# Instructions for filling in the NU Rate Estimation Template

The Rate Development Template is set up to perform the necessary calculations automatically after the proper information is entered. **Entries should only be made in the blue shaded areas of each spreadsheet in the workbook**. The workbook projects for 3 years and contains the following tabs:

1. **Menu**: Directory of pages in the workbook
2. **Budget:** Total Projected Budget, Projected Revenue, and Surplus/Deficit over 3 years.
3. **Rate: (**Rate-Year 1 to Rate-Year 3) Billing rate development worksheets divided by year onto separate tabs. These worksheets summarize costs estimates used to determine rates for services, and usage estimates used to predict revenue
4. **Salary & Fringe:** Worksheet for personnel, salaries and wages, and Fringe Benefits associated with shared facility personnel. Fringe Benefits are automatically calculated by the worksheet from the Fringe Rate.
5. **Matls:** Worksheet for materials and supplies costs
6. **Equip:** Worksheet for equipment maintenance costs
7. **Other:** Worksheet for other direct costs
8. **Subsidy:** Worksheet for sources of internal subsidies of shared facility operation

## Menu

On the menu tab, enter the **Name** of the Shared Facility, and **the billing account number** if known (otherwise “NA”).

## Budget

The Budget worksheet is a summary of the Shared Facility’s Total Budgets, Projected Revenue of the Proposed Rate, Subsidy, and Surplus/Deficit over 3 years. All the data on this sheet flows directly from the other worksheets listed below after they are filled out.

The rate schedule for each service should be chosen to come as close as possible to breakeven operation of the entire Shared Facility, as reflected in the calculated **Surplus (Deficit)** row. As a non-profit institution, Northeastern is not allowed to make money through operation of its Shared Facilities, which should not produce a surplus greater than 15% of total direct costs in a given budget year. It is more likely that reasonable estimates of anticipated usage and market rates will lead to a projected deficit in the proposed year of shared facility operation.

## Rate (Year 1- Year 3)

This the main sheet that will be used to identify the services offered by the proposed Shared Facility and calculate the total cost and subsidized cost of each service, which will be used to estimate billing rates.

1. Starting with the **Rate-Year 1** tab, in the **Description of Service** row, enter a brief description of each instrument or service offered by the Shared Facility under the columns **Rate 1**, **Rate 2**, etc. Space is provided for up to 10 different rates.
2. For readability, hide any unused **Rate** columns, making sure to leave the rightmost **Total** column visible.
3. The data in the Direct Costs section will be populated after filling out the other tabs.
4. If individual **Rates** have any surplus or deficit from previous years of operation, enter the dollar amount for each **Rate** in the **Deduct Surplus or Add Deficit** row, otherwise leave as zero.
5. In the **Actual Annual Volume** row, for each identified **Rate**, indicate the units by which the service is measured (e.g. hours, samples) in the **Units of measure** row. This number should be the projected total number of **Units** based on the historical knowledge of volume.
6. In the **Maximum Annual Volume** row, please fill out the maximum annual volume for each service. This will be the maximum estimated volume for each year.
7. The Break-Even Rates section is calculated from Direct Costs information after entering the numbers of **Units**.
8. The **External Rate** is automatically including the 57% F&A rate in the calculation.
9. Data in the blue shaded areas from in the **Rate – Year 2** to **Rate – Year 3** tabs are automatically populated after filling in Year 1, but may be edited later to reflect future plans of the Shared Facility.

After these initial steps, proceed to fill in information in the individual detail sheets (**Sal&Fr**, **Matls**, **Equip, Other**, **Subsidy**). Once that information is available, the estimates for cost and billing rates will be populated in this **Rate** sheet and the process can be completed.

For the Projected Usage, Proposed Rate, and Projected Revenue sections, please refer to the “Completing the Rate Determination Sheet” section at the end of this Instruction for more detail.

Salary & Fringe

## *Salary*

Each line of this worksheet should correspond to an employee who spends effort operating the Shared Facility. Employees need not be dedicated full time to shared facility operation. Note that the **Description of Service** entered on the **Rate** worksheet appear in the Rate columns. For each employee, specify:

1. Name under **Name of Employee**, if available, else TBD
2. Brief job title under **Title**
3. Put in **Account Code** that used for charging the salary
4. Total **Annual Salary** from all sources, not including benefits
5. The **percentage of Time allocated to SRF** is the effort that allocated to theshared facility.
6. For each **Rate**, indicate the percentage of employee’s shared facility effort devoted to that service. A typical approach to determining this quantity is to estimate on average how much time the employee spends per unit of a given service, multiply by the total number of available units for that service (“**Actual Annual Volume**” on the **Rate** spreadsheet), and divide by the total number of employee hours allocated to the shared facility annually. A figure typically used for a full-time employee is 1920 hours per year (48 weeks times 40 hours), although this may vary. It is anticipated that each employee may not spend effort on all available services. The cost of each employee’s effort on each **Rate** is calculated from the **Rate** percentages and the **Salary Allocated to SRF**.   
   For readability, hide columns for unused **Rates**, taking care to leave the rightmost **Totals** column visible. The total effort of each employee is monitored in the **Total** column and should be 100%.

The template has space for up to 7 employees. More rows may be added as needed, but in this case, care should be taken to update the sums in the grey-shaded **Totals** row at the bottom.

The worksheet contains 3 years projections. Scroll down the worksheet to check if the data for each year is correct. The Annual Salary includes 3% adjustment for each year.

## *Fringe*

The only thing that needs to be entered on this worksheet for fringe is the fringe benefit rate (%) in the **Fringe Benefit Rate** row. This should be the internal fringe benefit rate, not the rate approved for federal grant proposals. All other fields on this sheet are calculated from information entered during the process above (The Salary section).

## Matls

Each line of this worksheet corresponds to a type of material or supply used in Shared Facility operation. For each type, specify

1. A brief description of the material or supply
2. The **Account Code** for the material or supply if available. A brief listing of Northeastern codes is available at <https://www.northeastern.edu/sabo/wp-content/uploads/2018/02/SABO-Acccount-Codes-2.pdf> )
3. The **Total Amount** is the total annual cost amount of the material or supply
4. For each defined **Rate**, specify the percentage of the material or supply used for that service.
5. For readability, hide any unused **Rate** columns, taking care to leave the **Total** columns visible. The total percentage of material used is kept in the **Total** column and should be 100%.

The template has space for up to 20 types of materials or supplies. More rows may be added as needed, but in this case, care should be taken to update the sums in the grey-shaded **Total** row at the bottom.

The worksheet contains 3 years projections. Scroll down the worksheet to check if the data for each year is correct.

## Maint

Each line of this worksheet corresponds to the maintenance costs associated with an instrument or equipment used in operation of the Shared Facility. For each one, specify

1. In **Description of Equipment** column, a brief description of the equipment, including manufacturer and model number if appropriate.
2. In **NU Tag #,** the NU Inventory tag number for the instrument or equipment, if available.
   1. If an instrument consists of several individually tagged components, include each tag number, separated by commas.
   2. If the instrument is *leased*, indicate “leased” in this space
3. In **Index # (list all)** enter the index number(s) used for purchase, partial purchase, or lease of the equipment including both *federal* *and* *non-federal* funds. If more than one index was used, list the index numbers separated by commas
4. **Maintenance Contract PO #**, give the Purchase Order number for the service contract supporting the equipment. If the equipment is not covered by a service contract, enter “None”.
5. In **Total Maintenance Amount**, enter the annualized cost of any service contract for the equipment. Maintenance funds may be allocated for an instrument even if it is not under a maintenance contract and local staff are qualified to perform maintenance on the equipment.
6. **% Time Allocated to SRF,** enter the fraction of the equipment’s time that is available to Shared Facility users.
7. For each identified **Rate**, identify the percentage of the equipment’s shared facility time that will be used for the given service. Typically, a given instrument will be used for only one or two services.
8. For readability, hide any unused **Rate** columns, taking care to leave the **Total** columns visible. The total percentage of shared facility instrument time is kept in the **Total** column and should be 100%.

The template has space for up to 10 pieces of equipment. More rows may be added as needed, but in this case, care should be taken to update the sums in the grey-shaded **Totals** row at the bottom.

The worksheet contains 3 years projections. Scroll down the worksheet to check if the data for each year is correct.

## Other

Each line of this worksheet corresponds to an additional direct cost of shared facility operation not included on the other worksheets. Possible categories include travel for relevant conferences or training, billing/scheduling software, web development, and data storage. More information on the allowability of costs in this category is available from Northeastern’s Research website. For each item, specify

1. A description of the direct cost
2. The Account Code for the item if available (a brief listing of Northeastern codes is available at <https://www.northeastern.edu/sabo/wp-content/uploads/2018/02/SABO-Acccount-Codes-2.pdf>)
3. **Total Amount,** the annual cost of the item
4. For each identified **Rate**, identify the percentage of the cost allocated the given service. Typically, “Other” costs are distributed over the available **Rates** in proportion to the time the shared facility spends on each service, but they may also be evenly distributed.
5. For readability, hide any unused **Rate** columns, taking care to leave the **Total** columns visible. The total percentage of shared facility instrument time is kept in the **Total** column and should be 100%.

The template has space for up to 10 categories of “Other” costs. More rows may be added as needed, but in this case, care should be taken to update the sums in the grey-shaded **Total** row at the bottom.

The worksheet contains 3 years projections. Scroll down the worksheet to check if the data for each year is correct.

## Subsidy

This worksheet lists sources of financial support within the University that are used to offset the cost of Shared Facility operation. It is important to include all such support to provide the most accurate estimate of costs possible. For each separate subsidy

1. A description of the subsidy
2. **Subsidizing Org,** list the department or departments supplying the subsidy
3. **Subsidizing Index #**, list the number(s) of the account(s) providing the subsidy
4. Under **Total Amount,** the annual amount of the subsidy
5. For each identified **Rate**, identify the percentage of the subsidy allocated the given service.
6. For readability, hide any unused **Rate** columns, taking care to leave the **Total** columns visible. The total percentage of each subsidy is kept in the **Total** column and should be 100%.

The template has space for up to 9 types of subsidy. More rows may be added as needed, but in this case, care should be taken to update the sums in the grey-shaded **Total** row at the bottom.

The worksheet contains 3 years projections. Scroll down the worksheet to check if the data for each year is correct.

## Completing the Rate Determination Sheet

Return to the Rate worksheet to complete rate estimation. The itemized and total costs, and subsidies from the detail worksheets should appear for each of the services that have been defined.

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| --- | --- |
| **User Group** | **Definition** |
| Internal - Exploratory Researcher | Faculty who are performing experimental/feasibility testing that would be funded by the OHR (or other internal source) |
| Internal- NU Sponsored Research | Research projects with a defined scope/protocol and funded by an external funding source (ex. DOD grant) |
| External | Any external entity, individual who is not part of the NU community |
| Strategic Partner | Strategic corporate partnerships, such as Rogers, Raytheon and VRC |

1. For the **Break-Even Rate** section, the internal rate and external rate will calculate automatically. The External Rate section has included the 57% F&A rate in the formula.
2. For the **Usage by User Group** section, enter the anticipated annual units of usage for each user group. Ideally, this projection should be based on previous usage data if this is available for the service. Below chart has the explanations of each user group. Total usage for each service should match the **Actual Annual Volume** for each service on the top of the sheet.
3. For the Basic Calculated Rate section, the numbers are populated automatically. Please do not adjust any numbers in this section. The purpose of this section is to show what the break-even rate is based on different user group and the proposed rate should be determined based on the break-even rate.
4. For the **Proposed Operating Rate** section, you can input your proposed rate for each service based on different user group. Please be aware that the internal proposed rate cannot be higher than the internal break-even rate.
5. The **Estimated Revenue** under the **Proposed Operating Rate** section will be populated automatically after input the proposed rate. The calculation of estimated revenue is based on the usage by group and the proposed rate.
6. All the bottom sections will be populated automatically except Subsidy line. The **Subsidy** line are numbers pulling from the **Subsidy** tab.
7. **Estimated Total Revenue by service** line represents the total revenue for each service
8. **Estimated Surplus (Deficit) by service** represents the Surplus or Deficit between total revenue and total direct costs
9. **Margin by Service** line represents the % of surplus or deficit over the total direct costs
10. **Estimated Surplus (Deficit) by Service after Subsidy** line represents the surplus and deficit after including the subsidy. And the **Margin by Service after Subsidy** line represents the % of surplus or deficit over the total direct costs after including the subsidy.
11. Make sure to update the data for year 2 and year 3 tabs as well.