

# 兰州大学信息科学与工程学院

程 1958 创办的 电  
。1980 成 电 ， 1986 成 电  
。2000 电  
、 并成 大  
程 。

89 ， 15 ， 副 44  
， 得 ， “百 才 程”  
， 部 ( ) 才 ， 甘 高层  
次 才，

戴备点、甘电点、甘  
 础 范。程 的大  
 标,秉承“博、高”的,  
 持“定,方,发,”的导  
 ,发,部,“  
 带”地“+”的,打  
 的,出点,大产、产  
 等的服,把成部地  
 的才地创地。

|     |         |        |   |  |
|-----|---------|--------|---|--|
|     |         |        |   |  |
| 电   | 080714T | 430101 | 4 |  |
| 程   | 080703  | 430102 | 4 |  |
|     | 080717T | 430205 | 4 |  |
|     | 080901  | 430201 | 4 |  |
| 安   | 080904K | 430402 | 4 |  |
| 大   | 080910T | 430204 | 4 |  |
| (方) | 080910H | 430203 | 4 |  |

长

0931-8912405

# 兰州大学信息科学与工程学院 信息安全专业人才培养方案

大 1981 的本  
, 1986 成 , 2000 、  
电 并成 大  
程 。 2004 , 程 采 2+2 方  
安 方 本 , 2007 , 程  
采 ( 安 方 ) 方  
安 方 本 的 , 2014  
程 采 安 方 安 方 本 的  
。  
范 地、  
部 程 、 LINUX 、  
甘 穿戴 备 点 、 甘 电 点  
、 甘 础 范 、 甘  
才 地、 IBM 部等。 安  
础 6 个  
7 个, 安 1 个。  
本 础, 的 部  
“ 个 百 ” 奋 斗 标 步 动 , 持 “ 本  
本”, 不 断 本 创 、 创 、 度 创  
创 发 , 安 测 程 ,  
防、 分 分 复 程 等

程，创创，促  
，成，  
安高才，“办  
本，本才”的。

本发、  
安大“”，彻党的  
方，的程、创创、  
，的础、的  
、的防分、的  
、  
发的创才，干部  
、高等、单、部  
从安、发、

本毕达到标：

标 1: 的 础、程 础、  
础、防 分 础，地分  
、安 等 的复 程 ；

标 2: 备 程 ， 发 ，  
并 方案 、 定、 程 、 、  
持 发 等 ， 策 创 ；

标 3: ， 奉 、吃  
服 的 ； 道德， 的 底  
；

标 4: 的 ，

队分、；

标5: 不断调的，  
步、发发。

才标标，本毕的  
本：

1. 程：、程基础  
、安等复程  
。

1.1 、程基础  
对、安等复程的表。

1.2 对、安等的对  
并。

1.3 、程基础  
、分、安等的复程  
，对方案比改。

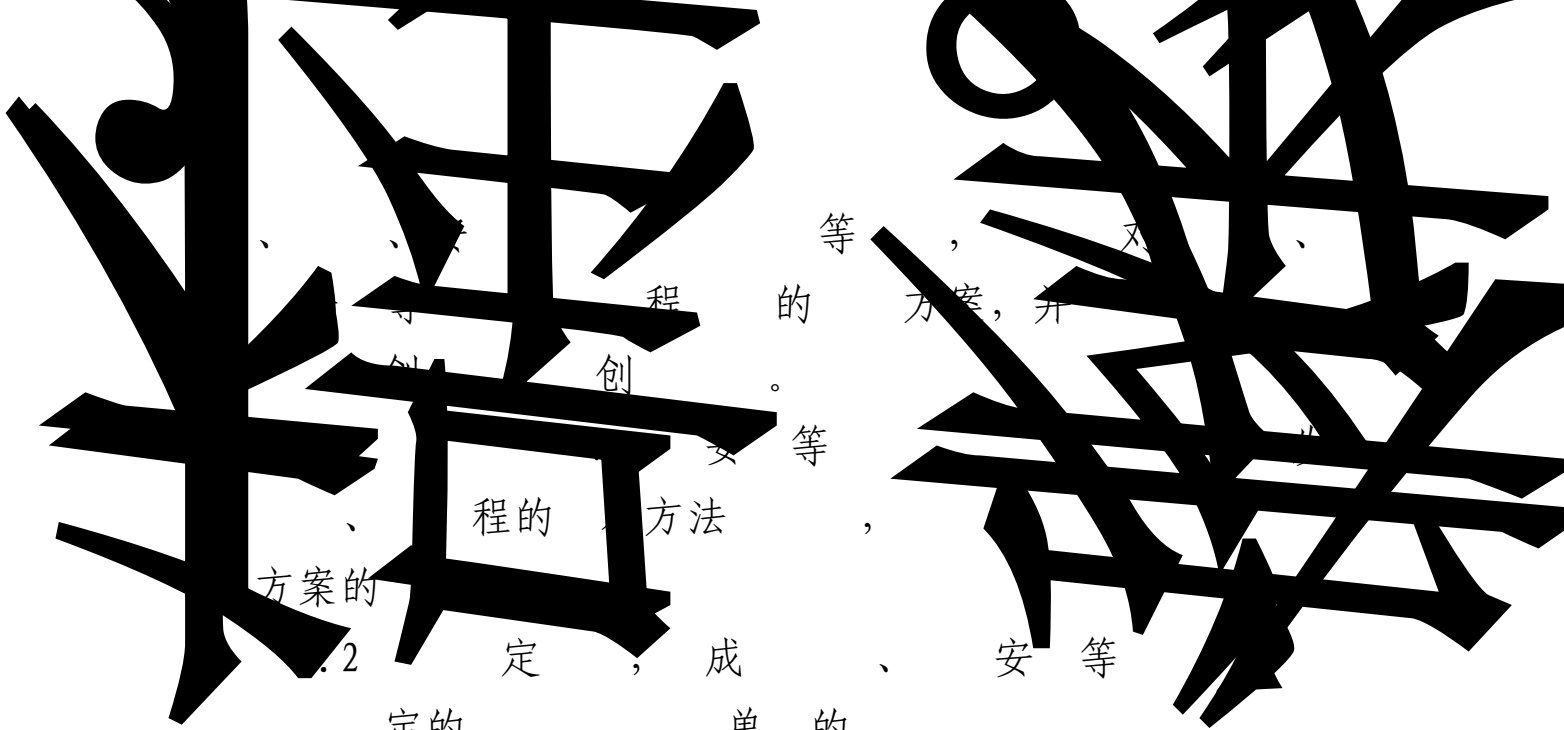
2. 分：、  
段，对、安等复程  
别、分表达，得。

2.1 对、安等的复程  
抽分，别参。

2.2 方法对、  
安等的复程表达。

2.3 ，对  
方案，分比不的方案得。

3. / 发方案：法法范畴，



、等、对、程的、方、并、创、创、安、等、程的、方法、方案的、

2. 定、成、安等、定的、单的、

3.3 成、安等的、创、

3.4 法、法、范畴、安、等、分、方案的、

4. : 本的、方法、安等的、方法、复、程

步抽



感，崇 动， 程 道德 范，

。

8.1 的 ，

。

8.2 ， 个 步 发 的辩 ，  
服 的 。

8.3 诚 ， 程 道德 范；崇 动，  
诚 动、创 动的 。

9. 个 队： 定的 队  
， 多 背 的 队 承担个 、 队成 负  
的 ， 成 承担的 。

9.1 多 背 的 队成 、 ，  
成承担的 。

9.2 、 调 队 。

10. ： 、 安 等 复 程  
， 包 报告  
稿、陈 发 、 表达 ， 并 备 定  
的 ， 背 的 。

10.1 的 表达，包  
、 、 、 辩 等，  
的差 。

10.2 的 发 、 点，

背 的 。

11. ： 并 本的 程  
方法， 程 动 的 ， 并  
多 。



11.1 并 本的 程 方法，  
程 。

11.2: 程 动 、 安 等  
发 程 的 ， 并 多  
。

12. : 的 ， 不断  
发 的 。

12.1 的 ， 成 的 。

12.2 备 的 ， 读 ， 出 ，  
。

本 12 毕 格毕 的  
。 程 的 动 撑 毕 分  
的二 标点， 从而 达到毕 ， 5  
的 ， 步达到 标的 。

### (一) 学制

### (二) 学分

158 分

### (三) 学位

本 程 大 成， 分 不  
158, :  
A : 必 程， 包 、 、  
、 、 、 、 第二

等 , 必 不 48 分。  
B :

表一：课程体系结构与学时学分分配 表

|  |   |     |          |      |    |       |
|--|---|-----|----------|------|----|-------|
|  |   |     |          |      |    |       |
|  | A |     |          |      | 17 | 306   |
|  |   |     | 1        |      | 2  | 36    |
|  |   |     |          |      | 12 | 216   |
|  |   |     |          |      | 8  | 252   |
|  |   |     | 2020 103 |      | /  | 36    |
|  |   |     | 104      | 2020 | /  | 36    |
|  |   |     |          |      | 2  | 36    |
|  |   |     |          |      | 2  | 36    |
|  |   |     | 5        |      | 5  | 90    |
|  |   |     |          | 0    | 36 |       |
|  |   | 1-3 | 2        |      | 0  | 18    |
|  |   |     |          |      | 48 | 30.4% |

|   |   |          |   |   |        |   |    |      |     |
|---|---|----------|---|---|--------|---|----|------|-----|
|   |   |          |   |   |        |   |    |      |     |
|   |   |          |   |   |        |   | 0  | 18   |     |
|   |   |          |   |   | 1      |   | 0  | 36   |     |
| B |   | 4        | 3 | 2 |        | 8 | 8  | 144  |     |
|   |   |          |   |   | 6      |   | 6  | 108  |     |
|   |   | C1       |   |   |        |   | 43 | 900  |     |
|   |   | C2       |   |   |        |   | 25 | 594  |     |
|   |   | C3       |   |   |        |   | 4  | 144  |     |
|   | D |          |   |   |        |   |    | 33   | 558 |
|   |   |          |   |   |        |   |    | 23.5 | 450 |
|   |   | Java C++ |   |   | Python |   |    | 21   | 684 |

Web

~  
A

表二：公共课学时学分分配表

|  |   |                          |  |   |    |     |
|--|---|--------------------------|--|---|----|-----|
|  |   |                          |  |   |    |     |
|  | 1309194   |                          | Value Morality and Rule of Law   | 3 | 3  | 1   |
|  | 1309061   |                          | Outline of Chinese Modern and Contemporary History   | 3 | 3  | 2   |
|  | 1309195   |                          | Basic Principles of Marxism  | 3 | 3  | 3   |
|  | 1309192   |                          | Introduction to Mao Zedong Thoughts and Theoretical System of Chinese Socialism                              | 3 | 3  | 4   |
|  | 1309193   |                          | The Thought on Socialism with Chinese Characteristics for a New Era  | 3 | 3  | 5   |
|  | 1309064<br>1309065<br>1309066<br>1309067<br>1039198 |                          | Current Situations and Policies  | / | 2  | 1-5 |
|  | 1309110   |                          | The History of the Communist Party of China  | 3 | 2  |     |
|  | 1309111   |                          | The History of the People's Republic of China  |   |    |     |
|  | 1309112   |                          | The History of Reform and Opening up   |   |    |     |
|  | 1309113   |                          | The History of Socialism   |   |    |     |
|  | /   |                          | College Foreign Languages  | 3 | 12 | 1-4 |
|  | 5051001<br>5051002<br>5051003<br>5051004            | 1/4<br>2/4<br>3/4<br>4/4 | Physical Education (1/4)<br>Physical Education (2/4)<br>Physical Education (3/4)<br>Physical Education (4/4) | 2 | 4  | 1-4 |
|  | 5605001<br>5605002                                  |                          | Military Theory<br>Military Skills   | / | 4  | 1-2 |
|  | 1087203   |                          | Mental Health of College Students  | 2 | 2  | 1-2 |
|  | 101404001<br>1<br>101404001                         |                          | Career Planning  |   | 2  | 1-6 |

|  |                     |  |   |   |     |
|--|---------------------|--|---|---|-----|
|  |                     |  |   |   |     |
|  | 2<br>101404001<br>3 |  |   |   |     |
|  | 701404001           |  | Reading, Writing, and Communication     | 0 | 1-7 |
|  | 101404002           |  | Frontier and Interdisciplinary Lectures | 0 | 1-6 |
|  | 406107010           |  | National Security Education             | 0 | 1-6 |
|  | 406107009           |  | Summer School                           | 0 | 1-6 |

表三：第二课堂学时学分分配表

|  |           |  |                                    |   |   |     |
|--|-----------|--|------------------------------------|---|---|-----|
|  |           |  |                                    |   |   |     |
|  | 406107001 |  | Social Practice                    | 2 | 2 | 5   |
|  | 406107002 |  | Productive and Physical Labor      | 2 | 2 | 1-8 |
|  | 406107003 |  | Ideological and Moral Cultivation  | 1 | 1 |     |
|  | 406107004 |  | Innovation and Entrepreneurship    | 1 | 1 |     |
|  | 406107005 |  | Volunteering and Public Service    | 1 | 1 |     |
|  | 406107006 |  | Recreational and Sports Activities | 0 | 0 |     |
|  | 406107007 |  | Work Experience                    | 0 | 0 |     |
|  | 406107008 |  | Skills and Specialties             | 0 | 0 |     |

表四： 通识教育类、跨学科类课程学时学分分配表

|  |  |  |  |  |   |  |
|--|--|--|--|--|---|--|
|  |  |  |  |  |   |  |
|  |  |  |  |  | 8 |  |
|  |  |  |  |  |   |  |
|  |  |  |  |  |   |  |
|  |  |  |  |  |   |  |
|  |  |  |  |  | 6 |  |
|  |  |  |  |  |   |  |
|  |  |  |  |  |   |  |

表五： 专业必修课程学时学分分配表

|    |             |  |  |   |     |   |
|----|-------------|--|--|---|-----|---|
|    |             |  |  |   |     |   |
| C1 | 1401202B 1  |  | Advanced Mathematics ( )                       | 4 | 4   | 1 |
|    | 1401202B 2  |  | Advanced Mathematics ( )                       | 4 | 4   | 2 |
|    | 1402001B 1  |  | Physics ( )                                    | 3 | 3   | 1 |
|    | 1402001B 2  |  | Physics ( )                                    | 3 | 3   | 2 |
|    | 1401221B    |  | Linear Algebra                                 | 3 | 3   | 3 |
|    | 1401222     |  | Probability Theory and Mathematical Statistics | 3 | 3   | 4 |
|    | 104404001   |  | Introduction to Information Science            | 2 | 1   | 1 |
|    | 304404001   |  | Programming Fundamentals                       | 5 | 2.5 | 1 |
|    | 2043155     |  | Discrete Mathematics                           | 4 | 4   | 2 |
|    | 304404002   |  | Electronic Circuit Foundation                  | 4 | 3   | 2 |
|    | 304404003   |  | Data Structure                                 | 7 | 5.5 | 3 |
|    | 305404002   |  | Digital Logic                                  | 4 | 3   | 3 |
|    | 2043259     |  | Introduction to Cyber Security                 | 2 | 2   | 3 |
|    | 2043046     |  | Mathematic Foundations of Information Security | 2 | 2   | 4 |
| C2 | 305404007   |  | Computer Networks                              | 5 | 4   | 3 |
|    | 105404008 1 |  | Penetration Testing ( )                        | 2 | 1   | 3 |
|    | 105404007   |  | Cryptography                                   | 3 | 2   | 4 |
|    | 205404001   |  | Foundation Experiment of Network Security      | 2 | 1   | 4 |
|    | 305404006   |  | Principles of Computer Organization            | 7 | 5.5 | 4 |



|    |             |  |   |   |     |   |
|----|-------------|--|---|---|-----|---|
|    |             |  |   |   |     |   |
|    | 2043054     |  | Database Systems and Security                     | 2 | 2   | 5 |
|    | 2043051     |  | Operating System and Security                     | 3 | 3   | 5 |
|    | 105404008 2 |  | Penetration Testing ( )                           | 2 | 1   | 5 |
|    | 107404025   |  | Privacy Computing                                 | 2 | 2   | 6 |
|    | 2043317     |  | Network Security Evaluation                       | 2 | 2   | 6 |
|    | 4043075     |  | Comprehensive Experiment of Network Security      | 3 | 1.5 | 6 |
| C3 | 206404005   |  | Comprehensive training in programming ability     | - | 2   |   |
|    | 206404006   |  | Comprehensive training in computer system ability | - | 2   | 7 |

表六：专业选修课程学时学分分配表

|           |           |                     |  |   |   |   |
|-----------|-----------|---------------------|--|---|---|---|
|           |           |                     |  |   |   |   |
| D1        | 2043023   |                     | Algorithms: Design and Analysis            | 3 | 3 | 4 |
|           | 107404018 |                     | Formal Language and Formal Methods         | 2 | 2 | 4 |
|           | 107404019 |                     | Computer Applied Mathematics               | 2 | 2 | 5 |
|           | 2043321   |                     | Computer Architecture                      | 2 | 2 | 5 |
|           | 2043016   |                     | Software Engineering                       | 4 | 3 | 6 |
|           | 2043075   |                     | Software Security                          | 2 | 2 | 6 |
|           | 107404030 |                     | IoT Security                               | 2 | 2 | 6 |
|           | 2043081   |                     | Intelligent Terminal Security              | 2 | 2 | 6 |
|           | 107404031 |                     | DigitalData Forensics                      | 2 | 2 | 6 |
|           | 107404032 |                     | Data Security                              | 2 | 2 | 6 |
|           | 107404033 |                     | IndustryControl Security                   | 2 | 2 | 7 |
|           | 2043167   |                     | Security of Wireless Communication Network | 2 | 2 | 7 |
|           | 107404034 |                     | Information Security Engineering           | 2 | 2 | 7 |
|           | 107404049 |                     | Social Cyber-Security                      | 2 | 2 | 7 |
|           | 607404001 |                     | Improvement of Computer System Ability     | 2 | 2 | 7 |
| 607404001 | *         | Innovative Practice | -  | 1 | - |   |
| D2        | 2043253   |                     | Principles of Modern Communications        | 2 | 2 | 5 |
|           | 2043106   |                     | Introduction to Artificial Intelligence    | 2 | 2 | 5 |
|           | 2043292   |                     | Introduction to Data Science               | 2 | 2 | 5 |
|           | 107404022 |                     | Affective Computing                        | 2 | 2 | 5 |



表七：荣誉学士学位课程学时学分分配表

|  |           |  |                                       |   |   |  |
|--|-----------|--|---------------------------------------|---|---|--|
|  |           |  |                                       |   |   |  |
|  | 109404001 |  | Advanced Computer Architecture        | 3 | 3 |  |
|  | 109404002 |  | Modern Algebra                        | 3 | 3 |  |
|  | 109404003 |  | Modern Optimization Algorithm         | 3 | 3 |  |
|  | 109404004 |  | Advanced Artificial Intelligence      | 3 | 3 |  |
|  | 109404005 |  | Network Theory and Technology         | 3 | 3 |  |
|  | 109404006 |  | Data Warehouse and Data Mining        | 3 | 3 |  |
|  | 109404007 |  | Object-oriented method and technology | 3 | 3 |  |

：达到 的 ， ， 定 ， 得 颁发的 。

- (1) 处分。
- (2) 1-7 点 本 的 10%。
- (3) 1-7 成表 程 。
- (4) 毕 等 。

表八：教学计划一览表

|  |  | 1309194   |  | Value Morality and Rule of Law  | 3 | 3 | 54 | 0 | 54 | 0 | 0 | 54  |     |     |     |     |  |  |
|--|--|---|--|---|---|---|----|---|----|---|---|-----|-----|-----|-----|-----|--|--|
|  |  | 1309061   |  | Outline of Chinese Modern and Contemporary History                              | 3 | 3 | 54 | 0 | 54 | 0 | 0 |     | 54  |     |     |     |  |  |
|  |  | 1309195   |  | Basic Principles of Marxism   | 3 | 3 | 54 | 0 | 54 | 0 | 0 |     |     | 54  |     |     |  |  |
|  |  | 1309192   |  | Introduction to Mao Zedong Thoughts and Theoretical System of Chinese Socialism | 3 | 3 | 54 | 0 | 54 | 0 | 0 |     |     |     | 54  |     |  |  |
|  |  | 1309193   |  | The Thought on Socialism with Chinese Characteristics for a New Era             | 3 | 3 | 54 | 0 | 54 | 0 | 0 |     |     |     |     | 54  |  |  |
|  |  | 1309064<br>1309065<br>1309066<br>1309067<br>1039198 |  | Current Situations and Policies   | 2 |   | 36 | 0 | 36 | 0 | 0 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |  |  |

|  |  |           |     |   |    |    |     |    |     |   |     |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|-----------|-----|---|----|----|-----|----|-----|---|-----|--------|----|----|----|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |           |     |   |    |    |     |    |     |   |     |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |           |     |   |    |    |     |    |     |   |     |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 1309110   |     | The History of the Communist Party of China   | 2  | 3  | 36  | 18 | 18  | 0 | 0   |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 1309111   |     | The History of the People's Republic of China |    |    |     |    |     |   |     |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 1309112   |     | The History of Reform and Opening up          |    |    |     |    |     |   |     |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 1309113   |     | The History of Socialism                      |    |    |     |    |     |   |     |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | /         |     | College Foreign Languages                     | 12 | 12 | 216 | 0  | 216 | 0 | 0   | 54     | 54 | 54 | 54 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 5051001   | 1/4 | Physical Education(1/4)                       | 4  | 8  | 144 | 0  | 144 | 0 | 0   | 36     | 36 | 36 | 36 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 5051002   | 2/4 | Physical Education(2/4)                       |    |    |     |    |     |   |     |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 5051003   | 3/4 | Physical Education(3/4)                       |    |    |     |    |     |   |     |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 5051004   | 4/4 | Physical Education(4/4)                       |    |    |     |    |     |   |     |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 5605001   |     | Military Theory                               | 4  |    | 148 | 18 | 18  | 0 | 112 | 36+112 |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 5605002   |     | Military Skills                               |    |    |     |    |     |   |     |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 1087203   |     | Mental Health of College Students             | 2  | 2  | 36  | 30 | 6   | 0 | 0   | 36     |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 101404001 |     | Career Planning                               | 2  |    | 54  |    | 18  |   | 36  |        |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  | 1<br>101404001 |  |                                     |   |   |    |   |    |   |    |    |  |  |  |    |  |  |  |
|--|--|----------------|--|-------------------------------------|---|---|----|---|----|---|----|----|--|--|--|----|--|--|--|
|  |  | 2<br>101404001 |  |                                     |   |   |    |   |    |   |    |    |  |  |  |    |  |  |  |
|  |  | 3<br>101404001 |  |                                     |   |   |    |   |    |   |    |    |  |  |  |    |  |  |  |
|  |  | 406107001      |  | Social Practice                     | 2 | 2 | 72 | 0 | 36 | 0 | 36 |    |  |  |  | 36 |  |  |  |
|  |  | 406107002      |  | Productive and Physical Labor       | 2 | 2 | 72 |   |    |   | 36 | 36 |  |  |  |    |  |  |  |
|  |  | 406107003      |  | Ideological and Moral Cultivation   | 1 | 1 | 36 |   |    |   |    |    |  |  |  |    |  |  |  |
|  |  | 406107004      |  | Innovation and Entrepreneurship     | 1 | 1 | 36 |   |    |   |    |    |  |  |  |    |  |  |  |
|  |  | 406107005      |  | Volunteering and Public Service     | 1 | 1 | 36 |   |    |   |    |    |  |  |  |    |  |  |  |
|  |  | 406107006      |  | Recreational and Sports Activities  | 0 | 0 |    |   |    |   |    |    |  |  |  |    |  |  |  |
|  |  | 406107007      |  | Work Experience                     | 0 | 0 |    |   |    |   |    |    |  |  |  |    |  |  |  |
|  |  | 406107008      |  | Skills and Specialties              | 0 | 0 |    |   |    |   |    |    |  |  |  |    |  |  |  |
|  |  | 701404001      |  | Reading, Writing, and Communication | 0 |   |    |   |    |   |    |    |  |  |  |    |  |  |  |
|  |  | 101404002      |  | Frontier and                        | 0 |   |    |   |    |   |    |    |  |  |  |    |  |  |  |

|  |  |  |           |  | Interdisciplinary Lectures  |   |   |     |  |  |  |  |  |  |  |  |  |  | 2 |
|--|--|--|-----------|--|-----------------------------|---|---|-----|--|--|--|--|--|--|--|--|--|--|---|
|  |  |  | 406107010 |  | National Security Education | 0 | 0 |     |  |  |  |  |  |  |  |  |  |  |   |
|  |  |  | 406107009 |  | Summer School               | 0 | 0 |     |  |  |  |  |  |  |  |  |  |  | 1 |
|  |  |  |           |  |                             |   |   |     |  |  |  |  |  |  |  |  |  |  |   |
|  |  |  |           |  |                             | 8 |   | 144 |  |  |  |  |  |  |  |  |  |  |   |
|  |  |  |           |  |                             |   |   |     |  |  |  |  |  |  |  |  |  |  |   |
|  |  |  |           |  |                             | 6 |   | 108 |  |  |  |  |  |  |  |  |  |  |   |





|  |  | 2043259        | Introduction to Cyber Security                 | 2   | 2 | 36  | 0 | 36 | 0 | 0  |  |  | 36 |     |    |    |  |  |  |
|--|--|----------------|--|-----|---|-----|---|----|---|----|--|--|----|-----|----|----|--|--|--|
|  |  | 2043046        | Mathematic Foundations of Information Security | 2   | 2 | 36  | 0 | 36 | 0 | 0  |  |  |    | 36  |    |    |  |  |  |
|  |  | 305404007      | Computer Networks                              | 4   | 5 | 90  | 0 | 54 | 0 | 36 |  |  | 90 |     |    |    |  |  |  |
|  |  | 105404008<br>1 | Penetration Testing ( )                        | 1   | 2 | 36  | 0 | 0  | 0 | 36 |  |  | 36 |     |    |    |  |  |  |
|  |  | 105404007      | Cryptography                                   | 3   | 2 | 54  | 0 | 18 | 0 | 36 |  |  |    | 54  |    |    |  |  |  |
|  |  | 205404001      | Foundation Experiment of Network Security      | 1   | 2 | 36  | 0 | 0  | 0 | 36 |  |  |    | 54  |    |    |  |  |  |
|  |  | 305404006      | Principles of Computer Organization            | 5.5 | 7 | 126 | 0 | 72 | 0 | 54 |  |  |    | 126 |    |    |  |  |  |
|  |  | 2043054        | Database Systems and Security                  | 2   | 2 | 36  | 0 | 36 | 0 | 0  |  |  |    |     | 36 |    |  |  |  |
|  |  | 2043051        | Operating System and Security                  | 3   | 3 | 54  | 0 | 54 | 0 | 0  |  |  |    |     | 54 |    |  |  |  |
|  |  | 105404008<br>2 | Penetration Testing ( )                        | 1   | 2 | 36  | 0 | 0  | 0 | 36 |  |  |    |     | 36 |    |  |  |  |
|  |  | 107404025      | Privacy Computing                              | 2   | 2 | 36  | 0 | 36 | 0 | 0  |  |  |    |     |    | 36 |  |  |  |
|  |  | 2043317        | Network Security Evaluation                    | 2   | 2 | 36  | 0 | 36 | 0 | 0  |  |  |    |     |    | 36 |  |  |  |

|  |           |   |     |    |    |   |    |   |    |    |
|--|-----------|---|-----|----|----|---|----|---|----|----|
|  |           |   |     |    |    |   |    |   |    |    |
|  |           |   |     |    |    |   |    |   |    |    |
|  | 4043075   | Comprehensive Experiment of Network Security      | 1.5 | 3  | 54 | 0 | 0  | 0 | 54 | 54 |
|  | 206404005 | Comprehensive training in programming ability     | 2   | 36 | 72 | 0 | 0  | 0 | 72 | 2  |
|  | 206404006 | Comprehensive training in computer system ability | 2   | 36 | 72 | 0 | 0  | 0 | 72 | 72 |
|  | 2043023   | Algorithms: Design and Analysis                   | 3   | 3  | 54 | 0 | 54 | 0 | 0  | 54 |
|  | 107404018 | Formal Language and Formal Methods                | 2   | 2  | 36 | 0 | 36 | 0 | 0  | 36 |
|  | 107404019 | Computer Applied Mathematics                      | 2   | 2  | 36 | 0 | 36 | 0 | 0  | 36 |
|  | 2043321   | Computer Architecture                             | 2   | 2  | 36 | 0 | 36 | 0 | 0  | 36 |
|  | 305404010 | Software Engineering                              | 3   | 4  | 72 | 0 | 36 | 0 | 36 | 72 |
|  | 2043075   | Software Security                                 | 2   | 2  | 36 | 0 | 36 | 0 | 0  | 36 |
|  | 107404030 | IoT Security                                      | 2   | 2  | 36 | 0 | 36 | 0 | 0  | 36 |
|  | 2043081   | Intelligent Terminal Security                     | 2   | 2  | 36 | 0 | 36 | 0 | 0  | 36 |
|  | 107404031 | DigitalData Forensics                             | 2   | 2  | 36 | 0 | 36 | 0 | 0  | 36 |
|  | 107404032 | Data Security                                     | 2   | 2  | 36 | 0 | 36 | 0 | 0  | 36 |

|  |  | 107404033 |   | IndustryControl Security                   | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  |  |    | 36 |  |
|--|--|-----------|---|--|-----|---|----|---|----|---|----|--|--|--|--|--|----|----|--|
|  |  | 2043167   |   | Security of Wireless Communication Network | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  |  |    | 36 |  |
|  |  | 107404034 |   | Information Security Engineering           | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  |  |    | 36 |  |
|  |  | 107404049 |   | Social Cyber-Security                      | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  |  |    | 36 |  |
|  |  | 607404001 |   | Improvement of Computer System Ability     | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  |  |    | 36 |  |
|  |  | 607404001 | * | Innovative Practice                        | 1   |   |    |   |    |   |    |  |  |  |  |  |    |    |  |
|  |  | 2043253   |   | Principles of Modern Communications        | 2   | 2 | 36 | 0 | 36 | 0 |    |  |  |  |  |  | 36 |    |  |
|  |  | 2043106   |   | Introduction to Artificial Intelligence    | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  |  | 36 |    |  |
|  |  | 2043292   |   | Introduction to Data Science               | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  |  | 36 |    |  |
|  |  | 107404022 |   | Affective Computing                        | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  |  | 36 |    |  |
|  |  | 2043327   |   | Foundations of Cognitive Science           | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  |  |    | 36 |  |
|  |  | 2043299   |   | Machine Learning                           | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  |  |    | 36 |  |
|  |  | 305404009 |   | Compiler Principles                        | 3.5 | 5 | 90 | 0 | 36 | 0 | 54 |  |  |  |  |  |    | 90 |  |

|  |  |  | 2043079                |          | Introduction to Electronic Commerce         | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |    |    |  | 36 |           |
|--|--|--|------------------------|----------|---|-----|---|----|---|----|---|----|--|--|----|----|--|----|-----------|
|  |  |  | 107404023              |          | Distributed Systems and Data Management     | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |    |    |  | 36 |           |
|  |  |  | 107404026              |          | Intelligent Retrieval                       | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |    |    |  | 36 |           |
|  |  |  | 107404027              |          | Block Chain Principle and Technology        | 2   | 2 | 36 | 0 | 36 | 0 | 0  |  |  |    |    |  | 36 |           |
|  |  |  | 305404003<br>305404004 | Java C++ | Object-Oriented Programming (C++/Java)      | 2.5 | 5 | 90 | 0 | 0  | 0 | 90 |  |  | 90 |    |  |    | C++/ Java |
|  |  |  | 2043010                |          | Assembly Language                           | 1.5 | 3 | 54 | 0 | 0  | 0 | 54 |  |  |    | 54 |  |    |           |
|  |  |  | 2043291                | Python   | Programming in Python                       | 1.5 | 3 | 54 | 0 | 0  | 0 | 54 |  |  |    | 54 |  |    |           |
|  |  |  | 205404003              | *        | Experiment of Operating System and Security | 1.5 | 3 | 54 | 0 | 0  | 0 | 54 |  |  |    | 54 |  |    |           |
|  |  |  | 205404004              | *        | Experiment of Database Systems and Security | 1   | 2 | 36 | 0 | 0  | 0 | 36 |  |  |    | 36 |  |    |           |
|  |  |  | 2043308                | *        | Front-End Interaction Design                | 1   | 2 | 36 | 0 | 0  | 0 | 36 |  |  |    | 36 |  |    |           |

|  |  |  | 2043178   | *     | Super Computing Technology                | 1 | 2 | 36 | 0 | 0  | 0 | 36 |  |  |  |  | 36 |    |    |
|--|--|--|-----------|-------|---|---|---|----|---|----|---|----|--|--|--|--|----|----|----|
|  |  |  | 2043183   | Web * | Databases on Web                          | 1 | 2 | 36 | 0 | 0  | 0 | 36 |  |  |  |  | 36 |    |    |
|  |  |  | 107404005 | *     | Big Data Analysis and In-Memory Computing | 1 | 2 | 36 | 0 | 0  | 0 | 36 |  |  |  |  | 36 |    |    |
|  |  |  | 107404006 | *     | Recommender System                        | 1 | 2 | 36 | 0 | 0  | 0 | 36 |  |  |  |  | 36 |    |    |
|  |  |  | 2043298   | *     | Engineering Cartography                   | 1 | 2 | 36 | 0 | 0  | 0 | 36 |  |  |  |  | 36 |    |    |
|  |  |  | 2043323   |       | Interfaces and Communication              | 2 | 2 | 36 | 0 | 36 | 0 | 0  |  |  |  |  | 36 |    |    |
|  |  |  | 2043258   |       | Cloud Computing and Big Data Processing   | 3 | 4 | 72 | 0 | 36 | 0 | 36 |  |  |  |  | 72 |    |    |
|  |  |  | 107404028 | *     | Social Media Data Analysis                | 1 | 2 | 36 | 0 | 0  | 0 | 36 |  |  |  |  | 36 |    |    |
|  |  |  | 107404029 | *     | Robot Development Practice                | 1 | 2 | 36 | 0 | 0  | 0 | 36 |  |  |  |  |    | 36 |    |
|  |  |  | 2043306   |       | Graduation Design (Thesis)                | 8 |   |    |   |    |   |    |  |  |  |  |    |    | 14 |

|  |  | 109404001 |  | Advanced Computer Architecture        | 3   | 3 | 54 | 0 | 54 | 0 | 0 |  |  |  |  |  |  |  |  |  |
|--|--|-----------|--|---------------------------------------|-----|---|----|---|----|---|---|--|--|--|--|--|--|--|--|--|
|  |  | 109404002 |  | Modern Algebra                        | 3   | 3 | 54 | 0 | 54 | 0 | 0 |  |  |  |  |  |  |  |  |  |
|  |  | 109404003 |  | Modern Optimization Algorithm         | 3   | 3 | 54 | 0 | 54 | 0 | 0 |  |  |  |  |  |  |  |  |  |
|  |  | 109404004 |  | Advanced Artificial Intelligence      | 3   | 3 | 54 | 0 | 54 | 0 | 0 |  |  |  |  |  |  |  |  |  |
|  |  | 109404005 |  | Network Theory and Technology         | 3   | 3 | 54 | 0 | 54 | 0 | 0 |  |  |  |  |  |  |  |  |  |
|  |  | 109404006 |  | Data Warehouse and Data Mining        | 3   | 3 | 54 | 0 | 54 | 0 | 0 |  |  |  |  |  |  |  |  |  |
|  |  | 109404007 |  | Object-oriented method and technology | 3   | 3 | 54 | 0 | 54 | 0 | 0 |  |  |  |  |  |  |  |  |  |
|  |  |           |  |                                       | 158 |   |    |   |    |   |   |  |  |  |  |  |  |  |  |  |

表九：毕业要求对培养目标的支撑关系矩阵

|     |  |  |  |  |  |
|-----|--|--|--|--|--|
|     |  |  |  |  |  |
| 1   |  |  |  |  |  |
| 2   |  |  |  |  |  |
| 3 / |  |  |  |  |  |
| 4   |  |  |  |  |  |
| 5   |  |  |  |  |  |
| 6   |  |  |  |  |  |
| 7   |  |  |  |  |  |
| 8   |  |  |  |  |  |
| 9   |  |  |  |  |  |
| 10  |  |  |  |  |  |
| 11  |  |  |  |  |  |
| 12  |  |  |  |  |  |

表十：课程体系中各个必修教学环节对毕业要求的支撑关系矩阵

(表 “H ( ) \M ( 调) \L (覆盖)” 表 程对毕 的 撑 度)

|  | 1   |     |     | 2.  |     |     | 3. / |     |     |     | 4.  |     |     | 5.  |     |     |     | 6.  |     | 7.  |     | 8.  |     |     | 9.  |     | 10.  |      | 11.  |      | 12.  |      |  |  |  |  |
|--|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|--|--|--|--|
|  | 1.1 | 1.2 | 1.3 | 2.1 | 2.2 | 2.3 | 3.1  | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 5.3 | 5.4 | 6.1 | 6.2 | 7.1 | 7.2 | 8.1 | 8.2 | 8.3 | 9.1 | 9.2 | 10.1 | 10.2 | 11.1 | 11.2 | 12.1 | 12.2 |  |  |  |  |
|  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | H   |     |     |     |     |      |      |      |      |      |      |  |  |  |  |
|  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | H   |     |     |     |      |      |      |      |      |      |  |  |  |  |
|  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | H   |     |     |     |      |      |      |      |      |      |  |  |  |  |
|  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     | H   |     | H   |     |     |     |     |      |      |      |      |      |      |  |  |  |  |
|  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     | H   |     |     | H   |     |     |     |      |      |      |      |      |      |  |  |  |  |
|  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | L   |     |     |     |      |      |      |      |      |      |  |  |  |  |
|  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | H    |      |      |      |  |  |  |  |
|  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | H    |      |      |      |      |      |  |  |  |  |
|  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | H    |      |      |      |      |      |  |  |  |  |



|  |  | 1   |     |     | 2.  |     |     | 3. / |     |     |     | 4.  |     |     | 5.  |     |     |     | 6.  |     | 7.  |     | 8.  |     |     | 9.  |     | 10.  |      | 11.  |      | 12.  |      |   |   |   |
|--|--|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|---|---|---|
|  |  | 1.1 | 1.2 | 1.3 | 2.1 | 2.2 | 2.3 | 3.1  | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 5.3 | 5.4 | 6.1 | 6.2 | 7.1 | 7.2 | 8.1 | 8.2 | 8.3 | 9.1 | 9.2 | 10.1 | 10.2 | 11.1 | 11.2 | 12.1 | 12.2 |   |   |   |
|  |  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |   |   |   |
|  |  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | L   |     |      |      |      |      |      | L    |   |   |   |
|  |  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     | H   |     | H   |     |     |     | H   |     |     |      |      |      |      |      | H    |   |   |   |
|  |  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | L   |     |      |      |      |      |      |      | L |   |   |
|  |  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | L   |     | L   |      |      |      |      |      |      |   | L |   |
|  |  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |   |   | L |
|  |  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     | L   |     | L   |     |     | L   |     |     | L   |     | L    |      | L    |      |      |      | L |   |   |
|  |  | H   |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |   |   |   |
|  |  | H   |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |   |   |   |
|  |  | H   |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |   |   |   |

|  | 1   |     |     | 2.  |     |     | 3. / |     |     |     | 4.  |     |     | 5.  |     |     |     | 6.  |     | 7.  |     | 8.  |     |     | 9.  |     | 10.  |      | 11.  |      | 12.  |      |  |  |
|--|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|--|--|
|  | 1.1 | 1.2 | 1.3 | 2.1 | 2.2 | 2.3 | 3.1  | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 5.3 | 5.4 | 6.1 | 6.2 | 7.1 | 7.2 | 8.1 | 8.2 | 8.3 | 9.1 | 9.2 | 10.1 | 10.2 | 11.1 | 11.2 | 12.1 | 12.2 |  |  |
|  |     |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |  |  |
|  | Н   |     |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     | Н   |     |     | Н   |     |     |     |     |     |      |      |      |      | Н    |      |  |  |
|  |     |     |     |     |     |     |      | Н   |     |     |     |     |     |     | Н   |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |  |  |
|  |     | Н   |     |     | Н   |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |  |  |
|  |     | Н   |     |     |     |     |      |     |     | Н   |     |     | Н   |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |  |  |
|  |     | Н   |     |     |     |     |      | Н   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |  |  |
|  |     | Н   |     |     |     |     |      | Н   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |  |  |
|  |     | Н   |     | Н   |     |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |  |  |
|  |     |     | Н   | Н   |     | Н   |      |     |     |     |     |     | Н   |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |  |  |
|  |     |     | Н   |     |     | Н   |      |     |     |     |     | Н   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |  |  |

|  |  | 1   |     |     | 2.  |     |     | 3. / |     |     |     | 4.  |     |     | 5.  |     |     |     | 6.  |     | 7.  |     | 8.  |     |     | 9.  |     | 10.  |      | 11.  |      | 12.  |      |
|--|--|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
|  |  | 1.1 | 1.2 | 1.3 | 2.1 | 2.2 | 2.3 | 3.1  | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 5.3 | 5.4 | 6.1 | 6.2 | 7.1 | 7.2 | 8.1 | 8.2 | 8.3 | 9.1 | 9.2 | 10.1 | 10.2 | 11.1 | 11.2 | 12.1 | 12.2 |
|  |  |     |     |     |     | H   |     | H    |     | H   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |
|  |  |     |     |     |     | H   |     |      | H   | H   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | H   |     |     | H    |      |      |      |      |      |
|  |  |     |     |     |     |     | H   |      | H   |     | H   | H   |     | H   |     |     |     |     |     |     |     |     |     |     | H   |     |     |      |      |      |      | H    |      |
|  |  |     |     |     |     |     |     |      |     |     |     |     |     | H   |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |
|  |  |     |     |     |     |     |     |      | H   |     |     |     |     |     | H   | H   |     |     |     |     |     |     |     |     | H   |     |     |      |      | H    |      | H    |      |
|  |  |     |     |     |     |     |     |      | H   |     |     |     |     |     |     | H   |     |     |     |     |     |     |     | H   |     | H   |     |      | H    |      | H    |      | H    |

