**Fig 1**

**UNF**

Teacher (TeacherID, TeacherName, {AddressID, Address}, Email, {ModuleCode, ModuleName, CreditHours})

1NF

Teacher (TeacherID, TeacherName, Email)

Address (AddressID, Address, TeacherID\*)

Module (ModuleCode, ModuleName, CreditHours, TeacherID\*)

2NF

In Teacher

No need to check

In Address

AddressID 🡪 Address

TeacherID 🡪

In Module

ModuleCode 🡪 ModuleName, CreditHours

TeacherID 🡪

Entities:

Teacher (TeacherID, TeacherName, Email)

Address (AddressID, Address)

TeacherAddress (AddressID\*, TeacherID\*)

Module (ModuleCode, ModuleName, CreditHours)

TeacherModule (ModuleCode\*, TeacherID\*)

3NF

**In teacher**

TeacherID 🡪 TeacherName 🡪

In Address

No need to check

In TeacherAddress

No need to check

In Module

ModuleCode 🡪 ModuleName 🡪

In TeacherModule

No need to check

Final Entities

Teacher (TeacherID, TeacherName, Email)

Address (AddressID, Address)

TeacherAddress (AddressID\*, TeacherID\*)

Module (ModuleCode, ModuleName, CreditHours)

TeacherModule (ModuleCode\*, TeacherID\*)

Fig 2:

UNF

Student (StudentID, StudentName, Address, {ModuleCode, ModuleName, {AssignmentType, Grade, Status})

1NF

Student (StudentID, StudentName, Address)

Module (ModuleCode , ModuleName, StudentID\* )

Assignment (AssignmentID , AssignmentType, Grade, Status, StudentID\*, ModuleCode\* )

2NF

In Student

In Module

ModuleCode 🡪 ModuleName

StudentID 🡪

ModuleCode, StudentID 🡪

In Assignment

AssignmentID 🡪 AssignmentType

StudentID 🡪

ModuleCode 🡪

AssignmentID, ModuleCode 🡪

AssignmentID, StudentID 🡪

ModuleCode, StudentID 🡪

AssignmentID, ModuleCode, StudentID 🡪 Grade, Status

Entities

Student (StudentID , StudentName, Address)

Module (ModuleCode , ModuleName)

Moduel.Student (ModuleCode\*, StudentID\*)

Assignment (AssignmentID , AssignmentType)

Assignment.Module.Student (AssignmentID\*, StudentID\*, ModuleCode\*, Grade, Status)

3NF

No process

Entities

Student (StudentID , StudentName, Address)

Module (ModuleCode , ModuleName)

Moduel.Student (ModuleCode\*, StudentID\*)

Assignment (AssignmentID , AssignmentType)

Assignment.Module.Student (AssignmentID\*, StudentID\*, ModuleCode\*, Grade\*)

Integration of Fig 1 and Fig 2

Teacher (TeacherID , TeacherName, Email)

Address (AddressID , Address)

Teacher. Address (TeacherID\*, AddressID\*)

Module (ModuleCode , ModuleName, CreditHour)

Teacher.Module (ModuleCode\* , TeacherID\*)

Student (StudentID , StudentName, Address)

Module.Student (ModuleCode\*, StudentID\*)

Assignment (AssignmentID , AssignmentType)

Assignment.Module.Student (AssignmentID\*, StudentID\*, ModuleCode\*, Grade, status)

Person (PersonID, PersonName)

Teacher (TeacherID\*, Email)

Address (AddressID, Address)

person. Address (PersonID\*, AddressID\*)

Module (ModuleCode , ModuleName, CreditHour)

Teacher.Module (ModuleCode\* , PersonID\*)

Student ( StudentID\*, add some attribute)

Module.Student (ModuleCode\*, PersonID\*)

Assignment (AssignmentID , AssignmentType)

Assignment.Module.Student (AssignmentID\*, PersonID\*, ModuleCode\*, Grade, status)