本科专业课程简介 / Brief Introduction on Bachelor Majors

**建筑与艺术学院 / School of Architecture & Fine Arts**

**建筑学专业（学制五年） Architecture (5 years)**

建筑学是艺术、技术、人文相互融通的交叉学科，其研究对象是建筑物、建筑群及室内空间。建筑学的核心是建筑设计，主要研究建筑物与周围环境、建筑功能与平面及空间组合、建筑造型与空间的艺术效果等。人才培养强调综合素质熏陶、形象思维培养和专业技法训练并重，理论学习和设计实践并重。目标是培养艺术修养高、设计能力强、具有国际视野和创新精神的优秀建筑师。

Architecture is an inter-discipline composed of Arts, Technology and Humanity, focusing on buildings, building complex and interior space. The core of Architecture is architectural design, which includes the design of buildings with the surrounding environment, building functions with spatial combinations, and the art of architectural forms with spatial effects. Architectural trainings emphasis on the integrated ability assessment: combining the imaginal thinking and professional skills, theory study and design practices. The aim of architectural training is to foster future architects’ high artistic accomplishment, design ability, international vision and innovative spirits.

该专业为国家首批高等学校特色专业、国家卓越工程师培养计划专业、辽宁省高等学校示范性专业，2000年通过“建筑学专业教育评估”，学制五年，毕业可授予建筑学专业学士学位。毕业后可在建筑、规划设计单位从事建筑设计与研究工作，也可在规划管理、房地产企业从事设计管理、项目策划等工作。

Architecture in Dalian University of Technology was rewarded as a characterized specialty in the Country's first professional institutions of higher education, the National outstanding engineers training plan, and the institutions of higher learning in Liaoning Province demonstration. In 2000, Architecture in DLUT passed through the Professional Education of Architecture Assessment, then the educational system of Architecture in DLUT is five years. Graduates are awarded a Bachelor's Degree in Architecture, and can be engaged in architectural design in architectural planning and design companies or taking research work, as well as doing design management and project planning in a real estate enterprise.

专业主干课程：建筑设计原理、城市规划原理、城市设计原理、建筑历史、建筑绘画、建筑设计、居住小区规划、城市设计、建筑结构、建筑材料与构造等

Main course: Architectural Design Theories, Urban Planning Principles, Urban Design Theories, Architectural History, Architectural Painting, Residential Area Planning， Urban Design， Structure and Construction, Building Materials and Building Tectonics.

该专业对学生徒手绘画能力具有一定的要求，入学后需加试美术，成绩不合格者将转入其它专业学习。The students in Architecture must have the ability of freehand painting. So that before admission, students will be tested and the ones, who do not pass the test, are not eligible to join into architectural study and will be transferred to other schools.

该专业有一级学科博士点、硕士点，以及博士后科研流动站。

Architecture in DLUT also has first-class research stations for masters, doctors, and postdoctoral researchers.

**城乡规划 本科**

专业名称：城乡规划

学习期限：5年

专业简介

本专业2014年通过中国城乡规划专业教育评估（有效期6年）。城乡规划主要研究城市与乡村布局、城乡社会服务与公共管理、城乡建设物质形态的规划设计等。通过专业培养使学生建立城乡规划、城市设计、建筑设计等相关知识结构，能够胜任城乡规划设计、城乡规划管理工作，具备从事城市道路交通规划、城市市政工程规划、景观园林系统规划的能力，能够参与区域规划、城市经营开发、房地产策划以及相关政策法规研究等方面的工作。本学科有用硕士、博士一级学科授权点。

必修课：

城乡规划原理、城市建设史、城市设计原理、城乡道路与交通规划、城乡基础设施规划、城乡总体规划、详细规划与城市设计

**Bachelor Degree: Urban and Rural Planning**

Name of specialty: Urban and Rural Planning

Credit system: 5 years

Brief Introduction

In 2014, this major has been accredited by the Ministry of Education of PRC (valid from 2014-2020). Urban and Rural Planning mainly studies the layout of urban and rural areas, social services and public management, building environment planning and design. The mission of Department of Urban and Rural Planning is to prepare students to become planning professionals by providing multi-disciplinary education, such as urban and rural planning, urban design, architectural design and other related knowledge, and to cultivate students to be competent for jobs of urban planning, urban design, urban or rural planning management, road network and traffic planning, urban municipal engineering planning, landscape planning; have the capacity to participate in regional planning, urban management and development, real estate planning and related policies and regulations and so on. Department of Urban and Rural Planning also has master and doctor programs.

Main Course

Compulsory courses :

Principles of Urban and Rural Planning, History of City Building, Principles of Urban design, Urban Road and Transportation, Planning of Urban Infrastructure, Mater Planning, Detail Planning and Urban Design

**雕塑专业**

雕塑是运用多种方式表达进行三维立体表现的造型艺术。雕塑专业主要通过写实雕塑、抽象雕塑、公共艺术、数字艺术、陶艺等教学，培养学生使用雕塑技艺及运用材料进行艺术创作与设计的能力。学校国家级文科综合教学实验中心的艺术造型、陶艺实验室是雕塑专业教学创作实训平台。

专业主干课程：肖像雕塑、人体雕塑写生、现代雕塑创作、公共艺术设计、陶艺创作、动漫雕塑设计、城市雕塑创作

该专业学制四年，毕业生授予艺术学学士学位。毕业后可在高等学校、创作院、设计院、景观设计、动漫设计、影视道具、工艺品设计等单位从事教学、科研、设计策划、设计制作、技术监督等工作。

该专业所在学科具有美术学一级学科硕士点和美术专业硕士学位授予权。

**Sculpture Specialty**

Sculpture is one kind of plastic art to express three-dimensions in a variety of methods. Through realistic sculpture, abstract sculpture, public sculpture, digital art, pottery and other teaching methods, the main purpose of sculpture major is to cultivate students’ability to use sculpture techniques and materials for artistic creation and design. The plastic art laboratory and pottery laboratory in national united laboratory for humanities and social sciences are our teaching and training platform.

Specialized courses: Portrait sculpture, Human body sculpture, Modern sculpture creation, Public art creation, Ceramic art creation, Animation sculpture design, Urban sculpture creation

After four-year academic period, student are awarded Bachelor of Arts degree. They can be competent for many jobs, such as teaching, researching, designing, technical supervision, etc. Mostly their employment units are colleges and universities, creation and design institutes, landscape and urban planning offices, arts and crafts corporations, animation and film design companies, etc.

Sculpture specialty qualifies for master station of first level discipline of Fine Arts, and it is authorized to offer Master of Fine Arts degree.

**视觉传达设计**

该专业是研究视觉图形语言及信息传递的专业，主要研究平面印刷媒体及数字媒体中视觉元素艺术化加工的形式与技术，培养学生视觉思维能力及对色彩、图形、图案、影像、文字、符号等视觉元素的组织与创新能力。目标是培养具备良好视觉思维能力、创新力强、艺术修养高、具有国际视野和团队意识的优秀设计师。

毕业可授予艺术学学士学位。毕业后可就职于文化企事业单位，从事平面视觉设计、动态媒体设计等领域的工作，有广阔的专业扩展性。

专业主干课程：标识与字体设计、广告招贴、书籍装帧、网页设计、包装设计、APP界面设计、交互设计、媒介综合设计、企业形象设计

该专业所在学科具有设计学一级学科硕士点和艺术设计专业硕士学位授予权。

**Visual Communication Design**

It is specialized in studies on visual language, focusing on artistic form of visual elements in printing and digital media. Through systemic and solid training program in design process, our purpose is to educate our students with well capabilities in organizing various visual elements, such as color, graphics, pattern, video, calligraphy, and symbols in a creative way. Meanwhile, we also encourage our students to develop themselves from multi-perspectives, such global sight, team collaboration, visual and creative thinking, etc.

Generally, our program awards Bachelor degree in Design after 4-year studies. After graduation, our graduates get offers from a wide range of cultural producing corporations, from advertisement agency, graphic design companies, magazine design companies, TV station, to new media and web design companies. Our program gains adaptability and flexibility through development of visual art, standing at the perspective of national strategies of cultural industry.

Major courses: logo and font design, book design, web design, package design, user-interface design, interactive design, synthetic media design, visual identity system design.

And also, our program awards Master degree in Design and Master of Fine Art in Design respectively.

**环境设计专业**

环境设计专业是涵盖室内设计与景观设计的综合性艺术类设计专业。专业培养强调艺术创造力和想象力，设计逻辑能力和设计技术能力。目标是培养具有国际化、本土化双重视野，符合时代发展需求的创新型环境设计人才。室内设计是建筑内部空间装修、陈设的综合设计，涉及建筑、土木工程、造型艺术、产品设计、声光机电等专业。通过教学使学生掌握空间与尺度概念、室内空间造型、界面装修设计、陈设艺术设计等方法，同时具备合理运用材料与工艺的能力。景观设计是城市空间视觉形象与建筑景观系统的综合设计，涉及城市规划设计、建筑设计、园林绿化设计、造型艺术以及公共设施等专业门类。通过教学使学生掌握总体平面规划、空间形态、景观设计等方法，同时具备对环境景观的综合判断、分析能力和设计实施、管理能力。

学制四年，毕业可授予艺术学学士学位。毕业后可就职于设计公司、建筑设计院，从事室内设计或景观设计工作；也可就职于建筑装饰工程公司、房地产企业，从事设计或设计管理工作。

专业主干课程：住宅室内设计、办公空间室内设计、酒店室内设计、软装饰设计、小型绿地景观设计、居住区景观设计、滨水景观设计、材料构造与工艺、室内设计原理、景观设计原理等

该专业所在设计学学科有一级学科硕士点和艺术设计专业硕士学位授予权。

**Environmental Design**

Environmental design is a comprehensive design of interior design and landscape design. Professional training emphasizes artistic creativity and imagination, design logic ability and design technical ability. The goal of this specialty is to cultivate an internationalized, localized, innovative environmental design talent. Interior design is the interior of the building decoration, furnishings of the integrated design, involving construction, civil engineering, plastic arts, product design, sound and optoelectronics and other specialty. Through the teaching, students should master the concept of space and scale, interior space modeling, interface decoration design, furnishings art design and the rational use of materials and technology capabilities. Landscape design is a comprehensive design of urban space visual image and architectural landscape system, involving urban planning and design, architectural design, landscaping design, plastic arts and public facilities and other professional categories. Through the teaching, students should master the planning, spatial form, landscape design methods and the comprehensive judgments, analysis, management capabilities for environmental landscape.

Students are awarded a Bachelor degree of Art and design for four years. After graduation, they may set up the company, architectural design institute, engaged in interior design or landscape design work; also work in the building decoration engineering company, engaged in design or design management.

Compulsory courses: residential interior design, office space interior design, hotel interior design, decorative design, green garden design, residential landscape design, waterfront landscape design, material construction and technology, interior design principles, landscape design principles

This specialty belong to design disciplines. It has a master's degree grant.

**工业设计专业**

工业设计专业是从事交通工具、家用电器、数码产品、工业装备、家具、日常生活用品等传统工业产品设计研究以及交互、智能、体验、服务等新兴科技产品设计研究的交叉学科；是教育部首批创新创业教育改革试点专业。人才培养注重科学技术知识与艺术人文素养相融合，理论知识与实践能力并重。目标是培养具有复合型知识结构、国际化视野、创新型思维、团队合作能力的高级设计人才。

该专业学制四年，可获得工学学士学位；在学期间可前往国外高校交流学习，优秀毕业生可免试推荐前往国外高校攻读硕士学位。毕业后可以进入国内外各类科技、制造型企业从事产品设计研发工作；也可以进入新兴互联网企业从事交互、体验等网络产品的设计研发工作；还可以进入科研机构、政府部门从事产业规划、产业创新研究等科研工作；同时具备进入新兴领域从事自主创业的能力。

专业主干课程：产品设计、交互设计、交通工具设计、家具设计、视觉传达设计、设计管理、感性工学、开源硬件与编程、创业实训等。

该专业所在学科具有设计学一级学科硕士点和艺术设计专业硕士学位授予权。

**Industrial Design**

It is an interdisciplinary subject spanning transportation, household appliances, digital products, industrial equipment, furniture, daily necessities and other traditional industrial product design, as well as research of interaction, intelligent, experience, service and other emerging technology product. It is the first batch of innovative entrepreneurship education reform pilot profession identified by the Ministry of Education. The education integrates both technological knowledge and artistic humanities, and combines theory with practice. The aim is to cultivate advanced design talents with compound knowledge structure, internationalization view, innovative thinking and teamwork ability.

Students can obtain a bachelor’s degree in engineering after four years’ study. They are provided with many opportunities like exchanging in foreign universities, being recommended to pursue a master’s degree without examination for excellent graduates. After graduation, they can enter all kinds of domestic or foreign technology, manufacturing enterprises engaged in product design or development work, or they can enter the emerging internet companies engaged in interactive, experience and other network product design, they can also enter the scientific research institutions or government departments engaged in industrial planning, innovation research and other research work. At the same time they are equipped with the ability to set up their own businesses in the emerging areas.

Main courses: Product Design, Interaction Design, Transportation Design, Furniture Design, Design for Ocular Communication, Design Management, Sensibility Engineering, Arduino and Programming, Entrepreneurship Training and so on.

The subject is qualified to award enrolled students with Master of Science Design and Master of Arts.

**机械工程学院 / School of Mechanical Engineering**

**机械设计制造及其自动化专业（国际班）-本科 （英文授课）**

专业名称：机械设计制造及其自动化

学习期限：4年

专业简介

机械设计制造及其自动化专业将工程科学的宽基础教育与定量分析、解决问题、设计方法以及沟通技巧的强化培养相结合。本培养方案以机械工程为基础，与计算机、自动化、传感测试等现代科学技术有机结合，培养学生具有机械工程技术基础，掌握市场经济和工业管理方面的知识。通过强化分析与创新能力，使学生具备作为工程师、创业或继续升学与从事研究的广泛技能。

必修课：

机械工程导论、控制工程基础、系统与测量、自动控制系统、计算技术及工程应用、先进制造技术、机械制造装备设计、特种加工、模具设计与制造、机器人技术

**Mechanical Design & Manufacturing and Automation (English-medium)**

Name of specialty: Mechanical Design & Manufacturing and Automation

Credit system: 4 years

Brief Introduction

Mechanical Design & Manufacturing and Automation combines a broad-based education in the engineering sciences with a strong grounding in quantitative, problem-solving, design, and communications skills. The undergraduate program combines mechanical engineering with computer technology, automation, sensing test and other technologies to cultivate students with basic knowledge of mechanical engineering, marketing, economy, and industrial management. By emphasizing both analytical and creative methods, MechE gives students the broad skills set they need to pursue their goals - whether that means working as an engineer, founding a company, or continuing on to graduate study and research.

Main Course

Compulsory courses :

INTRODUCTION TO MECHANICAL ENGINEERING, FUNDAMENTALS OF CONTROL ENGINEERING, SYSTEMS AND MEASUREMENTS, AUTOMATIC CONTROL SYSTEM, COMPUTING TECHNIQUES & ENGINEERING APPLICAION, ADVANCED MANUFACTURING TECHNOLOGY, DESIGN OF MANUFACTURING EQUIPMENT, NON-TRADITIONAL MANUFACTURING TECHNOLOGY , DESIGN AND MANUFACTURE TECHNOLOGY OF MOULD & DIE, ROBOTICS TECHNOLOGY

**测控技术与仪器专业-本科**

专业名称：测控技术与仪器

学习期限：4年

专业简介

测控技术及仪器专业是仪器科学与技术和控制科学与技术交叉融合而形成的综合性学科。以集精密机械工程、精密仪器、电子技术、计算机控制技术以及自动检测技术等于一体为特色，以精密仪器、信息获取与处理以及智能仪器仪表为主要研究对象。

必修课：

机械原理、机械加工基础、机械精度设计与检测技术、控制工程基础、机械工程测试技术、机械制造技术基础、测控仪器课程设计、测控专业大类实验、电子技术、单片机原理及应用

**Measurement Control Technology and Instrumentations**

Name of specialty: Measurement Control Technology and Instrumentations

Credit system: 4 years

Brief Introduction

The Measurement Control Technology and Instrumentations programme integrates the study of equipment with the technology of measurement and control, encompassing areas such as precision mechanical engineering, precision instruments, electronic technology, computer control technology, and automatic detection technology. It involves research on precision instruments, information acquisition and processing, as well as intelligent instruments and meters.

Main Course

Compulsory courses :

Mechanical Theory, Mechanical Machining Foundation, Mechanical Accuracy Design and Verification Technique, Foundation of Control Engineering, Measurement and Testing Technology for Mechanical Engineering , Fundamentals of Mechanical Manufacturing Technology, Project of Measurement Control Instrument, Measurement Control Discipline Categories Experiment, Electronic Technology, Principle and Application of Single Chip Microcomputer

**建设工程学部 / Faculty of Infrastructure Engineering**

**水利水电工程专业 本科**

学习期限 4年

专业简介

该专业是国家级特色专业，传统优势专业。培养从事大中型水利水电枢纽工程、水资源利用和城市水务工程的科研、设计、建设和管理等方面的高级专门人才，具有深厚人文素养、扎实知识基础、卓越实践能力和强烈创新思维的复合型人才。

毕业生去向：水利水电、水资源开发利用、城市水务工程等领域，能源、土木和交通等相关领域，教育科技、规划设计、开发建设与技术管理等工作。

该专业有博士和硕士学位授予权，设有博士后科研流动站

必修课：（专业核心课程）

工程水文学、水力学、土力学、工程地质、水工钢筋混凝土结构、水资源规划及利用、水工建筑学、水电站建筑学、水利工程施工

**Hydraulics and Hydropower Engineering (Undergraduate)**

Credit System: 4 years

Brief Introduction：

The Major of Hydraulics and Hydropower Engineering offers undergraduate programs which must be completed within four years.

A brief introduction of the major is as follows. The major is a leading as well as characteristic discipline in China. The Major of Hydraulics and Hydropower Engineering is designed to enable the students, upon completion of the B.S. degree program, to enter the profession-for example, to study, design, build and manage the large/medium sized hydraulic projects, water resource utilization program, and urban water engineering. We aim to train the compound talents with excellent humanistic quality, solid professional knowledge, outstanding practice ability, and strong innovation thinking. Graduates with a broad and fundamental technical base will be able to enter the professional hydraulic engineering work force including water conservancy/hydropower, water use/water availability, and urban water engineering. They could also engage in the engineering of energy, civil and transportation, and other fields, such as educational technology, planning/design, development and construction, and technology management. The major offers graduate programs leading to the degree of Master of Science (M.S.) and Doctor of Philosophy (Ph.D.). A postdoctoral research station is also available here. The core curriculum contains engineering hydrology, fluid mechanics, soil mechanics, engineering geology, hydraulic reinforced concrete structure, water resources planning and utilization, hydraulic architecture, hydropower station architecture, and construction of hydraulic engineering.

Main Courses

Compulsory courses:

Engineering hydrology, Hydraulics, Soil Mechanics, Engineering Geology, Hydraulic reinforced concrete structure, Water resources planning and utilization, Hydraulic architecture, Hydropower station architecture, Hydraulic engineering construction

**海洋资源开发技术（海洋空间资源）专业 本科**

学习期限 4年

专业简介

该专业是国家战略性新兴产业专业，适应我国海洋强国战略对复合型人才的迫切需求，依托于海岸和近海工程国家重点实验室。

培养能够胜任把滨海岸线资源和所属海域空间资源，当作城市空间的重要组成部分统筹加以规划、设计、施工、管理和科研的高级复合型人才。

毕业生去向：海洋、水利、交通、能源、城建等行业及政府相关管理部门,从事海洋空间资源开发和管理相关工作。

该专业有博士和硕士学位授予权，设有博士后科研流动站。

必修课：（专业核心课程）

工程水文学、海洋环境与荷载、海岸动力与地貌学、海洋资源与管理、海洋地理信息系统及数字化技术、海洋空间开发利用规划原理与方法、海洋空间开发利用水工建筑物、海洋生态环境保护与修复、城市规划概论、滨海景观学、海洋空间资源开发工程VR和BIM技术、水运工程施工技术与管理、海域使用论证与海洋环境影响评价

**Technology of Marine Resources Exploitation (Marine Space Resources)**

Credit system: 4 years

Brief Introduction

This is a new specialty belonging to national strategic and newly emerging industries, meeting the urgent needs of China's marine power strategy for the compound talent, and relying on the State Key Laboratory of Coastal and Offshore engineering.

It trains advanced composite talents who are capable of planning and designing, constructing, managing and researching the coastal shoreline resources and the marine resources in the sea area as an important part of urban space.

Graduates of this specialty can go to marine, water conservancy, transportation, energy, urban construction and other relevant departments of the industry and government, and engage in the development of marine space resources and management related work.

The specialty is entitled to grant the Ph.D. and master's degrees, and has a post doctoral research station.

Main Course

Compulsory courses :

Engineering hydrology, Marine environment and load, Coastal dynamic geomorphology, Marine resources and management, Marine geographic information system and digital technology, Principles and methods of marine space development and utilization planning, Marine space development and utilization of hydraulic structures, Marine ecological environment protection and restoration, Introduction to urban planning, Coastal landscape, VR and BIM technology for the development of marine space resources, Construction technology and management of water transport engineering, Sea utilization demonstration and marine environmental impact assessment

**港口航道与海岸工程专业 本科**

学习期限 4年

专业简介

该专业是国家级特色专业，是全国首批卓越工程师教育培养计划专业，2014年通过国家工程教育专业认证。着重培养从事港口航道工程、海岸与近海工程勘测、规划、设计、施工、生产和科学研究等方面工作的具有创新精神和实践能力的高级工程技术人才。

毕业生去向：主要在港口、航道、交通、海岸开发和航务工程等企事业及科研单位从事相关工作。

该专业有博士和硕士学位授予权，设有博士后科研流动站

必修课：（专业核心课程）

工程水文学、海岸动力学、港口规划与布置、港口水工建筑物、河流动力学与航道整治、渠化工程、水运工程施工技术与管理、水运工程建设法规、海岸带生态环境保护与修复

**Port, Waterway and Coastal Engineering undergraduate program**

Credit system: 4 years

Brief Introduction

This program is one of National Characteristic Specialties, which is also one of the first brand subjects of the Plan for Educating and Training Outstanding Engineers (PETOE). In 2014, it is successfully certified by China Engineering Education Accreditation Association (CEEAA). The educational objectives of this program focus on cultivating advanced technology talents with innovation spirits and practical abilities, who engaged in surveying, planning, design, construction, production, scientific research, etc. in the field of Port & Waterway Engineering or Coastal & Offshore Engineering.

The graduates work in enterprises, public institutions, and R＆D institutions of port, waterway, transportation, coastal development and navigational engineering.

The program has the right to confer doctoral degree and master’s degree. Besides, there is a center for post-doctoral studies.

Main Course

Compulsory courses :

Engineering Hydrology, Coastal Dynamics, Port Planning and Layout, Harbor engineering Structure, River Dynamics and Waterway Regulation Engineering, Canalization Engineering, Technology and Management for Port and Waterway Engineering Construction, Laws and Regulations for Water Transport Engineering, Ecological Environmental Protection and Restoration of Coastal Zone

**工程管理专业 本科**

学习期限 4年

专业简介

培养具有土木工程技术与经济、管理、法律知识，能从事建设项目决策和全过程管理的复合型、外向型高级人才。主干课程：工程结构、工程施工、工程经济学、工程估价、工程项目管理、国际工程管理、工程合同管理、房地产开发和建设法规等。

工程管理教育与注册建造师、监理师、造价师知识体系接轨，毕业生可从事投资、咨询、施工、房地产开发等工作，专业覆盖面宽，从业范围广，社会需求量大。

该专业有博士、硕士授予权和博士后流动站。

必修课：（专业核心课程）

测量学、画法几何与工程制图、工程力学、建筑材料、运筹学、房屋建筑概论、工程结构、土木工程施工、工程经济学、工程项目管理、工程合同管理、房地产开发与策划、工程估价、国际工程管理、建设项目决策与评估、建设与房地产法规

**Engineering Management Specialty Undergraduate**

Duration 4 years

Professional Introduction

Training objectives: training the compound, export-oriented talents with civil engineering technology, economics, management and legal knowledge, can be engaged in the construction project decision-making and management of the whole process. Main courses: Engineering Structure, Engineering Construction, Engineering Economics, Engineering Evaluation, Engineering Project Management, International Project Management, Project Contract Management, Real Estate Development and Construction Regulations.

Project management education connects with national certified architect, engineering project supervisor and cost engineer knowledge system. Graduates can be engaged in investment, engineering consulting, project construction and real estate development. It has wide professional coverage, wide scope of employment and great social demand. The professional is empowered to award Doctor and Master Degree and has postdoctoral research station

Required courses: (professional core courses)

Engineering Surveying, Descriptive Geometry and Engineering Drawing, Engineering Mechanics , Building Materials, Operations Research, Introduction to Building Construction, Engineering Structure, Civil Engineering Construction, Engineering Economics, Engineering Project Management, Engineering Contract Management, Real Estate Development and Planning, Engineering Evaluation, International Project Management, Construction Project Decision-making and Evaluation, Construction and Real Estate Law

**土木工程专业 本科**

学习期限 4年

专业简介

该专业是国家级特色专业、全国首批卓越工程师培养计划专业，依托结构工程国家重点学科。

培养具有土木工程项目的规划、勘测、设计、开发、施工及管理能力，能在房屋建筑、地下建筑、道桥等的设计、施工、管理、开发等部门从事技术或管理工作的高级人才。设有建筑工程、道路桥梁工程、地下工程三个专业方向。

毕业生可在土木工程领域从事勘测、设计、施工、监理、管理及科研等工作。

具有博士和硕士学位授予权，设有博士后科研流动站。学习期限 4年

 必修课：（专业核心课程）

测量学、画法几何与工程制图、理论力学、材料力学、结构力学、弹性力学与有限元程序设计、建筑材料、工程地质土力学、水力学、钢结构、钢筋混凝土结构

1、建筑工程专业方向：

高层建筑结构设计、房屋建筑学、建筑工程施工、建筑结构实验、建筑结构抗震

2、道桥工程方向：

道路勘测设计、桥梁工程路基路面工程、道路桥梁实验与检测技术、道路桥梁工程施工

3、地下工程方向：

岩石力学、地下结构设计隧道工程、地下工程施工地下工程测试技术、地下工程规划与设计

、边坡工程

Civil Engineering (Undergraduate)

Credit System: 4 years

Brief Introduction：

Civil engineering is a national level characteristic major, the first batch of national excellent engineering training program major, and supported by the state key discipline of structural engineering. Enrolled students are cultivated to possess the abilities of planning, survey, design, development, construction and management of civil engineering projects, and to be advanced civil engineers who are competent with planning, design, construction, management and research in the areas of buildings, underground structures, road, bridges and etc. Three specialties, i.e. construction engineering, road and bridge engineering and underground engineering, are included in the major of civil engineering.

 Graduates can be engaged in survey, design, construction, supervision, management and research in the field of civil engineering. The major has the right to award Doctor’s and Master’s degrees, and has the station for post-doctoral research.

Main Courses

Compulsory courses:

Surveying, Graphic Geometry and Engineering Drawing, Theoretical Mechanics, Material Mechanics, Structural Mechanics, Elastic Mechanics and Finite Element Programming , Construction Materials, Engineering Geology, Soil Mechanics, Hydraulics, Steel Structures, Reinforced Concrete Structures

Specialty: Construction engineering

Design of Tall Building Structures, Building Architecture, Building Construction, Structural Experiments, Seismic Design of Building Structures

Specialty: Road and bridge engineering

Road survey and design, Bridge engineering, Roadbed and pavement engineering, Experiment and monitoring technology of road and bridge, Engineering construction of road and bridge

Specialty: Underground engineering

Rock mechanics, Design of underground structure, Tunnel engineering, Underground engineering construction, Monitoring technology of underground engineering, Planning and design of underground engineering, Slope engineering

**土木工程（国际班）专业 本科**

学习期限 4年

专业简介

采用全英文教学方式，培养全方位适应国际土木工程建设需求，具备较扎实基础理论与专业知识、较强工程实践能力与创新思维的高素质、复合型土木工程专业精英人才。

专业主干课程：混凝土结构、钢结构、建筑结构抗震、高层建筑结构设计、结构可靠度、基础工程等。

毕业生定位于涉外土木工程基础设施设计、施工、管理以及对外学术进修与交流等工作。

该专业只招收英语语种考生。

该专业具有博士和硕士学位授予权，设有博士后科研流动站。

必修课：（专业核心课程）

理论力学、材料力学、结构力学、弹性力学与有限元程序设计、土木工程材料、钢筋混凝结构、钢结构、高层建筑结构设计、建筑结构实验、建筑结构抗震

Civil Engineering (International class) Undergraduate English-medium

Credit System: 4 years

Major Description:

 All the classes are taught in English. Develop complex civil engineering talents who fully adapt to the requirements of international civil engineering construction, possess more sturdy basic theory, specialized knowledge, stronger project practical ability and high-quality of innovative thinking.

Main courses of the major:

 Concrete Structures, Steel Structures, Seismic Design of Building Structures, Structural Design of High-Rise Buildings. The graduates are positioned to design, construct and manage foreign civil engineering infrastructure. They are also supposed to do further foreign education and communication.

 The major only recruits English language candidates.The major has the right to award Doctor’s and Master’s degree, has the station for post-doctoral research.

Compulsory Courses: (Main Course of the Major)

Theoretical Mechanics, Mechanics of Materials, Structural Mechanics, Elasticity & Finite Element Programming, Civil Engineering Materials, Reinforced Concrete Structures, Steel Structures, Structural Design of High-Rise Buildings, Structural Experiments, Seismic Design of Building Structures

**建筑环境与能源应用工程专业 本科**

学习期限 4年

专业简介

该专业培养从事建筑环境和其它人工环境及能源应用领域的工作，具备暖通空调、燃气供应等公共设施及能源应用系统的设计、安装、调试及建筑自动化系统的方案制定，并具有初步的应用研究与开发能力的高级工程技术人才，部分毕业生能成为行业未来发展的领导者。

主干课程：工程热力学、传热学、流体力学、暖通空调等。

毕业生可在设计、教育、安装、营销、工程咨询以及企事业等单位从事技术、经营与管理工作。

具有博士和硕士学位授予权

必修课：（专业核心课程）

工程热力学、流体力学、传热学、建筑环境学、热质交换原理与设备、流体输配管网、建筑环境、测试技术、暖通空调、建筑用制冷技术、建筑热源、供热工程、燃气储存与输配、建筑设备自动化、建筑设备工程施工技术与管理

**Building Environment and Energy Engineering (Undergraduate)**

Credit System: 4 years

Brief Introduction

The program prepares undergraduate students for working across virtually all fields of built environment, artificial environment and energy application. The graduates will possess the ability to design, install and test HVAC (i.e., Heating, Ventilation and Air Conditioning) systems, gas supply systems and other energy application systems, who can also finish basic research and development work in corresponding fields. Several outstanding graduates will advance toward leadership in the development of building environment and energy engineering.

Main Courses

Thermodynamics, Fluid Mechanics, Heat Transfer, HVAC, et al.

Prospective Career

The graduates can pursue careers related to design, education, installation, market and consultation of building environment and energy engineering in companies and governments.

Degree Conferring Right

The major has the right to award Doctor’s and Master’s degree.

Compulsory Courses

Thermodynamics, Fluid Mechanics, Heat Transfer, Built Environment, Fundamentals and Equipment of Heat and Mass Transfer, Fluid Network for Transportation and Distribution, Testing Technology for Built Environment, Heating, Ventilation and Air Conditioning (i.e., HVAC), Refrigeration Technology, Building Heating Source, Heating Engineering, Gas Storage and Transmission, Building Automation, Construction Technology and Management of Building Equipment Engineering

**交通工程专业 本科**

学习期限 4年

专业简介

该专业培养具备交通运输系统建设和运营管理必需的复合型知识结构，能够从事道路设计与施工或交通规划与管理的高级工程技术人才。

专业主干课程：交通工程导论、道路勘测设计、路基路面工程、公路养护技术、道路建筑材料、交通管理与控制、交通规划、智能交通系统等。

毕业生的从业渠道多、社会需求大，可就职于道路桥梁施工、市政设计、交通规划、交通管理、物流运输、智能交通等领域的企事业单位。

该专业具有博士和硕士学位授予权。

必修课：（专业核心课程）

交通工程导论、城市规划概论运筹学、交通系统分析、交通流理论、交通管理与控制、交通经济与政策、交通规划、交通法规与安全、道路建筑材料、道路勘测设计、路基路面工程、道路工程施工、公路养护技术

**Traffic Engineering**

Credit system: 4 years

Brief Introduction

This subject aims to enable students to have a compound type knowledge structure in the construction and operation management of transportation system, and develop students’ ability in road design and construction, transportation planning and management.

Main Course:

Introduction to traffic engineering; Road survey and design; Subgrade and Pavement Engineering; Highway Maintenance Technology; Highway Maintenance Technology; Road Constructional Materials; Traffic management and control; Traffic management and control; Traffic planning; Intelligent transportation system; et al.

There are many channels of employment and social requirements of graduates. Graduates can work for the following enterprises and institutions, such as road and bridge construction, municipal design, transportation planning, traffic management, logistics and transportation, intelligent transportation and other fields.

Compulsory courses :

Introduction to traffic engineering; Introduction to urban planning; Operations research; Traffic system analysis; Traffic flow theory; Traffic management and control; Transportation economics and policy; Traffic planning; Traffic law and safety; Road Constructional Materials; Road survey and design; Subgrade and Pavement Engineering; Road engineering construction; Highway Maintenance Technology.

**电子信息与电气工程学部 / Faculty of Electronic Information & Electrical Engineering**

**电气工程及其自动化 学士**

专业名称：电气工程及其自动化

学习期限：4年

专业简介

 以培养在电气工程相关领域从事设计、试验、管理等工作的高级技术人才为目标。专业批准为“高等学校特色专业”、“辽宁省本科综合改革试点专业”和“辽宁省本科优势特色专业”，在省本科专业评价中获得专业第1名。主干课程有电路、模拟电子技术、数字电路与系统、计算机原理、自动控制、电磁场、电机学、电力电子技术、电力系统分析、电器学等，设有电力系统及其自动化、电机电器与电力电子技术、电力电子与电工新技术三个专业方向供学生选择，具有博士和硕士学位授予权。毕业生可在电气、信息、机械、宇航等领域就业，就业率达98%以上。

 本专业通过华盛顿协议国观察员参加的中国工程教育专业认证。

专业核心课程：

电路理论、模拟电子线路、数字电路与系统、电磁场原理、电机学、自动控制原理、计算机原理、电力电子技术、电力系统分析、电器学、高电压技术

**Electrical Engineering and its Automation**

Name of specialty: Electrical Engineering and its Automation

Credit system: 3 years

Brief Introduction

 The educational objectives of the major is to educate high level technical personnel who can engaged in the field of electrical engineering design, test and management work. Themajor was approved to become a Feature Professional experimental Base of Universities of the Ministry of Education，to join in a Pilot Program for Comprehensive Reform of Liaoning Province,to become Ordinary Higher School Preponderant Undergraduate Specialty of Liaoning Province. The major was ranked first in Liaoning Province Undergraduate Program Appraisal.Main courses include Electric Circuit Theory，Analog Electronic Circuits，Digital Circuit and System，Computer Principles ，Automatic Control Principles ，Principles of Electromagnetic Fields，Electric Machinery ，Electric Machinery ，Power System Analysis, and Electrical Apparatus. The major has three professional-oriented directions , includingPower System and its Automation, Electrical Machine and Power Electronic Technology，New Technology of Power Electronics and Electrotechnics which students could choose one of the directions. The major has the granting rights of Doctoral and master's degree. The graduates can engage in the field of electrical, information, machinery, aerospace and etc. One-time employment rate is kept above 98%.

 Electrical Engineering and its Automation was certified by China Engineering Education Accreditation Association which the Washington Accord observer states participated in.

Main Course

Compulsory courses：

Electric Circuit Theory, Analog Electronic Circuits, Digital Circuit and System, Principles of Electromagnetic Fields, Electric Machinery, Automatic Control Principles, Computer Principles, Power Electronic Technology, Power System Analysis, Electrical Apparat, High Voltage Technology

**自动化 本科**

专业名称：自动化

学习期限：4年

专业简介

本学科点由我国著名控制理论学者王众托院士为首的学术队伍创建于1956年，同年开始招收本科生，1986年开始培养硕士研究生，2000年开始培养博士研究生，2003年建立博士后流动站。“控制科学与工程”学科目前是一级学科博士点、博士后流动站、辽宁省重点学科。在全国第三轮学科评估中排名17。

本学科点具有很好的科研环境和高水平的实验平台，现拥有国家级、省部级、市级重点实验室8个。本学科现有教师51人，其中教授17人，博士生导师17人，副教授24人，具有博士学位教师43人。在高端人才方面，本学科有国家级有突出贡献的中青年专家、国家杰出青年基金获得者、教育部长江学者特聘教授和讲座教授、科技部中青年领军人才、国家“863”领域专家、优青基金获得者、千人计划及青年千人入选者等各类人才11人。

核心课程：

大学计算机基础、程序设计基础、工科数学分析基础、线性代数与解析几何、概率与统计、大学物理、复变函数、积分变换与场论、工程制图、自动化专业导论、电路理论、模拟电子线路、数字电路与系统、自动控制原理、数据结构、计算机原理、电机与拖动、检测技术及仪表、现代控制理论基础、计算机控制技术、单片机原理及应用、可编程控制器、系统仿真与设计

**Automation**

Name of specialty: Automation

Credit system: 4 years

Brief Introduction

This discipline was established is in 1956 by an academic team led by the Academician Wang Zhongtuo, a famous scholar in the field of control theory, and began to recruit undergraduate since the same year. This discipline began to recruit master graduates in 1986 and PhD graduates in 2000. The postdoctoral research station was established in 2003. "Control Science and Engineering" is a first-level discipline doctoral program, postdoctoral research station and key discipline of Liaoning province, which ranked 17th in the third round national discipline evaluation.

This discipline has a good research environment and advanced experimental platform, and possesses 8 national, provincial and municipal key laboratories. Among the 51 staff members, there are 17 professors, 17 doctoral supervisors, 24 associate professors and 43 awarded with doctoral degrees. Among them, there are the national young and middle-aged experts with outstanding contributions, the winners of National Natural Science Funds for Distinguished Young Scholars, the Ministry of Education Yangtze River Scholars as distinguished professors and visiting professors, the MOST (Ministry of Science and Technology ) young and middle-aged leading talents, the national "863" field experts, the winners of National Natural Science Funds for Excellent Young Scholars, the National Thousand Talents Grogram Scholars, and so on.

Main Course:

Foundation of University Computer, Foundation of Computer Program Design, Foundation of Engineering Mathematics Analysis, [Linear Algebra and Analytic Geometry](http://www.baidu.com/link?url=oewwfFb8GCMUc7dSQLoGBjvqhS2wsVqNZ1fzJdcYuoXcNF2TbrFEihYYvYWDvaiIN8zmQClhP2nN873hV98WTIXOeP88bh-Xw6TnNQ_wxbZaEK7nF2XVy__siRVWc6epV9eOpM-ArRaroVrjuuwg7q" \t "_blank), [Probability and Statistics](http://www.baidu.com/link?url=4mtXGNKUXhLFIjFgS2339SiJkRcXlPX5-0Mls13P2tCVOc_nSBSx4X5NqGTZUyqOfJ9PSl5hfJN355aXa9oCrRkYTGjgQyRNLQXWjph9OlhCGhbgihqMf5ZhTG2T4wrIFj9yT6aSLuYc74ScwPcTA_" \t "_blank), University Physics, [Complex Function](http://www.baidu.com/link?url=stKL4JPdW2mM_JlnqjMWayj6ONPvDdTYxAfQjJbfzWiYPVIyg1uJ7XyzTx4R_gp5Yh9o3OUQ90HEavnuNNK5SsxR_TFYzFWvlq1ARTZsGyb6gBL10T-TKVkPifo5joyC" \t "_blank), Integral Transformation and Field Theory, [Engineering Drawing](http://www.baidu.com/link?url=NyjWYO5geU40E8vAbZGNdB3H8t-xQ1ZuORQrnal1c9jKpsFCd5vfV8OqOdDFneOVbX-6hFwR8UCSsYGlgmdRUWZuN4iw0v9uqHmwtns9ovDDD07migrFXxK4TXfzoAnk" \t "_blank), Introduction to Automation, Electric Circuit Theory, [Analog Electronic Circuits](http://www.baidu.com/link?url=xCFoXE8_i60rSSwjFgLGjb2Dz7LhkjgTJtoyi5d7EIVnzt0CYim_KnOuoGhEc3nb0sw6RHbN6EB92OUt9TZR74gkAkQfGySF8WkcyUM8ViS-po05TF6kfoEi4sBaNpebBPFZkUSclqueijLp-ODTZa" \t "_blank), [Digital Circuit and System](http://www.baidu.com/link?url=x47bLWP6rwsuSAziEOxuXLVbR7jIymL_T2MSv2GPsXRIWlNlA0CvP0TqOKkl0cqQgSiewx2dc5QXk7w4WQywzynrR_BAqEjoc_biqVzQsmBA11z7WsZS-TKDSkQRmUVwtCoVotmUznxtuuuIERVaeq" \t "_blank), Principle of Automatic Control, Data Structures, [Principles of Computer](http://www.baidu.com/link?url=if5298X3DcvpfDeZhgTvvCFIMS5qZoqQlXImkLw4w7_gSpbm9UF9UTjtebYdrarbYITrw0g306wOUX88atnCB_HQEldsgE_spzb6RZbSgqf-ttMmv0HllXrKVUgEFumC" \t "_blank), Electrical Machine and Drive, Measurement Technology and Instrumentation, Modern Control Theory, [Computer Control Technology](http://www.baidu.com/link?url=jZ3LvPUx25zk4WC6YwsR8Vp2-t8dy9eFYCdln0nKWB0-rv9ih0oK1LQt_wO96NN3xUu2qWflYdveEsg9sQdz_8y3SFyDMxByp82gyD3DfRNRQTwQZJZ_zfiUI-NDgOtKoSrCtiYVeJgZ5u-OVUFUva" \t "_blank), Foundation and Application of Microcontroller, Programmable Logic Controller, System simulation and design

**电子信息工程 本科**

专业名称：电子信息工程专业

学习期限：4年

专业简介

该专业培养掌握电子与通信系统中的信息获取、处理与传输技术，能从事电子设备与通信系统的研究、设计的高级工程技术人才。该专业是国家级特色专业，教育部综合改革试点专业，已通过国际工程教育专业认证。毕业生可在电子信息企业、科研院所及政府机关从事研究、设计、制造、管理等工作。该专业在全国各大高校薪酬排行榜中，屡进前十，位列辽宁省第一。专业主干课程：电路理论、模拟电子线路、数字电路与系统、计算机原理、电磁场与电磁波、信号与系统、数字信号处理、通信电子线路、通信原理、微波技术与天线等。专业方向：信息工程、通信工程、电子工程。该专业有权授予博士和硕士学位，并设有博士后科研流动站。

本专业通过中国工程教育专业认证。

必修课：（专业核心课程）

电气信息导论、电路理论A1、电路实验A、模拟电子线路、模拟电子线路实验、模拟电路课程设计、数字电路与系统、数字电路与系统实验、信号与系统、数据结构、电磁场与电磁波、通信电子线路A、计算机原理、随机信号分析、通信原理B、微波技术与天线、数字信号处理A、计算机网络B

**Information and Communication Engineering**

Name of specialty: Electronic Information Engineering

Credit system: 4 years

Brief Introduction

The discipline focuses on cultivating senior engineering and technical personnel with knowledge of information acquisition processing and transmission in electronic communication system and capability in the design of electronic systems. This discipline is rated as the National Characteristic Specialty, Comprehensive Education Reform Pilot Project of Ministry of Education and International Engineering Certificate Program. Graduates can engage in the research, design, manufacture, management and business within the area of information and communication at the electronic enterprises, research institute and government agencies. The discipline is always among the top-10 highest salary professions in the national ranking and top 1 in Liaoning province. Major courses include: circuit theory, analog electronic circuits, digital circuits and systems, computer theory, electric and magnetic field, signals and systems, digital signal processing, communication electronic circuit, communication theory and microwave technologies and antennas. Discipline classification for further studies: Information Engineering, Communication Engineering and Electronic Engineering. The discipline has a doctorial and master degree program, together with a post-doctoral mobile station.

The discipline was certified by China Engineering Education Accreditation Association.

Main Course

Compulsory courses :

Electrical Information Introduction, Electric Circuit Theory A1, Experiment of Electronic Circuits A, Analog Electronic Circuits, Experiment of Analog Electronic Circuits, Topics in Analog Circuits, Digital Circuits and System, Experiment of Digital Circuits & System, Signals and Systems A, Data Structures, Electromagnetic Field and Electromagnetic Wave, Communications of Electronic Circuits A, Principles of Computer, Stochastic Signals and Systems , Principle Communications B

Microwave Technique and Antenna, Digital Signal Processing A , Computer Networks B

**生物医学工程 （本科）**

专业名称：生物医学工程

学习期限：4年

专业简介

生物、医学与工程科学的交叉融合是当前国际重大研究成果机遇所在,也是我国重点发展战略性新兴产业。该专业所有教师拥有博士学位，具有留学海外名校背景的教师占90%以上，已建成一支结构合理、年轻卓越的国际化高水平教学与科研队伍。生物医学工程系拥有一级学科博士和硕士学位授予权、设有生物医学工程博士后流动站、是辽宁省一级重点学科，在医学信号与图像处理、纳米光电检测与仪器技术、脑功能成像与脑电信号处理、生物力学与康复技术等学科方向取得了丰硕成果。毕业生可在生物医学与工程学、电子、计算机、信息技术等交叉领域在从事科学研究、技术开发与支持、教学、咨询和管理等方面工作。

必修课：（专业核心课程）

生物医学工程导论、人体解剖学、生理学、模拟电子线路、数字电路与系统、医学传感器技术、嵌入式医疗仪器、数字信号处理、生物医学测量与仪器、医学信号分析与处理、医学成像、医学图像处理、生物医学光子学

**Biomedical Engineering**

Name of specialty: Biomedical Engineering

Credit system: 4 years

Brief Introduction

Biomedical Engineering is one of the most rewarding areas of engineering, applying the principles and methods of engineering to medicine and health care, engaging in research and teaching. The advances we make today will be seen in medicine tomorrow. A strength of this major is the diversity of expertise and young talents among our personnel, which serves an important training center in research, medicine, technology, and entrepreneurship in many areas of biomedical engineering. The Department of Biomedical Engineering offers Master’s and PhD degrees and post-doctoral training. Moreover, Biomedical Engineering is honored as one of the key and core competence disciplines in Liaoning. While research possibilities span the full spectrum of biomedical engineering, the Department has established interests in biomedical signal and image processing, bio-nano optical sensor, brain function imaging and electroencephalogram signal processing, and biomechanics and rehabilitation engineering. Graduates could engage in work related to scientific research, technology development and support, teaching, consulting and management in the cross field of biomedical engineering, electronics, computer and information technology.

Main Course

Compulsory courses :

Introduction to Biomedical Engineering, Human Anatomy, Physiology, Analog Electronic Circuit

Digital Circuit and System, Medical Sensor Technology, Embedded Medical Instrument, Digital Signal Processing, Biomedical Measurement and Instrumentation, Medical Signal Analysis and Processing, Medical Imaging, Medical Image Processing, Biomedical Photonics

**管理与经济学部 / Faculty of Management & Economics**

**物流管理**

专业名称：物流管理

学习期限：4年

专业简介

物流管理专业隶属于工商管理一级学科，辽宁省重点支持建设专业。物流管理专业师资力量雄厚，近年来承担多项国家、部省市、大型企业物流咨询与规划项目；建有物流管理实验室和物流实习基地；是国内率先开展物流管理专业硕士、博士培养的院校之一。

培养的人才以管理学、经济学、运筹学和信息管理学等为基础，侧重于企业物流与供应链管理的理论与应用研究，具有进行物流系统规 划、分析、设计、实施、管理和咨询等能力。

必修课：（专业核心课程）

大学计算机基础、C语言程序设计、高等数学A1、高等数学A2、线性代数A、概率与统计A、管理学原理、经济学导论、市场营销学、财务管理、系统工程概论、货币银行学、运筹学、组织行为学、管理经济学、管理统计学、运营管理、电子商务概论（双语）、管理信息系统、战略管理、绿色供应链管理、会计学、现代物流管理、物流信息管理、运输与配送管理、物流自动化、采购管理与库存控制、物流设施规划与设计、物流综合实验、物流成本管理、分销物流网络管理、人力资源管理、综合实习、物流管理课程设计

**Logistics Management**

Name of specialty: Logistics Management

Duration of study: 4 years

Brief Introduction

Logistics Management under the Business [Administration](file:///E%3A%5C%5C%E6%9C%89%E9%81%93%5C%5C%E5%AE%89%E8%A3%85%E5%8C%85%5C%5CDict%5C%5C7.0.0.1203%5C%5Cresultui%5C%5Cdict%5C%5Cresult.html?keyword=administration) of the first level discipline, is the key subject supported by Liaoning Province. Since the strong teachers strength, it has taken several national, ministerial, provincial projects related to logistic consultation and plan for large enterprises in recent years; it has a Logistics Management laboratory and logistics practice base. DUT is one of the earliest universities that carry out the Master and Doctor Degree of the Logistics Management in China.

The training students based on the Management, Economics, Operational Research and Information Management, focusing on the theory and application of enterprise logistics and supply chain management research, with the ability for logistics system planning, analysis, design, implementation, management and consulting And so on.

Compulsory Course(Professional Core Course)

Basic Computer Courses in College, C Language Programming, Advanced Mathematics A1, Advanced Mathematics A2, Linear Algebra A, Probability and Statistics A, Principles of Management, Introduction to Economics, Marketing, Financial Management, Introduction to System Engineering, Monetary banking, Operational Research, Organizational Behavior, Managerial Economics, Management Statistics, Operations Management, Introduction to Electronic Commerce, Management Information System, Strategic Management, Green Supply Chain Management, Accounting, Modern Logistics Management, Logistics Information Management, Transportation and distribution management, Logistics Automation, Purchasing Management and Inventory Control, Logistics Facilities Planning and Design, Logistics Comprehensive Experiment, Logistics Cost Management, Distribution Logistics Network Management, Human Resource Management, Comprehensive Internship, Logistics Management Course Design

**工商管理 学士**

专业名称：工商管理

学习期限：4年

专业简介

工商管理专业隶属于工商管理一级学科，是面向工商企业管理实践设立的专业。专业师资力量雄厚，拥有多名技术经济、运营管理、财务管理、市场营销及人力资源管理等领域的国内知名学者；拥有部、省、市级重点实验室和工程研究中心，近年来承担多项国家、部省市科研项目以及企业咨询项目.

工商管理专业设有人力资源管理、财务管理、项目管理、市场营销和运营管理五个专业方向，培养的学生既具有宽广的自然科学、管理科学、经济学、工商管理等基础知识，又具有业务专长和专业技能，学生能够适应各种类型工商企业的需求。

必修课：（专业核心课程）

大学计算机基础、C语言程序设计、高等数学A1、高等数学A2、线性代数A、概率与统计A、管理学原理、经济学导论、市场营销学、财务管理、系统工程概论、货币银行学、运筹学、组织行为学、管理经济学、管理统计学、运营管理、电子商务概论（双语）、管理信息系统、战略管理、社会心理学、绿色供应链管理、人力资源管理、会计学、投资风险管理、技术经济学、综合实习、工商管理课程设计

人力资源方向课：

招聘与培训、薪酬与绩效管理、劳动法、人才测评理论与方法、EHR

财务管理方向：

证券投资学、财务分析、成本会计、管理会计、高级财务管理

项目管理方向：

项目计划与控制、研发项目管理、项目风险管理、知识产权与技术贸易、项目评估与认证

市场营销方向：

营销战略、市场营销调研、营销数据挖掘与分析、营销工程、消费行为学

运营管理方向：

工业工程、现场管理、设备管理、生产成本管理、生产模拟实验

**Business Administration**

Name of specialty: Business Administration

Credit System: 4 years

Brief Introduction

Business Management is a subcategory of the national 1st level discipline of Business Management, which is designed for satisfying with the needs of business management practices. There is a strong team of teachers who are well-known both domestically and internationally in various study areas including technological economics, operation management, financial management, marketing and human resource management. Under administrated by Faculty of Management and Economics, the BM program owns different levels of modern key research labs including the ministerial, provincial and municipal level, as well as engineering research centers, which provide the solid foundation for the faculty members to carry out both national level research projects and business consulting tasks.

The discipline of Business Management comprises the following five major areas: Human resource management, Financial management, Project management, Marketing, and Operation management. The primary goals of BM program are to equip our students with the basic knowledge of natural science, management science, economics, business management and state-of-the-art skills in order to fulfill with the contemporary business needs.

Main Course

Compulsory courses :

Basic Computer Courses in College, C language Programming, Advanced Mathematics A1, Advanced Mathematics A2, linear Algebra A, Probability and Statistics A, Principles of Management, Introduction to Economics, Marketing, Financial Management, Introduction to System Engineering, Monetary Banking, Operational Research, Organizational Behavior, Managerial Economics, Management statistics, Operations Management, Introduction to Electronic Commerce, Management Information System, Strategic Management, Social Psychology, Green Supply Chain Management, Human Resource Management, Accounting, Risk Management and Investment, Technology Economics, Comprehensive Internship, Business Administration Course Design, Graduation Project(Thesis), Health Education, Social Practice

1、Human Resources Management Direction:

Recruitment and Training, Compensation and Performance Management, Labor Law, Theory and Method of Talent Evaluation

2、Financial Management Direction:

Securities Investment, Financial analysis, Cost Accounting, Management Accounting, Advanced Financial Management

3、Project Management Direction:

Project Planning and Control, R & D Project Management, Project Risk Management, Intellectual Property and Technology Trade, Project Evaluation and Demonstration

4、Marketing Direction:

Marketing Strategy, Marketing Research, Marketing Data Mining and Analysis, Marketing Engineering, Consumer Behavior

5、Operational Management Direction:

Industrial Engineering, Site Management, Equipment Management, Production Cost Management, Production Simulation Experiment

**信息管理与信息系统 学士**

专业名称：信息管理与信息系统

学习期限：4年

专业简介

信息管理与信息系统专业隶属于管理科学与工程一级学科。本专业基于系统的观点综合运用管理学、信息科学与信息技术以及经济学等相关理论、方法与技术，研究和解决社会、经济、工程等方面的信息系统建设与管理问题。本专业培养具有信息组织、分析、开发与利用能力，具备从事企业、政府及事业单位的信息系统的规划、建模、实施、管理、咨询与开发能力的高素质、复合型人才。

必修课：（专业核心课程）

大学计算机基础、C语言程序设计、高等数学A1、高等数学A2、线性代数A、概率与统计A、管理学原理、经济学导论、货币银行学、市场营销学、财务管理、系统工程概论、运筹学、组织行为学、管理经济学、管理统计学、运营管理、电子商务概论（双语）、管理信息系统、战略管理、数据结构、信息资源管理、数据库原理与应用、商务智能方法与应用、计算机网络原理与应用、信息系统安全、信息系统分析与设计、信息系统开发工具、面向对象程序设计、Web设计与开发、业务流程管理、工程训练C、认识实习、综合实习、信息系统课程设计

**Information Management & Information systems**

Name of specialty: Information Management & Information systems

Credit system: 4 years

Brief Introduction

Information Management & Information Systems is under the “Level-1”discipline Management Science and Engineering, Base on the systemic view, this major combined the theories and methods of management, Information science & Technology and Economics.It is aimed to study and solve the information system construction and management problems of the society, enterprises and projects. Our final goal is to train the high-quality and compound talents who equipped with ability of information systems, analysis, developmentand management.. The graduates could be able to plan, model, manage, consult and develop the information system for enterprises, government and other government-affiliated institutions.

Main Course

Compulsory courses :

Basic Computer Courses in College, C language Programming, Advanced Mathematics A1, Advanced Mathematics A2, linear Algebra A, Probability and Statistics A, Principles of Management, Introduction to Economics, Monetary banking, Marketing, Financial Management, Introduction to System Engineering, Operational Research, Organizational Behavior, Managerial Economics, Management Statistics, Operations Management, Introduction to Electronic Commerce, Management Information System, Strategic Management, Data Structure, Information Resource Management, Database Principles and Applications, Business Intelligence-Method and Application, Computer Network's Theories and Applications, Information System Security, Information System Analysis and Design, Information System Development Tools, Object-Oriented Programming, Web Degin and Development, Business Process Management, Engineering Training C, Know-how Internship, Comprehensive Internship, Information System Course Practicum

**金融学 学士**

专业名称：国际经济与贸易

学习期限：4年

专业简介

金融学专业是四年制英语强化本科。本专业依托学校理工科的优势，注重培养学生对金融运行问题的定量分析能力，要求学生具有扎实的经济学基础，系统地掌握宏观金融与微观金融的基本知识，熟悉银行、证券、投资与保险等方面的专业分析方法，具备从事金融活动的技能和解决金融实际问题的能力。毕业生可在银行、证券、投资、保险、期货，以及相关政府经济管理部门和企业从事经济分析、金融分析与预测、经济统计及金融营销策划等工作，也可在相关部门从事资金运营与管理实务工作。

必修课：（专业核心课程）

英语视听C1、英语口语C1、批评性阅读与写作C1、英语视听C2、英语口语C2、批评性阅读与写作2、演讲与辩论C、欧美社会与文化、西方文化概论、跨文化交际：商业语境、大学计算机、程序设计基础B、工科数学分析基础1、工科数学分析基础2、线性代数与解析几何、概率与统计A、管理学原理、经济学导论、社会心理学、商业伦理、商法、系统工程 、经济学原理：微观部分、经济学原理：宏观部分、财政学、制度经济学、货币银行学、统计学、国际经济学（双语）、计量经济学A、博弈论、国际金融（双语）、产业组织理论、金融市场学（双语）、证券投资学（双语）、公司金融、商业银行经营管理（双语）、国际结算（双语）、投资银行学、金融风险管理（双语）、金融工程学、保险学、国际财务管理（双语）、案例分析、综合实习

**Finance**

Name of specialty: Finance

Credit System: 4 years

Brief Introduction

Finance major is arranged with four-year English intensive course study. We relied on the advantages of science and engineering university, which focus on quantitative analysis ability education. The high education objects required student to have: 1. solid economics knowledge; 2.systematical study of macro finance and micro finance, 3.intimated knowledge of banking management securities, investment and insurance; 4. Ability to engage in financial activities and solve financial problems. After graduates form university, student could be capable at the work of economic analysis as well as the financial analysis and forecast on banks, securities, investment, insurance, futures and government. Fund operation and the management practice are also good choices.

Main Course

Compulsory courses :

English videos 1, Spoken English C1, Critical reading and writing 1, English videos 2, Spoken English C2, Critical reading and writing 2, Speech and debate C, American society and culture, An introduction to western culture, Intercultural communication: business context, University computer, Programming foundation B, Fundamentals of engineering mathematics analysis 1, Fundamentals of engineering mathematics analysis 2, Linear algebra and analytic geometry, Probability and statistics A, Principles of management, Introduction to economics, Social psychology, Business ethics, Commercial law, Systems engineering, Principles of economics:microeconomics, Principles of economics:macroeconomics, Public finance, Institutional economics, Monetary banking, Statistics, International economics (Bilingual), Econometrics A, Game theory, International finance (Bilingual), Industrial organization theory, Financial Markets (Blingual), Securities investment (Bilingual), Corporate Finance, Bank Management (Bilingual), International settlement (Bilingual), Investment banking, Financial Risk Management (Bilingual), Financial Mathematics, Insurance, International Financial Management (Bilingual), Comprehensive Internship

**国际经济与贸易 学士**

专业名称：国际经济与贸易

学习期限：4年

专业简介

国际经济与贸易专业是四年制英语强化本科。本专业依托学校理工科的优势，注重培养学生对国际经贸实际问题的定量分析能力，要求学生具有扎实的经济学基础，系统掌握国际经济与贸易的基本理论和基本知识，熟悉通行的国际经济贸易规则和惯例及中国对外贸易的政策法规，了解主要国家和地区的社会经济发展情况及其贸易政策，具备对国际商务领域问题敏锐的洞察能力及运用所学知识解决实际问题的能力。

必修课：（专业核心课程）

英语视听1、英语口语C1、批评性阅读与写作1、英语视听2、英语口语C2、批评性阅读与写作2、演讲与辩论、欧美社会与文化、西方文化概论、跨文化交际：商业语境、大学计算机、程序设计基础B、工科数学分析基础1、工科数学分析基础2、线性代数与解析几何、概率与统计A、管理学原理、经济学导论、社会心理学、商业伦理、商法、系统工程 、经济学原理：微观部分、经济学原理：宏观部分、财政学、制度经济学、货币银行学、统计学、国际经济学（双语）、计量经济学A、博弈论、国际金融（双语）、产业组织理论、经济史、经济思想史、国际商务合约（双语）、国际贸易学、国际贸易实务（双语）、外贸函电（双语）、市场营销学、服务贸易（双语）、国际结算（双语）、国际贸易实证方法、世界经济、国际财务管理（双语）、案例分析、综合实习

**International Economics and Trade**

Name of specialty: International Ecnomics and Trade

Credit system: 4 years

Brief Introduction

International Economics and Trade is arranged with four-year English intensive course study.We relied on the advantages of science and engineering university ,which focus on quantitative analysis ability education for the international trade practical problems.The high education objects required student to have:1.Solid economics knowledge ; 2.master the basic theory and knowledge of international economics and trade; 3.be familiar with International and national Economic and trade rules and practices; 4.understand the social and economic development of major countries and regions and their trade policies;5.the ability of Strong insight into international business issues and solving the practical problem with the learned knowledge.

Main Course

Compulsory courses :

English Videos 1, Spoken English C1, Critical Reading and Writing 1, English Videos 2, Spoken English C2, Critical Reading and Writing 2, Speech and Debate, American Society and Culture, An Introduction to Western Culture, Intercultural Communication: Business Context, University computer, Programming Foundation B, Fundamentals of Engineering Mathematics Analysis 1, Fundamentals of Engineering Mathematics Analysis 2, Linear Algebra and Analytic Geometry, Probability and Statistics A, Principles of Management, Introduction to Economics, Social Psychology, Business Ethics, Commercial law, Systems Engineering, Principles of Economics:Microeconomics, Principles of Economics:Macroeconomics, Public Finance, Institutional Economics, Monetary Banking, Statistics, International Economics (Bilingual), Econometrics A, Game Theory, International Finance (Bilingual), Industrial Organization Theory, Economic History, History of Economic thought, International business contracts (Bilingual), International Trade, International Trade Practice (Bilingual), Foreign Rrade Correspondence (Bilingual), Marketing, Trade in Services (Bilingual), International Settlement (Bilingual), Empirical methods of International trade, World Economics, International Financial Management (Bilingual), Case Analysis, Comprehensive Internship

**外国语学院 / School of Foreign Languages**

**英语 学士**

专业名称：英语

学习期限：4年

专业简介

该专业始设于1985年，拥有一支梯队结构合理、科研水平较高、教学效果良好的师资队伍,其中：教授8名，副教授11名，讲师2名、外籍教师3名。专业实践环节多样,学生能够通过拓宽专业知识的辩论赛、演讲赛、模仿赛以及参加模拟联合国等课外实习活动巩固和丰富课堂知识,这为未来的学习和工作奠定了良好的基础。该专业为学生认识社会、检测自我提供了良好的机遇。该专业培养学生扎实的英语语言基本功,宽泛的英语专业知识；培养学生德、智、体全面发展,要求掌握过硬的英语语言基本功,具有丰厚的人文底蕴,精通中西文化、英美文学、翻译理论和技巧、外交外事知识,并培养较强的思辨能力和语言应用能力。

必修课：

语言学概论、英语词汇学、英语文体学、语用学、应用语言学、英国古典文学、英国近现代文学、美国近现代文学、美国当代文学、西方文学理论、西方文明史、西方思想经典、英汉互译1-3、初级口译、中级口译、国际关系概论

**English**

Name of specialty: English

Credit system: 4 years

Brief Introduction

Founded in 1985, the English Department with a teaching group which consists of 8 professors, 11 associate professors, 2 lecturers and 3 foreign teachers, has shown its excellence both in teaching and academic research. Students are able to practice and expand their knowledge through a wide range of extracurricular activities including debate contests, speech contests, short sketch contests and Model United Nations, which will have an impact on their future studies and careers. The Department provides the students with good opportunities to put what they have learned into practice. The English course balances a strong grounding in language skills and knowledge as well as the all-round development of the students. The courses focus on arts and humanities subjects and abilities: Chinese and Western cultures, English and American literature, translation studies and techniques, diplomatic and foreign affairs awareness, critical thinking and applying linguistic skills.

Main Course

Compulsory courses :

An Introduction to Linguistics, English Lexicology, English Stylistics, Pragmatics, Applied Linguistics, Classical English Literature, Modern English Literature, Early and Modern American Literature. Contemporary American Literature, Western Literary Theory and Criticism, Western Civilization., Western Thought and Its Canon, Translation1-3, Interpreting 1, Interpreting 2International Relations

**翻译 学士**

专业名称：翻译

学习期限：4年

专业简介

本专业的人才培养目标是：培养德才兼备，具有广阔国际视野，具备较强的逻辑思维能力、较宽广的知识面、较高的跨文化交际素质和良好的职业道德，熟悉翻译基础理论，通晓中西文化和思维方式，具有科技、经贸知识结构，能够较好地掌握口笔译专业技能，熟练运用翻译工具，了解翻译及相关行业的运作流程，具备较强的独立思考能力、工作能力和沟通能力，能够从事中国文化英译和对外传播，能够从事理工类的科技翻译及经贸翻译的理工类院校翻译专业人才。毕业生可在各级政府机关的外事部门、涉外企业、金融机构、学校等单位从事外事、科技、商业、金融、管理等领域的口、笔译工作或中国文化对外传播工作。

必修课：

古代汉语、修辞学、西方文明史、西方思想经典、跨文化交际、翻译史、翻译概论、英汉笔译、汉英笔译、中国文化英译、典籍英译、新闻翻译、基础口译、商务口译、外交口译

**Translation and Interpreting**

Name of specialty: Translation and Interpreting

Credit system: 4 years

Brief Introduction

The program aims to train students into translator or interpreter with both ability and integrity, a broad international vision, a strong logical thinking ability, extensive knowledge, higher quality of cross-cultural communication and a good work ethic. Students are enabled to have a firm grasp of translation theory, be proficient in Chinese and Western cultures and thoughts, have a wide scope of knowledge in science and technology, economy and trade, have a better grasp of translation and interpretation skills, be proficient in translation tools, and understand the operation of translation and related industries. With a strong ability of think independently, working and communicating, students will be qualified for working on translation and interpreting of Chinese culture in international communication, science and technology, economy and trade. Graduates will find jobs in different sectors and industries such as foreign affair related sections in the government, state-owned companies, foreign enterprises, financial enterprises and schools. They will be qualified enough to work as interpreters, translators and cultural communicators in fields such as foreign affairs, science and technology, commerce, finance, management, etc.

Main Course

Compulsory courses:

Classical Chinese, Rhetoric, Western Civilization, Western Sinology, Intercultural Communication, Translation History, A Course in Translation Basics, English-Chinese Translation, Chinese-English Translation, English Translation of Chinese Culture, English Translation of Chinese Classics, News Translation, Basic Interpreting, Business Interpreting, Diplomatic Interpreting

**日语 本科**

专业名称：日语

学习期限：4年

专业简介

该专业成立于2001年。现有专职教师23人，日籍外教7人，1/3以上教师在日本知名大学获得博士学位，所有教师均具有日本留学或研修经历。该专业旨在培养宽厚的日语语言功底、与时俱进的跨文化交际能力，适量拓宽经济及理工科知识范围，培养善于思索、具备科研基本能力、能够服务于社会的复合型日语专业人才。该专业一向秉承“以学生为本”的教育理念，注重文理交融；注重课堂知识与实践能力的结合，为学生提供参与国际和外事活动的机会；积极开展国际交流与合作，至今已与日本多所大学达成派遣留学、学术交流等协议，每年有2/3的学生赴日交换留学，同时还为学生提供大量的赴日短期留学的机会。该专业已与国家知识产权出版社、大连市政府外事处、大连贸易促进委员会及在连日资企业等机构建立了长期翻译实习合作关系。

必修课：

综合日语、高级日语 、日语口语 、日语视听、日语写作、日语阅读、日语口译、日汉互译 、日语现代语法、日语语言学概论、日本近现代文学、日本概况、跨文化交际

**Japanese**

Name of specialty: Japanese

Credit system: 4 years

Brief Introduction

The Japanese major was founded in 2001. Now it has 23 full-time teachers, 7 Japanese teachers. Over 1/3 of the faculty have received doctorates from prestigious Japanese universities, and all the teachers have studying or research experiences in Japan. The Japanese major aims to cultivate inter-disciplinary Japanese language talents who have a good command of Japanese language skills, intercultural communication competence that constantly improves with the times, appropriate grasp of science and engineering knowledge. These students are expected to demonstrate innovative thinking as well as basic research capabilities, and should be able to serve the society with their knowledge and skills. Following the students-oriented teaching philosophy, the Japanese major emphasizes on the combination of science and arts and of knowledge and practice. Also, it actively promotes international cooperation to provide students with more opportunities to participate international or foreign-related activities. As of now, the Japanese major has signed agreements with a number of Japanese universities on overseas studying and academic exchange, sending 2/3 of the students to Japan on exchange programs and providing numerous opportunities on short-term, Japan-bound exchanges. The Japanese major has established long-term collaboration with government agencies such as Dalian Foreign Affairs Office and China Council for the Promotion of International Trade (Dalian), and Japan-funded enterprises in Dalian.

Main Course

Compulsory courses :

Comprehensive Japanese, Advanced Japanese, Japanese Speaking, Japanese Viewing and Listening, Japanese Writing, Japanese Reading Comprehension, Japanese Interpretation, Intertranslation of Japanese and Chinese, Modern Japanese Grammar, An Introduction to Japanese Linguistics, Modern Japanese Literature, Introduction of Japan, Intercultural Communication

**俄语 本科**

专业名称：俄语

学习期限：4年

专业简介

俄语专业自成立以来，旨在培养具有“高尚道德品质、强烈责任精神、宽厚通识基础、突出能力潜质、优秀综合素质和开阔国际视野”的专业型人才。

俄语系现有教师7人，其中教授1人，副教授4人，讲师2人；硕士生导师6人；博士3人；常年聘任具有博士学位和高级职称的俄语国家教师在校任教。

俄语专业依托大连理工大学以理工为主的办学优势，基于理、工、经、管、文、 法、哲等多学科、综合性协调发展的办学定位，突出俄语系多年来科技俄语翻译的教学优势，加强对“俄语+理工科”培养模式的建设，与此同时，依据国家重大需求，积极参与和贯彻国家进一步国际化和软实力的提升战略，结合学校国别研究方向的学科发展，以及培养应用型外语人才的需求，在帮助学生奠定宽厚的人文通识素养的同时，新设“文化外交”培养方向，并与俄罗斯、白俄罗斯、乌克兰等国家的大学开展务实合作，积极开展学术交流与人员交流。

必修课

基础俄语、俄语语法、俄语视听说、俄罗斯概况、俄语阅读（1生活与社会；2语言与国情；3科技与经济）、高级俄语阅读（1文学与人生；2文化与外交）、高级俄语视听说（1社会新闻与热点综述；2文化外交与国际关系）、俄语语言学概论、俄语实践修辞、俄罗斯文学、俄语写作、俄罗斯社会与文化、俄语演讲实训、俄罗斯区域学、文化外交与中俄关系、科技俄语翻译实践、商务俄语翻译实践、文化视听、俄语论文写作指导、第二外语（英语）

**Russian**

Name of specialty: Russian

Credit system: 4 years

Brief Introduction

From the time of its establishment, the Russian major is dedicated to cultivating talents with a lofty character, a strong sense of responsibility, extensive common knowledge, outstanding capability, excellent comprehensive quality and a wide international vision.

The major now has 7 full-time teachers, including 1 professor, 4 associate professors and 2 lecturers. Six out of the 7 teachers are supervisors of master students, and 3 of them have doctor’s degree. The major also regularly employs teachers from Russian-speaking countries who have doctor’s degree and senior professional title.

Based on the university’s teaching advantages that give priority to science and engineering, the major sets a comprehensive teaching concept with the help of multiple disciplines such as science, engineering, economics, management, liberal arts, law and philosophy. It highlights its competitive edge through years of scientific and technical Russian translation and enhances the development of the teaching model “Russian language + science and engineering disciplines”. While cultivating students with extensive humanities knowledge, the major also participates in the national strategy of improving the soft power of China and enhancing its internationalization. A new field of study--Cultural Diplomacy has been initiated in respond to the development of regional studies and the need for application-oriented foreign language talents. Meanwhile, it regularly organizes academic exchanges with universities in Russia, Belarus and Ukraine.

Main Course

Compulsory courses :

Basic Russian, Russian Grammar, Russian Viewing, Listening and Speaking, An Introduction to Russia, Russian Reading (1. Daily Life and Society 2 Language and Nation 3. Science and Economy)

Advanced Russian Reading (1.Literature and Life 2. Culture and Diplomacy), Advanced Russian Viewing, Listening and Speaking (1. News and Hot Spot 2. Cultural Diplomacy and International Relations), A Guide to Russian Linguistics, Pragmatic Russian Rhetoric, Russian Literature, Russian Writing, Russian Society and Culture, Training on Russian Speaking, Russian Regional Studies, Cultural Diplomacy and Sino-Russian Relationship, Translation Practice on Sci-Tech Russian, Translation Practice on Business Russian, Cultural Viewing and Listening, Russian Thesis Writing, Second Foreign Language (English)

**运载工程与力学学部 / Faculty of Vehicle Engineering & Mechanics**

**工程力学 本科**

专业名称：工程力学

学习期限：4年

专业简介

工程力学属于应用科学的范畴，以理论、实验和计算机仿真为主要手段，研究工程技术中的普遍规律和共性问题，并直接为工程技术服务。培养集力学理论研究、工程设计和计算机应用于一体的高级工程技术人才。毕业生适于继续深造，也可在航空、航天、交通、建工领域从事相关工作。毕业生中保送或考取硕士研究生、出国留学、攻读双学位约占60%，到科研院所或国有大中型企业工作占25%。

该专业有权授予硕士和博士学位，并设有博士后流动站。

必修课：（专业核心课程）

理论力学、材料力学、结构力学、弹性力学、振动力学、流体力学、塑性力学、有限元

**Engineering Mechanics, Bachelor Degree**

Name of specialty: Engineering Mechanics

Credit system: 4 years

Brief Introduction

The specialty of Engineering Mechanics belongs to the category of applied science, it use the theory, experiment and computer simulation as main approaches, aiming to research the common problems and application methods in engineering techniques. This major aims to train talents with strong background on theory of mechanics, engineering design and computer application. The graduates are suitable for further study, but also in working in the engineering areas, for instant, the aviation, aerospace, transportation, civil engineering. The ratio of graduates in taking further study as Master students is about 60%, and the ratio in working in research institutes or industries accounted for 25%.

The specialty has the right to confer Master and Doctoral degrees, and has a post-doctoral mobile station.

Main Course

Theoretical Mechanics, Mechanics of Materials , Structural Mechanics, Elasticity Mechanics, [Mechanics of Vibration](http://www.baidu.com/link?url=7iRM__1xL9tdvYr3n45po5U0tuu-b80w5pgHt04BY_tNqgky64aXF_Z1PVXIUUQszdOAvmqmC9AMwPt3FpEYJa" \t "_blank), Fluid mechanics, Plastic Mechanics, Finite Elements

**飞行器设计与工程 学士**

专业名称：飞行器设计与工程

学习期限：4年

专业简介

飞行器设计与工程是航空宇航科学与技术领域主要专业方向之一。专业培养飞行器系统设计、结构设计、飞行动力学和机电一体化设计等领域高端人才。毕业生将具有良好的自然科学背景和包括数学、力学和计算机技能在内的宽泛的知识面。此外，他们还将熟悉相关专业的基础知识，如机械设计、工程力学、控制工程等，并具备较好的适应能力。因此，他们能够胜任航空宇航领域科研、设计、管理等工作以及其他领域如机械电子工程、软件工程等工作。有深造意愿的学生还可以在本专业或航空宇航相关专业继续攻读硕士和博士学位。

必修课：

大学计算机、程序设计基础、工科数学分析基础1、工科数学分析基础2、线性代数与解析几何、概率与统计A、大学物理A1、大学物理A2、大学物理实验1、大学物理实验2、工程制图C1、工程制图C2、理论力学A 、材料力学A、基础力学实验、机械设计基础、机械设计-课程设计、工程训练B、电工技术B、电工学实验B1、流体力学、流体力学实验、结构力学、振动力学、工程数值方法、航空航天技术概论、普通化学B、电子技术B、电工学实验B2、空气动力学、工程热力学、自动控制理论基础、航空器飞行动力学、飞行器结构学、飞行器结构力学、工程材料学、弹性力学、飞行器结构动力学、飞行器人机环境工程、卫星轨道姿态动力学与控制（上）、卫星轨道姿态动力学与控制（下）

**Flight Vehicle Design & Engineering Bachelor**

Name of specialty: Flight Vehicle Design & Engineering

Credit system: 4 years

Brief Introduction

Flight vehicle design & engineering is one of the main specialties in subject of aerospace science and technology. This specialty trains specialists in the fields of flight vehicle system design and structural design, flight dynamics, and mechatronics system design. Graduates from this specialty have strong natural science background, wide scope of knowledge on mathematics, mechanics, and computer technology. Furthermore, they are familiar with the basic knowledge of some relevant specialties such as mechanical design, engineering mechanics, and control engineering, and have adaptive abilities. Therefore, they can be engaged in research, design, and administration work in aerospace engineering, and other engineering fields such as mechatronic engineering, and software engineering. Excellent students can continue their study in graduate schools for master or doctor degrees in this specialty or other subjects of aerospace science and technology.

Main Course

Compulsory courses :

Fundamentals of Computers, Fundamentals of Programming Design, Foundation of Mathematical Analysis in Engineering 1, Foundation of Mathematical analysis in Engineering 2. Linear Algebra and Analytic Geometry, Probability and Statistics A, College Physics A1, College Physics A2, College Physics Experiment 1, College Physics Experiment 2, Engineering Drawing C1, Engineering Drawing C2, Theoretical Mechanics A, Material Mechanics A, Basic Mechanics Experiment, Basic of Mechanical Designing, Curriculum Design of Machine Design, Engineering Training B, Electrical Technology B, Electrics Experiment B1, Fluid Mechanics, Experiment on Fluid Mechanics, Structural Mechanics, Vibration Mechanical, Numerical Methods for Engineering, Introduction to Aerospace Technologies, General Chemistry B, Electronic Technology B, Electrics Experiment B2, Aerodynamic, Engineering Thermodynamics, The Principle of Automatic Control

Flight Mechanics of Aircrafts, Aircraft Structure, Structural Mechanics for Aerocraft, The science of engineering materials, Elasticity Mechanics, Aircraft Structural Dynamics, Human-machine-environment engineering for aircraft, Dynamics and Control of Satellite Orbital and Attitude 1, Dynamics and Control of Satellite Orbital and Attitude 2

**车辆工程 本科**

专业名称：车辆工程

学习期限：4年

专业简介
本专业培养具备车辆工程方面专业知识与能力，通晓外语，胜任未来车辆工程领域内的设计制造、系统集成、科研开发、应用研究、产品管理与营销等方面工作的创新型工程技术人才。并在毕业五年后成为独立开展相关工作的专业骨干。
该专业有权授予硕士和博士学位，并设有博士后流动站。

必修课：（专业核心课程）
汽车理论、汽车构造、汽车发动机构造与原理、汽车设计、车身设计、汽车系统动力学、汽车安全与优化、汽车电子控制技术

**Automotive Engineering (Undergraduate)**

Name of specialty：Automotive Engineering

Credit term: 4 years

Brief Introduction

 This major cultivates innovative engineering and technical personnel with the knowledge and ability of vehicle engineering, proficient in foreign language, competent design and manufacturing, system integration, research and development, applied research, product management and marketing in the future vehicle engineering field. The aim is to make them be independent professional backbone in relevant works five years after graduation.

 Students could be granted master's and doctor's degree here, also a post-doctoral mobile station is available.

Compulsory Courses (major core courses)

The Theory of Automobile, The Automobile Configuration, The Structure and Principle of Automobile Engine, Automotive Design, Body Design, Automotive System Dynamics, Automotive Safety and Optimization, Automotive Electronic Control Technology

**化工与环境生命学部 / Faculty of Chemical, Environmental & Biological Science & Technology**

**高分子材料与工程 本科**

专业名称：高分子材料与工程

学习期限：4年

专业简介

经过60多年的发展，本专业形成了一支由中国工程院院士领衔的高水平师资队伍，已成为我国高分子材料与工程领域人才培养、科技创新和社会服务的重要基地。本专业是国家级特色专业（2010年）、辽宁省普通高等学校本科优势特色专业（2015年）,2013年辽宁省普通高等学校本科专业综合评价中专业排名第一。拥有国家级工程训练中心、国家级基础物理实验教学中心、国家级电工电子实验教学中心、国家级基础化学实验教学中心、国家级化工综合实验教学中心等五个实验中心；拥有精细化工国家重点实验室，辽宁省高分子科学与工程重点实验室和辽宁省高性能工程塑料工程技术研究中心等国家级、省级教学科研基地。

必修课：

无机化学、分析化学、有机化学、物理化学、化工原理、高分子化学、高分子物理、高分子材料学、聚合反应工程、高分子化学实验、高分子物理实验

**Polymer Materials and Engineering**

Name of specialty: Polymer Materials and Engineering

Credit system: 4 years

Brief Introduction

After over 60 years of effort, the specialty has formed an excellent teacher team led by an academician of Chinese Academy of Engineering and become an important basis for personnel training, scientific and technological innovation and social service in the field of polymer materials and engineering. The specialty is one of national characteristic specialty for Polymer Materials and Engineering (2010), one of the first group of Liaoning provincial general colleges and Universities advantage specialty (2015). The specialty ranked the first one in the undergraduate assessment of Liaoning Province general colleges and Universities in 2013. There are 5 national experimental teaching centers including National Engineering Training Center, National Basic Physics Experiment Teaching Center, National Electrical and Electronic Experiment Teaching Center, National Basic Chemistry Experiment Teaching Center, and National Chemical Engineering Comprehensive Experiment Teaching Center. There are national and provincial teaching research bases including the State Key Laboratory of Fine Chemicals, Liaoning Key Laboratory of Polymer Science and Engineering, and Liaoning High Performance Polymer Engineering Research Center.

Main Course

Compulsory courses :

Inorganic Chemistry, Analytical Chemistry, Organic Chemistry, Physical Chemistry, Principles of Chemical Engineering, Polymer Chemistry, Polymer Physics, Polymer Materials Science, Polymerization Reaction Engineering, Polymer Chemical Experiment, Polymer Physical Experiment

**化学工程与工艺 学士**

专业名称：化学工程与工艺（含国际班）

学习期限：4年

专业简介

本专业培养学生综合运用数学、物理、化学的基本原理和相关专业基础知识，对各种化工及其相关过程和化学加工工艺进行分析、研究，并能较熟练地利用计算机技术进行过程模拟、设计。培养具有深厚的化工理论基础，掌握现代化工技术和计算机应用技术，能够从事化工过程及生产工艺研究、过程开发及设计方面的高级技术人才。同时也为学生向相关的新型交叉学科领域的发展奠定坚实的理论和技术基础。

经过60多年的发展，本专业已成为我国化学工程与工艺领域人才培养、科技创新和社会服务的重要基地。是国家级特色专业、辽宁省普通高等学校本科优势特色专业，通过中国工程教育专业认证，有权授予工学学士、硕士和博士学位，设有博士后科研流动站。拥有5个国家级实验教学中心、精细化工国家重点实验室。毕业生可在石化、能源、汽车、军工等领域，从事教学科研、工程设计和生产管理等工作。

必修课：（专业核心课程）

无机化学、分析化学、有机化学、物理化学、化工原理、化工热力学、传递过程、反应工程、化工设计、化工仪表自动化、化工过程安全、化工设计实训、化工专业实验

**Chemical Engineering and Processing Bachelor**

Name of specialty: Chemical Engineering and Processing (including English-medium)

Credit system: 4 years

Brief Introduction

Chemical engineering is an applied science. Chemical Engineers use science and mathematics, especially chemistry, physics, applied mathematics and engineering principles, to take laboratory or conceptual ideas and turn them into value added products in a cost effective and safe (including environmental) manner. Chemical Engineers work in research, design, production, simulation, optimization, technical sales and management of various chemical processes. They are responsible for the basic necessities in life that many of us take for granted.

Over 60 years of development, the specialty has become an important basis for personnel training, scientific and technological innovation and social service in the field of chemical engineering. This specialty is the national characteristic specialty, the first group of Liaoning provincial general colleges and Universities advantage specialty, and passes the Engineering Education Accreditation of China. This specialty is entitled to award bachelor, master and doctor in engineering, and has a post doc research station. There are 5 national experimental teaching centers and national and provincial teaching research bases, such as the State Key Laboratory of Fine Chemical. Graduates are suitable to be engaged in research, teaching, technical design and management in broad fields of chemical engineering, oil refinery, energy, automobile, military, etc.

Main Course

Compulsory (Core) courses :

Inorganic Chemistry, Analytical Chemistry, Organic Chemistry, Physical Chemistry, Principles of Chemical Engineering, Thermodynamics, Transfer Processes, Reaction Engineering, Chemical Process Design, Chemical Process Control, Chemical Process Safety, Practices of Chemical Process Design, Chemical Engineering Lab

**制药工程 本科**

专业名称：制药工程

学习期限：4年

专业简介

制药工程专业是一个化学、药学和工程学交叉的工科专业，以培养从事药品制造，新品种、新工艺、新设备开发和设计的高级工程技术人才为目标。本专业学生应掌握化学、药学、工程学等方面的基本理论、基础知识和实践技能，毕业后能够从事药品生产与质量控制、工艺设计与革新、新药研究与开发以及经营与管理等工作。本专业2002年开始招生，2013年通过了教育部组织的“全国工程教育专业认证”，并在2013年辽宁省本科专业综合评价中排名第一。制药工程专业学制4年，前两年实行通识与大类教育，后两年实行专业培养。

必修课：（专业核心课程）

有机化学、化工原理、药物合成反应、药物化学、药理学、药剂学、天然药物化学、药物分析、制药工艺学、制药设备与工程设计

**Pharmaceutical Engineering**

Name of specialty: Pharmaceutical Engineering

Credit system: 4 years

Brief Introduction

Pharmaceutical Engineering, as an interdisciplinary engineering Specialty connected with chemistry, pharmaceutical and engineering, aims to cultivate advanced technology talents engaged in drug manufacturing, development and design of new products, new process and new equipment. Students majoring in Pharmaceutical Engineering should grasp the basic theory and knowledge, and practical skill and ability in chemistry, pharmaceutical and engineering. After graduation, they can undertake such works as pharmaceutical manufacturing, Quality control, process design and innovation, new drug research and development, business and management. The specialty began to recruit students in 2002 and passed the National Engineering Education Professional Certification in 2013 and ranked No 1 in the comprehensive assessment of undergraduate programs in Liaoning Province in 2013. Training program of Pharmaceutical Engineering has a duration of four years, the first two years for general course and last two years for professional courses.

Main Course

Compulsory courses :

Organic chemistry, Principles of Chemical Engineering, Organic Reactions for Drug Synthesi, Medicinal Chemistry, Pharmacology, Pharmaceutics, Medicinal Chemistry of Natural Products, Pharmaceutical Analysis, Pharmaceutical Technology, Pharmaceutical Equipment and Engineering Design

**应用化学 学士**

专业名称：应用化学

学习期限：4年

专业简介

本专业以培养化学、化工结合型人才为目标，培养具有宽厚、扎实的化学理论基础和较强的实验技能，同时受到应用研究、科研开发和科技管理方面的综合训练，能够在化学或相关科学技术领域从事基础和应用科学研究和教学的高素质科学技术人才。毕业生适合在化学或化工研究院所（所）、高等学校从事研究或教学工作，也可从事技术管理等工作。该专业学生修满规定学分授予理学学士学位。该专业有权授予硕士和博士学位，设有博士后流动站。大连理工大学化学一级学科博士点、国家级教学团队和国家级化学实验教学示范中心等优质教学资源和科研条件为本专业人才的培养提供可靠的保障。

专业核心课程：

无机化学、有机化学、物理化学、分析化学、仪器分析、结构化学、化工原理、无机化学实验、分析化学实验、有机化学实验、物理化学实验

**Applied Chemistry**

Degree: Bachelor

Name of Major: Applied Chemistry

Duration of Study: 4 years

Brief Introduction of the major

With an aim to train students with comprehensive knowledge of chemistry and chemical engineering, the major will lay a broad and solid chemical theories for its students and help them attain excellent experimental skills. The intensive and comprehensive training in the aspects of scientific development, scientific management and applied research will eventually bring out highly qualified personnel in science and technology.  After finishing required courses, the graduate will obtain a Bachelor degree of Science. This major is entitled to confer the degrees of bachelor, master, and PhD in science, and owns a center for post-doctoral studies. The commitment to cultivate high caliber talents is based upon quality teaching resources and researching conditions provided by the first-grade doctoral center of the university’s chemistry discipline, national-level teaching staff, national-level chemical experimental demonstration center.

Main Courses

Inorganic Chemistry, Organic Chemistry, Physical Chemistry, Analytical Chemistry, Instrumental Analysis, Structural Chemistry, Principles of Chemical Engineering, Experiments of Inorganic Chemistry, Experiments of Analytical Chemistry, Experiments of Organic Chemistry, Experiments of Physical Chemistry

**环境工程 本科**

专业名称：环境工程

学习期限：4年

专业简介

培养德、智、体、美全面发展，掌握环境工程基础理论、工程设计与实践应用方法，可从事废水、废气、固体废弃物和其它污染的控制与修复的高级工程技术人才，以及可从事环境规划与管理的高级人才。毕业生具备终生学习的能力，能够在政府部门、规划部门、设计单位、工矿企业、科研单位和学校等，从事环境污染预防与控制的规划、设计、教学、研究开发和管理工作，也能够继续进行学业深造。环境工程专业为国家级特色专业和辽宁省本科示范专业。2011年，环境工程专业以优秀的成绩顺利通过工程教育专业认证，并加入了教育部“卓越工程师教育培养计划”。该专业在工业污染防治方面特色鲜明、优势突出。

必修课：

化工原理、流体力学、环境化学、环境监测、环境微生物学、水污染控制工程、大气污染控制工程、环境影响评价、固体废物全过程管理、环境工程设计基础、环境工程制图、环境工程项目管理

**Environmental Engineering**

Name of specialty: Environmental Engineering

Credit system: 4 years

Brief Introduction

We aim to achieve comprehensive development in moral, intelligence, sports, aesthetics education for our students and provide them with basic environmental engineering theory, engineering design and practical application methods. They will be trained to become senior engineering and technical talents who are capable to engage in controlling and restoring the waste water, gas, solid and other pollution or senior talents in environmental planning and management. The graduates have the ability of learning, and can pursue an occupation in planning, designing, teaching, researching and management for environmental pollution prevention and control in government, planning administration, design institution, industrial and mining enterprises, scientific research centers and universities, etc. They can continue to pursue advanced study as well. Environmental Engineering in Dalian University and Technology is a national-level characteristic major and a demonstration of undergraduate education in Liaoning Province. In 2011, the major of Environmental Engineering successfully certificated the engineering education accreditation with good mark, and accessed “Excellent Engineers Training Program” raised by Ministry of Education. The major has distinct features and prominent advantages in industrial pollution control and prevention.

Main Course

Principles of Chemical Engineering, Fluid Mechanics, Environmental Chemistry, Environmental Monitoring, Environmental Microbiology, Water Pollution Control Engineering, Air Pollution Control Engineering, Environmental Impact Assessment, Integrated Solid Waste Management, Fundamental of Environmental Engineering Design, Environmental Engineering Drawing, Environmental Engineering and Project Management

**环境科学 本科**

专业名称：环境科学

学习期限：4年

专业简介

培养德、智、体、美全面发展，掌握环境污染预防、控制、监测、修复、风险评价与管理、工业生态设计与规划方面的基本原理与方法，可在政府部门、企事业单位、科研院所和学校等，从事环境保护与管理、研究、教学等工作，也能够继续进行学业深造的高级人才。

本专业在化学品风险评价与管理、产业生态设计与生态规划方面具有特色。在2013年辽宁省教育厅组织的环境科学专业评价中，本专业在辽宁省排名第一。

必修课：

化工原理、流体力学、环境化学、环境监测、环境微生物学、普通生物学、环境生物化学、环境地学、环境工程概论、环境生态学、环境影响评价、环境管理学、工业生态学

**Environmental Science**

Name of specialty: Environmental Science

Credit system: 4 years

Brief Introduction

We aim to achieve comprehensive development in moral, intelligence, sports, aesthetics education for students and provide them with basic principles and methods of environmental pollution prevention, control, monitoring, remediation, risk assessment and management, industrial ecological design and planning. They are capable of working on environmental protection and management, researching and teaching in government administration, enterprises and institutions, scientific research centers and universities, etc. They can continue to pursue advanced study as well.

The major of Environmental Science has distinct features in the chemical risk assessment and management, industrial ecological design and ecological planning. The major ranked the top one in the evaluation of Environmental Science Majors organized by the Educational Department in Liaoning Province in 2013.

Main Course

Principles of Chemical Engineering, Fluid Mechanics, Environmental Chemistry, Environmental Monitoring, Environmental Microbiology, General Biology, Environmental Biochemistry, Environmental Geo-science, Introduction to Environmental Engineering, Environmental Ecology, Environmental Impact Assessment, Environmental Management, Industrial Ecology