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How To Use the Genomic Sciences Laboratory Online Submission System

This user's guide was developed to guide our customers through our new online submission system to request services, supplies, or schedule equipment use. While the Lab Management platform is very intuitive, this guide may be useful for quickly navigating the system. For more information on how to use this system, please visit https://support.labs.ncsu.edu/.

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I. How to Login to the GSL Submission System

Step 1. Click on the GSL Submission System portal link on the GSL website, or visit labs.ncsu.edu.

Step 2: For **internal (NC State) users**, click the red **UNITY ID LOGIN** to log in with your NCSU credentials.

For **External users**, use the **GUEST LOGIN**.

For new external users, fill out the signup request information, including billing contact information, in order to open an account. Note: ncsu.edu email accounts cannot be used as external user accounts. If you are an external user at NC State, you will need to use a different email account.

II. Managing your Contact & Billing Information

Users can manage their contact and billing information by clicking on the **My Accounts** section of the top toolbar. There are tabs to update your email, physical address, and phone number. If you are an internal NC State user, some of the fields may not be editable and are tied to the University system. This is primarily for external users to update their contact information.
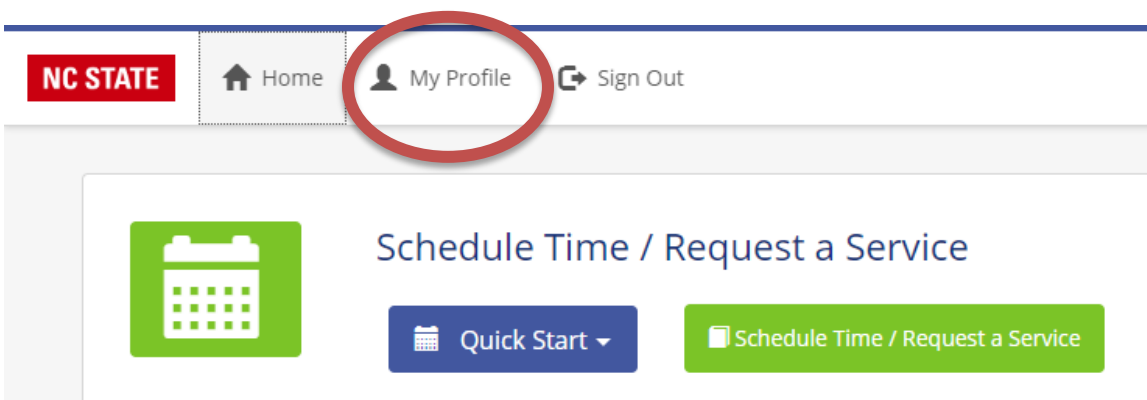
III. Navigating your Account Homepage

Once you've successfully logged in, your Homepage will have a variety of icons to select from. You can return to this menu at anytime by selecting **Home** on the top toolbar.

Appointments – This sections allows you see dates and times you've scheduled for instrument use.

Schedule Time / Request a Service - Use this icon to schedule equipment use or request a GSL service, such as Sanger sequencing, Next Generation Sequencing, Pippin prep, etc.. Users will need to select the "Genomic Sciences Laboratory" in the next option as all participating core facilities are listed.

Training – This icon allows you to see what GSL equipment you've been trained to use. If you were previously trained for an instrument, you will need to request training again and have it waived. No previous training events will be in the new system. Once your training event has been completed or waived, you will be able to schedule equipment use.

Agreements & Existing Agreements – Some core facilities require authorization agreements from PIs on behalf of their students. Currently, the GSL does not require authorization agreements to be in place for students and researchers to use our services. **We do require all students or researchers to designate the PI who will be paying the bill when submitting requests**. This will happen during the submission request process.

Orders – This icon allows you to view existing orders for instrument use or services in our system.
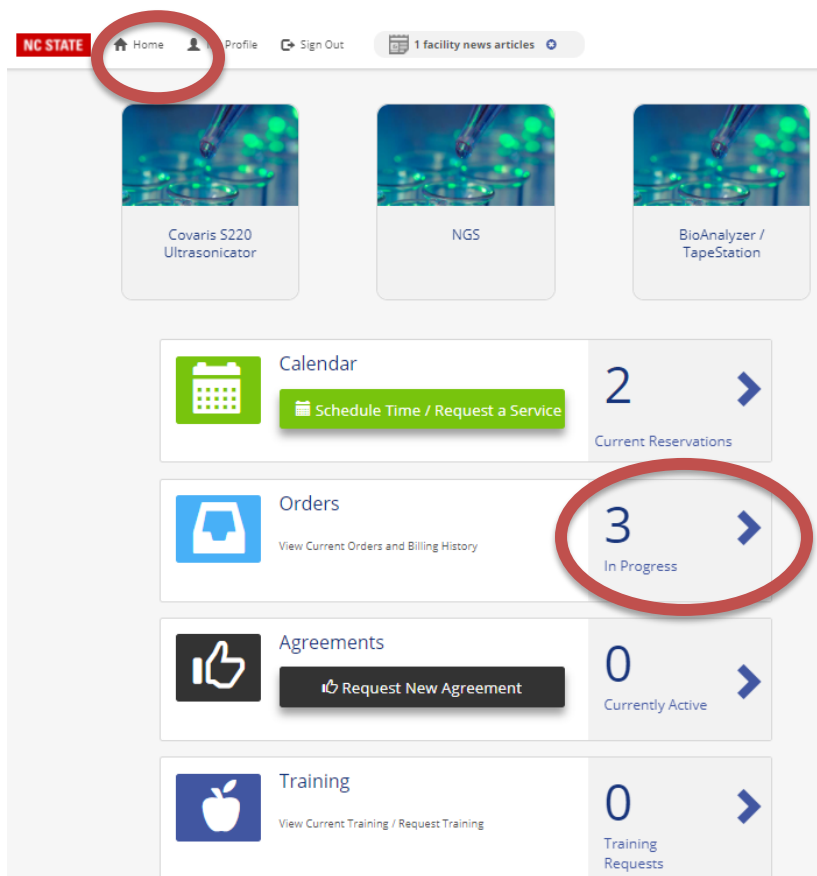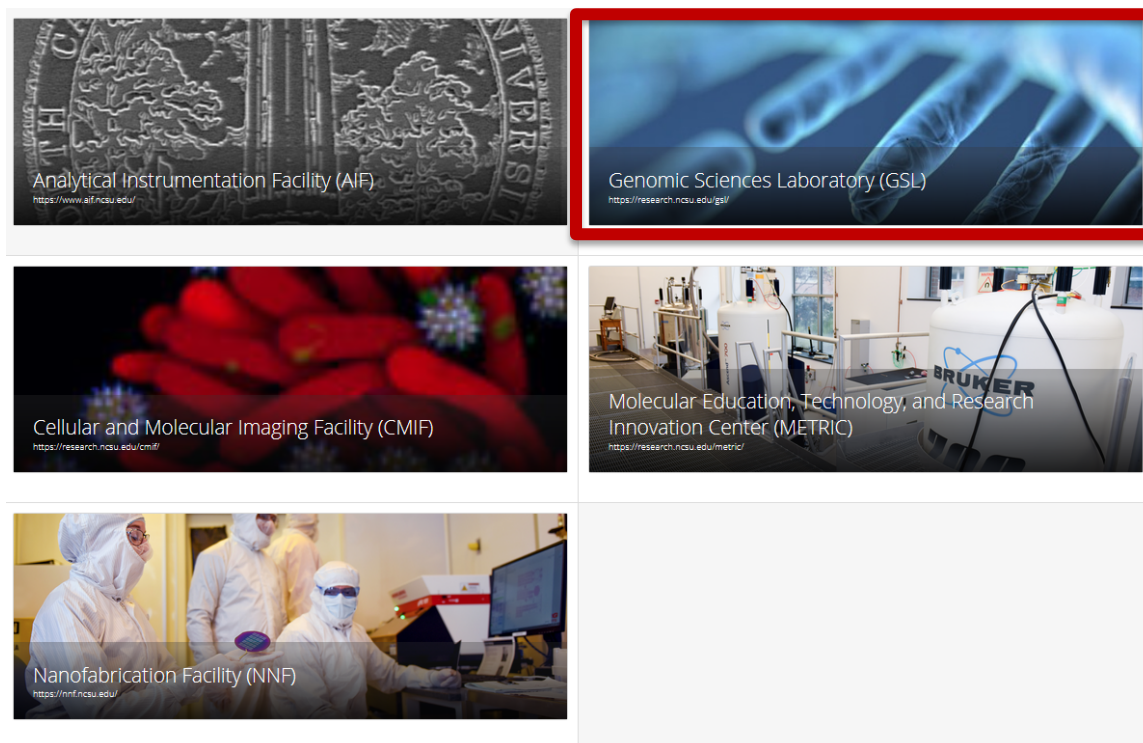
IV. How to Schedule Equipment Use

Step 1. From your Home page, select **Schedule Time / Request a Service** OR if you have previously requested a service, select the tile from the **Quick Start** menu.
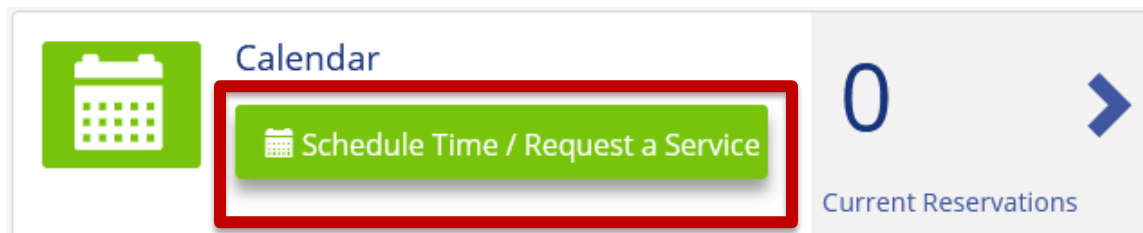
Step 2. Select "Genomic Sciences Laboratory" from the list of core facilities available.
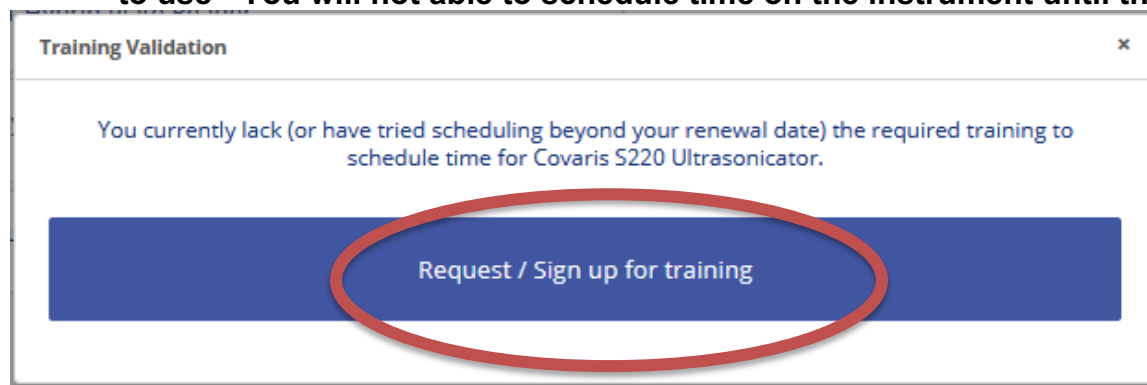

Step 3. Select the instrument you would like to use.
Note – if you were trained before the new system was put in place, no records are available. A training request can be submitted in the system and waived for users that were previously trained.

Genomic Sciences Laboratory / Select Action

BioAnalyzer / TapeStation	Blue Pippin
NGS	Sanger and Genotyping
Consumable Request	Covaris S220 Ultrasonicator
Synergy H1 Hybrid Plate Reader	BioRad CFX384 QPCR Instrument
Qiagen TissueLyzer	BioRAD QX200 digital droplet PCR

Step 4. **Training** - If you are not listed as trained for this instrument in the system, you will be prompted to submit a training request. **All new users are required to complete a training event prior to use - You will not able to schedule time on the instrument until this is completed.**

Training Validation   ✕

You currently lack (or have tried scheduling beyond your renewal date) the required training to schedule time for Covaris S220 Ultrasonicator.

Request / Sign up for training

Step 5. The GSL will receive an internal system notification of your training request. **The GSL will schedule a training event for you that fits with our staff work schedule and you will receive a notification by email when training is complete.** We will waive users that have already been trained when we receive the request, so you do not have to retrain to use the equipment. You can keep tabs on what instruments you've been trained using the **Training** icon on your Home Page.

Step 6. Once you are trained, select the instrument as before: **Schedule Time / Request a Service ➔ Select Laboratory (GSL) ➔ Select Equipment**. You can schedule time by dragging a window on the calendar or double clicking to the next window. Additional information about the equipment, such as the operator's manual, may be available in the top right text selection.

Step 8. In the next window, you can refine your schedule times as well purchase any additional supplies you may need for instrument user (qPCR plates, Covaris tubes, etc). When you have completed your selections, click **Continue** to proceed to checkout.

Note: If you receive an error message after clicking on Continue, you are likely in conflict with the scheduling rules for this instrument. See below for the Reservable Rules for GSL instruments:

Covaris S220 Ultrasonicator – Scheduling available from 9:00 AM to 4:00 PM Monday – Friday (except Holidays). There are no minimum or maximum scheduling constraints (per day). Instrument charges are hourly.

Note: If you would like us to turn on the instrument to chill down, please contact us at gslncsu@gmail.com several hours ahead of your appointment time.

Synergy H1 Hybrid Plate Reader - Scheduling available from 9:00 AM to 4:00 PM Monday – Friday (except Holidays). **A minimum time of 15 minutes** must be scheduled. Instrument charges are hourly.

BioRAD CFX384 qPCR - Scheduling available from **9:00 AM to 5:00 PM** Monday – Friday (except Holidays). A **maximum time of 3 hours** can be scheduled per order. Instrument charges are a flat rate per run.

Note: If you'd like to schedule a qPCR run overnight, book time from 4:00 PM to 5:00 PM only, and remember to collect the data and plate by 9:00 AM the next morning.

BioRAD QX200 digital droplet PCR - Scheduling available from 9:00 AM to 4:00 PM Monday – Friday (except Holidays).

Note: The BioRAD ddPCR machine is charged per sample, not by time used. Users must specify the number of samples to be run on the instrument, using the Additional Required Items tab. Users can schedule instrument time free of charge.

Qiagen TissueLyzer - Scheduling available from 9:00 AM to 4:00 PM Monday – Friday (except Holidays). There are no minimum or maximum scheduling constraints (per day). Instrument charges are hourly.

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Step 9. Fill out billing information, agree to terms and conditions, and select Finalize Order. More information on how to fill out your billing information, see Section VII (Completing Your Order).

V. How to Submit a Service Request

Step 1. From your Home page, select **Schedule Time / Request a Service**.

Step 2. Select "Genomic Sciences Laboratory" from the list of core facilities available.

Step 3. Select the service you would like performed. The following options are available:

Genomic Sciences Laboratory / Select Action

BioAnalyzer / TapeStation	Blue Pippin
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Consumable Request	Covaris S220 Ultrasonicator
Synergy H1 Hybrid Plate Reader	BioRad CFX384 QPCR Instrument
Qiagen TissueLyzer	BioRAD QX200 digital droplet PCR

Bioanalyzer / Tapestation – Select this service for Q/C of RNA or DNA samples using a Bioanalyzer or Tapestation assay. This selection replaces the old paper form for Bioanalyzer and Tapestation assays. **Use this form for your Q/C only** – if you are submitting samples to be used directly in a sequencing project, use the NGS form (Q/C will be included).

Blue Pippin – Select this service for submission of DNA samples for fragment size-selection. This procedure is used for specific NGS library prep applications, including GBS, ddRAD-seq, and PacBio sequencing.

Sanger & Genotyping – Select this service for submission of samples for Sanger DNA sequencing or Genotyping plates for fragment analysis on our ABI 3730 sequencer. Follow options for submission type and level of service (Platinum, Gold or Bronze) to select your choice.

Next Generation Sequencing (NGS) – This is the primary form for submission of all NGS projects, including both Illumina and PacBio sequencing. The following submission types are available:

> **Prepared Illumina Library** – Use this option to submit a *pooled*, user prepared Illumina library for sequencing (including GBS, ddRAD-seq libraries).
> **Prepared PacBio Library** – Use this option to submit a user prepared PacBio library for sequencing.
>
> **RNA Extractions** – Use this option when submitting tissues for RNA extraction. Note – a separate submission form will be required for NGS library prep and sequencing of the extracted RNA samples.
>
> **NGS Library Prep & Sequencing** - Use this option when submitting RNA or DNA samples directly for library prep and sequencing at the GSL (Illumina and PacBio). Follow the options for library prep & sequencing, and select instrument platform/run type.

Step 4. Follow the drop down text choices to navigate through completion of your service request, filling in all required fields. Most will require you to upload sample name excel file to the system – there are sample template forms available for you to download, fill out, and upload to your service request. When you have completed all required fields, click **Submit**.

Step 5. Complete the billing information and Terms & Conditions on the Order Summary page. *See Section VII (Billing) for more information what information should be provided for billing*. When ready submit, select **Finalize Order**.

VI. How to Purchase Supplies

You can use the Consumables Request form to purchase supplies for sale at the GSL *without requesting any other service*. If you're purchasing supplies to be used on a GSL instrument, these supplies can be purchased during checkout for instrument reservations (See Section VI: Step 8).

Step 1. From your Home page, select **Schedule Time / Request a Service**.

Step 2. Select "Genomic Sciences Laboratory" from the list of core facilities available.

Step 3. Select the **Consumable Request** form. Select a supply from the drop down text (one selection per order).

Step 4. Proceed to checkout steps (Section VII).

VII. Completing Your Order (Billing)

When your have completed your selection for a GSL Service or Equipment scheduling, you will be prompted to an order summary page containing cost estimates, additional submission notes or guidelines, and input fields for billing information. *Completion of all the required billing fields are necessary to submit your order.*

Internal Users (NC State)

Step 1. **Primary Investigator** – Select the **Add/Change Primary Investigator** button to open a searchable window. User's can search by PI last name, first name, or unity email address. When the correct PI is located, select their name and then click **Select Highlighted PI**.

Step 2. Enter the internal account to be charged (**Project ID**) …

> **- OR –**

Enter other billing arrangements in the **Additional Billing Comments** field. Use this field if your PI has previously paid for services at the GSL (such as a credit balance from a previous project).

Note: DO NOT put in a project number if you intend to use a previously established credit with the GSL. The bill will be charged to the account number you provide.

Step 3. Agree to the Terms of Service and select whether you would like to receive a confirmation email sent to your unity email amount account.

Step 4. When you have provided the requested information, select **Finalize Order** at the bottom of the order summary. This should complete your order.

External Users

Step 1. Make sure your billing contact information is current using the **My Accounts** selection on the top right toolbar (see Section II).

Step 2. Indicate your method of payment in the **Additional Billing Comments** section. Please indicate any PO numbers or Government Award numbers that should be referenced on the formal invoice.

Step 3. Agree to the Terms of Service and select whether you would like to receive a confirmation email sent to your unity email account.

Step 4. When you have provided the requested information, select **Finalize Order** at the bottom of the order summary. This should complete your order.