**慈星智能产业学院培养方案**

1. **学院培养目标**

在中国制造2025大背景下，慈星智能产业学院（简称“产业学院”）将对接及服务智能产业链及相关企业的两化融合和产业升级需求，构建“智能+”应用型技术人才培养体系，培养智能+移动物联网、智能+软件开发及VR、智能+嵌入式系统、智能+结构与制造等方向的研发及应用工程技术人才。

1. **学院培养方式与特色**

采用“2+2”办学模式，前2年学生进行通识教育平台、学科基础平台、专业基础平台的学习和实践。在后两年的教学中采用“项目驱动”教学模式，以筛选过的企业实际项目开发为教学设计重心，将课程体系设计从理论体系向应用体现转变，以应用的实际需求为切入点，以点扩展到面同步进行理论教学，同时将产业的最新技术知识和技能引入到课程中，在课程中体现“产业学院”之产业特性，提高课程与相关产业的适用性和针对性。产学深度融合，校企协同育人。

**三、学院教学要求**

依托宁波大学科学技术学院多年技术积累和现有师资力量，打造智能+产业课程教学体系。产业学院以计算机科学与技术、软件工程、电子信息工程、机械制造、电气自动化等专业为依托，设置移动物联网、软件应用、VR、嵌入式系统、结构与制造等五大专业模块，并配置相应工作室。通过项目驱动教学方式加强专业理论认知及实践能力的融合。着力于与移动物联网、软件开发、嵌入式系统、智能控制相关的通信系统、物联网安全、过程控制、现场总线、电子电路设计等技术集成与开发的专业教学和实践。

**三、各类课程设置及学分分配要求**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 课程分类 | 产业学院公共课 | 工作室方向模块 | 实训基础选修 | 合计 | 其中实践环节 |
| 学分数 | 11 | 45 | 9 | 65 | 59 |
| 占总学分% | 16.9 | 69.2 | 13.8 | 100.0 | 90.8 |

**四、学院课程设置**

| 课程  类别 | | 课程编号 | | 课 程 名 称 | | | 学  分  数 | 总  学  时 | | | 学 时 分 配 | | | | | | | | | | | | | | | | | | | 建议修读学期 | | | 修读  说明 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 讲  课 | | | | 实  验 | | | 上  机 | | | | 实  习 | | | | 实  训 | | | |
| 慈星智能  产业学院公共课 | 选  修 | CX1Z01A | 机器人导论  Introduction of Robot | | | 2 | | 34 | | | 34 | | |  | | | |  | | |  | | | |  | | | | **5** | | | |  |
| CX1Z02A | 人工智能导论  Introduction to Artificial Intelligence | | | 2 | | 34 | | | 34 | | |  | | | |  | | |  | | | |  | | | | **6** | | | |  |
| CX1Z03A | 智能制造导论  Introduction to intelligent manufacturing | | | 2 | | 51 | | | 17 | | | 34 | | | |  | | |  | | | |  | | | | **6** | | | |  |
| CX1Z04A | 科技创业创新  Technological entrepreneurship and innovation | | | 2 | | 51 | | | 17 | | | 34 | | | |  | | |  | | | |  | | | | **5-7** | | | |  |
| CX1Z05A | 前沿讲座系列  Cutting-edge lecture series | | | 1 | | 17 | | | 17 | | |  | | | |  | | |  | | | |  | | | | 5-6 | | | |  |
| CX1Z06A | 慈星实训课程  Cixing training course | | | 2 | | 3周 | | |  | | |  | | | |  | | |  | | | | 3周 | | | | 暑期 | | | |  |
| 小 计 | | | | 11学分 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 移动物联网模块 | 选修 | CX2Z01A | 移动应用开发与实践  Mobile application development and practice | | | 6 | | 204 | | | 0 | | |  | | | |  | | | 68 | | | | 136 | | | | 5 | | | |  |
| CX2Z02A | 物联网技术集成与开发实践  IOT technology integration and development practice | | | 7 | | 238 | | | 0 | | |  | | | |  | | | 102 | | | | 136 | | | | 5 | | | |
| CX2Z03A | 物联网项目实践I  IOT project practice I | | | 10 | | 340 | | | 0 | | |  | | | |  | | | 136 | | | | 204 | | | | 6 | | | |  |
| CX2Z04A | 物联网项目实践II  IOT project practice II | | | 10 | | 340 | | | 0 | | |  | | | |  | | | 136 | | | | 204 | | | | 7 | | | |  |
| CX2Z05A | 毕业设计（论文）  Dissertation | | | 12 | | 12周 | | |  | | |  | | | |  | | |  | | | | 12周 | | | | 8 | | | |  |
| 小 计 | | | | 45学分 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 软件应用与VR模块 | 选修 | CX2Z06A | 大型网络系统项目设计  Large network system project design | | | 11 | | 374 | | |  | | |  | | | |  | | | 136 | | | | 238 | | | | 5 | | | |  |
| CX2Z07B | 软件系统项目设计  Soft System project design | | | 11 | | 374 | | |  | | |  | | | |  | | | 136 | | | | 238 | | | | 6 | | | |
| CX2Z08A | 云端信息系统设计与实现  Design and implementation of cloud information system | | | 6 | | 204 | | |  | | |  | | | |  | | | 68 | | | | 136 | | | | 7 | | | |
| CX2Z09A | 互联网项目设计与开发  Internet project design and development | | | 5 | | 170 | | |  | | |  | | | |  | | | 68 | | | | 102 | | | | 7 | | | |  |
| CX2Z05A | 毕业设计（论文）  Dissertation | | | 12 | | 12周 | | |  | | |  | | | |  | | |  | | | | 12周 | | | | 8 | | | |  |
|  |  | | |  | |  | | |  | | |  | | | |  | | |  | | | |  | | | |  | | | |  |
| 小 计 | | | | 45学分 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 嵌入式系统模块 | 选  修 | CX2Z10A | | | 电子系统项目设计  Electronic system project design | 9.5 | | 323 | | | 0 | |  | | | | |  | | | | 102 | | | | | 221 | | | | 5 | |  |
| CX2Z11B | | | 嵌入式系统项目设计  Embeded system project design | 13.5 | | 459 | | | 0 | |  | | | | |  | | | | 136 | | | | | 323 | | | | 6 | |  |
| CX2Z12B | | | 智能信息处理系统项目设计  Intelligent information process system project design | 10 | | 340 | | |  | |  | | | | |  | | | | 136 | | | | | 204 | | | | 7 | |  |
| CX2Z05A | | | 毕业设计（论文）  Dissertation | 12 | | 12周 | | |  | |  | | | | |  | | | |  | | | | | 12周 | | | | 8 | |  |
| 小计 | | | | 45学分 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  |  |  | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 结构与制造模块 | 选  修 | CX2Z13A | | | 机械制造项目设计  Mechanical manufacturing project design | 9.5 | | | | 306 | | 0 | | | | |  | |  | | | | 102 | | | | 204 | | | | 5 | |  |
| CX2Z14A | | | PLC控制项目设计  PLC Control project design | 13.5 | | | | 459 | | 0 | | | | |  | |  | | | | 136 | | | | 323 | | | | 6 | |  |
| CX2Z15A | | | 智能装备项目设计  Intelligent equipment project design | 10 | | | | 340 | |  | | | | |  | |  | | | | 136 | | | | 204 | | | | 7 | |  |
| CX2Z05A | | | 毕业设计（论文）  Dissertation | 12 | | | | 12周 | |  | | | | |  | |  | | | |  | | | | 12周 | | | | 8 | |  |
| 小计 | | | | 45学分 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 实训基础选修 | 选修 | CX3Z01A | | | 软件分析与设计  Software analysis and design | 3 | | | 102 | | |  | | | |  | | | |  | | | | 34 | | | | 68 | | | | 6 |  |
| CX3Z02A | | | 电子产品设计  Electronic product design | 3 | | | 102 | | |  | | | |  | | | |  | | | | 34 | | | | 68 | | | | 7 |  |
| CX3Z03A | | | 移动应用开发  Mobile application development | 3 | | | 102 | | |  | | | |  | | | |  | | | | 34 | | | | 68 | | | | 5 |  |
| CX3Z04A | | | 操作系统原理及应用  Principle and application of operating system | 3 | | | 68 | | | 34 | | | | 34 | | | |  | | | |  | | | |  | | | | 5 |  |
| CX3Z05A | | | 计算机网络应用实践  Application practice of computer network | 3 | | | 68 | | | 34 | | | | 34 | | | |  | | | |  | | | |  | | | | 5 |  |
| CX3Z06A | | | 数字信号处理算法及应用  Digital signal processing algorithm and its application | 3 | | | 68 | | | 34 | | | | 34 | | | |  | | | |  | | | |  | | | | 5 |  |
| 小计 | | | | 18学分 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**五、关于产业学院实训基础选修课的说明**

由于进入慈星智能产业学院的学生来自于多个科学技术学院原专业，采用2+2模式，各个原专业前两年已修习学分存在较大差异，故特意设置9学分的实训基础选修课，供产业学院部分学分不够的学生选修，以期完成毕业学分要求。

**六、关于产业学院学生中途终止该培养方案的处理方法**

学生选择该培养方案完成一个学期的课程后，原则上不予中途停止，若个别学生由于个人原因申报终止该培养方案，则回原专业进行课程修习，若产生学分不够的现象，则在原专业修习后续课程的过程中，可以选修产业学院实训基础选修课，以补齐学分。

学生退回原专业的过程中，需要根据原专业培养方案的差异化情况提交各自的课程顶替申请，产业学院收到该申请后，由产业学院根据上一学期的项目课程内容及学生成绩，给出顶替课程的学生评价和课程成绩，补充提交课程成绩，从而完成该类原专业的教学计划。