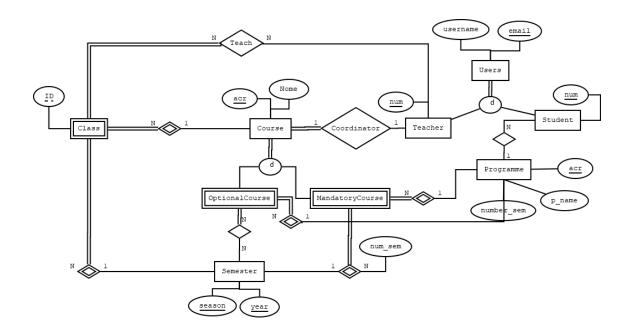
# Modelo Entidade-Associação



## Modelo Físico

#### **Entidades Fortes:**

```
Users (email, username)
       CC = \{\{email\}\}\
Course (acr,c_name,numCoord)
       CC = \{\{acr\}\}\
       CE= {{numCoord}}
       numCoord: Teacher (num)
Programme (acr, p_name, number_sem)
       CC = \{\{acr\}\}\
Student (Snum, email,p_acr)
       CC = \{\{num\}\}\
       CE= {{email,p_acr}}
       Email: Users(email)
       P_acr: Programme(p_acr)
Teacher (num, email)
       CC = \{\{num\}\}\
       CE={{email}}
       Email: Users(email)
Semester (season, year)
       CC = \{\{season, year\}\}\
```

#### **Entidades Fracas:**

```
Optional_course (acr, acrProgramme)

CE= {{acr, acrProgramme}}

Acr: Course (acr)

acrProgramme: Programme(acr)

Mandatory_course (acr,yearSem,season,acrProgramme)

CC= {{acr,year,season,acrProgramme}}

CE= {{year,season,acr,acrProgramme,}}

Year, season: Semester (year, season)

Acr: Course (acr)

acrProgramme:Programme(acr)

Class (id,year,season,acrCourse)

CC= {{id, year, season, acrCourse}}

CE= {{year,season,acrCourse}}

Year, season: Semester (year, season)

acrCourse: course (acr)
```

### Associações:

```
Sem_optionalcourse (acr, yearSem, season, acrProgramme, )

CC= {{acr, yearSem, season, acrProgramme}}

CE= {{yearSem, season, acrProgramme, acr}}

Acr: optional_course(acr)

yearSem,season: semester(yearSem,season)

acrProgramme: programme(acr)

Teacher_class(id,yearSem,season,numTeacher,acrCourse)

CC= {{id,yearSem,season,numTeacher,acrCourse}}

CE={{id,yearSem,season,acrCourse,numTeacher}}

id,yearSem,season,acrCourse: Class(id,yearSem,season,acrCourse)

numTeacher: Teacher(num)
```