

# 生物工程专业本科生培养方案

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

|  |  |      |      |      |
|--|--|------|------|------|
|  |  |      |      |      |
|  |  | 17.0 | 63   | 41%  |
|  |  | 4.0  |      |      |
|  |  | 4.0  |      |      |
|  |  | 2.0  |      |      |
|  |  | 28.0 |      |      |
|  |  | 4.0  |      |      |
|  |  | 1.0  |      |      |
|  |  | 2.0  |      |      |
|  |  | 1.0  |      |      |
|  |  |      | 31.5 | 20%  |
|  |  | 31.5 |      |      |
|  |  | 9.0  | 36.5 | 24%  |
|  |  | 17.5 |      |      |
|  |  | 10.0 |      |      |
|  |  | 8.0  | 24   | 15%  |
|  |  | 6.0  |      |      |
|  |  | 10.0 |      |      |
|  |  | 155  | 155  | 100% |

### 1. 思想政治课程

|           |  |     |    |  |
|-----------|--|-----|----|--|
|           |  |     |    |  |
| 22MX11001 |  | 2.5 | 40 |  |
| 22MX11002 |  | 2.5 | 40 |  |
| 22MX11003 |  | 2.5 | 40 |  |

|           |   |     |    |  |
|-----------|---|-----|----|--|
| 22MX11004 |   | 2.5 | 40 |  |
| 22MX11005 |   | 3.0 | 48 |  |
| 22MX11006 | 1 | 0.5 | 8  |  |
| 22MX11007 | 2 | 1.0 | 16 |  |
| 22MX11008 | 3 | 0.5 | 8  |  |
| 22AD11001 |   | 2.0 | 32 |  |

## 2. 外语

4

2.5

1.5

|           |  |     |    |  |
|-----------|--|-----|----|--|
|           |  |     |    |  |
| 22FL12001 |  | 2.5 | 60 |  |
| 22FL12002 |  | 1.5 | 36 |  |

## 3. 体育

4

|           |   |     |    |  |
|-----------|---|-----|----|--|
|           |   |     |    |  |
| 22PE13001 | 1 | 1.0 | 32 |  |
| 22PE13002 | 2 | 1.0 | 32 |  |
| 22PE13003 | 3 | 0.5 | 16 |  |
| 22PE13004 | 4 | 0.5 | 16 |  |
| 22PE13005 | 5 | 0.5 | 16 |  |
| 22PE13006 | 6 | 0.5 | 16 |  |

## 4. 计算思维与信息基础

|           |  |     |    |  |
|-----------|--|-----|----|--|
|           |  |     |    |  |
| 22CS14001 |  | 2.0 | 32 |  |

## 5. 数理与自然科学基础课程

|           |     |     |    |  |
|-----------|-----|-----|----|--|
|           |     |     |    |  |
| 22LS15001 |     | 1.0 | 16 |  |
| 22MA15009 | E 1 | 4.0 | 64 |  |
| 22MA15010 | E 2 | 4.0 | 64 |  |
| 22MA15021 | F   | 3.0 | 48 |  |
| 22PH15008 | F   | 4.0 | 64 |  |
| 22PH15018 | B   | 1.0 | 24 |  |
| 22CC22015 | B 1 | 2.5 | 40 |  |
| 22CC22023 | B 2 | 2.5 | 40 |  |
| 22CC15006 | B   | 2.0 | 48 |  |
| 22CC22008 | C   | 4.0 | 64 |  |

#### 6. 军事理论和军事技能

|           |  |     |    |  |
|-----------|--|-----|----|--|
|           |  |     |    |  |
| 22AD16001 |  | 2.0 | 36 |  |
| 22AD16002 |  | 2.0 | 2  |  |

#### 7. 国家安全教育

|           |  |     |    |  |
|-----------|--|-----|----|--|
|           |  |     |    |  |
| 22MX16001 |  | 1.0 | 16 |  |

#### 8. 心理健康教育

|           |  |     |    |  |
|-----------|--|-----|----|--|
|           |  |     |    |  |
| 22AD16003 |  | 2.0 | 32 |  |

#### 9. 写作与沟通

|           |  |     |    |  |
|-----------|--|-----|----|--|
|           |  |     |    |  |
| 22HS16001 |  | 1.0 | 16 |  |

#### 1. 大类专业基础课程

|           |   |     |    |  |
|-----------|---|-----|----|--|
|           |   |     |    |  |
| 22LS22004 |   | 1.5 | 24 |  |
| 22LS22007 | 1 | 0.5 | 12 |  |
| 22LS22002 | 2 | 0.5 | 12 |  |

|           |     |     |    |  |
|-----------|-----|-----|----|--|
| 22LS22005 |     | 1.0 | 24 |  |
| 22LS22006 |     | 1.5 | 36 |  |
| 22LS22003 |     | 2.0 | 32 |  |
| 22LS22014 |     | 0.5 | 12 |  |
| 22LS22013 |     | 1.5 | 24 |  |
| 22LS22016 | A 2 | 2.5 | 40 |  |
| 22LS22015 |     | 2.5 | 40 |  |
| 22LS22009 | A 1 | 2.5 | 40 |  |
| 22LS22010 | A 1 | 1.5 | 36 |  |
| 22LS22011 | A   | 2.5 | 40 |  |
| 22LS22012 | A   | 1.0 | 24 |  |
| 22LS22017 |     | 2.5 | 40 |  |
| 22LS22018 |     | 1.5 | 36 |  |
| 22LS22019 |     | 2.5 | 40 |  |
| 22LS22020 | A   | 1.0 | 24 |  |
| 22LS22021 |     | 2.0 | 32 |  |
| 22LS22022 |     | 0.5 | 12 |  |

### 1. 专业方向核心课程（含实习实训课程）

|           |  |     |    |  |
|-----------|--|-----|----|--|
|           |  |     |    |  |
| 22LS31004 |  | 1.5 | 24 |  |
| 22LS31003 |  | 1.5 | 24 |  |
| 22LS31006 |  | 1.5 | 24 |  |
| 22LS31005 |  | 2.5 | 40 |  |
| 22LS33002 |  | 2.0 | 2  |  |

### 2. 专业方向选修课程（含研究生课程）

|           |  |     |    |   |
|-----------|--|-----|----|---|
|           |  |     |    |   |
| 22LS32034 |  | 1.5 | 24 | 3 |
| 22LS32007 |  | 1.5 | 24 | 3 |
| 22LS32008 |  | 1.0 | 16 | 3 |
| 22LS32005 |  | 4.0 | 4  | 3 |

|           |              |     |    |   |
|-----------|--------------|-----|----|---|
| 22CS21502 | C B          | 2.5 | 40 | 1 |
| 22LS32003 |              | 1.0 | 16 | 2 |
| 22MA15028 | F            | 3.0 | 48 | 2 |
| 22LS32009 |              | 1.5 | 24 | 2 |
| 22LS32010 |              | 1.0 | 16 | 2 |
| 22LS32011 |              | 1.0 | 16 | 2 |
| 22LS32012 |              | 1.5 | 24 | 2 |
| 22LS33003 |              | 1.0 | 1  | 2 |
| 22LS32013 |              | 1.5 | 24 | 3 |
| 22LS32014 |              | 1.5 | 24 | 3 |
| 22LS32015 |              | 1.0 | 16 | 3 |
| 22LS31010 |              | 1.5 | 24 | 3 |
| 22LS32016 |              | 1.0 | 16 | 3 |
| 22LS31011 |              | 3.0 | 48 | 3 |
| 22LS31012 |              | 2.0 | 32 | 3 |
| 22LS32017 |              | 1.0 | 16 | 3 |
| 22LS31007 | Neurobiology | 1.5 | 24 | 3 |
| 22LS31008 |              | 1.5 | 24 | 3 |
| 22LS32018 |              | 1.5 | 24 | 3 |
| 22LS32019 |              | 1.0 | 24 | 3 |
| 22LS32020 |              | 1.5 | 24 | 3 |
| 22LS32021 |              | 1.5 | 24 | 3 |
| 22LS32022 |              | 1.5 | 24 | 3 |
| 22LS32023 |              | 1.0 | 24 | 3 |
| 22EE22014 | E            | 3.5 | 56 | 3 |
| 22EE22033 | E            | 1.0 | 24 | 3 |
| 22LS32024 |              | 1.0 | 16 | 3 |
| 22LS32025 |              | 1.5 | 24 | 3 |
| 22LS32026 | 3D Slicer    | 1.0 | 16 | 3 |
| 22LS31013 |              | 3.5 | 56 | 3 |
| 22LS31014 |              | 2.0 | 32 | 3 |
| 22CS32703 | B            | 2.0 | 32 | 3 |
| 22LS31009 |              | 1.5 | 24 | 3 |

|           |   |     |    |   |
|-----------|---|-----|----|---|
| 22LS32027 |   | 1.0 | 16 | 3 |
| 22LS32028 |   | 1.5 | 24 | 3 |
| 22CC32077 | B | 3.0 | 48 | 3 |
| 22LS32029 |   | 1.5 | 24 | 3 |
| 22LS32030 |   | 1.0 | 16 | 3 |
| 22LS32031 |   | 1.0 | 16 | 3 |
| 22LS33004 |   | 1.0 | 1  | 3 |
| 22LS32032 |   | 1.0 | 16 | 4 |

### 3. 毕业论文（设计）

|           |  |    |    |   |
|-----------|--|----|----|---|
|           |  |    |    |   |
| 22LS33001 |  | 10 | 20 | 4 |

### 1. 文化素质教育课程

8

2





# 生物工程专业教学进程计划方案

## 第一学年

|  | 22PE13001 | 1 | 1.0 | 32 | 32 |  |  |  |  |  |
|--|-----------|---|-----|----|----|--|--|--|--|--|
|  | 22FL12001 |   | 2.5 | 60 | 60 |  |  |  |  |  |
|  | 22MX11003 |   | 2.5 | 40 | 40 |  |  |  |  |  |
|  | 22AD16001 |   | 2.0 | 36 | 36 |  |  |  |  |  |
|  | 22AD11001 |   | 2.0 |    |    |  |  |  |  |  |

## 第二学年

| 22MX11004 |   |     | 2.5  | 40  | 40  |     |  |  |    |  |
|-----------|---|-----|------|-----|-----|-----|--|--|----|--|
| 22PE13003 | 3 |     | 0.5  | 16  | 16  |     |  |  | 16 |  |
| 22PH15018 |   | B   | 1.0  | 24  | 3   | 21  |  |  |    |  |
| 22CC22015 |   | B 1 | 2.5  | 40  | 40  |     |  |  |    |  |
| 22CC15006 |   | B   | 2.0  | 48  |     | 48  |  |  |    |  |
| 22LS22009 |   | A 1 | 2.5  | 40  | 40  |     |  |  |    |  |
| 22LS22010 |   | A 1 | 1.5  | 36  |     | 36  |  |  |    |  |
| 22LS22011 |   | A   | 2.5  | 40  | 40  |     |  |  |    |  |
| 22LS22012 |   | A   | 1.0  | 24  |     | 24  |  |  |    |  |
| 22LS22013 |   |     | 1.5  | 24  | 24  |     |  |  |    |  |
| 22LS22014 |   |     | 0.5  | 12  |     | 12  |  |  |    |  |
|           |   | 1   | 0.5  |     |     |     |  |  |    |  |
|           |   | 1   | 1.5  | 24  | 24  |     |  |  |    |  |
|           |   | 1   | 1.0  | 16  | 16  |     |  |  |    |  |
|           |   |     | 21.0 | 384 | 243 | 141 |  |  | 16 |  |
| 22MX11005 |   |     | 3.0  | 48  | 48  |     |  |  |    |  |
| 22PE13004 | 4 |     | 0.5  | 16  |     |     |  |  |    |  |

|    |   |    |      |     |     |    |   |   |     |  |
|----|---|----|------|-----|-----|----|---|---|-----|--|
|    |   |    |      |     |     |    |   |   |     |  |
|    |   |    | 24.0 | 416 | 340 | 72 |   | 4 | 16  |  |
|    |   | 3  | 1.0  | 16  | 16  |    |   |   |     |  |
|    |   | 1  | 1.0  | 16  | 16  |    |   |   |     |  |
|    |   |    | 2.0  | 32  | 32  |    |   |   |     |  |
| 1. |   | 8  |      |     |     |    |   | 2 |     |  |
|    |   |    | 2    |     |     |    |   |   |     |  |
| 2. | 1 |    |      |     |     |    |   |   |     |  |
|    | / | 6  |      |     |     |    |   |   | 0.5 |  |
|    | / |    |      |     |     |    |   |   |     |  |
| 3. |   | 4  | 17.5 |     |     |    |   |   |     |  |
| 4. |   | 10 |      | 2   |     |    |   |   |     |  |
|    | 1 |    |      |     |     |    |   |   |     |  |
|    | 2 |    |      |     |     |    | 2 |   |     |  |
| 5. |   | 4  |      |     |     |    |   |   |     |  |

### 第三学年

|  |                        |   |     |    |    |  |  |  |  |  |
|--|------------------------|---|-----|----|----|--|--|--|--|--|
|  |                        |   |     |    |    |  |  |  |  |  |
|  | 22PE13005<br>22LS31004 | 5 | 0.5 | 16 | 16 |  |  |  |  |  |

|    |   |    |   |      |   |   |
|----|---|----|---|------|---|---|
| 1. |   | 8  |   | 2    |   | 2 |
| 2. | 1 | /  | 6 |      |   | 4 |
| 3. |   | 4  | 1 | 17.5 | / | 3 |
|    |   |    |   | 3    |   |   |
| 4. |   | 10 |   | 2    |   |   |
|    | 1 |    |   |      |   |   |
|    | 2 |    |   |      | 2 |   |

## 第四学年

|  | 22LS33002 | 4  | 2.0  | 2    |    |  |  |  |  |  |
|--|-----------|----|------|------|----|--|--|--|--|--|
|  |           | 5  | 1.0  | 16   | 16 |  |  |  |  |  |
|  |           | 7  | 2.0  | 32   | 32 |  |  |  |  |  |
|  |           |    | 1.0  | 16   | 16 |  |  |  |  |  |
|  |           |    | 6.0  | 64+2 | 64 |  |  |  |  |  |
|  | 22LS33001 |    | 10.0 | 20   |    |  |  |  |  |  |
|  |           |    | 10.0 | 20   |    |  |  |  |  |  |
|  | 1.        |    |      |      |    |  |  |  |  |  |
|  | 2.        | 16 |      |      |    |  |  |  |  |  |

实践教学环节学分（学时）表

|   |      |         |
|---|------|---------|
|   |      | /       |
|   | 2.0  | 32      |
|   | 2.0  | 2       |
| / | 13.5 | 315     |
|   | 0    | 0       |
|   | 6.0  | 6       |
|   | 10.0 | 20      |
|   | 6.0  | 96      |
|   | 39.5 | 443 +28 |