List of Topics we've covered over the semester

Pre-Midterm:
1. Normal Form Games (Simultaneous Games)
    a. Pure Strategies
    b. Mixed Strategies
2. Extensive Form Games (Dynamic Games)
    a. Complete Info
    b. Incomplete Info (unobserved actions)
    c. Applications
        i. Brinkmanship Games
        ii. War of Attrition

Post-Miderm:
1. Bargaining
    a. Complete Info
    b. Asymmetric Info (unobserved payoffs)
2. Repeated Games
    a. Finite
    b. Infinite
3. Principal-Agent Problems
    a. Adverse Selection (don't know type)
    b. Moral Hazard (can't monitor actions)
4. Signaling Games

Correct way to write different types of equilibria

Normal Form Games
    Example: Prisoner's Dilemma
    Pure Strategy Nash Equilibria: (Defect, Defect)
    Payoffs: (2,2)

    Example: Airport Security Game
    Mixed Strategy Nash Equilibria:
    (Tourist: ¾ Smuggle + ¼ Don't smuggle; Security: 3/5 Inspect + 2/5 Don't Inspect)
    remember you can use mixed strategies when there are multiple Pure Strategy Nash or when there are no Pure Strategy Nash

Extensive Form Games
    Example: War of Attrition
    Nash equilibrium: (F,F,F;A,A)
    Equilibrium path: (F,A)
    Equilibrium outcome: (3,-4)

Bargaining
    SGPN: (Anne offers p*=30; Jack accepts all p≥30, rejects otherwise)
    Don't just write "Jack accepts"!

Signaling Games

Separating Equilibria: (Defender: If strong, play Maintain. If weak, play Slash; Challenger: If see Maintain, believe facing strong with pr=1, play Out. If see Slash, believe facing strong with pr=0, play Enter.)

You could also write "If see Slash, believe facing weak with pr=1, play Enter"

Pooling Equilibria: (Defender: Always play Maintain. Challenger: If see Maintain, believe facing strong with pr=3/5, play Enter. If see Slash, believe facing strong with pr=1/2, play Enter.)

- Remember to always specify what the Receiver will believe and do if he sees a signal he's not supposed to see!
- Also, for pooling equilibria, the beliefs when the Sender does what he's supposed to do (Maintain) are just the priors (the probabilities assigned by Nature). The beliefs for when the Sender deviates (Slash) are constructed by you.