

# How Much Does it Cost to Educate a Student?

Understanding Program Costs  
and Academic Contribution  
Margins

WEALTH ADVISORY | OUTSOURCING | AUDIT, TAX, AND CONSULTING

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Create Opportunities

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# Introductions



**Leah Lindstrom, CPA**

**Manager, Higher Education**

**CLA**

A portrait of Frankie Rose, a man with short brown hair and a light beard, smiling. He is wearing a dark suit jacket over a light blue shirt. The background is a soft, out-of-focus blue.

Frankie Rose  
Vice President for Academic Administration

A photograph of a tree with pink blossoms against a clear blue sky. A black antenna tower is visible in the lower center of the frame.

Union College  
Lincoln, NE

# Learning Objectives



Identify how cost of academic programs can be understood in relation to revenue

Explain why academic program costs and contribution margins are important to institutions

Review procedures when creating contribution margin models

# State of the Industry



## How to Recognize the Warning Signs of a Death Spiral — and How Colleges Can Avoid One

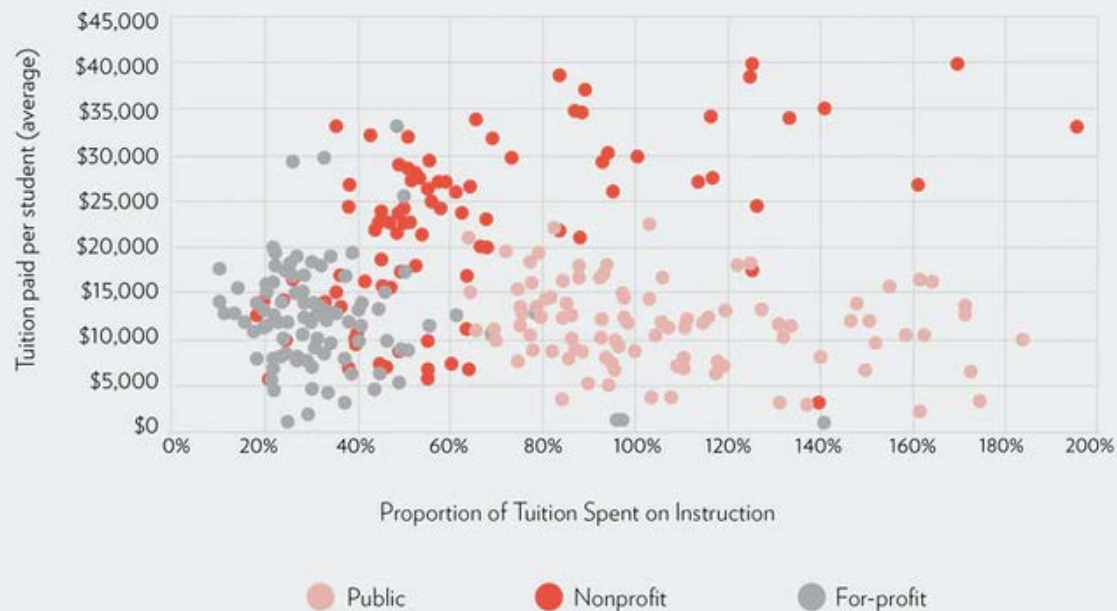
By *Scott Carlson* and *James F. Galbally Jr.* | APRIL 22, 2020

- **Your institution has never assessed the costs of its operation**
- **Do not know the cost of programs and departments**
- **Do not understand the return on investments**

<https://www.chronicle.com/article/how-to-recognize-the-warning-signs-of-a-death-spiral-and-how-colleges-can-avoid-one/>



## AVERAGE TUITION AND PROPORTION OF TUITION SPENT ON INSTRUCTION AT THE LARGEST 100 PUBLIC, NONPROFIT, AND FOR-PROFIT SCHOOLS



<https://tcf.org/content/report/much-education-students-getting-tuition-dollar/>



# Financial Challenges

Declining  
Enrollment

Loss of  
Government  
Funding

Decrease in  
Contributions

Poor Market  
Performance

Inflation

Increase  
Salary and  
Benefit Cost

Capital  
Projects



# Union College's Experience with Contribution Margin Modeling



# Potential Solutions

## Focus on “Top Line”

- Increase enrollment
- Increase tuition rates
- Implement a differential pricing or fee strategies

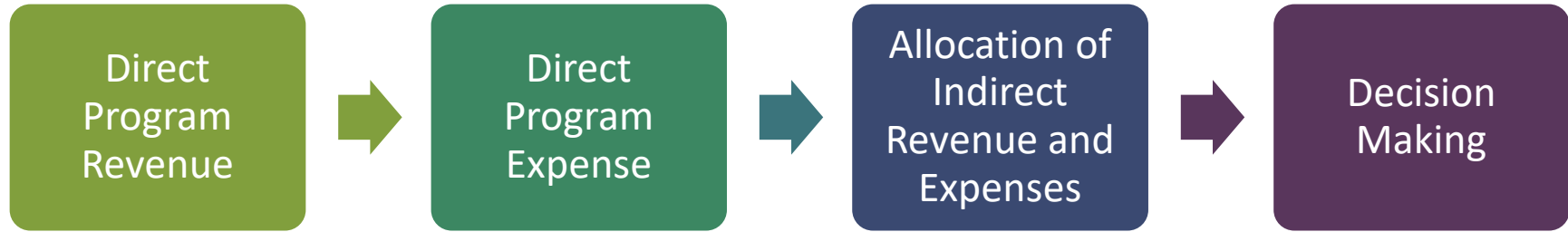
## Cost Containment

- Budget reductions
- Hiring freezes
- Workforce reductions

# Union College's Experience with Contribution Margin Modeling

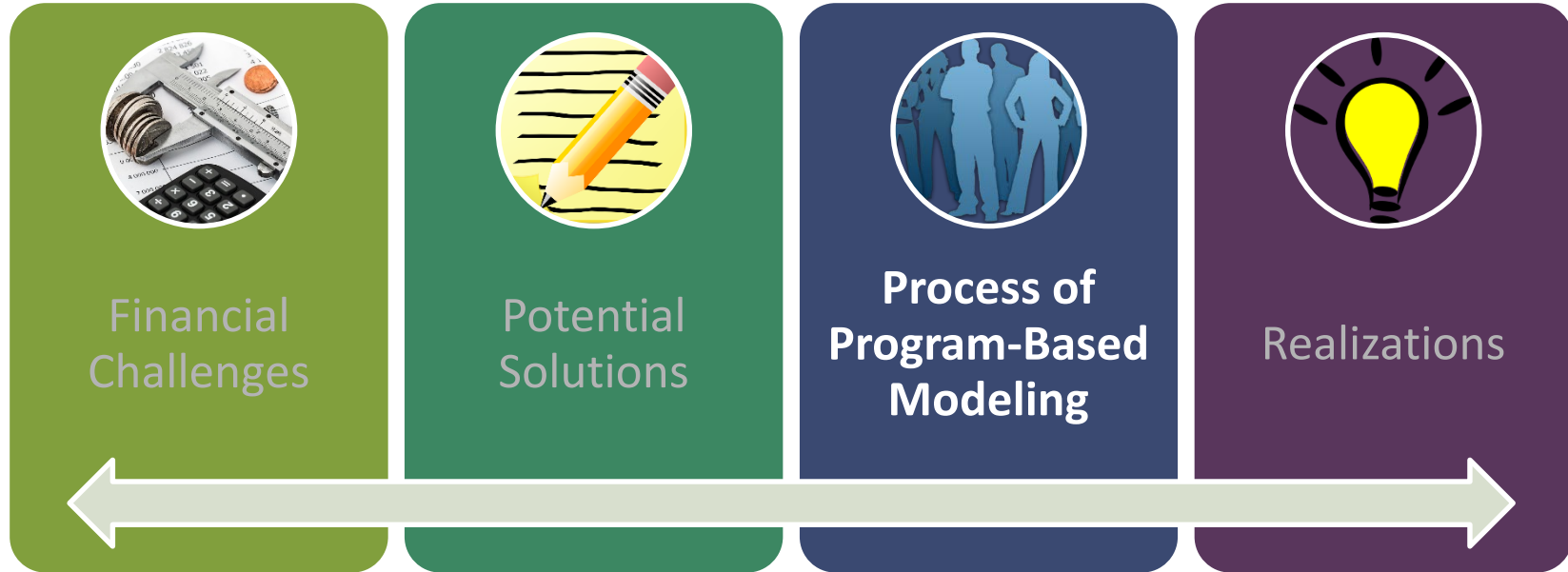


# Program-Based Financial Model



*This type of financial model allows decisions to be made with an understanding of the impact on specific degrees, programs, or departments instead of broad units or functions.*

# Union College's Experience with Contribution Margin Modeling



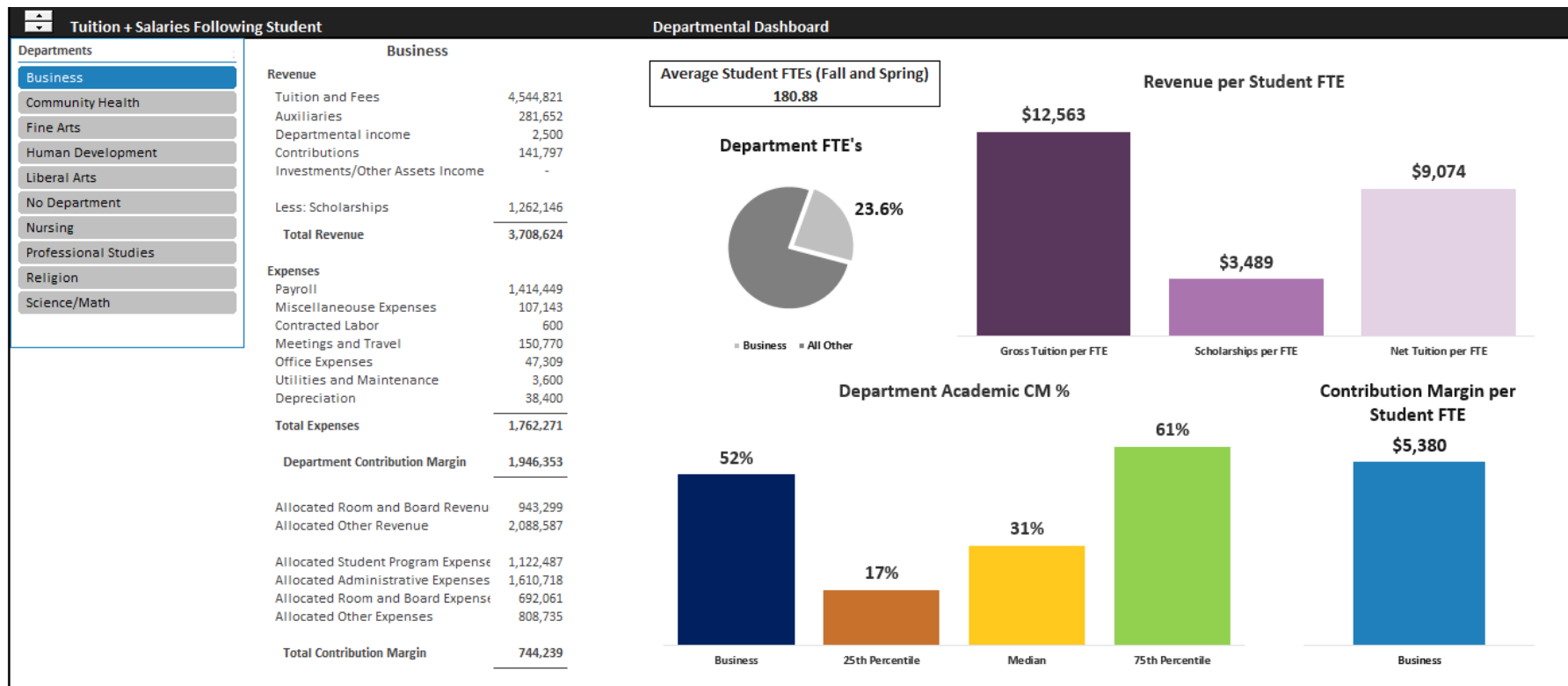


## Example of Academic Contribution Margins

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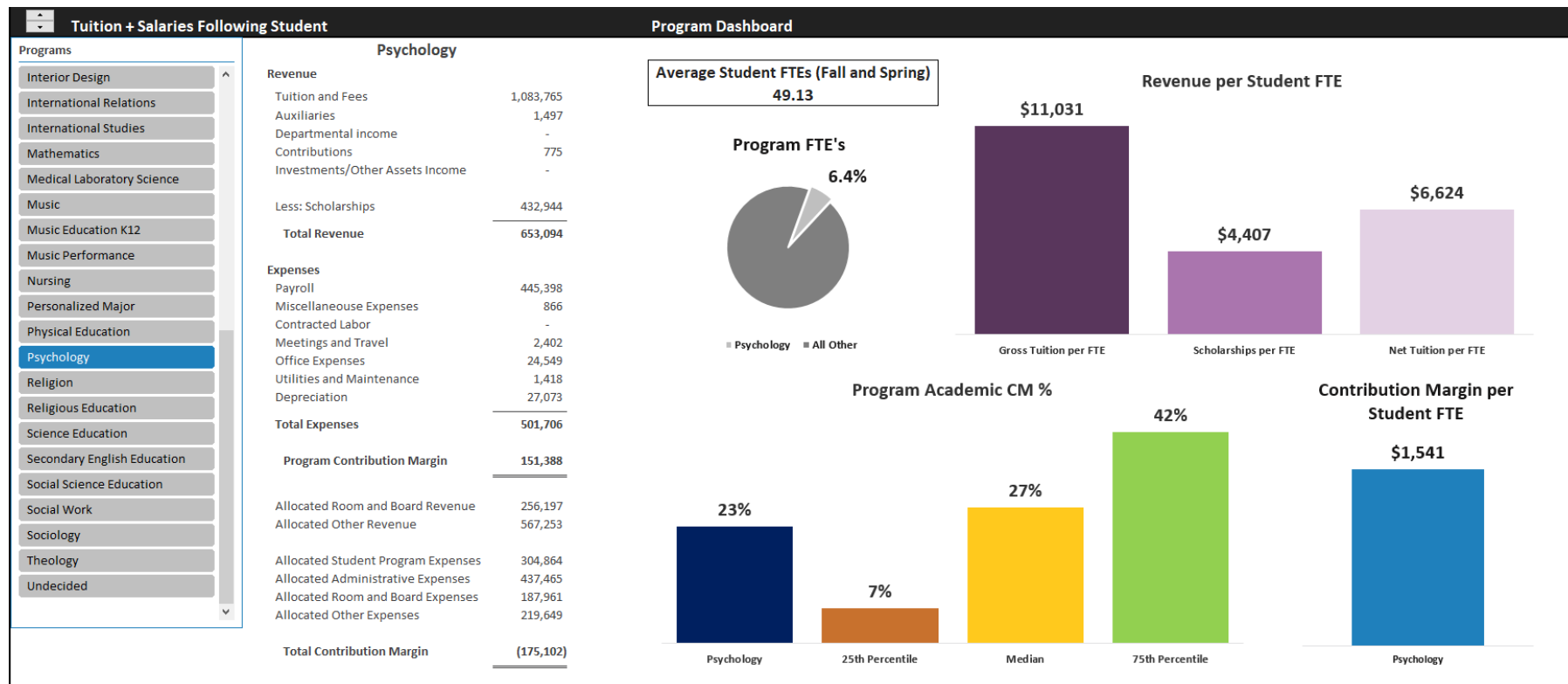
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# Department Dashboard





# Program Dashboard



# Step 1: Identifying the Direct Revenue that is generated by each program

Assign a program to each student

Nursing	
<b>Revenue</b>	
Tuition and Fees	1,730,479
Auxiliaries	174,309
Departmental income	1,545
Contributions	87,571
Investments/Other Assets Income	-
Less: Scholarships	692,014
<b>Total Revenue</b>	<b>1,301,890</b>

# *Step 1: Identifying the Direct Revenue that is generated by each program*

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Utilize billing system to allocate tuition and fees

# Step 1: Identifying the Direct Revenue that is generated by each program

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Identify other direct program revenue by using the general ledger detail

# *Step 1: Identifying the Direct Revenue that is generated by each program*

Nursing	
<b>Revenue</b>	
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Auxiliaries	174,309
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Investments/Other Assets Income	-
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<b>Total Revenue</b>	<b>1,301,890</b>

Obtain a detail of scholarships granted to each student and allocate discount to the student's program

## *Step 2: Identifying the Direct Expenses that are incurred by each program*

### **Expenses**

Payroll	747,025
Miscellaneous Expenses	65,876
Contracted Labor	340
Meetings and Travel	93,573
Office Expenses	31,144
Utilities and Maintenance	2,187
Depreciation	23,773
<b>Total Expenses</b>	<b>963,917</b>

Allocate faculty's salary and benefits to the classes they teach.

Determine a method to allow the dollar to follow the student

## *Step 2: Identifying the Direct Expenses that are incurred by each program*

<b>Expenses</b>	
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<b>Total Expenses</b>	<b>963,917</b>

Allocate other direct program expenses based on coding within the general ledger



## *Step 3: Calculating Program Contribution Margin*

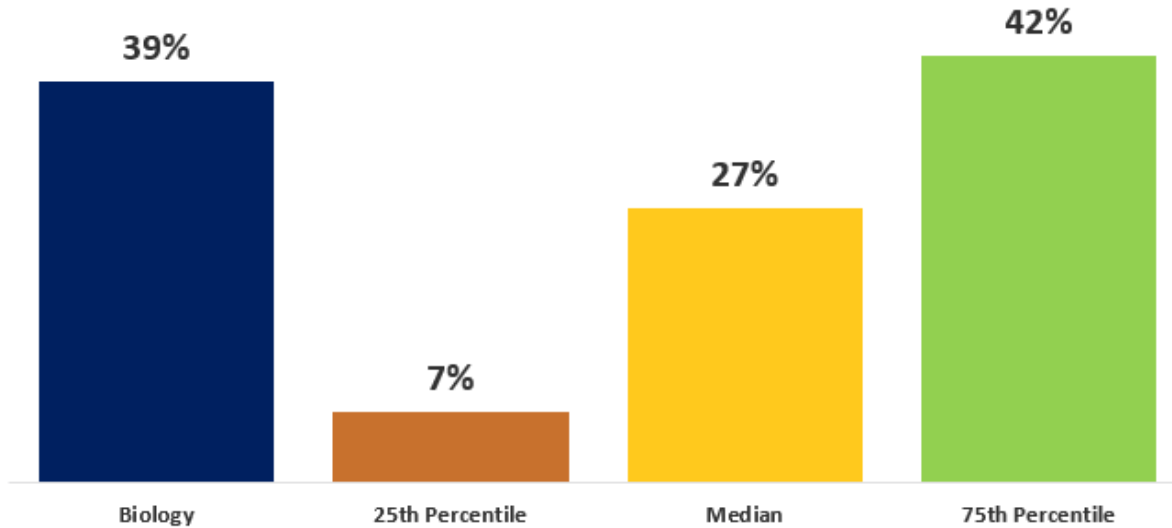
$$\begin{array}{rcccl} \text{Direct} & & \text{Direct} & & \text{Program} \\ \text{Program} & & \text{Program} & & \text{Contribution} \\ \text{Revenue} & - & \text{Expenses} & = & \text{Margin} \\ & & & & \$ \end{array}$$

## *Step 3: Calculating Program Contribution Margin*

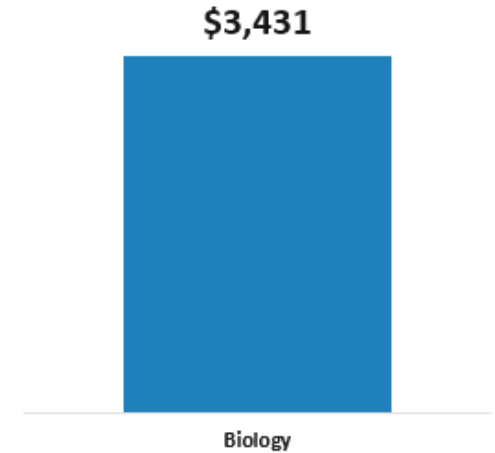
$$\frac{\text{Direct Program Revenue} - \text{Direct Program Expenses}}{\text{Direct Program Revenue}} = \text{Program Contribution Margin \%}$$

# Program Contribution Margin (%)

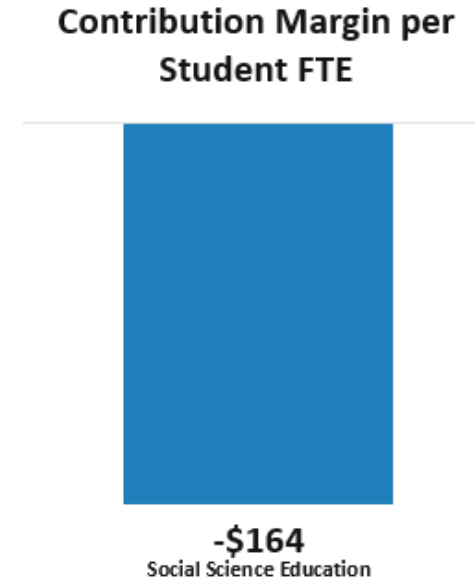
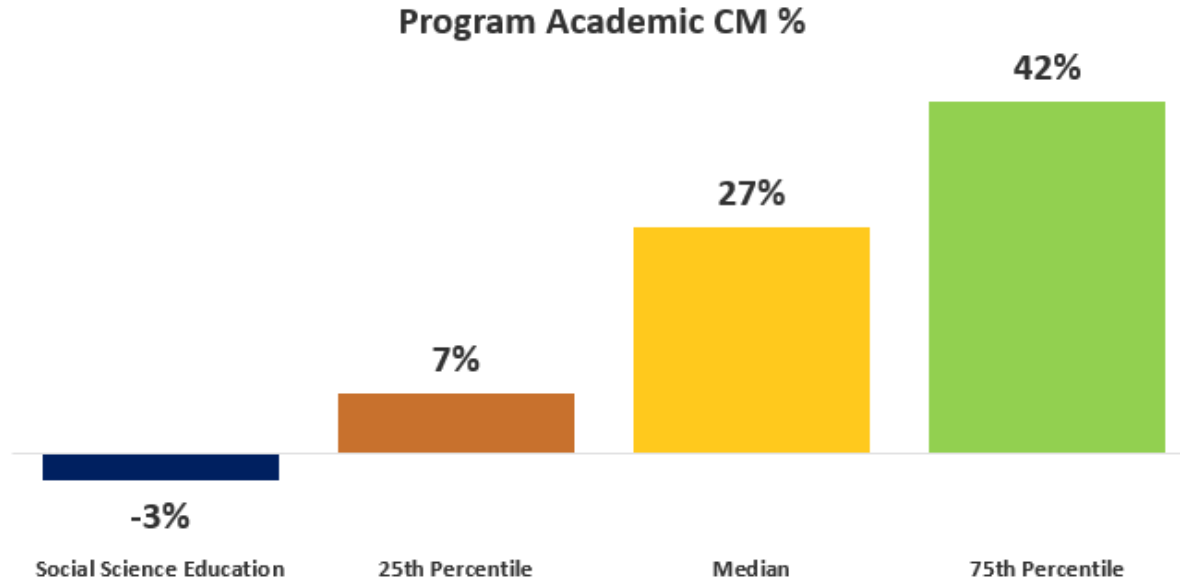
Program Academic CM %



Contribution Margin per Student FTE



# Program Contribution Margin (%)



## *Step 4: Allocate Overhead Revenue and Expense*

Utilities

Building  
Maintenance

Depreciation

Accounting

Human  
Resources

Admission

Student  
Success

Gifts and  
Pledges

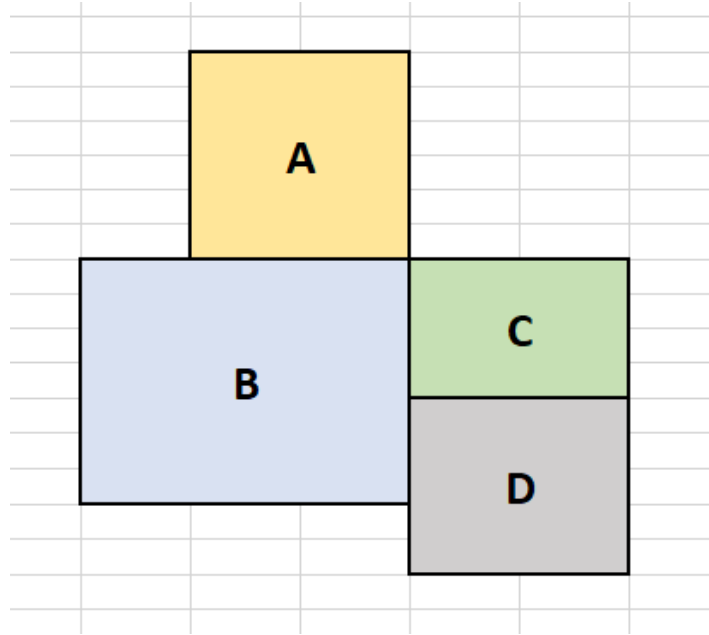
Institutional  
Aid

# Overhead Allocation – Student Headcount



- **Other Personnel Cost**
- **Other Administrative Expenses**
- **Marketing**
- **Financial Aid and Scholarships**
- **Contributions**

# Overhead Allocation – Square Footage



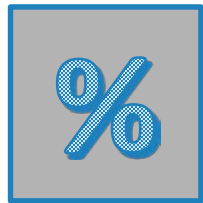
- **Utilities**
- **Building Maintenance**
- **Depreciation**



## Step 5: Calculate Academic Net Margin



$$\text{Total Revenue} - \text{Total Expense} = \text{Academic Net Margin (\$)}$$



$$\frac{(\text{Total Revenue} - \text{Total Expense})}{\text{Revenue}} = \text{Academic Net Margin (\%)}$$

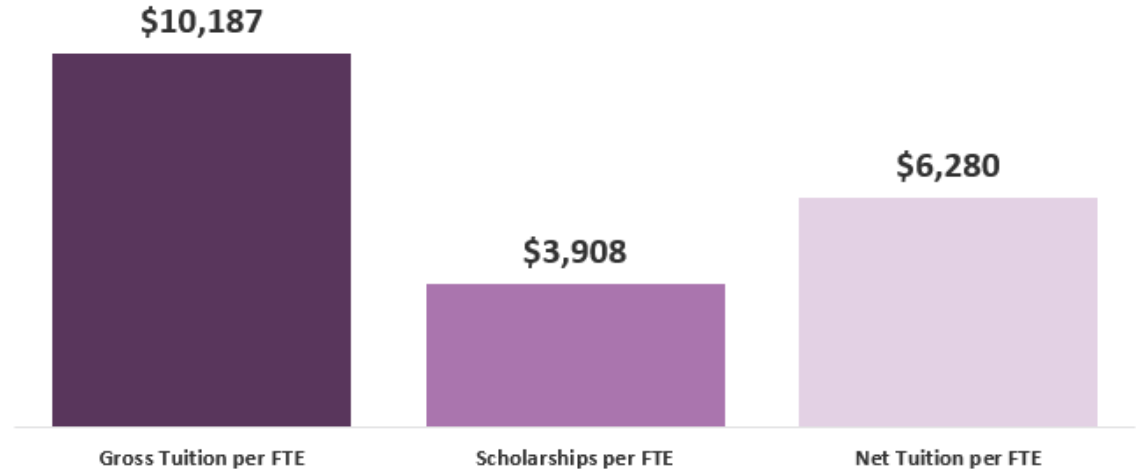
# Dashboard

Average Student FTEs (Fall and Spring)  
20.25

Program FTE's



Revenue per Student FTE



# Dashboard

Average Student FTEs (Fall and Spring)  
29.75

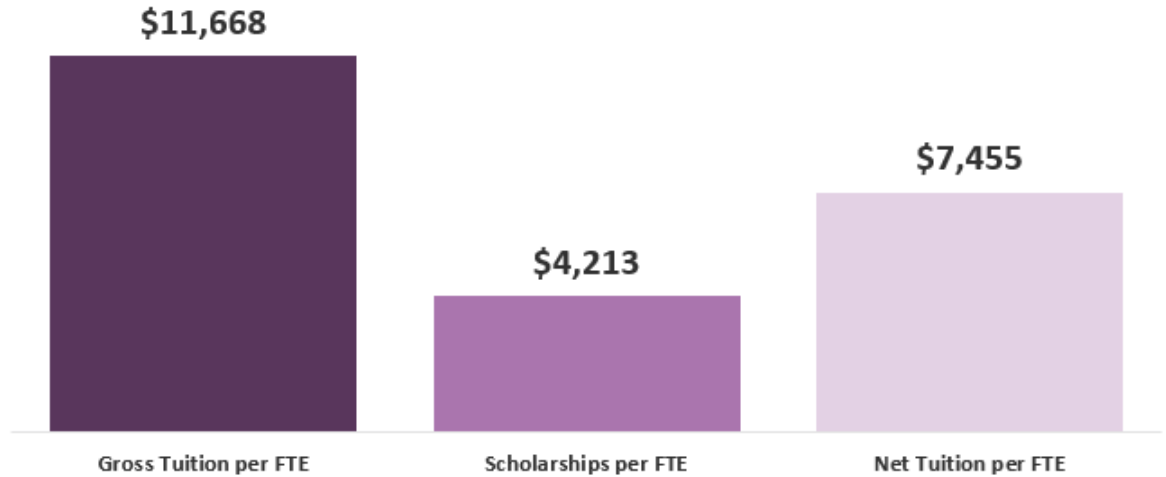
Program FTE's

3.9%



■ Biomedical Science ■ All Other

Revenue per Student FTE



# Dashboard

Average Student FTEs (Fall and Spring)

3

Program FTE's

0.4%



■ Exercise Science ■ All Other

Revenue per Student FTE

\$11,031



Gross Tuition per FTE

\$7,267



Scholarships per FTE

\$3,763



Net Tuition per FTE

# Union College's Experience with Contribution Margin Modeling



## Next Steps



Leverage the data that you have

Assemble the correct team

Reach out – we can help!



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