

# Fish Tank Project Platform Fabrication

EAS 199B Portland State University  
Mechanical and Materials Engineering

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### Learning Objectives for these Slides

After this presentation you should be able to

- ◆ Describe the safety precautions necessary for working in the lab
- ◆ Follow the safety precautions necessary for working in the lab
- ◆ Follow the assembly instructions for the wooden platform
  - ▶ <http://web.cecs.pdx.edu/~eas199/B/howto/fishtank/platform/>
- ◆ Complete the assembly of the wooden platform

LWTL: Fish Tank Platform Assembly 2

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### Follow these Safety rules

1. Do not operate any machine unless you have
  - ◆ Completed the hold-harmless form (Fall 2012)
  - ◆ Been trained to operate the machine
  - ◆ Been authorized to do so by the instructor or teaching assistant
2. When using rotating equipment such as milling machines, drills and lathes
  - ◆ Securely tie long hair back to remove the possibility of it falling below your face
  - ◆ Do not wear loose clothing
  - ◆ Remove lanyards or jewelry hanging from your neck or wrist

LWTL: Fish Tank Platform Assembly 3

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**Follow these Safety Rules, continued**

3. When using any power tools like milling machines, drills and lathes

- ❖ Clamp the work piece in a vise or chuck before drilling or cutting
- ❖ Do not hold or restrain the work piece only with your hand
- ❖ Make sure safety guards are in place before turning on the machine
- ❖ Never leave a running tool unattended

4. When working in the lab

- ❖ Always wear approved eye protection
- ❖ Take common sense precautions and avoid "horse play"
- ❖ Keep the work area clean and organized
- ❖ Never use your own power tools
- ❖ Only use lab facilities for activities required for EAS 199A, 199B, 199C
- ❖ Report damaged equipment, unsafe activities and accidents to the instructor

LWTL: Fish Tank Platform Assembly 4

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**Follow these Safety Rules, continued**



Do not begin to fabricate your fish tank platform until you have carefully read the operating and safety instructions above and agree to operate the equipment in a responsible manner. *You must sign the safety contract before beginning fabrication.*

LWTL: Fish Tank Platform Assembly 5

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**Start with the structure**

1. Materials are provided
2. Finish fabrication today
3. Have painted by next week
4. See:
  - ❖ <http://web.cecs.pdx.edu/eas199/B/howto>



LWTL: Fish Tank Platform Assembly 6

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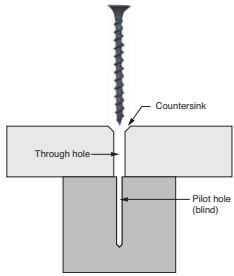
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Follow instructions for basic joint construction



LWTL: Fish Tank Platform Assembly 7

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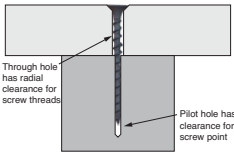
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Follow instructions for basic joint construction



LWTL: Fish Tank Platform Assembly 8

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To-do list for Class Meeting 2

1. Sign hold-harmless form
2. Sign-up your group members
3. Fabricate the fish tank platform
  - ◆ See <http://web.cecs.pdx.edu/~eas199/B/howto/>
4. Prepare for next class
  - ◆ Paint your fish tank platform — finished by next class meeting
  - ◆ Read instructions for fabricating the salinity sensor
  - ◆ Start homework
  - ◆ Visit D2L web site
  - ◆ Start purchasing items on your shopping list
    - ▶ <http://web.cecs.pdx.edu/~eas199/B/equipment/>

LWTL: Fish Tank Platform Assembly 9

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