

# DAX Measures

## 1. Student Demographics & Performance Metrics

```
Average Age =  
AVERAGEX(DimStudent, DATEDIFF(DimStudent[Birthdate], TODAY(), YEAR))
```

```
Average GPA =  
AVERAGE(DimStudent[GPA])
```

```
Female Count =  
CALCULATE(COUNTROWS(DimStudent), DimStudent[Gender] = "Female")
```

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## 2. Course & Exam Performance Metrics

```
Average Course Score =  
AVERAGEX(  
    VALUES(DimCourse[Course ID]),  
    CALCULATE(AVERAGE(FactStudentExam[Student_Score]))  
)
```

```
Avg Exams per Student =  
DIVIDE(  
    DISTINCTCOUNT(FactStudentExam[Exam_ID]),  
    DISTINCTCOUNT(FactStudentExam[Student_ID])  
)
```

```
AVG Minutes Exam Time =  
AVERAGEX(  
    FactStudentExam,  
    DATEDIFF(  
        RELATED(DimExams[Start_Time]),  
        FactStudentExam[Submission_Time],  
        MINUTE  
    )  
)
```

```
Pass Exams =  
CALCULATE(COUNTROWS(FactStudentExam), FactStudentExam[Status] = "Pass")
```

```
Fail Exams =  
CALCULATE(COUNTROWS(FactStudentExam), FactStudentExam[Status] = "Fail")
```

```
Pass Rate =  
DIVIDE([Pass Exams], [Pass Exams] + [Fail Exams])
```

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## 3. Graduation Metrics

```
Graduated Students =  
CALCULATE(  
    COUNTROWS(DimStudent),  
    FILTER(  
        DimStudent,  
        CALCULATE(  
            COUNTROWS(FactStudentExam),  
            FactStudentExam[Exam_Status] = "Graded"  
        ) > 0  
    )  
)
```

```
Graduation Rate (Track) =  
VAR Graduated =  
    CALCULATETABLE(  
        VALUES(DimStudent[Student ID]),  
        FactStudentExam[Exam_Status] = "Graded"  
    )  
VAR TotalStudents = COUNTROWS(DimStudent)  
RETURN DIVIDE(COUNTROWS(Graduated), TotalStudents, 0)
```

```
Graduation Year (Proxy) =  
VAR LastExamDate =
```

```

        CALCULATE (
            MAX (FactStudentExam[Exam_Date]),
            FactStudentExam[Exam_Status] = "Graded"
        )
    RETURN IF (NOT (ISBLANK (LastExamDate)), YEAR (LastExamDate))

```

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#### 4. Employment & Freelancing Metrics

```

AVG Salary (Employment) =
AVERAGE (SubDimEmployment[Salary])

Max Salary =
MAX (SubDimEmployment[Salary])

Avg Freelancing Income =
AVERAGE (SubDimFreelancing_Jobs[Income (USD)])

NonFreelanceStudents =
[No. Students] -
CALCULATE (
    DISTINCTCOUNT (SubDimFreelancing_Jobs[Student ID])
)

Top Hiring Company =
TOPN (
    1,
    SUMMARIZE (
        SubDimEmployment,
        SubDimEmployment[Company],
        "CountStudents",
        COUNTROWS (SubDimEmployment)
    ),
    [CountStudents], DESC
)

```

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#### 5. Administrative & Structural Metrics

```

Number of Departments =
DISTINCTCOUNT (DimTrack[Department Name])

No. Exams per Intake =
CALCULATE (
    DISTINCTCOUNT (FactStudentExam[Exam_ID]),
    ALLEXCEPT (SubDimIntake, SubDimIntake[Intake ID])
)

Total Provider =
DISTINCTCOUNT (SubDimCertificates[Provider])

```