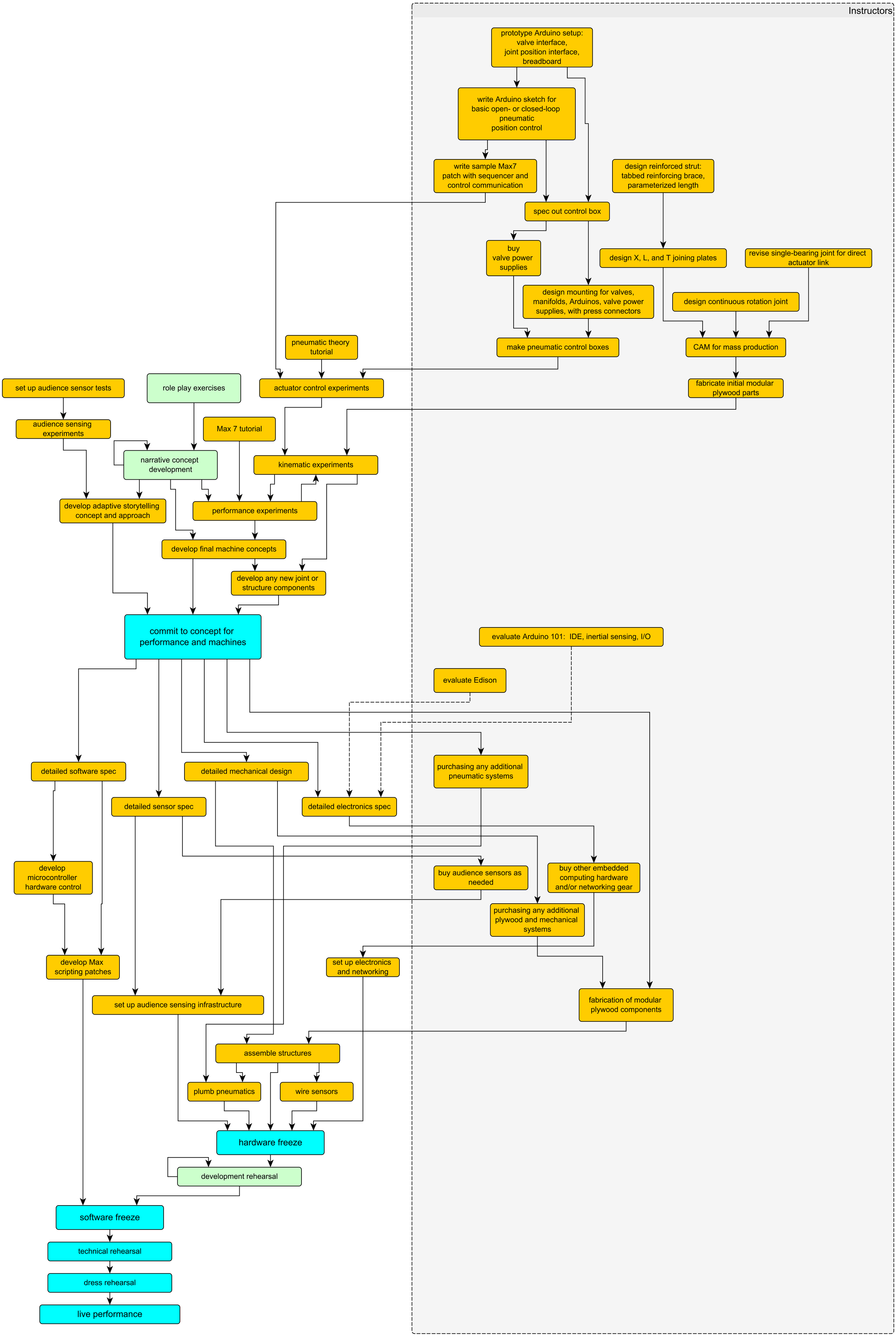
Instructors
prototype Arduino setup: valve interface, joint position interface, breadboard
write Arduino sketch for basic open- or closed-loop pneumatic position control
write sample Max7 patch with sequencer and control communication
design reinforced strut: tabbed reinforcing brace, parameterized length
spec out control box
buy valve power supplies
design X, L, and T joining plates
revise single-bearing joint for direct actuator link
design mounting for valves, manifolds, Arduinos, valve power supplies, with press connectors
design continuous rotation joint
pneumatic theory tutorial
make pneumatic control boxes
CAM for mass production
set up audience sensor tests
role play exercises
actuator control experiments
fabricate initial modular plywood parts
audience sensing experiments
Max 7 tutorial
narrative concept development
kinematic experiments
develop adaptive storytelling concept and approach
performance experiments
develop final machine concepts
develop any new joint or structure components
commit to concept for performance and machines
evaluate Arduino 101: IDE, inertial sensing, I/O
evaluate Edison
detailed software spec
detailed mechanical design
purchasing any additional pneumatic systems
detailed sensor spec
detailed electronics spec
develop microcontroller hardware control
buy audience sensors as needed
buy other embedded computing hardware and/or networking gear
purchasing any additional plywood and mechanical systems
develop Max scripting patches
set up electronics and networking
set up audience sensing infrastructure
fabrication of modular plywood components
assemble structures
plumb pneumatics
wire sensors
hardware freeze
development rehearsal
software freeze
technical rehearsal
dress rehearsal
live performance