

Purchasing and Budgeting

Supplies, Materials, and Tools

This week we are introducing prototyping. By the end of the semester, you will need to design, fabricate, and test three prototypes. See the lecture notes for specifics on what is required from a prototype, but generally you can think of this as at least three fundamental parts of your project, in an early stage form.

To build your prototypes, you may (probably will) need to purchase some materials. Each project has a specified budget (you'll need to talk with your client to learn exactly how much). And every project will follow more-or-less the same purchasing process. That process is detailed here.

The General Process

All orders must *first* be approved by your GTA mentor. Large orders will also need approval from your client (discuss what constitutes a large order with your client). *Once your GTA has approved the order*, you will need to send that order in a plain text email:

To: Kyla.Phoenix@nau.edu

CC: Your GTA Mentor (ar2832@nau.edu, dg856@nau.edu, hp263@nau.edu, OR AshwijaKorenda@nau.edu)

CC: Your Client

CC: Your Professor (kyle.winfree@nau.edu)

Subject: "CAPSTONE ORDER - [YOUR PROJECT NAME AS LISTED IN THE PROJECT ASSIGNMENTS DOCUMENT]"

Body: Dear Kyla, our team would like to order the following items. These total \$X. We have received approval from our mentor ([mentor name]) for this order. Following this purchase, we expect to have \$Y remaining in our budget. Thank you, [the team]

- link to first item
- link to second item
- so on, breaking the lines into groups of supplier where possible

Kyla and your GTA mentor will then confirm approval together. *Wait wait, just to be clear here, you must work with your GTA mentor for approval before you send this email to Kyla.* If this is the first your GTA is hearing about this order, they will deny it as per my instructions. That doesn't mean you can't order the supplies, but that does mean the order may be pushed back an entire week!

Orders may be requested as late as **Tuesday at noon, weekly**. This will allow your GTA mentor and Kyla to confirm that your order has been approved by the GTA, or in the case of large orders, also approved by your client.

After your order request has been received, Kyla will work to place the orders on Thursday/Friday. All orders will come to the GTAs. Once the package(s) have arrived, the GTAs will reach out to you to let you know your supplies are in. *Hint hint here, Slack may prove super useful for this!* Kyla, the GTAs, and myself reserve the right to combine shipping. If your group, and another group, happen to both be ordering from Mouser as an example, we will combine the shipping. The GTAs will coordinate dispersing the supplies/materials to each group.

The External Client Process

If your client is external of NAU, they will likely complete the purchasing. However, I have asked all clients to work with Kyla for purchasing and addressing. This means, that the process looks the same to you, the student, regardless of who is paying for your project.

Your Budget

Each project will have a very specific budget to work with. Generally speaking, this is about \$500 per project. Ask your client what you have to work with! You will need to track all your expenses for your project, except for shipping (in most cases). If your purchase requires special shipping, this may count against your overall budget. To help prevent this, always order with enough lead time such that you can patiently wait a week for things to arrive.

Kyla will be keeping a “ghost” budget of your expenditures. You may coordinate with her to confirm your remaining budget on any Thursday (via email). However, you will need to come with an idea of what you have spent and what you have left, so as to confirm that you both show the same expenses. You will not be able to simply ask her “what do we have left?”

Reimbursements

With rare exception, no reimbursements will be honored. Please be sure to coordinate ordering the materials and supplies you need before you actually need them. Do not expect that you will be reimbursed for purchases you make personally, but for your project.

Left Overs and Free Materials

As you might expect, all purchases are the property of the client sponsoring the project. As such, any extras, unused, or left over materials, supplies, or tools should be provided to the client. These can be left in the EE Cage with your GTA, who will coordinate with your client to return the materials to them.