercises: Flexibility.</p> <p>8. Football: Learn to play with a positive instep. Body exercises: Flexibility.</p> <p>9. Football: Learning to stop the ball in the chest; learning the head ball; physical exercises: speed smart class.</p> <p>10. Football: Dribbling and piling exercises; teaching small games. Physical exercises: Speed smart class.</p> <p>11. Football: Basic Skills Combination Practice; Rules: Intruder fouls (football); Teaching competitions; Physical exercises: Speed smart.</p> <p>12. Football: Basic Skills Combination Exercise; Rules Introduction: Positioning Ball (Football).</p> <p>13. Teaching competitions; physical exercises: endurance.</p> <p>14. Exam: 1000/800M.</p> <p>15. Exam: Football game.</p> <p>16. Maneuvering - Testing Untested Students</p> <p>•Physical Education III</p> <p>1. Familiar with water; review breast stroke technical movements; review breaststroke legs and breathing Collaborative exercises of technical movements; quality exercises.</p> <p>2. Review breaststroke leg technical movements; Learn how to swim in the breaststroke stroke in the water Work; quality exercises.</p> <p>3. Review the breaststroke of the breaststroke in the water; learn the stroke of the breaststroke and the frog Swimming leg technical exercise coordination exercises; quality exercises.</p> <p>4. Review exercises for breast stroke arm strokes and breast stroke technical exercises;Quality exercises.</p> <p>5. Volleyball: Overview of volleyball; ready for posture, pace movement;Face mat ball; body exercises: Flexibility power class.</p> <p>6. Volleyball: learn to pass the ball in front of two hands; double pass, practice on the mat;Physical exercises: Flexible forces.</p> <p>7. Volleyball: Learn to play with the front; Learn to play with the side of the body; Learn Standing long jump; physical exercises</p> <p>8. Volleyball: Learn to play with the front; use the front spiking technique;Physical exercises</p> <p>9. Volleyball: Introducing the "secondary and second" offensive tactics; introducing the rules of the game;Body exercises.</p> <p>10. Volleyball: review pass, cushion technique; single pad practice (test item)</p>
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	<p>11. Volleyball: single pad exercise; teaching small game; physical exercise.</p> <p>12. Volleyball: basic technical training; teaching small competitions; physical exercises.</p> <p>13. Exam: 1000/800M; relax after exercise.</p> <p>14. Exam: Volleyball.</p> <p>15. Exam: Volleyball game.</p> <p>16. Maneuvering - Testing Untested Students</p> <p>● Physical Education IV</p> <p>1. Familiar with water; review breast stroke arm stroke and breaststroke technical movements With practice; quality exercises.</p> <p>2. Learn the complete technical movements of breaststroke (ie breathing, paddling, kicking techniques Action coordination exercises); quality exercises.</p> <p>3. Review breaststroke complete technical movements; quality exercises.</p> <p>4. Swimming test</p> <p>5. Learn Tai Chi: basic movements - hand type - step type; physical exercise: flexible Power class.</p> <p>6. Learn Tai Chi; Physical Exercise: Flexibility.</p> <p>7. Learning Tai Chi; physical exercises; ball activities.</p> <p>8. Learn Tai Chi; physical exercises; ball activities.</p> <p>9. Learn Tai Chi; physical exercises; ball activities.</p> <p>10. Learn Tai Chi; physical exercises.</p> <p>11. Learn Tai Chi.</p> <p>12. Learn Tai Chi; physical exercises; ball activities.</p> <p>13. Learn Tai Chi; physical exercises.</p> <p>14. Exam: 1000/800M; relax after exercise.</p> <p>15. Exams: Ball games.</p> <p>16. Maneuvering - Testing Untested Students</p> <p>●Extension training</p> <p>1. Breaking ice</p> <p>Through the ice-breaking sailing project, the students understand each other and integrate into this event. And introduce the origin of outreach training, we all know. The team's team name, slogan, team song, team logo, and logo are organized to form a team. Each team will display the team culture in turn after the completion of the team to improve the fighting spirit and momentum of the team and prepare for the next training.</p> <p>2. Competition project</p> <p>Through the mutual competition between the teams, we enhance everyone's sense of competition and can better integrate into the team and integrate into the collective.</p> <p>3. Site project</p> <p>Through the challenge of site projects, such as crossing the grid, minefield water intake, blind squares and other project challenges, guide students to</p>
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discuss teamwork, details, leadership, execution, etc., and communicate with each other in order to achieve harvesting goals. .

4. High altitude project

Through the challenges of high-altitude projects, such as the challenges of airborne horizontal bars, airborne bridges, and climbing ladders, students are encouraged to cultivate their self-confidence, dare to break through, believe in themselves, and see how they can achieve the challenges of high-altitude projects. This enhances self-confidence.

5. Team smelting

After the challenges and smelting of the previous courses, the final competition of the project, the examination of the early courses, thereby enhancing the individual's sense of honor to the team and learn to be grateful.

6. After class reflection and feelings

Through the training of the course and the mutual exchanges between the participants in the course, each trainee writes an extended thought, not only the sentiment of the course but also the writing, so that the trainees can have a more profound and rewarding two-day experience.

7. School exam

Practice to test student gains.

● **Competitive sports**

1. Badminton: Theory: Overview of badminton, Rules and Judgment of badminton, Basic techniques and tactics: Holding a racket and preparing for a posture, Positive and negative hands, Goal and netball techniques, Step movement method, Positive and negative ball technique, Positive , backhand ball technology; singles technology; physical fitness: 100m, 1000m/800m, endurance, strength, speed, flexibility and other qualities of practice.

2. Volleyball: Theory: Overview of Volleyball, Rules and Judgment of Volleyball; Preparation of Posture and Movement: Combining Other Techniques; Passing: Moving Passing Left and Right, Turning Passing; Passing the Ball; Serving the Ball; Serving: Front Facing; Lineup , "Four Two" equipped; physical fitness: 100m, 1000m/800m, endurance, strength, speed, flexibility and other qualities of practice.

3. Tennis: theory: overview of tennis, tennis rules and referees; singles basic tactics; table tennis backhand flattening shots; basic skills, tactics forehand shots; backhand shots; serve; backhand push and table tennis Backhand ball technology; doubles tactics; 100m, 1000m/800m, endurance, strength, speed, flexibility and other qualities.

4. Table Tennis: Theory: The origin, development, and characteristics of sports and exercise values of table tennis; basic techniques and tactics: holding and preparing postures; forward and backward hands; high and netball techniques; footwork movement methods; Counterattack technology; positive and negative handball technology; singles technology; physical fitness: 100m, 1000m/800m, endurance, strength, speed, flexibility and other qualities of



practice.

5. Badminton: Theory: Overview of badminton, Rules and Judgment of badminton, Basic techniques and tactics: Holding a racket and preparing for a posture, Positive and negative hands, Goal and netball technique, Step movement method, Positive and negative ball technique, Positive , backhand ball technology; singles technology; physical fitness: 100m, 1000m/800m, endurance, strength, speed, flexibility and other qualities of practice.

Art Accomplishment and Practice

● Dance Appreciation

1. Understand the basics of dance
2. Learn dance knowledge by enjoying dance videos

● Yoga

1. Understand the origin, development, basic knowledge and precautions of yoga.

2. Yoga awareness, breathing training
3. Yoga posture training

●Basic training for basic skills of Chinese classical dance

1. The origin, development and basic knowledge of Chinese classical dance

2. Basic skills of Chinese classical dance training and training
3. Chinese classical dance techniques
4. Chinese classical dance body rhyme
5. Chinese classical dance basic skills soft opening training

● Western ballet dance practice

1. Initial understanding of dance
 2. Learn about the cultural characteristics of ballet
 3. Cultivate students' personal knowledge and practice of basic ballet knowledge

●Appreciation of movie music

1. Familiar with information, theory and/or subject knowledge
 2. Used knowledge recognition and practical ability, knowledge, skills and social integration

● Popular vocal music

1. The vocal method of popular vocal music, the sound and vocalization in the popular vocal music, the control of the breath, and the singing of various popular styles.

2. Determine the voice path of your own voice and development, and the handling of various song emotions. The history of music about pop music, and the evolution of pop music.

3. Related issues to be noted when popular singing is performed on the stage.

● Chinese traditional music appreciation

1. Learn Chinese Classical Classical Music Appreciation (eg: tone music,



	<p>literary music, Tang Dynasty song and dance music)</p> <ol style="list-style-type: none"> 2. Cognition and appreciation of Chinese instrumental music (such as "guqin music") 3. The appreciation of Chinese folk songs <ul style="list-style-type: none"> ● Guitar Art Appreciation <ol style="list-style-type: none"> 1. Guitar basics 2. The appreciation of guitar art in movies 3. Music Theory 4. Rhythm and music training 5. Percussion's aesthetic and creative 6. Percussion aesthetics and simple choreography ● Bamboo flute performance and appreciation <ol style="list-style-type: none"> 1. Familiar with pronunciation principles 2. Understand style, playing method 3. Theory and practice 4. Solo practice ● Appreciation of piano works <ol style="list-style-type: none"> 1. Familiar with mastering the staff and knowledge of music theory, gaining practical skills on the piano by mastering the knowledge of stave and music theory 2. Through the knowledge and skills to let the students know how to appreciate the understanding of frets <ul style="list-style-type: none"> ● Guzheng performance basis Guzheng performances, hands, rhythm, basic skills, and musical sensation training <ul style="list-style-type: none"> ● The development of modern music style Give students appreciation of the music styles and music development of different eras. With different musical styles, students will know how pop music evolves. <ul style="list-style-type: none"> ● Computer music production <ol style="list-style-type: none"> 1. Use of music production software and basic knowledge of composer arrangement, familiar with and use software 2. Understand the basics of composer composition, record the desired notes correctly on the computer, and how students use calculations and make music ● Musical performances and appreciation <ol style="list-style-type: none"> 1. Master musical appreciation methods 2. Master the basic performance elements of musicals 3. Master the common performance techniques and structures of musicals ● Basic musical performance singing and appreciation <ol style="list-style-type: none"> 1. Understanding the main elements that make up a musical, the development and artistic characteristics of the musical by watching and performing the inquiring learning methods of musicals
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	<p>2. With open teaching, students can enjoy the artistic form of musicals easily and happily in the performances and in the wonderful musical arias.</p> <ul style="list-style-type: none"> ● Drama Screenplay and Appreciation <ol style="list-style-type: none"> 1. The mastery of drama theory knowledge 2. Analysis of the script structure of drama works in Liqiu and Thunderstorm 3. Characterization of theatrical play 4. Analyze and explain the students' drama conflict depiction and character creation 5. Explain and analyze the drama scripts created by students ● Program Hosting and Appreciation <ol style="list-style-type: none"> 1. Basic sounding of Mandarin 2. Exercise around the tongue twister 3. Mandarin tone adjustment 4. The nature and classification of television programs, entertainment program hosting basis 5. Improvisation training ● Clothing and makeup appreciation <ol style="list-style-type: none"> 1. Understand the perception of beauty 2. Recognize the importance of color in character modeling 3. Creation of makeup 4. The combination of clothing and makeup ● Makeup and Fashion Design Direction <ol style="list-style-type: none"> 1. Understand the choice of clothing makeup 2. Recognize the importance of clothing makeup 3. According to different roles to design a characteristic shape 4. Skilled in mastering the effective matching and modeling of clothing and makeup ● Drama Performance Practice and Appreciation <ol style="list-style-type: none"> 1. Liberation of nature 2. Communication practice 3. Sketch exercises ● Stage art foundation <ol style="list-style-type: none"> 1. The basic knowledge of the stage art, the ability to use the stage art theory to practice 2. Familiar with the integration of theory, skills and practice. ● Introduction to Film and Television Art Design <ol style="list-style-type: none"> 1. Understand what is film and television art design 2. Understand what is clothing and props 3. Understand what is a camera 4. Understand what is perspective <p>Master course</p> <ul style="list-style-type: none"> ● Masters Rostrum
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1. The evolution of human civilization and the cultural pattern of today's world
 2. The arrival of the Internet Oligopoly era
 3. Personalized development of modern college students
 4. The contemporary value of traditional culture
 5. New pattern of opening up under the new economic normal
 6. The poet keeps the festival and serves as a cultural conscious person.
 7. Contemporary Novels: A Way to Tell Love Stories
 8. A magazine and an era
 9. Metaphysics and Nihilism - Based on Heidegger Nietzsche's Thoughts
 10. Mobile user preference acquisition and recommendation
 11. Deep Learning Models and Applications
 12. Security General: Refresh Your View of Security
 13. Chinese Movie Recognition
 14. How to take a good life path - talk about several historical figures
 15. General Safety Theory: Refresh Your View of Security
 16. The arrival of the Internet Oligopoly era
 17. Career Planning and Job Interviewing Skills for College Students
 18. Mint and Candy - The Youth Movie Style
 19. Kuang Zhong Fought against the Governor
 20. The Song Sentinel Officer --Out of the Difficulties
 21. World Energy Development Trends and China's Energy Development Strategy
 22. Chinese Classics and Wisdom
 23. The Essence of Marketing and Strategic Marketing Management
 24. What can we do in the era of new media
 25. Contemporary Art Appreciation and Collection
 26. Volunteerism: Ideas and Actions
 27. "Creativeness" in Contemporary Chinese Literature
 28. Contemporary Fiction: A Way to Tell Love Stories
 29. The general spirit and research paradigm of Marxist philosophy
 30. Freehand spirit of Chinese literati painting
 31. Can Qing Dynasty Win?
 32. Planning careers with entrepreneurship
- **Masters Lecture**
1. Marketing - the Practices in China
 2. Corporate strategies
 3. Confucian culture
 4. The economics of life
 5. Art of War and Life Wisdom
 6. Network Culture Construction and Moral Cultivation
 7. Chinese contemporary social issues
 8. The wisdom of history



	<p>9. Contemporary International Political Economy and China's Diplomacy 10. Movie Appreciation 11. Lu Xun Culture and Art 12. Contemporary Art Criticism 13. Critical Chinese Education 14. Poetry, Song, Art, Aesthetics and Exercises 15. Public Policy Review 16. Wine and Western Culture 17. Chinese classics and humanistic cultivation 18. Three Kingdoms Wisdom 19. Thinking training 20. Security situation around China 21. Contemporary International Political Economy and China's Diplomacy 22. Public opinion control and media response The Imperial Examination and the Mentality of Scholars in the Tang Dynasty 24. China's Urbanization and Real Estate Investment 25. Bayu Culture 26. The wisdom of history 27. Writing novels and storytelling 28. Speech eloquence and thinking wisdom</p> <p>Campus Activities and Social Practices and Volunteer Service</p> <ul style="list-style-type: none"> ● Campus activities and social practice <ol style="list-style-type: none"> 1. Introduction of college activities and social practice 2. Participate in various campus activities and compose experiences and experiences 3. Actively organize and participate in social practice projects 4. Summary, report ● Volunteer service <ol style="list-style-type: none"> 1. Understand the contents of volunteer services 2. Organize and learn about volunteers 3. Actively join volunteer service projects and write experience reports 4. Summary, report
<p>Examination requirements and forms of examination</p>	<ul style="list-style-type: none"> ● Physical Education I Examination/site assessment ● Physical Education II Examination/site assessment ● Physical Education III Examination/site assessment ● Physical Education IV Examination/site assessment ● Extension training



	<p>Examination/site assessment</p> <ul style="list-style-type: none"> ● Competitive sports <p>Examination/site assessment</p> <ul style="list-style-type: none"> ● Art Accomplishment and Practice <p>Closed written exam</p> <ul style="list-style-type: none"> ● Masters Rostrum <p>Course Paper</p> <ul style="list-style-type: none"> ● Masters Lecture <p>Course Paper</p> <ul style="list-style-type: none"> ● Campus activities and social practice <p>On-site assessment to score</p> <ul style="list-style-type: none"> ● Volunteer service <p>On-site assessment to score</p>
Media employed	Multimedia, blackboards, professional high-altitude challenge facilities and venues, new media, community activities, etc.
Reading list	<ol style="list-style-type: none"> 1. Traditional Chinese Music 2. Appreciation of Chinese Classical Music 3. Chinese Folk Songs 4. Basic Music Theory Tutorial 5. Classical Chord progression 6. Songs Change Life 7. Popular Music History and Style 8. Wang Zhongshan Guzheng Collection 9. Guzheng Basic Course 10. Chinese Music 11. Yellow Bell 12. Art Gallery 13. Bye 14. Western Ballet Dance Practice 15. History of Ballet Dance 16. Dance Studies 17. Europe and American Musical Singing and Training Course 18. Contemporary Pop Vocalist Vocal Training Skills 19. Study on Musical Theatre Teaching—The First Symposium on Chinese Musical Theatre Teaching and Writing 20. Musical Arts and Practice 21. Self-development training 22. Outward Training 23. Be the Best Trainer 24. University Sports and Health 25. The Road to Success - Innovation and Practice of Quality Education for College Students



	26. Complete Strength - Selected Cases of Quality Education for College Students
Last modified date	2018.12.28
Explanation of the module (reason)	<p>The sports curriculum module is based on basketball, volleyball, football, 24 simplified tai chi, aerobics, and swimming. It is the most popular sports program for college students in our country and our university. It plays a positive role in improving the physical and mental health of college students. The cultivation of lifelong sports awareness plays a good role in promoting.</p> <p>The composition of the Art Accomplishment and Practice module is designed to cultivate students' cultivation and practice of the music section of the Academy's art.</p> <p>The Forum of Masters aims to introduce lectures by experts and scholars in various fields, broaden the horizons of students, increase students' knowledge, and teach the most basic knowledge and cutting-edge information in various fields. The elective courses are designed to allow students to systematically grasp certain topics. The knowledge of the field allows students to fully grasp the basic concept to the core content, from the development law to the future trend, and from academic research to practical application.</p> <p>Campus activities and social practices, volunteer services are designed to make the education process no longer purely preaching, but also not a simple judgment, but become live, connotative, emotional, and strengthen the practice of In the process, the relationship between teachers and students will change from a one-way relationship to an interactive relationship. This interaction relationship cannot be simulated by any machine. In the common learning, life and activity experience, there will be mutual understanding and trust. Students are also becoming familiar with the laws of doing things and skills of people.</p>