

NCBS 405: SUPPLEMENTAL INSTRUCTION: PHYSICAL SCIENCE, MATH & ENGINEERING

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Winter 2022
Units:	0
Hours:	60-360 hours laboratory total per quarter.
Degree & Credit Status:	Non-Degree-Applicable Non-Credit Course Basic Skills, 1 Level Below Transfer
Foothill GE:	Non-GE
Transferable:	None
Grade Type:	Non-Credit Course (Receives no Grade)
Repeatability:	Unlimited Repeatability

Student Learning Outcomes

- Students can identify one study strategy to increase course success
- Students can identify one strategy to reduce anxiety in class and on exams

Description

An open-entry, open-exit course for students who seek academic support, through supplemental instructions and use of computers, to fill in missing prerequisite knowledge and strengthen skills developed in a referring course or courses as follows: ACTG 1A-C, 1BH-CH, 51A-C, 52, 53, 58, 59, 60, 64A-B, 65, 66, 67, 68A-C, 75, 76; ANTH 1; ASTR 10A-B, 10BH, 10L, 54H; BIOL 1A-D, 8, 9, 10, 12, 13, 14, 15, 40A-C, 41, 45; CHEM 1A-C, 1AH-BH, 12A-C, 12AL-CL, 13BH-CH, 25, 30A-B; C S 1A-C, 1M, 2A-C, 2M, 3A-C, 3M, 10, 18, 20A, 21A-B, 22A, 26A, 30A-E, 31A, 40A, 49, 50A-E, 52A-B, 53A-D, 54B, 54D, 56B, 63A, 64A, 71A, 80A, 81A, 82A, 84A-B; ECON 1A-B, 9, 9H, 25, 54H; ENGR 6, 10, 11, 35, 37, 37L, 40, 45, 47, 49, 70R; GEOG 1; MATH 1A-D, 1AH-BH, 1AHP-BHP, 2A-B, 10, 12, 17, 22, 42, 44, 48A-C, 70R, 105, 180, 217, 248A; NCBS 403A-B; PHYS 2A-C, 2AM-CM, 4A-D, 6, 12, 70R.

Course Objectives

The student will be able to:

- Use online course management system(s) to practice problem solving in Accounting, Anthropology, Astronomy, Biology, Chemistry, Computer Science, Economics, Engineering, Geography, Mathematics, Nanotechnology, or Physics courses.
- Identify and use appropriate computer software to generate assigned class reports for Accounting, Anthropology, Astronomy, Biology, Chemistry, Computer Science, Economics, Engineering, Geography, Mathematics, Nanotechnology, or Physics courses.
- Identify and use appropriate computer software to create additional practice problems for mastery of course content in Accounting, Anthropology, Astronomy, Biology, Chemistry, Computer Science, Economics, Engineering, Geography, Mathematics, Nanotechnology, or Physics.

D. Use individualized instruction to enhance learning in Accounting, Anthropology, Astronomy, Biology, Chemistry, Computer Science, Economics, Engineering, Geography, Mathematics, Nanotechnology, or Physics courses.

Course Content

A. Use online course management system(s), for example:

- Problem solving using software
 - Pearson product: MyMathLab, MyLabsPlus, MyLab, Mastering Chemistry
 - Wiley product: Wiley Plus
 - Cengage product: Webassign
 - McGraw-Hill product: ALEKS, McGraw-Hill Connect
 - Canvas

B. Identify and use appropriate computer software, for example:

- In-class reports generated by using software
 - Maple
 - Mathematica
 - Geometer's Sketchpad
 - Excel
 - SPSS
 - Graphical Analysis
 - SpartanView
 - Microsoft Word

C. Identify and use appropriate computer software, for example:

- Additional practice problems using software
 - Pearson product: MyMathLab, MyLabsPlus, MyLab, Mastering Chemistry
 - Wiley product: Wiley Plus
 - Cengage product: Webassign
 - McGraw-Hill product: ALEKS, McGraw-Hill Connect

D. Use individualized instruction

1. Apply knowledge obtained to enhance learning in Accounting, Anthropology, Astronomy, Biology, Chemistry, Computer Science, Economics, Engineering, Geography, Mathematics, Nanotechnology, or Physics courses

- Individualized instruction
- Computer research
- Use of software

Lab Content

- Determining different approaches to solving problems.
- Exploring applications of scientific and mathematical rules and postulates.
- Determining limitations of software.

Special Facilities and/or Equipment

- Internet access and computers.

Method(s) of Evaluation

- Completion of homework problems as assigned by course instructor.
- Completion of additional problems beyond those assigned by course instructor.
- Completion of lab reports.

Method(s) of Instruction

- Work in groups
- Individualized instruction
- Work on computer

Representative Text(s) and Other Materials

Students will use textbook(s) in the referring course(s).

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

A. Homework assignments:

1. Problems are assigned by course instructor
2. Completion of assignments both online and hand written

B. Laboratory assignments:

1. Problems are assigned by course instructor
2. Completion of assignments both online and hand written

C. Additional coursework:

1. Practice worksheets provided by instructor that showcase basic and more challenging problems
2. Reading textbook

Discipline(s)

Accounting, Anthropology, Biological Sciences, Chemistry, Computer Information Systems, Computer Science, Economics, Engineering, Geography, Mathematics, Physics/Astronomy