# Appendix I - Test Cases for Course.equals()

**Test Case 1: Two identical courses**

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| **Operation** | **Purpose** | **Object State** | **Expected Result** |
| Course course1 = new Course("420-A11", "Operating Systems"); | Instantiate a Course object | courseNumber = "420-A11"  courseName = "Operating Systems"  semester = -1  theoryHours = -1  labHours = -1 | a new Course object is created |
| Course course2 = new Course("420-A11", "Operating Systems"); | Instantiate a Course object with the same course number and name as the first course | courseNumber = "420-A11"  courseName = "Operating Systems"  semester = -1  theoryHours = -1  labHours = -1 | a new Course object is created |
| course1.equals(course2) | Verify that the equals() method works for two courses with the same course number | unchanged | true |

**Test Case 2: Two courses with the same name, but a different number**

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| **Operation** | **Purpose** | **Object State** | **Expected Result** |
| Course course1 = new Course("420-A11", "Operating Systems"); | Instantiate a Course object | courseNumber = "420-A11"  courseName = "Operating Systems"  semester = -1  theoryHours = -1  labHours = -1 | a new Course object is created |
| Course course3 = new Course ("420-A12", "Operating Systems"); | Instantiate a Course object with the same name, but a different course number | courseNumber = "420-A12"  courseName = "Operating Systems"  semester = -1  theoryHours = -1  labHours = -1 | a new Course object is created |
| course1.equals(course3) | Verify that the equals() method works for two courses with the different course numbers | unchanged | false |

**Test Case 3: Two courses with the same number, but a different name**

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| **Operation** | **Purpose** | **Object State** | **Expected Result** |
| Course course1 = new Course("420-A11", "Operating Systems"); | Instantiate a Course object | courseNumber = "420-A11"  courseName = "Operating Systems"  semester = -1  theoryHours = -1  labHours = -1 | a new Course object is created |
| Course course4 = new Course("420-A11", "Something else"); | Instantiate a Course object with the same number, but a different name | courseNumber = "420-A11"  courseName = "Something else"  semester = -1  theoryHours = -1  labHours = -1 | a new Course object is created |
| course1.equals(course4) | Verify that the equals() method works for two courses with the same course number and different names | unchanged | true |