表一： **教 学 进 程 表**

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| --- | --- | --- | --- | --- | --- |
| 课 程 | 学 分 | 门数/门次 | 集中考试 | 学 时 分 配 | 学期、周数、周学时数 |
| 种类 | 性质 | 课程编号 | 课 程 名 称 | 总计 | 讲课 | 实验 | 上机 | 翻转、案例实践、创新 | 一 | 二 | 三 | 四 | 五 | 六 | 七 | 八 |
| 14 | 17 | 14 | 16 | 15 | 12 | 10 | 0 |
| 通 识 课 | 通 识 必 修 课 | 自 然 科 学 类 | 080119TO01W  | 高等数学（一）-I、II | 6+5 | 1/2 | 1,2 | 176 | 80+96 |  |  |  | 6 | 6×16 |  |  |  |  |  |  |
| 080119TO06W | 线性代数 | 3.5 | 1/1 |  | 56 | 56 |  |  |  |  | 4×14 |  |  |  |  |  |  |
| 080119TO08W | 概率论与数理统计 | 2.5 | 1/1 |  | 40 | 40 |  |  |  |  |  | 3×14 |  |  |  |  |  |
| 080319TO02W | 大学物理（二）-I、II | 3+3 | 1/2 | 2 | 96 | 48+48 |  |  |  |  | 3×16 | 4×12 |  |  |  |  |  |
| 080819SO01W | 物理实验-I、II | 0+1.5 | 1/2 |  | 40 |  | 20+20 |  |  |  | √ | √ |  |  |  |  |  |
| 100319TO43W | 大学化学 | 2 | 1/1 |  | 32 | 32 |  |  |  | 3×11 |  |  |  |  |  |  |  |
| 010219TI01W | 计算方法 | 1 | 1/1 |  | 16 | 16 |  |  |  |  |  |  | 2×8 |  |  |  |  |
| 080119TO09W | 复变函数、积分变换 | 2.5 | 1/1 |  | 48 | 48 |  |  |  |  |  | 4×12 |  |  |  |  |  |
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| 自然科学类小计 | 30 | 8/11 |  | 504 | 464 | 40 |  |  | 9 | 13 | 11 | 2 |  |  |  |  |
| 人文、社科、经管类 | 090519TO01W | 大学英语-I、II、III | 3+3.5+2 | 1/3 | 1,2,3 | 136 | 48+56+32 |  |  |  | 4×12 | 4×14 | 3×11 |  |  |  |  |  |
| 730119TO01W | 体育-I-IV | 2 | 1/2 |  | 64 | 22 |  |  | (122) | 2 | 2 | 2 | 2 |  |  |  |  |
| 170119TO01W | 军事理论 | 1 | 1/1 |  | 28 | 28 |  |  |  | 2×14 |  |  |  |  |  |  |  |
| 180119TO01W | 思想道德修养与法律基础 | 3 | 1/1 |  | 48 | 42 |  |  | 6 | 3 |  |  |  |  |  |  |  |
| 180119TO02W | 马克思主义基本原理概论 | 3 | 1/1 |  | 48 | 42 |  |  | 6 |  |  | 3×14 |  |  |  |  |  |
| 180119TO03W | 中国近现代史纲要 | 3 | 1/1 |  | 48 | 42 |  |  | 6 |  | 3×14 |  |  |  |  |  |  |
| 180119TO04W | 毛泽东思想和中国特色社会主义理论体系概论 | 5 | 1/1 |  | 80 | 64 |  |  | 16 |  |  |  | 4×16 |  |  |  |  |
| 180119TO05W | 习近平新时代中国特色社会主义思想 | 1 | 1/1 |  | 16 | 16 |  |  |  |  |  |  |  |  | 2×8 |  |  |
| 060119TO01W | 创新创业基础 | 2 | 1/1 |  | 32 | 22 |  |  | 10 |  |  |  |  | 3×11 |  |  |  |
| 060119TO03W | 项目管理与技术经济学 | 2 | 1/1 |  | 32 | 32 |  |  |  |  |  |  |  |  | 4×8 |  |  |
| 920119TO01W | 大学生健康教育 | 0 |  |  | (16+4) |  |  |  |  | √ |  |  |  |  |  |  |  |
| 920119TO03W | 大学生就业指导 | 0 |  |  | (16) | （12） |  |  | （4） |  |  |  |  |  | √ |  |  |
| 180119TO06W | 形势与政策 | 1 | 1/1 |  | （48） |  |  |  | （48） | (2×4) | (2×4) | (2×4) | (2×4) | (2×4) | (2×4) |  |  |
| 000119TO01W | 大学语文 | 2 | 1/1 |  | 32 | 32 |  |  |  | 2 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| 人文、社科、经管类小计 | 33.5 | 12/15 |  | 564 | 478 |  |  | 44 | 13 | 9 | 8 | 6 | 3 | 6 |  |  |
| 通识必修小计 | 63.5 | 20/26 |  | 1068 | 942 | 40 |  | 44 | 22 | 22 | 19 | 8 | 3 | 6 |  |  |
| 通识任选 | 全校通识任选课共分科学探索与技术创新【简称A类】、社会研究与当代中国【简称B类】、文明对话与世界视野【简称C类】、研究学习与实战体验【简称D类】、艺术创作与审美体验【简称E类】等五类。1、所有本科生选课时间为2-7学期，每学期可选1-2门；2、本科在校学生（除艺术学院和工业设计专业学生以外）本科学习期间在A、B、C、D、E类任选课组中任选5门7.5学分；3、艺术学院和工业设计专业学生，本科学习期间在A、B、C、D类任选课组中任选5门7.5学分；4、未通过大学英语四级的在校本科生应必选C类任选课组中的《大学英语四级强化》。详情参阅《哈尔滨理工大学全校性通识选修课选修指南》 |
| 通识任选小计 | 7.5 | 5/5 |  | 150 | 150 |  |  |  | 4 | 2 |  | 4 | 2 |  |  |  |
| 通识课合计 | 71 | 25/31 |  | 1218 | 1092 | 40 |  | 44 | 22 | 24 | 19 | 12 | 5 | 6 |  |  |

续表一：

**教 学 进 程 表**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 课 程 | 学 分 | 门数/门次 | 集中考试 | 学 时 分 配 | 学期、周数、周学时数 |
| 种类 | 性质 | 课程编号 | 课 程 名 称 | 总计 | 讲课 | 实验 | 上机 | 翻转、案例实践、创新 | 一 | 二 | 三 | 四 | 五 | 六 | 七 | 八 |
| 14 | 17 | 14 | 16 | 15 | 12 | 10 | 0 |
| 专 业 课 程 | 专 业 核 心 课 | 学科、专业基础 | 010719HO02W | 工程图学 | 2.5+2 | 1/2 | 1,2 | 72 | 40+32 |  |  |  | 3×14 | 2×16 |  |  |  |  |  |  |
| 160319HO03W | 工程力学Ⅰ、Ⅱ | 3+3 | 1/2 | 3,4 | 96 | 48+44 | 0+4 |  |  |  |  | 3×16 | 3×16 |  |  |  |  |
| 010619HO32W | 材料成形技术基础 | 2 | 1/1 | 3 | 32 | 28 | 4 |  |  |  |  | 2×16 |  |  |  |  |  |
| 150319HO03W | 电工学Ⅰ、Ⅱ | 3.5+2.5 | 1/2 | 3,4 | 96 | 48+34 | 8+6 |  |  |  |  | 4×14 | 3×14 |  |  |  |  |
| 010619HO02W | 机械设计基础Ⅰ、Ⅱ | 2.5+2.5 | 1/2 | 4,5 | 80 | 36+36 | 4+4 |  |  |  |  |  | 3×14 | 3×14 |  |  |  |
| 010119HO01W | 机械制造基础 | 2 | 1/1 | 6 | 32 | 24 | 8 |  |  |  |  |  |  |  | 3×11 |  |  |
| 010219HI01W | 热工基础与应用 | 1.5 | 1/1 |  | 30 | 30 |  |  |  |  |  |  |  | 3×10 |  |  |  |
| 010219HI02W  | 互换性与测量技术 | 2 | 1/1 |  | 32 | 26 | 6 |  |  |  |  |  | 2×16 |  |  |  |  |
| 010219HI03W | 机械控制工程基础 | 3 | 1/1 | 5 | 48 | 44 | 4 |  |  |  |  |  |  | 4×12 |  |  |  |
| 010219HI04W | 液压与气压传动 | 3.5 | 1/1 |  | 56 | 48 | 8 |  |  |  |  |  |  | 4×16 |  |  |  |
| 010219HI05W | 机电专业导论 | 0 |  |  | (16) |  |  |  |  | (2×1) | (2×1) | (2×1) | (2×1) | (2×1) | (2×1) | (4×1) |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 学科、专业基础小计 | 35.5 | 11/14 |  | 574 | 518 | 56 |  |  | 3 | 2 | 9 | 11 | 14 | 3 |  |  |
| 专 业 平 台 | 010219HI06W | 传感与检测技术 | 2.5 | 1/1 |  | 40 | 34 | 6 |  |  |  |  |  |  |  | 3×14 |  |  |
| 010219HI07W | 机电一体化系统设计 | 2 | 1/1 |  | 32 | 28 | 4 |  |  |  |  |  |  |  | 3×11 |  |  |
| 010219HI08W | 机电传动控制技术 | 3.5 | 1/2 |  | 56 | 48 | 8 |  |  |  |  |  |  |  | 4×12 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 专业平台小计 | 8 | 3/4 |  | 128 | 110 | 18 |  |  |  |  |  |  |  | 10 |  |  |
| 专业核心课小计 | 43.5 | 14/18 |  | 702 | 628 | 74 |  |  | 3 | 2 | 9 | 11 | 14 | 13 |  |  |

续表一： **教 学 进 程 表**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 课 程 | 学 分 | 门数/门次 | 集中考试 | 学 时 分 配 | 学期、周数、周学时数 |
| 种类 | 性质 | 课程编号 | 课 程 名 称 | 总计 | 讲课 | 实验 | 上机 | 翻转、案例实践、创新 | 一 | 二 | 三 | 四 | 五 | 六 | 七 | 八 |
| 14 | 17 | 14 | 16 | 15 | 12 | 10 | 0 |
| 专 业 课 程 | 专 业 选 修 课 | A模块选修 | 010219XI01W | 新型液压元件及制造技术 | 2 | 1/1 |  | 40 | 38 | 2 |  |  |  |  |  |  |  |  | 4 |  |
| 010219XI02W | 气压控制工程 | 1.5 | 1/1 | 7 | 30 | 26 | 4 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI03W | 液压系统的电控设计 | 1.5 | 1/1 | 7 | 30 | 26 | 4 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI24W | 电液伺服系统 | 1.5 | 1/1 |  | 30 | 20 |  |  | 10 |  |  |  |  |  |  | 3 |  |
| A模块选修小计 | 6.5 | 4/4 |  | 130 | 108 | 10 |  | 10 |  |  |  |  |  |  | 13 |  |
| B模块选修 | 010219XI06W | 机器人技术 | 2 | 1/1 |  | 40 | 30 |  |  | 10 |  |  |  |  |  |  | 4 |  |
| 010219XI07W | 多刚体动力学分析 | 1.5 | 1/1 | 7 | 30 | 20 | 10 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI08W | 嵌入式技术及其机器人应用 | 1.5 | 1/1 | 7 | 30 | 26 | 4 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI09W | 机器人运动控制技术 | 1.5 | 1/1 |  | 30 | 26 | 4 |  |  |  |  |  |  |  |  | 3 |  |
| B模块选修小计 | 6.5 | 4/4 |  | 130 | 104 | 18 |  | 10 |  |  |  |  |  |  | 13 |  |
| C模块选修 | 010219XI11W | 人工智能基础 | 2 | 1/1 |  | 40 | 30 |  |  | 10 |  |  |  |  |  |  | 4 |  |
| 010219XI12W | 图像处理及可视化 | 1.5 | 1/1 | 7 | 30 | 26 | 4 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI13W | 有限元分析理论基础 | 1.5 | 1/1 | 7 | 30 | 30 |  |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI14W | 仿真分析方法的工程应用 | 1.5 | 1/1 |  | 30 | 26 | 4 |  |  |  |  |  |  |  |  | 3 |  |
| C模块选修小计 | 6.5 | 4/4 |  | 130 | 108 | 12 |  | 10 |  |  |  |  |  |  | 13 |  |
| D模块选修 | 010219XI16W | 数控机床 | 2 | 1/1 |  | 40 | 32 | 8 |  |  |  |  |  |  |  |  | 4 |  |
| 010219XI17W | 数控伺服系统 | 1.5 | 1/1 | 7 | 30 | 26 | 4 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI18W | 数控加工技术 | 1.5 | 1/1 | 7 | 30 | 26 | 4 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI19W | 数控机床故障诊断及维修 | 1.5 | 1/1 |  | 30 | 16 | 4 |  | 10 |  |  |  |  |  |  | 3 |  |
| D模块选修小计 | 6.5 | 4/4 |  | 130 | 100 | 20 |  | 10 |  |  |  |  |  |  | 13 |  |
| 模块选修小计 | 6.5 | 4/4 |  | 130 | 105 | 15 |  | 10 |  |  |  |  |  |  |  |  |
|  | 010219XI21W | 计算机控制技术 | 1.5 | 1/1 |  | 30 | 28 | 2 |  |  |  |  |  |  |  | 3×10 |  |  |
| 010219XI22W | 机械电气控制技术 | 1.5 | 1/1 |  | 30 | 26 | 4 |  |  |  |  |  |  | 2 |  |  |  |
| 010219XI23W | 单片机原理与接口技术 | 3 | 1/2 |  | 60 | 34+16 | 6+4 |  |  |  |  |  |  | 3×12 | 2×10 |  |  |
| 010219XI24W | 机电创新实践 | 1.5 | 1/1 |  | 30 |  |  |  | 30 |  |  |  |  |  | 4×8 |  |  |
| 010219XI25W | C语言程序设计 | 1.5 | 1/1 |  | 30 | 24 | 6 |  |  |  |  |  | 3×7 |  |  |  |  |
| 010119XO26W | 机械系统设计 | 1.5 | 1/1 |  | 30 | 26 | 4 |  |  |  |  |  |  |  | 3×10 |  |  |
| 010219XI27W | 模式识别与机器学习 | 1.5 | 1/1 |  | 30 | 26 | 4 |  |  |  |  |  |  |  |  |  |  |
| 010219XI28W | 3D打印技术及应用 | 1.5 | 1/1 |  | 30 | 24 |  | 6 |  |  |  |  |  |  | 3×10 |  |  |
| 学科、专业任意选修小计 | 9 | 5/6 |  | 180 | 128 | 22 |  | 30 |  |  |  | 3 | 5 | 9 |  |  |
| 专业模块任选 | 010219XI40W | 液压控制系统仿真(双语) | 1.5 | 1/1 |  | 30 | 20 | 10 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI41W | 液压系统设计维护与应用 | 1.5 | 1/1 |  | 30 | 26 | 4 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI42W | 机电液系统动态分析与设计(双语) | 1.5 | 1/1 |  | 30 | 20 | 4 | 6 |  |  |  |  |  |  |  | 3 |  |
| 010219XI43W | 机床摩擦磨损与润滑 | 1.5 | 1/1 |  | 30 | 28 | 2 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI44W | 机器人机构学 | 1.5 | 1/1 |  | 30 | 30 |  |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI45W | 医疗机器人技术 | 1.5 | 1/1 |  | 30 | 30 |  |  |  |  |  |  |  |  |  |  |  |
| 010219XI46W | 检测技术与故障诊断 | 1.5 | 1/1 |  | 30 | 24 | 6 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI47W | 高级语言程序设计 | 1.5 | 1/1 |  | 30 | 15 | 15 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI48W | 仿生技术力学基础 | 1.5 | 1/1 |  | 30 | 30 |  |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI49W | 计算机辅助医疗概论 | 1.5 | 1/1 |  | 30 | 30 |  |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI50W | 系统建模与仿真 | 1.5 | 1/1 |  | 30 | 30 |  |  |  |  |  |  |  |  |  | 3 |  |
| 010219HI51W | 智能控制算法 | 1.5 | 1/1 |  | 30 | 24 | 6 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI52W | 机床振动分析与控制 | 1.5 | 1/1 |  | 30 | 28 | 2 |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI53W | 机电测控系统 | 1.5 | 1/1 |  | 30 | 26 | 4 |  |  |  |  |  |  |  |  | 3 |  |
| 010119XO54W | 机械CAD技术基础 | 1.5 | 1/1 |  | 30 | 20 | 10 |  |  |  |  |  |  |  |  | 3 |  |
| 010119XI55W | 机电创业实践课 | 1.5 | 1/1 |  | 30 |  |  |  | 30 |  |  |  |  |  |  | 3 |  |
| 010219XI56W | 现场可编程门阵列技术及应用 | 1.5 | 1/1 |  | 30 | 30 |  |  |  |  |  |  |  |  |  | 3 |  |
| 010219XI57W | 可视化编程语言 | 1.5 | 1/1 |  | 30 | 15 |  | 15 |  |  |  |  |  |  |  | 3 |  |
| 专业模块任意选修小计 | 3 | 2/2 |  | 60 | 43 | 2 | 15 |  |  |  |  |  |  |  | 6 |  |
| 专 业 选 修 课 小 计 | 18.5 | 11/12 |  | 370 | 272 | 43 | 15 | 30 |  |  |  | 3 | 5 | 9 | 19 |  |
| 专 业 课 程 合 计 | 62 | 25/30 |  | 1072 | 900 | 117 | 15 | 30 | 3 | 2 | 9 | 14 | 19 | 22 | 19 |  |
| 合 计 | 总学分、总学时、周学时 | 133 |  |  | 2290 | 1992 | 157 | 15 | 74 | 25 | 26 | 28 | 26 | 24 | 28 | 19 |  |
| 集中考试课门数 |  | 12 |  |  |  |  |  | 3 | 1 | 3 | 1 | 1 | 1 | 2 |  |
| 课程门数、课程门次数 |  | 50 | 61 |  |  |  |  |  | 9 | 10 | 9 | 8 | 9 | 9 | 7 |  |