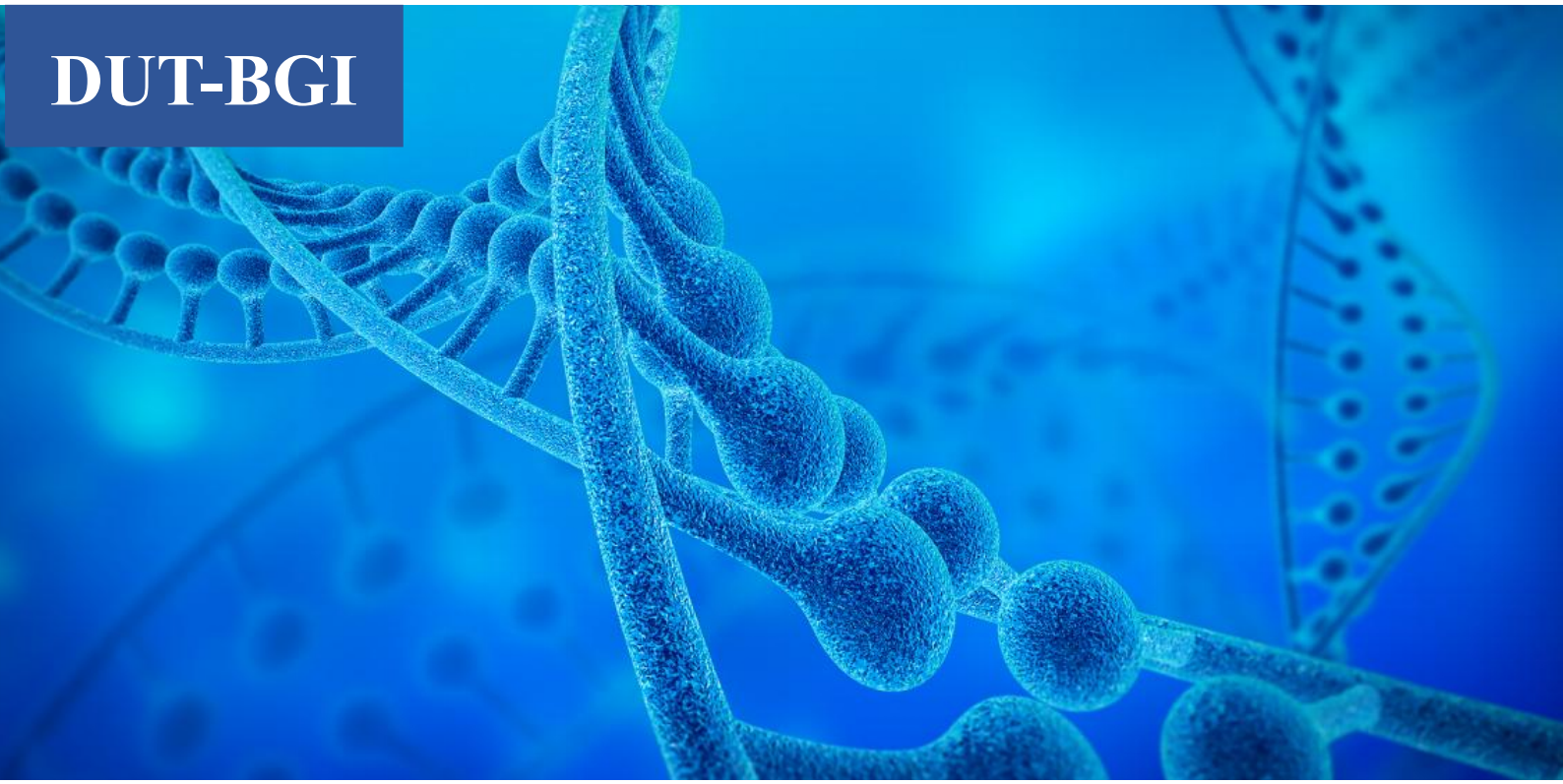
大连理工大学 DALIAN UNIVERSITY OF TECHNOLOGY

华大BGI

DUT-BGI



大连理工大学—华大国际班项目

DUT—BGI Bioengineering Degree Program

大 连 理 工 大 学 — 华 大 国 际 班 项 目

DUT—BGI Bioengineering Degree Program

项目简介/Briefings

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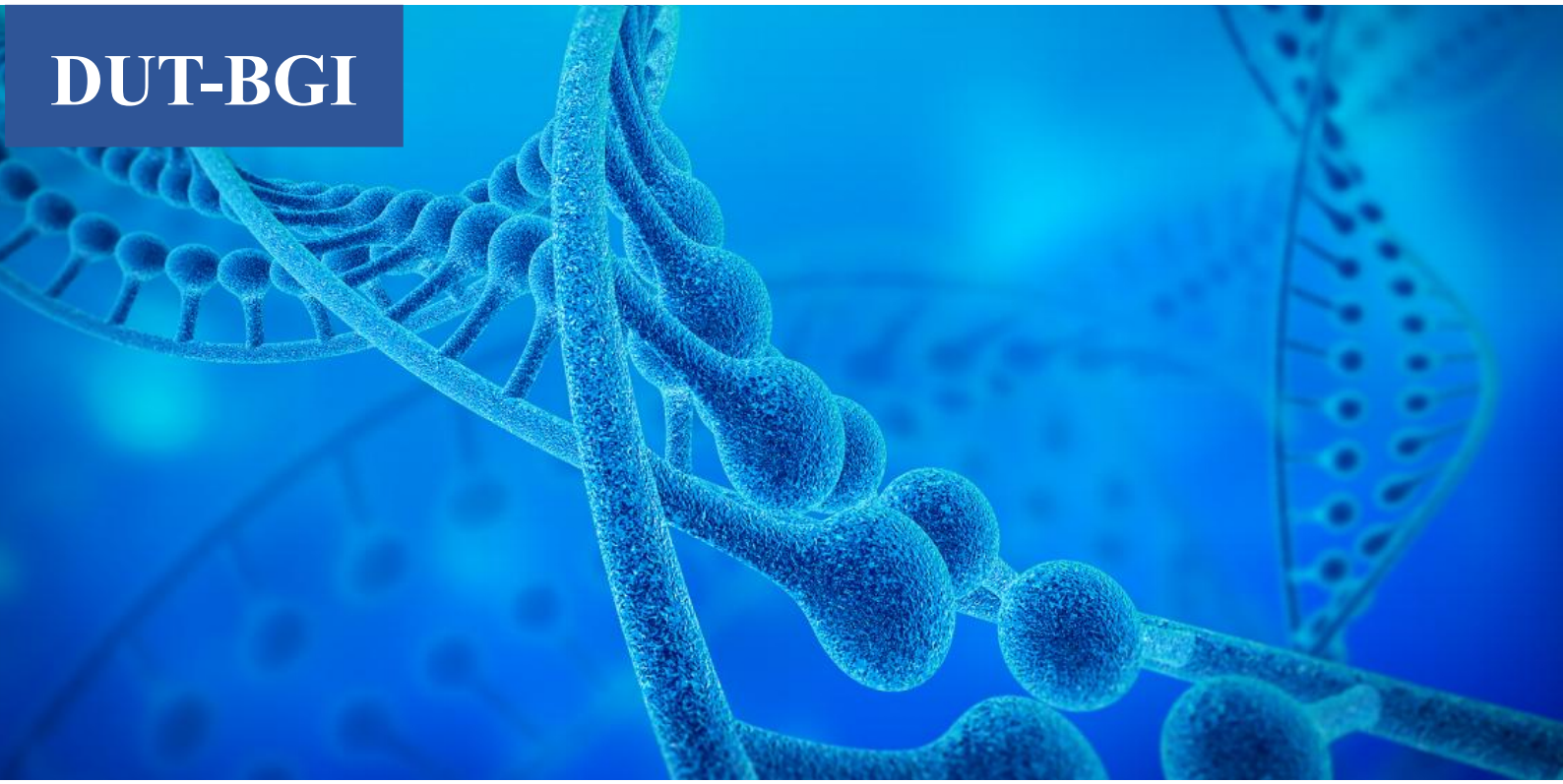


大连理工大学—华大国际班本科项目

DUT—BGI Bioengineering Bachelor Program

大连理工大学—华大国际班本科项目

DUT—BGI Bioengineering Bachelor Program

项目简介/Briefings

1.项 目 简 介 Introduction

大连理工大学华大国际班结合了我校“双一流”学科建设特色和华大集团国际领先的科研技术平台，旨在培养具有卓越学术能力和实践创新精神的生物领域拔尖创新人才，培育生命科学的未来领袖。通过跨学科、跨领域的学习与实践，学生将掌握生物工程和基因组学领域的基础与应用知识，并具备国际视野与行业领导力。

The DUT-BGI Bioengineering International Class combines the "Double First-Class" discipline construction of Dalian University of Technology (DUT) with the world-leading research and technological platform of BGI. It aims to cultivate outstanding talents in life sciences with exceptional academic abilities and innovative practical skills, nurturing the future leaders of life sciences. Through interdisciplinary learning and practice, students will acquire fundamental and applied knowledge in bioengineering and genomics while developing an international perspective and industry leadership qualities.

授课语言 / Language of Instruction: 英文 / English

本科专业 / Major: 生物工程 / Bioengineering

学制 / Duration:

本科项目 4 年，采用“2.5+1.5”模式。

Bachelor Program is 4 years, including 2.5-year in DUT and 1.5-year in BGI.

学生入学后两年半在大连理工大学参与集中教学，后续在华大开展理论和实践训练。

Students will finish the foundation courses in DUT for 2.5 years, then continue their theoretical and practical training in BGI.

2.项 目 特 色 Program Features

★ **跨学科导师团** / Interdisciplinary multi-mentorship

★ **不同国家、城市、体系、岗位轮转的机会** / Rotation opportunities in different nations, cities, divisions, or positions

★ **产学研一体化大平台下的无限成长和发展可能**

Endless growth and development possibilities under the integrated industry-academia-research platform

第一年： 融入与启发 / The 1st Year: Integration and Inspiration

通过丰富的活动，帮助学生快速适应项目，激发科研兴趣。

Through diverse activities, students quickly adapt to the program and ignite their passion for research.

第二年：探索与聚焦 /The 2nd Year: Exploration and Focus

鼓励学生探索多元方向，并逐步聚焦研究兴趣领域。

Students are encouraged to explore various directions and gradually focus on their research interests.

第三年：实践与提升 /The 3rd Year: Practice and Advancement

跨学科、多维度实践，拓宽学术与应用视野。

Multidimensional interdisciplinary practice broadens academic and applied horizons.

第四年：深入与发展 / The 4th Year: Immersion and Growth

参与高水平科研项目，为进一步深造或职业发展打下坚实基础。

Students engage in high-level research projects, laying a solid foundation for further studies or career development.

3.招 生 对 象 Target Students

★ 对生命科学研究充满热情，具备较强学术能力和实践潜力的优秀高中毕业生

Highly motivated high school graduates with strong academic abilities and practical potential in life sciences.

★ 英语水平优秀，能够适应全英文授课和研究环境

Proficient in English, capable of thriving in an all-English teaching and research environment

★ 具有团队合作精神、抗压能力强，能快速适应变化与创新思维的学生

Students with strong teamwork abilities, resilience under pressure, adaptability to change, and innovative thinking.

4.申 请 条 件 Admission Qualifications

★ 非中国公民、身体健康、年龄 18-25 周岁 、具有高中毕业学历

Non-Chinese citizen, age between 18 to 25 years old and in good health, high school graduate

★ 满足相应的英语水平要求 / Satisfied English Language Proficiency Requirement

原则上，托福 TOEFL80 分或以上或雅思 IELTS5.5 分或以上

In principle, the TOEFL score must be 80 or higher, and the IELTS score must be 5.5 or higher.

上一阶段授课语言为英语的授课语言证明

Applicants that use English as the language of instruction at high school, may use the language certificate issued by high school.

以英语作为官方语言国家的申请者，免交英语语言水平证明

Applicants from countries where English is the official language are exempt from proof of English language proficiency.

★ 上符合教育教外函【2020】12 号文件规定及我校相关规定

Applicants must comply with the regulations ([2020]No.12) issued by Ministry of Education of China.

***以年龄 18 周岁以下，高中毕业，在中国境内（大连市）有监护人亦可报名。**

Applicants under 18 must have a guardian who lives in Dalian.

Vision — Omics For All

Mission — To be a world leader in the age of life sciences

Values — Curiosity, Application of Knowledge, Working for the Betterment of Mankind

1999
BGI founded.

100+
Services and solutions are available in 100+ countries and regions.

500+
500+ scientific papers published in CNNS (*Cell, Nature, New England Journal of Medicine, Science.*

10000+
BGI has more than 10000 employees worldwide.

Shenzhen
Headquartered in Shenzhen.

3900+
SCI publications

1715
Patents obtained

学生入学后两年半在大连理工大学参与集中教学，获得大连理工大学国际学生校长奖学金；后续在华大开展理论和实践训练，由华大集团为学生提供助研金。

Students will finish the foundation courses in DUT for 2.5 years with DUT scholarship, then continue their theoretical and practical training in BGI, and BGI Research Assistantship for Undergraduates will cover their study in BGI.

1.大连理工大学国际学生校长奖学金
DUT Scholarship

★ 免学费、在大工学习期间提供免费校内住宿

Tuition waived, and free accommodation at DUT.

2.华大本科生助研金
BGI Research Assistantships for Undergraduates

★ 10%-20%的学生可获一等助研金：提供 2000 元/月生活费，800 元/月餐补，免培训费、提供免费住宿

10%-20% of students can receive the first research assistantship:

A stipend of 2000 CNY per month and a meal allowance of 800 CNY per month, with BGI training and accommodation fees waived.

★ 20%-30%的学生可获二等助研金：800 元/月餐补，免培训费、提供免费住宿

20%-30% of students can receive the second research assistantship:

A meal allowance of 800 CNY per month with BGI training and accommodation fees waived

★ 其余学生可获三等助研金：免培训费、提供免费住宿

The rest of students can receive the third research assistantship: BGI training and accommodation fees waived

★ 所有学生均需支付管理费和宿舍水电费。

All students are required to pay an administrative fee of 490 CNY per month, as well as dormitory utilities.

免住宿费情况仅限华大中国区，住宿标准根据当地设施决定

The free accommodation policy applies exclusively to BGI's China region. Accommodation standards depend on local facilities.

*助研金发放方案视年度预算调整，最终解释权归华大所有。

3.华大奖学金 BGI Scholarships

★ 华大本科生登峰探极奖学金：8848 元，每年约有 5%的华大在读学生会获得该奖项。

8848 米是世界最高峰珠穆朗玛峰的高度。

BGI Pinnacle Exploration Scholarship for Undergraduates:

8848 CNY, around 5% of all current students will be awarded each year.

8848 meters is the height of Mount Everest, the world's highest peak.

★ 华大本科生同行奖学金：5000 元，所有被华大联培研究生项目录取的本项目学生。

BGI Undergraduate Fellowship: 5000 CNY，all students under this program who are admitted to BGI joint graduate programs.

1.申 请 材 料 Application Documents

(1) **高中毕业证书（需公证，中文或英文版本）**

The Certified/Notarized Copy of High School Diploma (Chinese or English Version)

(2) **学习成绩单（需公证，中文或英文版本）**

The Certified/Notarized Copy of High School Transcript (Chinese or English Version)

(3) **语言水平能力证明** / Valid Report of English Language Proficiency Tests

(4) **个人陈述/来华学习计划***

Personal Statement / Study Plan (English Version)

(5) **推荐信** / Recommendation Letter*

(6) **外国人体格检查记录** / Physical Examination Form*

(7) **申请人护照首页扫描件及签证空白页** / Passport copies on photo page and blank visa page

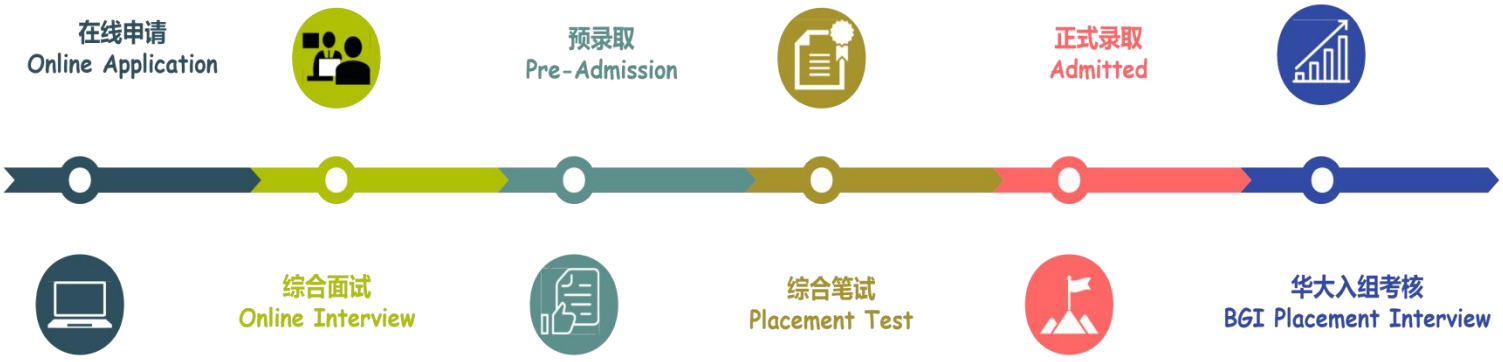
(8) **无犯罪证明** / Certificate of No-Criminal Conviction

(9) **其他材料** / Other documents

*请在 http://sie.dlut.edu.cn/zlxz/zlxz.htm 下载模板

Download the sample from http://sie.dlut.edu.cn/English/Download/Download.htm

2.招 生 流 程 Admission Procedure



3.申 请 时 间 Application Time

每年 11 月 1 日至次年 6 月 30 日 / Start from November 1 to June 30

申请网址 / Online application Website:**http://iso.dlut.edu.cn**

Tel: 86-411-84779078

Email: dutluna@dlut.edu.cn

华大介绍 / BGI Introduction

海滨之城，啤酒之乡
Coastal city and the hometown of beer

历史与现代交融的文化之都
A cultural capital blending history and modernity

江城风光，九省通衢
The river city and a hub connecting nine provinces

华大成立于1999年
秉承“基因科技造福人类”的使命，
怀抱“健康美丽，做生命时代的引领者”的愿景
以“产学研”一体化的发展模式引领基因组学的创新发展

Founded in 1999, BGI dedicate to "**Omics for all**"
Advancing innovation through an integrated research-education-industry model.

Shenzhen深圳
创新之都，活力之城
The city of innovation and vibrant energy

根据自然指数年度榜单，华大连续9年蝉联亚太生命科学机构榜首，全球排名第8
NATURE INDEX: *BGI TOPS ASIA-PACIFIC LIFE SCIENCES FOR THE 9TH CONSECUTIVE YEAR AND RANKS 8TH GLOBALLY.*

HANGZHOU
杭州
人间天堂，西湖风光
A paradise on earth with the beauty of West Lake

三亚
热带天堂，椰风海韵
A tropical paradise with coconut breezes and ocean charm

CHONGQING
重庆
山城风光，火锅之都
The mountain city and home of hotpot

科研和教育成果 Research and Education

6个学科领域位列ESI全球前1% | 6 ESI Top 1% Disciplines

分子生物遗传学、临床医学、生物学与生物化学、植物与动物科学、微生物、多学科
Molecular Biogenetics, Clinical Medicine, Biology, Biochemistry, Plant & Animal Sciences, Microbiology, Multidisciplinary

已培养学生3,780人 | 3,780 Students Trained
硕博研究生1,973人，本科生1,807人
1,973 postgraduates, 1,807 undergraduates

学生成果卓著 | Outstanding Students' Achievements
发表SCI论文600+（CNS等200+），专利400+项，软著160+项
600+ SCI papers (200+ in Science, Nature, Cell), 400+ patents, 160+ software copyrights

华大集团官网 / BGI Group Website: https://www.genomics.cn/
华大学院官网 / BGI College Website: https://en.bgi-college.cn/

大连 Dalian

四季分明，气候宜人，交通便利
Distinct four seasons, Pleasant climate, Convenient situation

位于中国辽东半岛南端
At the southern tip of Liaoning Peninsula

冬无严寒，夏无酷暑
Neither bitterly cold in winter nor extremely hot in summer

东北亚国际航运中心、
国际物流中心和区域性金融中心
Shipping, logistics and regional financial center of Northeast Asia

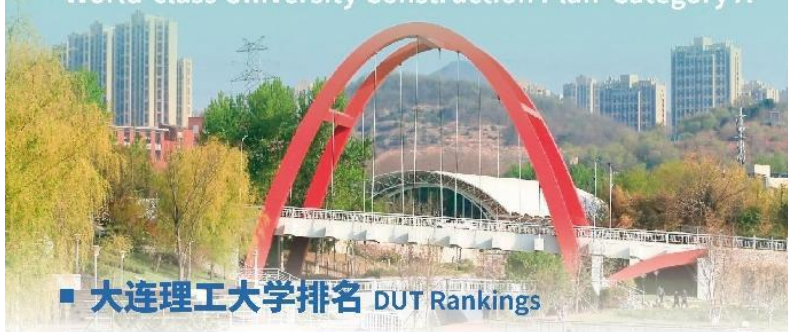
中国第一个
被联合国环境规划署授予“全球环境500佳”的城市
Awarded Global 500 Roll of Honor for Environmental Achievement as the first Chinese city

有“北方明珠”“浪漫之都”之称
Famous as "Pearl of North China" and "City of Romance"

中国“985”“211”工程重点建设高校

教育部直属全国重点大学
国家“211”工程和“985”工程重点建设高校
世界一流大学A类建设高校

National Key University
Project 211 & Project 985
World-class University Construction Plan Category A



大连理工大学排名 DUT Rankings

292 位 — 2024年U.S News世界大学排名
Best Global Universities in 2024 U.S News Ranking

63 位 — 2024年U.S News亚洲大学排名
Best Global Universities Asia in 2024 U.S News Ranking

20 位 — 2024年内地高校排名
Best University in China in 2024 Ranking

1‰ — 4个学科领域位列ESI世界排名前1‰
4 disciplines are selected into the top 1‰ in ESI

1% — 13个学科领域位列ESI世界排名前1%
13 disciplines are selected into the top 1% in ESI

大连理工大学学科排名 DUT Subject Rankings

10th 土木工程 Civil Engineering	21st 机械工程 Mechanical Engineering	37th 人工智能 Artificial Intelligence
38th 环境工程 Environmental Engineering	39th 化学 Chemistry	40th 工程学 Engineering
40th 化学工程 Chemical Engineering	57th 计算机科学 Computer Science	79th 材料科学 Materials Science

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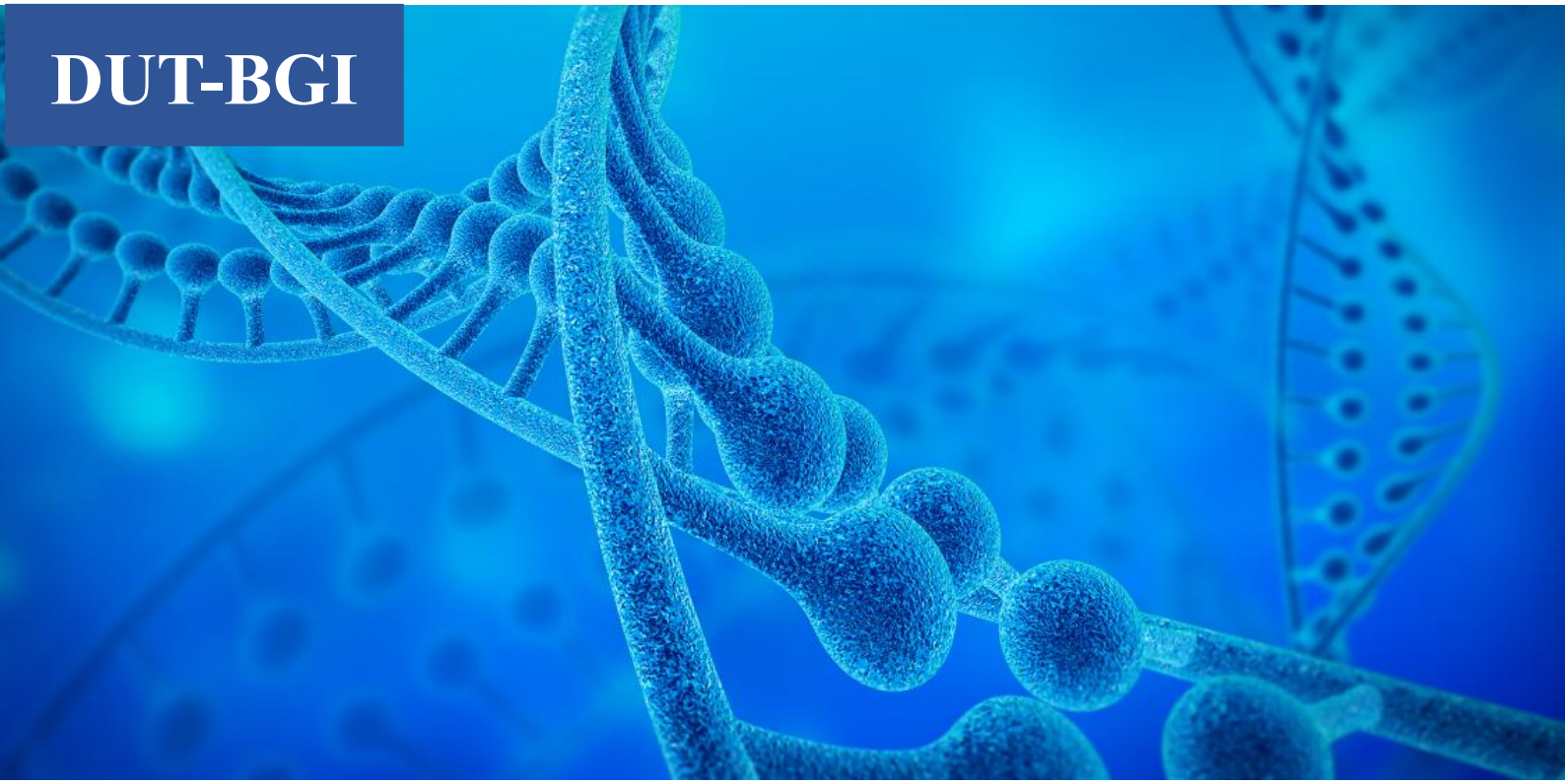


大连理工大学—华大国际班研究生项目

DUT—BGI Bioengineering Master and Ph.d Program

大连理工大学—华大国际班研究生项目

DUT—BGI Bioengineering Master and Ph.d Program

项目简介/Briefings

1.项 目 简 介 Introduction

大连理工大学华大国际班结合了我校“双一流”学科建设特色和华大集团国际领先的科研技术平台，旨在培养德才兼备能够从事生物工程领域基础与应用研究、技术开发和管理、具有国际视野的高层次拔尖创新人才。

With the combination of the featured "Double First-Class" discipline construction of Dalian University of Technology (DUT) and BGI's world-leading research and technological platform, DUT-BGI Bioengineering International Class aims to cultivate top-notch innovative talents who are morally upright, proficient in basic and applied research fields of bioengineering, skilled in technological development and management, and equipped with an international perspective.

授课语言 / Language of Instruction: 英文 / English

学制 / Duration:

硕士研究生项目 3 年，采用“0.5+2.5”模式

Master Program is 3 years, including 0.5-year in DUT and 2.5-year in BGI

博士研究生项目 4 年，采用“0.5+3.5”模式

Ph.D Program is 4 years, including 0.5-year in DUT and 3.5-year in BGI

***学生入学后第一学期在大连理工大学参与集中教学，后续在华大开展科研实践训练。**

*Students will finish the foundation courses in DUT during the first semester, then continue their scientific research practice in BGI.

2.项 目 优 势 Advantages

★ **跨学科导师团** / Interdisciplinary multi-mentorship

★ **产学研一体化大平台下的无限成长和发展可能**

Endless growth and development possibilities under the integrated industry-academia-research platform

★ **优先加入华大管培生项目，定制个性化的全球职业发展规划**

Personalized global career development plan and priority entry into the BGI management trainee program

★ **参与基因组学、单细胞组学、时空组学等国际大科学项目培训**

Immersive training in international big science projects of genomics, single-cell omics, and spatiotemporal omics

Vision — Omics For All

Mission — To be a world leader in the age of life sciences

Values — Curiosity, Application of Knowledge, Working for the Betterment of Mankind

1999
BGI founded.

100+
Services and solutions are available in 100+ countries and regions.

500+
500+ scientific papers published in CNNS (*Cell, Nature, New England Journal of Medicine, Science*.

10000+
BGI has more than 10000 employees worldwide.

Shenzhen
Headquartered in Shenzhen.

3900+
SCI publications

1715
Patents obtained

学生入学后第一学期在大连理工大学参与集中教学，获得大连理工大学国际学生校长奖学金；后续在华大开展理论和实践训练，由华大集团为学生提供助研金。

Students will finish the foundation courses in DUT during the first semester with DUT scholarship, then continue their scientific research practice in BGI, and BGI Research Assistantship for Postgraduates will cover their study in BGI.

1.大连理工大学国际学生校长奖学金

DUT Scholarship

★ **免学费、在大工学习期间住宿费** / Tuition waived, free accommodation at DUT.

★ **在大工学习期间生活费：博士研究生 1800 元/月；硕士研究生 1500 元/月**

Living allowance at DUT: Ph.D students 1800 CNY/month, Master students 1500 CNY/month.

2.华大研究生助研金

BGI Research Assistantships for Graduates

★ **硕士研究生 / Master students :**

提供 2000-3000 元/月生活费、500* k 元/月绩效补贴、800 元/月餐补，免培训费、住宿费

A stipend of 2000-3000CNY per month, 500* k CNY per month incentive subsidy and a meal allowance of 800 CNY per month, with BGI training and accommodation fees waived.

★ **博士研究生 / Ph.D students :**

提供 3000-4000 元/月生活费、500* k 元/月绩效补贴、800 元/月餐补，免培训费、住宿费

A stipend of 3000-4000CNY per month, 500* k CNY per month incentive subsidy and a meal allowance of 800 CNY per month, with BGI training and accommodation fees waived.

** k 为奖励补贴考评系数，由所在培养部门决定 / *k refers to evaluation coefficient of incentive subsidy, which will be determined by BGI supervisor.*

★ **所有学生均需支付管理费和宿舍水电费。**

All students are required to pay an administrative fee of 490 CNY per month, as well as dormitory utilities.

免住宿费情况仅限华大中国大陆地区，住宿标准根据当地设施决定。

Free accommodation is only provided in BGI mainland China. Accommodation standards depend on local facilities.

***助研金发放方案视年度预算调整，最终解释权归华大所有。**

Research assistantship arrangements are subject to annual budget adjustments, with final interpretation rights reserved by BGI.

3.华大奖学金

BGI Scholarships

★ **华大登峰探极奖学金（Awarded to top 5%）**

BGI Pinnacle Exploration Scholarship

硕士 Master's: 10909 CNY

博士 Doctoral: 19757 CNY

***每年约有 5%的华大在读学生会获得该奖项**

**Each year, around 5% of all current students will be awarded.*

8848 米是世界最高峰珠穆朗玛峰的高度，10909 米是地球海洋最深处，太平洋马里亚纳海沟的深度，19657 是这两者之和，寓意“登峰探极”。

8848 meters is the height of Mount Everest, the world's highest peak, and 10909 meters is the depth of the Mariana Trench, the deepest point on Earth. 19657 is the sum of these two numbers, symbolizing the spirit of "Pinnacle Exploration."

4.其他华大补贴

Other Stipends of BGI

★ **助教金：担任华大助教可获得每小时 100 元人民币的补贴**

Teaching Assistantship: 100 CNY per hour

★ **项目激励：学生参与华大科研项目表现突出者有机会获得项目奖金。**

Project Bonuses: Students with outstanding performance will have the opportunity to receive project bonuses by participating in BGI's research projects.

1.申 请 条 件 Qualification

(1) **非中国籍公民** Non-Chinese citizen

(2) **身体健康，申请硕士年龄在 35 周岁以下；申请博士年龄在 40 周岁以下**

Under the age of 35 years old and in good health for master degree application

Under the age of 40 years old and in good health for Ph.D degree application

(3) **申请硕士，具有正规大学本科毕业学历（获学士学位）；申请博士，具有正规大学硕士毕业学历（获硕士学位）**

Holder of a bachelor degree for master degree application; holder of a master degree for Ph.D degree application

(4) **满足相应的语言水平要求** Satisfied English Language Proficiency Requirement

★ 提交托福（TOEFL）或雅思（IELTS）成绩单，原则上需达到 80 分或以上，雅思需达到 5.5 分或以上

Submit a TOEFL or IELTS transcript, in principle, the score must be 80 or higher, and the IELTS score must be 5.5 or higher

★ 上一阶段授课语言为英语的授课语言证明

Submit the certification issued by graduated university that use English as the language of instruction

★ 以英语作为官方语言国家的申请者，免交英语语言水平证明

Applicants from countries where English is the official language are exempt from proof of English language proficiency

*** 如无法提供以上证明的申请者，其语言水平可由导师和院系根据面试和笔试的具体情况决定**

* If the applicant cannot provide the above proof, the final tutor and department could evaluate your language level according to the interview or written test.

2.申 请 材 料 Application Documents

(1) **最高学历证明/在学证明（需公证，中文或英文版本）**

The Certified/Notarized Copy of Highest Degree's Diploma or Certificate of Enrollment (Chinese or English Version)

(2) **学习成绩单（需公证，中文或英文版本）**

The Certified/Notarized Copy of Highest Academic Transcript (Chinese or English Version)

(3) **语言水平能力证明** Valid Report of English Language Proficiency Tests

(4) **来华学习计划*（英文，不少于 1000 字）**

Study Plan (English Version, no less than 1000 words)

(5) **申请人毕业学校两名教授或副教授的推荐信*:**

Two recommendation letters in Chinese or English by professors or associate professors from the graduated university

(6) **外国人体格检查记录*** Physical Examination Form

(7) **申请人护照首页扫描件及签证空白页** Passport copies on photo page and blank visa page

(8) **无犯罪证明** Certificate of No-Criminal Conviction

(9) **其他材料** Other documents

*请在 http://sie.dlut.edu.cn/zlxz/zlxz.htm 下载模板

Download the sample from http://sie.dlut.edu.cn/English/Download/Download.htm

3.申 请 时 间 Application Time

每年 11 月 1 日至次年 6 月 30 日 / Start from November 1 to June 30

申请网址 / Online application Website: **http://iso.dlut.edu.cn**

Tel: 86-411-84779078

Email: dutluna@dlut.edu.cn

1.合成生物学与系统生物工程
Synthetic Biology and Systems Biotechnology

以高效生产生物产品为目标，重点研究高效细胞工厂构建的理论与技术，在基因-蛋白调控与互作理论、细胞代谢网络适配及重建、高性能元件库、基因编辑工具酶、分子靶标预测工具等方面形成优势和特色。

研究方向：基因编辑与合成生物技术；生物信息学与计算生物学；代谢工程与合成途径优化等。

With the goal of efficient production of biological products, we focus on the theoretical and technological construction of high-efficiency cell factories. Our research strengths and characteristics include gene-protein regulation and interaction theory, cell metabolism network adaptation and reconstruction, high-performance component libraries, gene editing enzyme tools, and molecular target prediction tools.

Research directions: gene editing and synthetic biology technology, bioinformatics and computational biology, metabolism engineering and synthetic pathway optimization, etc.

2.生物催化与转化工程
Biocatalysis and Transformation Engineering

以国家中长期发展战略中的生物质能源和生物基化学品为主攻方向，在高效细胞工厂构建、反应过程控制、分离过程优化及过程集成等方面形成优势和特色。

研究方向：液体生物燃料的生物加工过程工程；生物基化学品的生物转化与分离工程；海洋能源微藻生物技术等。

This major research direction focuses on national medium- and long-term development strategies such as biomass energy and bio-based chemicals. It has formed advantages and characteristics in efficient cell factory construction, reaction process control, separation process optimization, and process integration.

Research directions: Engineering of bioprocessing for liquid biofuels; Biocatalytic transformation and separation engineering of bio-based chemicals; Microalgae biotechnology for marine energy, etc.

3.生物医药与材料工程
Biomedical and Material Engineering

瞄准生物药物和生物材料产业的重大需求，通过设计、改造等方法制备具有优良性质和功能的新型生物药物与生物材料。主要聚焦在生物工程技术在生物材料的开发与应用、纳米生物药物及新型生物材料的研究与应用等方向。

研究方向：血液净化吸附材料；人体组织体外构建；纳米生物给药系统；纳米生物材料；生物小分子药物；生物分析诊断新技术新方法等。

This research direction targets the significant demand for the biopharmaceutical and biomaterial industries, aiming to develop new biopharmaceuticals and biomaterials with excellent properties and functions through design and modification methods. The focus is on the development and application of biotechnology in biomaterials, research and application of nanobiopharmaceuticals, and new biomaterials.

Research directions: blood purification adsorption materials, in vitro construction of human tissues, nanobiopharmaceutical delivery systems, nanobiomaterials, biopharmaceutical small molecule drugs, and new technologies and methods for biologic analysis and diagnosis.

4.生物靶标与分子工程
Biological Targets and Molecular Engineering

主要聚焦于有害生物、恶性肿瘤、生物钟等新型生物靶标的发现研究，发展基于新靶标的药物先导化合物设计新方法。

研究方向：有害分子靶标与农药创制；肿瘤细胞生物学及其新靶标发现；生物钟紊乱的药物及非药物干预措施；基于生物靶标的计算机辅助药物筛选等。

This research direction focuses mainly on the discovery and study of new biological targets, such as harmful organisms, malignant tumors, and biological clocks, and develops new methods for designing drug lead compounds based on these new targets.

Research directions: Discovery of harmful molecular targets and development of pesticides; tumor cell biology and discovery of new targets; drugs and non-drug interventions for circadian rhythm disorders; computer-aided drug screening based on biological targets, etc.

5.单细胞组学
Single-cell omics

单细胞测序是近十年来生命科学领域最重要的技术突破之一，该技术已经成为生命科学领域的底层技术，在发育、进化，人类疾病等领域全面应用，使得人们可以在单细胞分辨率研究生命的多组学图谱，理解生命起源和生老病死。

研究方向：单细胞基因组/外显子组测序、单细胞全长转录组、单细胞多组学、高通量的单细胞建库系统 DNBelab C4 在发育、疾病、动植物演化、衰老、脑科学等领域的应用。

The single-cell sequencing is one of the most important technological breakthroughs in life science in the last decade. It has become the fundamental technology in life science and has been fully used in the fields of development, evolution, human diseases, etc., enabling researchers to study the multiomics atlas of lives with single-cell resolution and understand the origins of lives, illness and death.

Research directions: single-cell genome/exome sequencing, single-cell full-length transcriptome, single-cell multiomics, and the application of high-throughput single-cell library system DNBelab C4 in the fields of development, diseases, animal and plant evolution, aging, brain science, etc.

6.时空组学
Spatiotemporal omics

单时空组学技术因其能在组织原位的基础上研究单细胞分辨率的基因组、转录组、表观组等多组学特征，为理解细胞命运调控的复杂性带来了重大突破。

研究方向：单器官 3D 数字化图谱、疾病分型诊断、受精卵如何变成完成个体、演化过程中的器官适应性。

The spatiotemporal omics technology has made a major breakthrough in understanding the complexity of cell fate regulation for its ability to study multiomics features of genomics, transcriptome, and epigenome with single-cell resolution on the basis of tissue in situ.

Research directions: 3D digital map of organs, disease typing diagnosis, the evolution process from fertilized eggs to complete individuals, organ adaptability in the process of evolution.

7.生信前沿工具算法

Frontier bioinformatic tools and algorithms

主要围绕多组学新型测序技术、海量大数据人群分析等前沿生物大数据场景，开发一系列生信算法工具和平台系统，形成完整的生物大数据解决方案。

研究方向：围绕测序仪碱基识别、基因数据压缩、大人群和低深度变异检测、以及空间组学等新型场景的算法工具开发；自动化计算系统、数据仓库系统的开发。

Frontier bioinformatic tools and algorithms: this orientation mainly focusing on the cutting-edge biological big data scenarios like multi-omics sequencing technologies and mass population big date analysis to develop a series of bioinformatic algorithm tools and platforms, forming a complete biological big data solution.

Research directions: development of algorithmic tools with sequencer base recognition, gene data compression, large population and low-level variation detection, and spatial omics, as well as the development of automated computing systems, data warehouse systems, etc.

培 养 方 式
Education and Training Methods

以课程学习和参与科学研究为主，重点进行科学研究方法、团队合作和创新能力的培养。研究生培养实行双导师负责制和以导师为主的指导小组负责制，每名学生由一名大工导师和一名华大导师共同辅导。导师（组）负责研究生日常管理、学风和学术道德教育、制订和调整硕士研究生培养计划、组织安排开题、指导科学研究和学位论文等。在研究生培养过程中，充分发挥导师（组）的指导作用，又要特别注重硕士生自学、独立工作和创新能力的培养。

研究生课程学习实行学分制，在申请答辩之前须修满所要求的学分。

The graduate education is mainly focused on course learning and scientific research participation, with an emphasis on cultivating scientific research methods, teamwork, and innovative abilities. The graduate education is conducted under the guidance of a supervisor from the university and a supervisor from BGI, who are jointly responsible for the daily management of the graduate students, academic and ethical education, the formulation and adjustment of the master's graduate training plan, organization of the thesis proposal, guidance of scientific research and dissertation writing, etc. During the graduate education process, the guidance of the supervisor is fully utilized, while special attention is paid to the cultivation of the master's students' self-learning, independent work, and innovative abilities.

The graduate curriculum adopts a credit system, and students must complete the required credits before applying for the defense.

博 士 学 分 要 求 与 课 程 设 置
Ph.D Credit Requirements and Course Settings

★ **仅供参考，可能调整 / For reference only and subject to changes.**

★ **总学分不低于 19 学分，其中必修课 18 学分，选修课不低于 1 学分。**

The total credits shall not be less than 19, including 18 credits for compulsory courses and 1 credit for elective courses.

硕 士 学 分 要 求 与 课 程 设 置
Master Credit Requirements and Course Settings

★ **仅供参考，可能调整 / For reference only and subject to changes.**

★ **总学分不低于 32 学分，其中必修课 30 学分，选修课不低于 2 学分。**

The total credits shall not be less than 32 credits, including 30 credits for compulsory courses and 2 credits for elective courses.

博士学习年限
Length of Ph.D Study

国际博士研究生的基本学制为 4 年，在校修业年限为 6 年，超过修业年限的博士生须办理离校手续、离校；申请博士学位最长年限为 8 年（含休学时间）；各类博士研究生在校学习最短时间为 2.5 年（含提前答辩）。

The normal duration of full time Ph.D programs in DUT is 4 years and the length limit of schooling for Ph.D programs is 6 years. Postgraduate students whose actual length of schooling has exceeded 6 years shall perform the leaving procedures and leave the university. The length limit of degree application for Ph.D programs is 8 years (suspension period included): the minimum duration of on campus schooling for Ph.D programs is 2.5 years (early thesis defense included).

入学后第一个学期（0.5 年）在大工学习汉语、中国文化类课程、数学等相关课程，之后的 7 个学期（3.5 年）在华大学习其余专业课程并开展研究。

After enrollment, in the first semester (0.5 years) students shall study at DUT to learn the Chinese language courses, Chinese culture related courses, mathematical course etc., while in the following seven semesters (3.5 years) students shall study at BGI to learn the other academic courses as well as to conduct research.

如因学术性的正当理由，博士研究生在基本学制结束前可申请学业延期。延期以学期为单位。学生提交所需文件并经相关部门审核批准后，在校修业年限可最多延长至 6 年。延期期间学生继续在华大开展科研完成毕业论文等相关要求。

For academically legitimate reasons, students of Ph.D programs may apply for study extension before the basic schooling period expires. The extension could be applied for by semesters. After submitting the required documents and obtaining approval from the relevant departments, the study period could be extended to a maximum of 6 years. During the extended period, students shall continue their research at BGI to fulfill the requirements for their thesis.

硕士学习年限
Length of Master Study

国际硕士研究生的基本学制为 3 年，在校修业年限为 4 年，超过修业年限的硕士生须办理离校手续、离校；申请硕士学位最长年限为 5 年（含休学时间）；各类硕士研究生在校学习最短时间为 2 年（含提前答辩）。

This The normal duration of full time master programs in DUT is 3 years and the length limit of schooling for master programs is 4 years. Postgraduate students whose actual length of schooling has exceeded 4 years shall perform the leaving procedures and leave the university. The length limit of degree application for master programs is 5 years (suspension period included): the minimum duration of on campus schooling for master programs is 2 years (early thesis defense included).

入学后第一个学期（0.5 年）在大工学习汉语、中国文化类课程、数学等相关课程，之后的 5 个学期（2.5 年）在华大学习其余专业课程并开展研究。

After enrollment, in the first semester (0.5 years) students shall study at DUT to learn the Chinese language courses, Chinese culture related courses, mathematical course etc., while in the following five semesters (2.5 years) students shall study at BGI to learn the other academic courses as well as to conduct research.

如因学术性的正当理由，硕士研究生在基本学制结束前可申请学业延期。延期以学期为单位。学生提交所需文件并经相关部门审核批准后，在校修业年限可最多延长至 4 年。延期期间学生继续在华大开展科研完成毕业论文等相关要求。

For academically legitimate reasons, students of master programs may apply for study extension before the basic schooling period expires. The extension could be applied for by semesters. After submitting the required documents and obtaining approval from the relevant departments, the study period could be extended to a maximum of 4 years. During the extended period, students shall continue their research at BGI to fulfill the requirements for their thesis.

论文工作必修环节
Required Components of Thesis Work

研究生在完成课程学习、满足课程学分要求的基础上，即进入论文工作环节，要求完成研究生培养过程中的论文学分和必修环节任务。

Upon completion of the course learning and meeting the credit requirements, students will enter the thesis work stage and are required to complete the required graduated credits and tasks.

开题、中期检查和预答辩要求
Requirements for thesis proposal,mid-term assessment,and pre-defense

学位论文的开题、中期检查和预答辩按照 2023 年 7 月出台的《生物工程学院研究生培养过程管理规定》来执行。

The topic opening, mid-term examination and pre-defense of the dissertation shall be carried out in accordance with the "Regulations on the Management of the Graduate Cultivation Process of the School of Bioengineering" issued in July 2023.

发表学术论文
Publication of Academic Papers

具体要求详见 2020 年 7 月出台的《生物工程学院关于研究生在申请学位前发表研究成果的规定》。

The specific requirements are detailed in the “Regulation of the School of Biotechnology on the Publication of Research Results by Graduate Students before Applying for Degree”issued in July 2020.

论文评审与答辩
Thesis Review and Defenses

学位论文撰写格式严格按照大连理工大学各类研究生学位论文模板执行；论文的查重、外审（抽审）、预答辩和答辩严格按照 2019 年印发的《大连理工大学学位授予工作细则（修订）》及学位管理相关文件的要求执行。

The format of the thesis writing must strictly follow the templates of various types of postgraduate degree theses at Dalian University of Technology. The thesis checking, external review, pre-defense, and defense must strictly follow the requirements of the 2019 revised "Detailed Rules for Degree Conferral at Dalian University of Technology" and related degree management documents.

毕业及学位授予
Graduation and Degree Conferral

修满规定学分、成绩合格，并通过论文答辩者，则准予毕业，并发给毕业证书。经学院学位评定分委员会审核，报校学位评定委员会审议通过后可授予硕士/博士学位，并发给学位证书。

Upon completing the required credits, achieving qualified grades, and passing the thesis defense, the student will be allowed to graduate and will receive a graduation certificate. After being reviewed by the subcommittee of the college's degree evaluation committee and approved by the university's degree evaluation committee, the student may be awarded a master's/Ph.D degree and will receive a degree certificate.

科学研究及学位论文要求（博士）
Requirements for Scientific Research and Thesis for Ph.Ds

在修完必要的学分后，学生必须开展相对系统深入的科学研究工作，包括文献阅读，选题，一定深度的理论分析和较高水平的实验研究，参与科研项目并独立完成和撰写科学研究报告，最后撰写符合学位论文要求的毕业论文。

学位论文要求具有系统的研究思路和计划，反映系统科学的研究过程和研究方法，有独立见解和创新思路，具有一定的科学上的前沿性。论文应具有较丰富的工作量，有明确而可信的研究结论。论文的撰写应符合科技文献的编写规范，具有良好的条理性和逻辑性，文字表达精炼准确，外文摘要等的编写合乎要求。

博士学位论文工作须在导师指导下独立完成，学位论文撰写规范按学校有关要求执行。

After completing the necessary credits, students must conduct relatively systematic and in-depth scientific research, including literature review, topic selection, in-depth theoretical analysis, high-level experimental research, participation in scientific research projects, and independently complete and write scientific research reports. Finally, they must write a graduation thesis that meets the requirements of a degree thesis.

The degree thesis requires a systematic research approach and plan, reflecting a systematic scientific research process and research methods, independent thinking and innovative ideas, and a certain level of scientific frontier. The thesis should have a rich workload and clear and reliable research conclusions. The writing of the thesis should comply with the specifications for scientific and technological literature, with good organization, logical expression, and concise and accurate wording. The writing of the abstract in a foreign language should also meet the requirements.

The work on the doctoral thesis must be completed independently under the guidance of a supervisor, and the specifications for writing the thesis should be implemented according to the relevant requirements of the university.

科学研究及学位论文要求（硕士）
Requirements for Scientific Research and Thesis for Masters

在修完必要的学分后，学生必须开展相对系统深入的科学研究工作，包括从文献阅读，选题，一定深度的理论分析，参与科研项目，最后撰写符合学位论文要求的毕业论文和学术论文。

在研究工作基础上，发表学术论文。学位论文要求具有系统的研究思路和计划，反映系统科学的研究过程和研究方法，有一定的独立见解和学术探索，具有一定的科学上的前沿性。论文应具有较丰富的工作量，有明确而可信的研究结论。论文的撰写应符合科技文献的编写规范，具有良好的条理性和逻辑性，文字表达精炼准确，外文摘要等的编写合乎要求。

After completing the necessary credits, students are required to conduct relatively systematic and in-depth scientific research, including literature reading, topic selection, certain depth of theoretical analysis, participation in scientific research projects, and finally writing a graduation thesis and academic paper that meets the requirements for the degree thesis.

In addition to the research work, students are required to publish academic papers. The thesis should have a systematic research idea and plan, reflecting the systematic scientific research process and methods, with certain independent insights and academic explorations, and having a certain scientific frontier. The thesis should have a rich workload and clear and credible research conclusions. The writing of the thesis should comply with the norms of scientific and technological literature, with good organization and logicality, concise and accurate language expression, and complying with the requirements for writing abstracts in foreign languages.

华大介绍 / BGI Introduction

海滨之城，啤酒之乡
Coastal city and the hometown of beer

历史与现代交融的文化之都
A cultural capital blending history and modernity

江城风光，九省通衢
The river city and a hub connecting nine provinces

华大成立于1999年
秉承“基因科技造福人类”的使命，
怀抱“健康美丽，做生命时代的引领者”的愿景
以“产学研”一体化的发展模式引领基因组学的创新发展

Founded in 1999, BGI dedicate to "**Omics for all**"
Advancing innovation through an integrated research-education-industry model.

Shenzhen深圳
创新之都，活力之城
The city of innovation and vibrant energy

根据自然指数年度榜单，华大连续9年蝉联亚太生命科学机构榜首，全球排名第8
NATURE INDEX: *BGI TOPS ASIA-PACIFIC LIFE SCIENCES FOR THE 9TH CONSECUTIVE YEAR AND RANKS 8TH GLOBALLY.*

HANGZHOU
杭州
人间天堂，西湖风光
A paradise on earth with the beauty of West Lake

三亚
热带天堂，椰风海韵
A tropical paradise with coconut breezes and ocean charm

山城风光，火锅之都
The mountain city and home of hotpot

科研和教育成果 Research and Education

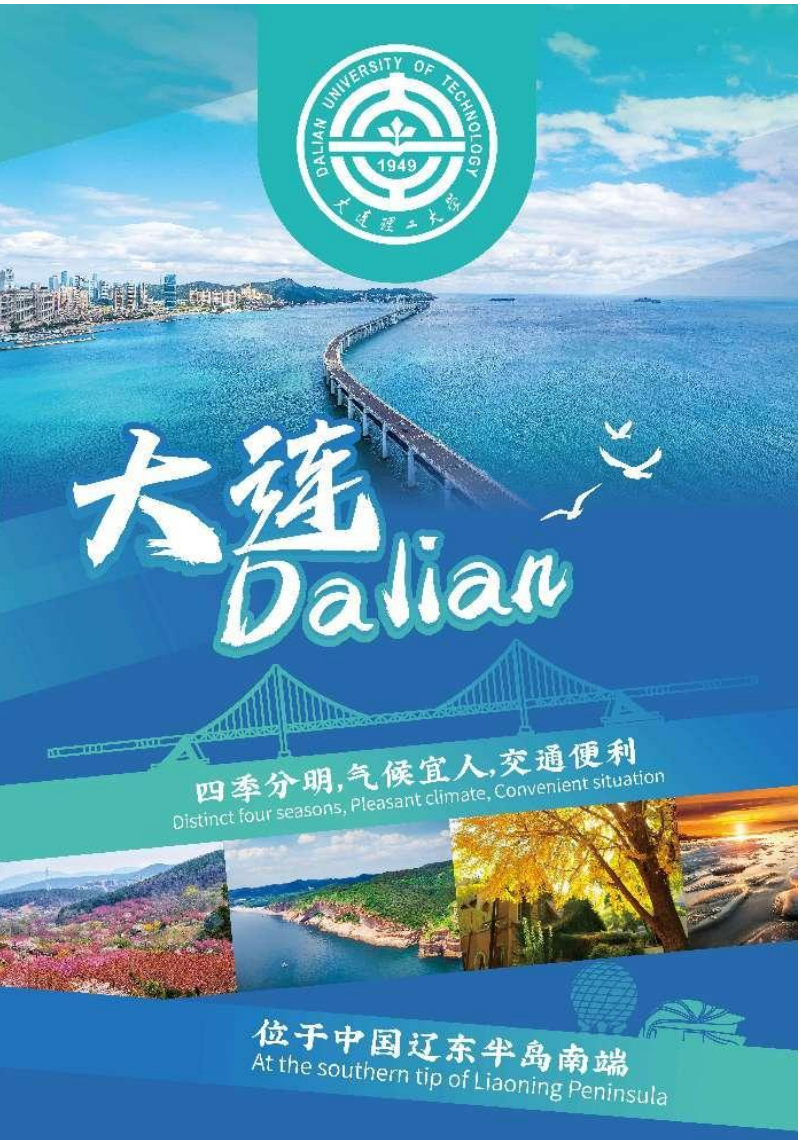
6个学科领域位列ESI全球前1% | 6 ESI Top 1% Disciplines

分子生物遗传学、临床医学、生物学与生物化学、植物与动物科学、微生物、多学科
Molecular Biogenetics, Clinical Medicine, Biology, Biochemistry, Plant & Animal Sciences, Microbiology, Multidisciplinary

已培养学生3,780人 | 3,780 Students Trained
硕博研究生1,973人，本科生1,807人
1,973 postgraduates, 1,807 undergraduates

学生成果卓著 | Outstanding Students' Achievements
发表SCI论文600+（CNS等200+），专利400+项，软著160+项
600+ SCI papers (200+ in Science, Nature, Cell), 400+ patents, 160+ software copyrights

华大集团官网 / BGI Group Website: https://www.genomics.cn/
华大学院官网 / BGI College Website: https://en.bgi-college.cn/



大连 Dalian

四季分明，气候宜人，交通便利
Distinct four seasons, Pleasant climate, Convenient situation

位于中国辽东半岛南端
At the southern tip of Liaoning Peninsula

冬无严寒，夏无酷暑
Neither bitterly cold in winter nor extremely hot in summer

东北亚国际航运中心、
国际物流中心和区域性金融中心
Shipping, logistics and regional financial center of Northeast Asia

中国第一个
被联合国环境规划署授予“全球环境500佳”的城市
Awarded Global 500 Roll of Honor for Environmental Achievement as the first Chinese city

有“北方明珠”“浪漫之都”之称
Famous as "Pearl of North China" and "City of Romance"

中国“985”“211”工程重点建设高校

教育部直属全国重点大学
国家“211”工程和“985”工程重点建设高校
世界一流大学A类建设高校

National Key University
Project 211 & Project 985
World-class University Construction Plan Category A

大连理工大学排名 DUT Rankings

292 位
2024年U.S News世界大学排名
Best Global Universities in 2024 U.S News Ranking

63 位
2024年U.S News亚洲大学排名
Best Global Universities Asia in 2024 U.S News Ranking

20 位
2024年内地高校排名
Best University in China in 2024 Ranking

1‰
4个学科领域位列ESI世界排名前1‰
4 disciplines are selected into the top 1‰ in ESI

1%
13个学科领域位列ESI世界排名前1%
13 disciplines are selected into the top 1% in ESI

大连理工大学学科排名 DUT Subject Rankings

10th 土木工程 Civil Engineering	**21st** 机械工程 Mechanical Engineering	**37th** 人工智能 Artificial Intelligence
38th 环境工程 Environmental Engineering	**39th** 化学 Chemistry	**40th** 工程学 Engineering
40th 化学工程 Chemical Engineering	**57th** 计算机科学 Computer Science	**79th** 材料科学 Materials Science