

**Walla Walla Community College**  
**Student Learning Outcomes**  
**for the**  
**Associate in Science Degree**

The content and expectations entailed in the Associate in Science Degree (AS) reflect the Walla Walla Community College Mission and Goals, particularly as expressed in the College Core Abilities: **Communication, Critical Thinking, Personal and Professional Responsibility, Diversity/Appreciation of Differences, Information/Technology, and Lifelong Learning.**

**The Associate in Science Degree** serves students intending to complete the required coursework for preprofessional programs at selected baccalaureate institutions. Candidates for the AS are expected to complete a 93-credit program that is parallel with the first two years of a baccalaureate program at the institution to which they intend to transfer. A cumulative g.p.a. of 2.0 or better is required for successful completion of this degree. Students may complete the degree following one of **three options**:

- **Option I**--biological science, chemistry, environmental/resource sciences, and geology and earth sciences; or
- **Option II**—Engineering, computer science, physics and atmospheric sciences; or
- **Option III**—Associate in Science/Agriculture, and Associate in Science/Agriculture Technology and Management. Option III candidates must have determined that they will be transferring to specific baccalaureate institutions where agreements exist for students who have earned these degrees at WWCC.

It is particularly important that students pursuing the AS degree, regardless of which option they prefer, should plan their course selection in accordance with the requirements of the institution to which they plan to transfer.

- A. Upon successful fulfillment of the requirements for an **Associate in Science degree** students will have completed the following: At least eight credits in **Communication Skills**, including Speech 101 and English Composition 101 or English Composition 102:
1. By successfully completing **Speech 101 (Public Speaking)**, students will have accomplished the following expected learning outcomes:
    - a. Developed listening skills that will enhance their critical thinking ability and reflect their sense of responsibility and consideration of others;
    - b. Developed presentational skills, verbal and non-verbal;

- c. Responded to public speaking, performance, and art as emphatic and critical audience/responders with their peers as well as in relation to works and forms of expression that have stood the test of time and public scrutiny;
  2. By successfully completing **English Composition 101** students will have accomplished the following expected learning outcomes:
    - a. Demonstrated the ability to produce organized, unified, coherent and well-developed essays;
    - b. Demonstrated grammar, punctuation, spelling, and manuscript skills appropriate to college examinations and written assignments;
    - c. Demonstrated critical thinking skills in the context of exposition and argumentation;
  3. By successfully completing **English Composition 102** students will have accomplished the following expected learning outcomes:
    - a. Demonstrated an improved writing style, with emphasis on any of the following - the writer's voice, wording, sentence construction, and figures of speech.
    - b. Successfully completed three research projects--at least one using APA style and one using MLA style;
    - c. Demonstrated the understanding and the ability to locate, collect, and evaluate material using critical and logical analysis;
- B. By successfully completing the **Quantitative Skills** requirement, students will have accomplished the following expected learning outcomes:
  1. Participated in learning experiences that reflect the latest current teaching methodologies and implement current technological innovations and tools.
  2. Demonstrated the ability to use a variety of mathematical topics in exercises drawn from management science, social science, measurement and geometry, and other miscellaneous areas.
  3. Assessed the validity of proofs, inferences, and results based upon mathematical principles and rules.
- C. A minimum of five credits in **Humanities**, a minimum of five credits in **Social Sciences** plus an additional five credits in either Humanities or Social Sciences for a total of fifteen credits. Students completing these courses will have achieved these expected learning outcomes:
  1. Built a foundation of knowledge and experience for lifetime learning;
  2. Explored and developed critical thinking and creative thinking experience and skills;
  3. Learned to use, understand, and appreciate the terminology and concepts of humanistic studies, performing arts, and the social sciences;

4. Developed an increased aesthetic appreciation as well as increased cultural awareness;
5. Students will have developed written and oral communication and critical thinking skills that require analysis and synthesis of course content.
6. Students will have been provided with opportunities to better understand the impact of diverse cultures in historical context on individual and group behavior.

D. A minimum of forty credits in the **Natural Sciences**, including fifteen credits of chemistry for science majors; fifteen credits of biology for science majors or physics. In addition, candidates for this degree must complete a minimum of ten credits in physics, geology, organic chemistry, biology or mathematics, consisting of courses normally taken by science majors, preferably in a two or three quarter sequence. Since the path each student takes to fulfill this part of the requirements may differ slightly, the following are set forth as typical examples of the expected outcomes:

1. By completing the requirements for all options, students will achieve these expected learning outcomes:
  - a. Students will have become more scientifically literate;
  - b. Students will have developed the knowledge they will need in order to continue successfully in upper level courses, either at WWCC or at a transfer institution.
2. By completing the requirements for **Option I**--biological science, chemistry, environmental/resource sciences, and geology and earth sciences—students will achieve these expected learning outcomes:
  - a. Completing fifteen credits of chemistry for science majors, they will know the meaning of terms used in the course; compute accurately and rapidly in the chemical context; and understand basic chemical principles.
  - b. Completing fifteen credits of biology for science majors, they will know and understand the basics of cell chemistry, structure, metabolism, energetics, cell division and genetic principles, and DNA technology.
  - c. Completing fifteen credits of physics, they will understand Newton's Laws as they relate to motion and forces, the significance of conservation laws in physics, particularly conservation of energy and momentum; be able to solve numerical problems related to the above-mentioned concepts.
  - d. Completing the additional requirement of ten credits in physics, geology, organic chemistry, biology or mathematics, they will achieve a variety of outcomes including increased skills in mathematics, quantitative and qualitative analysis, and scientific literacy.

3. By completing the requirements for **Option II**—Engineering, computer science, physics and atmospheric sciences—students will achieve these expected learning outcomes;
  - a. Completing five credits of chemistry for science majors, they will know the meaning of terms used in the course; compute accurately and rapidly in the chemical context; and understand basic chemical principles.
  - b. Completing fifteen credits of physics, they will understand Newton's Laws as they relate to motion and forces, the significance of conservation laws in physics, particularly conservation of energy and momentum; be able to solve numerical problems related to the above-mentioned concepts.
  - c. Completing the computer science requirement for this option, they will acquire knowledge of the Java programming language, designing applications, the selection structure, the repetition structure, sequential access files, error trapping, arrays, algorithms in pseudocode and flow charts, and modularization.

4. By completing the specific science and mathematics requirements for **Option III**, students will achieve the learning outcomes necessary to prepare them for transfer to specific baccalaureate institutions where agreements exist related to **Agriculture and Agriculture Technology and Management**.

II. Three unduplicated **Physical Education activity courses** required (only waived for military service and by physician recommendation). In these courses, students will achieve these expected learning outcomes:

1. Learned the basic skills necessary to perform the activity in which they have enrolled.
2. Developed a working knowledge of the rules, etiquette, basic strategies and appropriate behaviors associated with the activity.
3. Assessed their own fitness level as it relates to the demands of that particular activity.
4. Improved fitness level through participation in activity.

In addition to these General Education Requirements (GER), students must enroll in and successfully complete the expected learning outcomes in an additional twenty-seven (27) credit hours of college-level transfer courses, including no more than six (6) PE activity classes. The resulting total of ninety-three credit hours (GER plus electives) meets the necessary course requirement for the degree.