Admission into the REM program requires “some knowledge of microeconomic principles.” To be admitted into ECON 462: Economics of Energy, Resources, and Environment you must either: (1) demonstrate successful completion of a microeconomic principles course, or equivalent; or, (2) achieve a sufficiently high score (80+% correct) on a microeconomic principles diagnostic exam. The diagnostic exam(s) will be multiple choice, will be fairly short (approximately 25 questions), will only test basic principles, and may be repeated until a satisfactory score is attained. The diagnostic exam(s) will cover the topics listed below.

All of these topics can be found in virtually any principles/introductory microeconomics text from the past 50 years. Used copies of past editions of many textbooks sell for $5 or less – go to your favorite online bookstore and do a search for “principles of microeconomics” or “principles of economics.” There are numerous publicly available online references as well. In particular, Wikipedia is an excellent, if sometimes verbose, source. Many, but not all, of the topics listed below are presented in a very approachable manner at AmosWEB. Finally, I will place two or three textbooks on reserve at CWU Brooks Library.

If you have any questions please do not hesitate to contact me (Chad Wassell) at wasselle@cwu.edu or (509) 963-3056. The diagnostic exam can be taken in the Economics office which is located on the 4th floor of Shaw-Smyser.

1. Economics defined
   • The study of the allocation and use of scarce resources to satisfy unlimited human wants
2. Resources
   • Four scarce economic resources: land, labor, capital, entrepreneurship
3. Opportunity cost
   • The best foregone alternative of the choice made
4. Marginal analysis
   • Action is worth taking when the marginal benefit exceeds the marginal cost
5. Positive vs. normative analysis
   • Positive = defensible… the way things are
   • Normative = subjective… the way things ought to be
6. Markets
   • Where goods and services are exchanged, typically for money
7. Perfectly competitive market
   • Many producers, homogeneous products, easy entry/exit into market
8. Quantity demanded/supplied
   • The quantity that consumers/producers are willing and able to buy/sell at a given price and time
9. (Market) Equilibrium
   • The price/quantity such that quantity supplied equals quantity demanded
10. Law of demand, and why it makes sense
   • Price and quantity demanded are inversely related
   • Substitution effect: when the price of a good increases, consumers buy less, because they go buy something else
   • Real-balances effect (Income effect): when a price increases, consumers buy less because their real purchasing power has gone down
   • Law of diminishing marginal utility: the consumption of each additional unit of a good brings us less and less happiness, and therefore each additional unit is worth less and less to us

11. Determinants of demand
   • Tastes
   • Income
     i. Normal good – income increase leads to increased demand
     ii. Inferior good – income increase leads to decreased demand
   • Price of other goods
     i. Substitutes – price of substitute increases, demand increases
     ii. Complements – price of complement increases, demand decreases
   • Population
   • Expected future price

12. Determinants of supply
   • Prices of inputs
   • Technology
   • Price of other potential outputs, and co-product prices
   • Number of sellers
   • Expected future price

13. Change in demand/supply vs. change in quantity demanded/supplied

14. Equilibrium response to a change in demand/supply

15. Elasticity
   • Responsiveness of quantity demanded/supplied or demand/supply to change in price or other demand/supply determinants, respectively
     • Inelastic = relatively small response; elastic = relatively large response

16. Consumer surplus
   • The difference between what consumers are willing to pay and what they actually pay

17. Producer surplus
   • The difference between what producers are willing to accept and what they actually accept

18. Deadweight loss
   • Surplus that is foregone because potentially mutually beneficial transactions do not occur

19. Profit, and revenue
   • Profit = total revenue – total cost

20. Costs: economic vs. accounting
   • Accounting costs = costs explicitly paid to others by the owner of the business
   • Economic costs = all costs, including accounting costs as well as foregone opportunities (implicit costs)
21. Marginal cost (MC)
   • The additional cost associated with one additional unit of output
22. Marginal revenue (MR)
   • The additional revenue that the firm receives from the sale of an additional unit
23. Profit-maximization
   • In most cases, a firm should produce the largest quantity such that MR ≥ MC
24. Externality
   • A cost or benefit that is imposed on or accrues to a third party who is not party to the transaction
25. Unit taxes/subsidies
   • A uniform increase/decrease in the price per unit
   • Can be imposed on (paid/received) either buyers or sellers, but this is ultimately irrelevant; under a tax the net price paid by buyers increases, the net price received by sellers decreases, and the quantity traded decreases