Figure 16-5  Java implementation of the design model

```java
public abstract class Person {
    private Long id;
    private String lastName;
    private String firstName;
}

public class Student extends Person {
    private int yearMatriculated;
    private String studentID;
}

public class Faculty extends Person {
    private String office;
    private String facultyID;
}

public class Course {
    private Long id;
    private String courseNbr;
    private String courseTitle;
    private Set<Section> sections;
    public int getNonStudents(String semester) {
        // the body of the method is intentionally missing
    }
}

public class Section {
    private Long id;
    private String sectionRgnr;
    private String sectionNbr;
    private String semester;
    private Faculty facultyMember;
    private Set<Registration> enrolledStudents;
    public double getAvgGrade() {
        // the body of the method is intentionally missing
    }
}

public class Registration {
    private Long id;
    private Student student;
    private String status;
    private String grade;
    private final int numGrade;
}
```

Figure 16-6  Relational database implementation of the design model

<table>
<thead>
<tr>
<th>Table</th>
<th>Columns</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERSON</td>
<td>Person_ID, Last_Name, First_Name</td>
</tr>
<tr>
<td>FACULTY</td>
<td>Faculty_ID, Faculty_ID, Office</td>
</tr>
<tr>
<td>STUDENT</td>
<td>Student_ID, Person_ID, Year_Matriculated</td>
</tr>
<tr>
<td>COURSE</td>
<td>Course_ID, Course_Nbr, Course_Title</td>
</tr>
<tr>
<td>SECTION</td>
<td>Section_ID, Section_Reg_Nbr, Section_Nbr, Semester, Course_ID, Faculty_ID</td>
</tr>
<tr>
<td>REGISTRATION</td>
<td>Section_ID, Student_ID, Person_ID, Status, Grade, Num_Grade</td>
</tr>
</tbody>
</table>