

遥感科学与技术专业培养方案

专业名称与代码：遥感科学与技术 (081202)

专业培养目标：

- 1. 培养具备良好综合素质和职业道德；
- 2. 掌握遥感科学、测绘科学、地理信息科学基础理论、知识和技能；
- 3. 结合计算机科学与技术 在国土资源、城市规划、水利、电力、地质工程、环境监测、海洋勘查、国防等领域从事空间信息获取、处理、管理与应用的专门高级技术人才。

专业毕业要求：

具备扎实的数理与外语基础，牢固掌握计算机理论和技术，系统学习遥感科学、测绘科学和地理信息科学的理论和知识，并接受系统开发技能和应用方法训练，能结合计算机技术、地理信息技术分析解决遥感及测绘科学研究与应用中实际问题，并具备从事空间信息相关领域科学研究和工程开发等方面的能力。

- 1. 具备良好的综合素质，包括思想道德修养、科学素质、人文素质、心理和身体素质，坚持社会主义核心价值观；具有良好的职业道德与修养，具备法律法规意识；
- 2. 具备扎实的数理与外语基础，具有从事工程与科研所需的相关自然科学知识以及一定的经济管理知识；
- 3. 系统掌握遥感科学、测绘科学、地理信息科学的理论、知识和技能；
- 4. 系统掌握计算机科学的理论、知识和体系，并能结合计算机科学解决遥感、测绘、地理信息科学中的工程与科研问题；
- 5. 掌握遥感、测绘、地理信息科学常用仪器与软件，具备综合运用遥感、测绘、地理信息技术从事相关领域科学研究和工程实践的能力；
- 6. 具有归纳、整理、分析实验结果，撰写论文，参与学术交流的能力；
- 7. 具有自我学习的能力，能通过继续教育等途径拓展自身的知识体系，能适应遥感、测绘科学与地理信息学科的发展。

毕业要求实现及途径：

| 序号 | 毕业要求 | 实现途径（教学过程） |
|----|--|---|
| 1 | 具备良好的综合素质 | <p>①课堂教学：毛泽东思想和中国特色社会主义理论体系概论、马克思主义基本原理、思想道德修养与法律基础、军事理论、中国近现代史纲要、体育 I -IV、大学生就业指导、以及各类通选课。</p> <p>②课外学习：大学生“暑假社会实践”开展社会调查。</p> |
| 2 | 具备扎实的数学与外语基础，具有从事工程与科研所需的相关自然科学知识以及一定的经济管理知识 | <p>①课堂教学：高等数学 A、线性代数 A、概率论与数理统计 A、大学物理、大学英语以及自然科学类、经济管理类选修课等。</p> |

| 序号 | 毕业要求 | 实现途径(教学过程) |
|----|--|--|
| | 识 | ② 课外学习 : 参加英语竞赛、数学建模比赛等活动等、相关学术报告。 |
| 3 | 掌握遥感科学、测绘科学、地理信息科学的理论、知识和技能 | ① 课堂教学 : 数字测量学、自然地理与地质学、遥感原理与应用、遥感解译与制图、地理信息系统原理、误差处理与测量平差基础、大地测量学基础、数字摄影测量、微波遥感、热红外遥感、航空航天数据获取、雷达干涉测量、激光雷达技术、近景摄影测量、三维GIS、物联网技术与应用、地理空间信息服务、数字测量学实习、地理信息系统实习、数字摄影测量实习、自然地理与地质学实习。 ② 课外学习 : 参加行业类竞赛(MapGIS 二次开发大赛等)、参加各类学术报告讲座。 |
| 4. | 系统掌握计算机科学的理论、知识和体系,并能结合计算机科学解决遥感、测绘、地理信息科学中的工程实践问题; | ① 课堂教学 : 计算机高级语言程序设计 C++、面向对象程序设计 B、数据结构、数据库概论 A、遥感仪器与软件应用、遥感图像处理、模式识别、面向对象软件工程与 UML、软件过程管理、计算机高级语言课程设计(C++)、面向对象程序设计课程设计、数据结构课程设计 A、数据库课程设计、遥感图像处理课程设计,以及上述各门课程的实践教学环节(详见各门课程大纲)。 ② 课外学习 : 参加全国计算机等级考试。 |
| 5 | 掌握遥感、测绘、地理信息科学常用仪器与软件,具备综合运用遥感、测绘、地理信息技术从事相关领域科学研究和工程实践的能力 | ① 课堂教学 : 遥感仪器与软件应用、遥感应用模型、遥感信息工程、数字地面模型、GNSS 原理及其应用、国土资源遥感、地质与灾害应急遥感、大气遥感与雾霾监测、海岛与海岸带遥感、摄影测量课程设计、以及上述各门课程的实践教学环节(详见各门课程大纲)。 ② 课外学习 : 产学研、大学生挑战杯竞赛、参加学术报告。 |
| 6 | 具有归纳、整理、分析实验结果,撰写论文,参与学术交流的能力。 | 遥感专业文献阅读与写作、各门课程的课堂讨论、报告。 |
| 7 | 具有自我学习的能力,能通过继续 | 毕业设计、各门课程的理论学习及课程实践。 |

| 序号 | 毕 业 要 求 | 实现途径（教学过程） |
|----|--------------------------------------|------------|
| | 教育等途径拓展自身的知识体系，能适应遥感、测绘科学与地理信息学科的发展。 | |

主干学科：测绘科学与技术；计算机科学与技术；地理学。

核心课程：数字测量学、自然地理与地质学、遥感原理与应用、地理信息系统原理、遥感图像处理、遥感信息工程、数字摄影测量、微波遥感、遥感应用模型、数字地面模型。

主要实践性教学环节：计算机高级语言课程设计(C++)、面向对象程序设计课程设计、自然地理与地质学实习、数字测量学实习、数据库课程设计、数据结构课程设计、地理信息系统实习 B、遥感图像处理课程设计、数字摄影测量实习、毕业设计。

修业年限：四年。

授予学位：工学学士。

相近专业：测绘工程。

Program for Remote Sensing Science and Technology

Specialty and Code: Remote Sensing Science and Technology (081202)

Education Objective:

1. The goal of the Undergraduate Program of RS Science and Technology is to develop comprehensive quality and excellent professional ethics
2. To make them master the basic theory, knowledge and skills of remote sensing science, surveying and mapping and geographic information.
3. They should apply computer science and technology in the fields of land resource remote sensing, urban planning, hydraulic engineering, electrical power engineering, geology project, environmental monitoring, and ocean investigation, national defense, and so on to acquire process and analyze the information of remote sensing. They should also be professionally high-level technical talented person of related spatial information engineering application.

Graduation Requirements: After mastering the foundation of mathematics, physics and foreign language, the students will master computation science and technology fully, and study remote sensing science, survey and mapping science, the geographic information system computer science systemically. They will be trained to master how to develop system and application method. So they will be able to do research work and engineering exploitation.

1. To obtain comprehensive quality, including ideological and moral cultivation, scientific quality, cultural quality, psychological and physical quality, adhere to the socialist core values. Have good professional ethics and self-cultivation, have the consciousness of laws and regulations.
2. To be qualified with solid mathematical foundation and foreign language. To master natural science knowledge and knowledge of economic management, both are required for the engineering and scientific research.
3. To grasp the basic principle, theory, knowledge and skill of remote sensing science, surveying and mapping science, and geographic information system.
4. To master the theory, knowledge and system of computer science, so undergraduates should unify the computer technology to solve engineering and scientific problems in remote sensing, surveying and mapping and geo-information.
5. Be able to use the specific software and instruments in remote sensing and photogrammetry. With the integrated use of surveying and mapping, geographic information technology and remote sensing, graduates are engaged in the related fields of scientific research and engineering practice.
6. To have the ability of concluding, reorganizing, and analyzing the experiment results, writing paper, participating in academic exchanges activities.
7. To develop the ability of self-learning, which means students are able to expand their knowledge system through the way such as continuing education. Be able to adapt to the development of remote sensing.

Graduation requirements and ways to achieve:

| ID | Graduation Requirements | ways to achieve (Teaching Process) |
|----|--|---|
| 1 | Comprehensive Qualities | <p>① Classroom teaching: Principles of Marxism, Mao Tse-tung Thought and Introduction to the Theoretical System of Socialism with Chinese Characteristics, The Essentials of Modern Chinese History, Morality Education & Fundamentals of Law, Physical Education, other Liberal Education Courses.</p> <p>② Extracurricular learning: Social Investigation</p> |
| 2 | mathematical foundation and foreign language, knowledge of economic management | <p>① Classroom teaching: Advanced Mathematics A、Linear Algebra A, Probability and Statics A, College Physics C, College English</p> <p>② Extracurricular learning: College Students English Test, Mathematical Contest in Modeling, academic report</p> |
| 3 | To grasp the basic principle, theory, knowledge and skill of remote sensing science, surveying and mapping science, and geographic information system. | <p>① Classroom teaching: Digital Surveying, Physical Geography and Geology, An Introduction of Remote Sensing, Remote sensing Image Interpretation and Mapping, The Principles of Geographic Information System, Error Theory and surveying Adjustment B, Geodesy, Photogrammetry A, Microwave Remote Sensing, Thermal Infrared Remote Sensing, Aerospace data Acquisition, Radar interferometry, Lidar Technology, Close Range Photogrammetry, 3D GIS, Technologies and Applications of Internet of Things, Geographic Spatial Information Service, Practice of Geographic Information Systems B, Practice of Digital Surveying, Physical Geography and Geology Practice.</p> <p>② Extracurricular learning: Participate in competition (MapGIS Development Competition) and academic report</p> |
| 4. | To master the theory, knowledge and | ① Classroom teaching: Computer High-Level |

| ID | Graduation Requirements | ways to achieve (Teaching Process) |
|----|---|---|
| | system of computer science, so undergraduates should unify the computer technology to solve engineering and scientific problems in remote sensing, surveying and mapping and geo-information. | Language C++, Object-Oriented Programming B, Data Structure, An Introduction of Database A. Application Of Remote Sensing Software and Instruments, Remote Sensing Image Processing, Pattern Recognition, Object-Oriented Software Engineering & UML, Projects Computer High-Level Language Course (C++), Projects of Object-Oriented Programming, Projects of Database, Projects of Data Structure, Comprehensive Practice for Remote Sensing. ② Extracurricular learning: participate in national computer level test |
| 5 | Be able to use the specific software and instruments in remote sensing and Photogrammetry. With the integrated use of surveying and mapping, geographic information technology and remote sensing, graduates are engaged in the related fields of scientific research and engineering practice. | ① Classroom teaching : Application Of Remote Sensing Software and Instruments, Application Model of Remote sensing, Remote Sensing Engineering, Digital Terrain Model, Principles and Applications of GNSS, Land Resource Remote sensing, Geosciences and Hazard Remote sensing, Atmospheric Remote sensing and Haze Monitoring, Island and Coastal Zone Remote Sensing, Digital Photogrammetry Practice. ② Extracurricular learning: Industry-university-research cooperation, College students challenge cup competition, academic report. |
| 6 | To have the ability of concluding, reorganizing, and analyzing the experiment results, writing paper, participating in academic exchanges activities. | Up-to-date Specialized Literature Searching and writing, discussion in class, report. |
| 7 | To develop the ability of self-learning, which means students are able to expand their knowledge system through the way such as continuing education. Be able to adapt to the development of remote sensing, surveying and mapping science and geographic information | Sessions of self-learning for every courses, every course practice, and Graduation Design (Thesis). |

Major Disciplines: Surveying and Mapping.

Main Courses: Physical Geology and Geomorphology, Remote Sensing Principles and Applying, Photogrammetry, The Principles of GIS, Data Structure, Digital Remote Sensing Image Processing, Remote sensing Engineering, Photogrammetry, Microwave Remote sensing, Application Model of Remote sensing, Digital Terrain Model.

Practical Work: Projects of Object-Oriented Programming, Projects of Data Structure A, Projects of Database, Practice of Geographic Information Systems B, Practice of Digital Surveying, Practice of Digital Photogrammetry, Practice of Physical Geography and Geology, Projects of Remote Sensing Image Processing, Comprehensive Practice of Remote Sensing, Graduation Design (Thesis).

Duration: Four years.

Degree Granted: Bachelor of Engineering.

Related Specialties: Surveying Engineering.

遥感科学与技术专业课程教学计划表
Course Descriptions of RS Science and Technology

| 课程类别 Classification | 课程编号 Code | 课程名称 Course Name | 学分 Crs | 学时 Hrs | 学时分类 Class Hours | | 先修课程 Prerequisite courses | 学期学分分配 Semester Credits | | | | | | | |
|------------------------------------|------------------|--|-----------|-----------|---------------------|------------|------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | 一 | 二 | 三 | 四 | 五 | 六 | 七 | 八 |
| | | | | | 讲课 Lec. | 实验 Lab. | | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th |
| 通识教育课 Liberal Education Courses | 必修 Compulsory | 11706200 马克思主义基本原理 Principles of Marxism | 3 | 48 | 48 | | | | 3 | | | | | | |
| | | 11706500 毛泽东思想与中国特色社会主义理论体系概论 Introduction to Mao Tse-tung Thought and the Theoretical System of Socialism with Chinese Characteristics | 4 | 64 | 64 | | | | | | 4 | | | | |
| | | 11711800 中国近现代史纲要 The Essentials of Modern Chinese History | 2 | 32 | 32 | | | | | 2 | | | | | |
| | | 120002*0 思想道德修养与法律基础 Morality Education and Fundamentals of Law | 3 | 48 | 48 | | | 1.5 | 1.5 | | | | | | |
| | | 113076*0 体育 Physical Education | 4 | 144 | 144 | | | 1 | 1 | 1 | 1 | | | | |
| | | 109116*0 大学英语 (ABC) College English (ABC) | 12 | 192 | 192 | | | 3 | 3 | 3 | 3 | | | | |
| | | 21919400 计算机高级语言程序设计(C++) High-level programming language (C++) | 3.5 | 56 | 36 | 20 | | 3.5 | | | | | | | |
| | | 21114500 信息导论 Introduction to Information | 1 | 16 | 16 | | | 1 | | | | | | | |
| | | 14300100 军事理论 Military Theory | 2 | 32 | 32 | | | 2 | | | | | | | |
| | 选修 Elective | 总计 12 学分, 含创新创业选修课学分, 跨学科选修课不低于 6 学分 | | 12 | 192 | | | | | | | | | | |
| 学科基础课 Fundamental Courses | 小计 Sum | | 46.5 | 824 | 612 | 20 | | 12 | 8.5 | 6 | 8 | | | | |
| | 212127*1 | 高等数学 A Advanced Mathematics A | 11.5 | 184 | 184 | | | 5 | 6.5 | | | | | | |
| | 21212801 | 线性代数 A Linear Algebra A | 3.5 | 56 | 56 | | | 3.5 | | | | | | | |
| | 21213501 | 概率论与数理统计 A Probability and Statics A | 3.5 | 56 | 56 | | | | | 3.5 | | | | | |
| | 212130*3 | 大学物理 C College Physics C | 6 | 96 | 96 | | | | 3.5 | 2.5 | | | | | |

| 课程类别 Classification | 课程编号 Code | 课程名称 Course Name | 学分 Crs | 学时 Hrs | 学时分类 Class Hours | | 先修课程 Prerequisite courses | 学期学分分配 Semester Credits | | | | | | | |
|---------------------------------|--------------|--|-----------|-----------|---------------------|------------|------------------------------|----------------------------|----------|----------|----------|----------|----------|----------|----------|
| | | | | | | | | | | | | | | | |
| | | | | | 讲课 Lec. | 实验 Lab. | | 一 1st | 二 2nd | 三 3rd | 四 4th | 五 5th | 六 6th | 七 7th | 八 8th |
| | 21213202 | 物理实验 B Physics Experiments B | 2 | 32 | | 32 | | | 2 | | | | | | |
| | 21906800 | 面向对象程序设计 B Object-Oriented Programming B | 3 | 48 | 28 | 20 | | | 3 | | | | | | |
| | 21915900 | 数据结构 A Data Structure A | 4 | 64 | 48 | 16 | | | | 4 | | | | | |
| | 21908701 | 数据库概论 A Introduction to Database A | 3.5 | 56 | 44 | 12 | | | | 3.5 | | | | | |
| | 20107300 | 自然地理与地质学 Physical Geography and Geology | 2.5 | 40 | 40 | | | | 2.5 | | | | | | |
| | 21123100 | 数字测量学 Digital Surveying | 3.5 | 56 | 36 | 20 | | | | 3.5 | | | | | |
| | 21123200 | 模式识别 Pattern Recognition | 2.5 | 40 | 32 | 8 | | | | | 2.5 | | | | |
| | 小计 Sum | | 45.5 | 728 | 620 | 108 | | 8.5 | 17.5 | 17 | 2.5 | | | | |
| 专业主干课 Main Specialty Courses | 21117700 | 遥感原理与应用 Principles and Applications of Remote Sensing | 2.5 | 40 | 40 | 0 | | | 2.5 | | | | | | |
| | 21123300 | 航空与航天数据获取 Aerial and Space Data Acquisition | 1.5 | 24 | 24 | 0 | | | | 1.5 | | | | | |
| | 21129100 | 遥感图像解译与制图 Remote Sensing Image Interpretation and Mapping | 2 | 32 | 20 | 12 | | | | 2 | | | | | |
| | 21117900 | 遥感仪器与软件应用 Application of Remote Sensing Software and Instrument | 2.5 | 40 | 20 | 20 | | | | | 2.5 | | | | |
| | 21110600 | 遥感图像处理 Remote Sensing Image Processing | 2.5 | 40 | 28 | 12 | | | | | 2.5 | | | | |
| | 21128500 | 微波遥感 Microwave Remote Sensing | 3 | 48 | 40 | 8 | | | | | | 3 | | | |
| | 21123400 | 遥感应用模型 Application Model of Remote Sensing | 3.5 | 56 | 36 | 20 | | | | | | 3.5 | | | |
| | 21111000 | 遥感信息工程 Remote Sensing Engineering | 2 | 32 | 24 | 8 | | | | | | | 2 | | |
| | 21114800 | 地理信息系统原理 Principles of Geographic Information Systems | 3 | 48 | 28 | 20 | | | | | 3 | | | | |
| | 21108100 | 数字地面模型 Digital Terrain Model | 2 | 32 | 24 | 8 | | | | | | | 2 | | |
| | 21123502 | 误差理论与测量平差基础 B Error Theory and Foundation of Surveying Adjustment | 2.5 | 40 | 32 | 8 | | | | | 2.5 | | | | |
| | 21123602 | GNSS 原理及其应用 B GNSS Principles and Applications B | 2.5 | 40 | 32 | 8 | | | | | 2.5 | | | | |
| | 21128300 | 大地测量基础 Geodesy | 3.5 | 56 | 46 | 10 | | | | | | 3.5 | | | |
| | 21123700 | 数字摄影测量 Digital Photogrammetry | 4 | 64 | 52 | 12 | | | | | | | 4 | | |

| 课程类别 Classification | 课程编号 Code | 课程名称 Course Name | 学分 Crs | 学时 Hrs | 学时分类 Class Hours | | 先修课程 Prerequisite courses | 学期学分分配 Semester Credits | | | | | | | |
|---------------------------|--------------|--|-----------|-----------|---------------------|------------|------------------------------|----------------------------|----------|----------|----------|----------|----------|----------|----------|
| | | | | | | | | 一 1st | 二 2nd | 三 3rd | 四 4th | 五 5th | 六 6th | 七 7th | 八 8th |
| | | | | | 讲课 Lec. | 实验 Lab. | | | | | | | | | |
| | 小计 Sum | | 37.0 | 592 | 446 | 146 | | | 2.5 | 3.5 | 13 | 10 | 8 | | |
| 专业选修课 Elective Courses | | 具体见专业选修课列表 | 12 | 192 | | | | | | | | | | | |
| 合计 Sub-total | | | 141 | 2336 | 1678 | 274 | | 20.5 | 28.5 | 26.5 | 23.5 | 10 | 8 | | |
| 实践环节 Practical Work | 44300200 | 军事训练 Military Training | 2 | 2 周 | | | | 2 | | | | | | | |
| | 41919500 | 计算机高级语言课程设计 (C++) Projects of High-level programming language (C++) | 1.5 | 1.5 周 | | | | 1.5 | | | | | | | |
| | 41920200 | 面向对象程序设计课程设计 Projects of Object-Oriented Programming | 1.5 | 1.5 周 | | | | | 1.5 | | | | | | |
| | 41920901 | 数据结构课程设计 A Projects of Data Structure A | 2 | 2 周 | | | | | | 2 | | | | | |
| | 41921200 | 数据库课程设计 Projects of Database | 2 | 2 周 | | | | | | 2 | | | | | |
| | 41123802 | 地理信息系统实习 B Practice of Geographic Information Systems B | 1 | 1 周 | | | | | | | 1 | | | | |
| | 41123900 | 数字测量学实习 Practice of Digital Surveying | 1 | 1 周 | | | | | | 1 | | | | | |
| | 41124000 | 数字摄影测量实习 Practice of Digital Photogrammetry | 2 | 2 周 | | | | | | | | | 2 | | |
| | 40115300 | 自然地理与地质学实习 Practice of Physical Geography and Geology | 2 | 2 周 | | | | | 2 | | | | | | |
| | 41124200 | 遥感图像处理课程设计 Projects of Remote Sensing Image Processing | 2 | 2 周 | | | | | | | 2 | | | | |
| | 41124300 | 遥感专业综合实习 Comprehensive Practice of Remote Sensing | 2 | 2 周 | | | | | | | | | 2 | | |
| | 41122300 | 毕业设计（论文） Graduation Design (Thesis) | 16 | 16 周 | | | | | | | | | | | 16 |
| | 小计 Sum | | 35 | 35 周 | | | | 3.5 | 3.5 | 5 | 3 | | 4 | | 16 |

| 课程类别 Classi- fication | 课程 编号 Code | 课程名称 Course Name | 学分 Crs | 学时 Hrs | 学时分类 Class Hours | | 先修课程 Prerequisite courses | 学期学分分配 Semester Credits | | | | | | | |
|--|------------------|---|-----------|--------------|------------------------|------------|---------------------------------|----------------------------|-----|------|------|-----|-----|-----|-----|
| | | | | | | | | 一 | 二 | 三 | 四 | 五 | 六 | 七 | 八 |
| | | | | | 讲课 Lec. | 实验 Lab. | | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th |
| 创新创业学习学分 Freedom study | ZZ35S | 社会调查 Social Investigation | 2 | | | | | | | | | | | | |
| | | 其他(学科竞赛、发明创造、科研报告) Others (Contest, Invention, Innovation and Research Presentation) | 3 | | | | | | | | | | | | |
| | 小计 Sum | | 5 | | | | | | | | | | | | |
| 总计 Total | | | 181 | 2336+ 35周 | 1678 | 274 | | 24 | 32 | 32.5 | 27.5 | 10 | 12 | | 16 |
| 可开出专业选修课列表 Specialty Elective Courses | 遥感与摄影测量方向 | | | | | | | | | | | | | | |
| | 21124400 | 雷达干涉测量 Radar Interferometry | 2 | 32 | 20 | 12 | | | | | | | 2 | | |
| | 21105400 | 激光雷达技术 Lidar Technology | 2 | 32 | 24 | 8 | | | | | | | 2 | | |
| | 20512600 | 近景摄影测量 Close Range Photogrammetry | 1.5 | 24 | 24 | 0 | | | | | | | | 1.5 | |
| | 21124500 | 测绘管理与法律法规 Surveying Management and Laws | 1.5 | 24 | 24 | 0 | | | | | | | | 1.5 | |
| | 资源与环境遥感 | | | | | | | | | | | | | | |
| | 21118300 | 热红外遥感 Thermal Infrared Remote Sensing | 1.5 | 24 | 24 | 0 | | | | | | 1.5 | | | |
| | 21105000 | 国土资源遥感 Land Resource Remote Sensing | 2 | 32 | 32 | | | | | | | | 2 | | |
| | 21124600 | 地质与灾害遥感 Geosciences and Hazard Remote Sensing | 2 | 32 | 32 | | | | | | | | 2 | | |
| | 21110400 | 遥感科学专业前沿文献阅读与写作 Up-to-date Specialized Literature Searching and writing | 2 | 32 | 32 | 0 | | | | | | | 2 | | |
| | 21124700 | 大气遥感与雾霾监测 Atmospheric Remote sensing and Haze Monitoring | 2 | 32 | 32 | 0 | | | | | | | 2 | | |
| | 21124800 | 海岛与海岸带遥感 Island and Coastal Zone Remote Sensing | 1.5 | 24 | 24 | 0 | | | | | | | 1.5 | | |
| | 21124900 | 对地观测与全球变化 Earth Observing and Global Change Detection | 2 | 32 | 32 | 0 | | | | | | | | 2 | |
| | 遥感信息工程方向 | | | | | | | | | | | | | | |
| | 21128400 | 三维地理信息系统 3D GIS | 2 | 32 | 24 | 8 | | | | | | 2 | | | |
| | 21127802 | 数字信号处理 B Digital Signal Processing B | 2 | 32 | 28 | 4 | | | | | | 2 | | | |
| | 21119900 | 高性能计算 High Performance Computation | 2.5 | 40 | 24 | 16 | | | | | | 2.5 | | | |

| 课程类别 Classification | 课程编号 Code | 课程名称 Course Name | 学分 Crs | 学时 Hrs | 学时分类 Class Hours | | 先修课程 Prerequisite courses | 学期学分分配 Semester Credits | | | | | | | |
|------------------------|--------------|---|-----------|-----------|---------------------|------------|------------------------------|----------------------------|----------|----------|----------|----------|----------|----------|----------|
| | | | | | | | | 一 1st | 二 2nd | 三 3rd | 四 4th | 五 5th | 六 6th | 七 7th | 八 8th |
| | | | | | 讲课 Lec. | 实验 Lab. | | | | | | | | | |
| | 21122700 | 空间统计与分析 Spatial Statistic and Analysis | 2.5 | 40 | 24 | 16 | | | | | | 2.5 | | | |
| | 21107200 | 软件项目管理 Software Project Management | 2.5 | 40 | 40 | 0 | | | | | | 2.5 | | | |
| | 21125300 | 面向对象软件工程与 UML Object-Oriented Software Engineering & UML | 2 | 32 | 24 | 8 | | | | | | | 2 | | |
| | 21125100 | 地理空间信息服务 Geospatial Information Service | 2 | 32 | 20 | 12 | | | | | | | 2 | | |
| | 21917500 | 物联网技术与应用 Technologies and Applications of Internet of Things | 2.5 | 40 | 32 | 8 | | | | | | | 2.5 | | |
| | 41125200 | 3S 综合实践 3S Comprehensive Practice | 3 | | | 6 周 | | | | | | | | 3 | |

注：1 通识教育选修课学分，专业选修课学分以及创新创业自主学习学分未列入具体学期。

2 “3S 综合实践”为第七学期的专业综合实践选修课程，由教师开展遥感科学与技术领域的综合实践能力教学。开课时间为 6 周给 3 学分，具体由教师带领学生针对本专业开展综合应用与开发。

遥感科学与技术专业课程分类统计

| | 通识教育课程 Liberal Education Courses | | 学科基础课 Disciplinary Fundamental Courses | 专业主干课 Main Specialty Courses | 专业选修课 Specialty Elective Courses | 实践环节 Practical Work | 自主学习 Autonomous Learning | 学时总计 Total Hours | 学分总计 Total Credits |
|------------|-------------------------------------|--------|---|---------------------------------|-------------------------------------|------------------------|-----------------------------|---------------------|-----------------------|
| | 必修 | 选修 | | | | | | | |
| 学时/ 学分 | 632/34.5 | 192/12 | 728/45.5 | 592/37 | 192/12 | 35 周/35 | 5 | 2336+ 35 周 | 181 |
| 学分所 占比例 | 25.7% | | 25.1% | 20.4% | 6.6% | 19.3% | 2.8% | | 100% |