

Georgia Professional Engineers and Land Surveyors Board

Land Surveying Education Evaluation Guide Effective April 2025

This guide supersedes all previously published policies and/or guides regarding land surveying education evaluation.

All applicants for licensure as a land surveyor in Georgia are required by law to obtain at least 18 semester hours of acceptable land surveying coursework per OCGA 43-15-12, last updated in 2024. These semester hours can either be included in a formal course of study such as a degree or acquired separately. Appropriate prerequisites are required for said coursework and do not apply towards the required 18 hours.

The purpose of this guide is to provide aspiring land surveyor licensure candidates with a tool to assist them with assessing land surveying programs that will be acceptable to the board. The board assesses programs within the State of GA regularly and provides a list of those pre-approved programs in a separate document entitled "GA PELS Board Approved Education Programs for Land Surveyors". The board acknowledges that many institutions outside Georgia provide appropriate surveying coursework that meet the requirements as set forth below. Applicants should consult with the board if they question whether or not the courses will meet the requirements set forth below. Pursuing land surveying education from a program that is not listed is at the individual's own risk. The Board is under no obligation to recognize a program that it does not deem as adequate.

Surveying courses will generally be acceptable if successfully passed at a college or university where the degree or certificate program has achieved accreditation acceptable to the board, or courses that have been pre-approved by the board. Applicants will be asked to provide which courses in their transcript satisfy the Board's specific criteria. Applicants will also be responsible for providing any requested information such as syllabi, accreditation, course descriptions, etc. to aid the Board in evaluating courses presented. The required content may be provided in different courses, but credit will not be given for redundant material. All_applicants are required to provide courses which meet criteria S1, S2, S3, S4, and other additional course work (S5+) as needed to satisfy the 18-semester hour requirement.

Effective July 1, 2018, the hydrology examination became optional for all applicants. Applicants wishing to be examined to become a Hydrology and Design Authorized PLS are required to provide surveying related courses which meet criteria HP1, HP2, and AH as well as pass the Georgia Hydrology Exam. Professional Land Surveyors who choose to be examined and subsequently pass the GA Hydrology exam in hydrology and design will be indicated on their license record as "Hydrology and Design Authorized" (see OCGA 43-15-13.1(2)). All other new licensees will be indicated simply as "Current" (standard) licensure.

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Land Surveying programs should contain proper coursework material to cover subjects as outlined at the NCEES website (https://ncees.org/) for both the Fundamentals of Surveying (FS) exam, the Principles and Practice of Surveying (PS) exam, and the GA state specific exam. Programs should contain at least 18 semester hours of relevant coursework material and will be reviewed by the GA PELS Board utilizing the NCEES criteria and the criteria as outlined below:

Land Surveying Course Content Requirements

S1: Foundation in Land Surveying

This course should cover the basics of surveying including coordinate geometry, surveying calculations, traversing and leveling, topography & contours, proper field procedures, and basic cartography. **Prerequisites should include trigonometry and a course in drafting, engineering graphics, CAD, cartography, or similar background.** This course might be offered under names such as "Elementary Surveying", "Surveying 1", "Geomatics Measurements", etc. This course should have a laboratory that provides hands-on experience for learning to care for, set up, and utilize conventional survey equipment to obtain surveying field measurements, etc. With proper documentation, lab experience can be obtained remotely under the guidance and supervision of a professional land surveyor local to the student.

S2: Advanced Land Surveying

This course should cover state plane coordinates, mapping projections, advanced field techniques, route and alignment surveys, volumetric calculations, construction staking techniques, data collection, and other advanced land surveying topics. This course might be offered under names such as "Advanced Surveying", "Route Surveying", "Surveying 2", etc. This course should have a laboratory that provides hands-on experience related to utilizing conventional and GPS survey equipment to layout calculated points, collect topographic data, closing traverses, etc. With proper documentation, lab experience can be obtained remotely under the guidance and supervision of a professional land surveyor local to the student.

S3: Land Surveying Legal Aspects

This course should include the history of land division systems, basic property rights, legal descriptions, written conveyances, unwritten conveyances, retracing the footsteps of older surveys, junior-senior rights, prescription and adverse possession, hierarchy of controlling monuments and title elements, disputes and litigation and other legal land surveying related topics. This course might be offered under names such as "Legal Aspects of Surveying", "Boundary Law, "Property Law", etc. Although courses at this level may be taken at land surveying programs in other states, applicants are encouraged to take a course offered in Georgia which contains materials specific to Georgia as may be found on the state specific exam and is needed for competent practice within Georgia.

S4: Land Surveying Professional Practice and Design

The course should prepare the applicant for professional practice as a Professional Land Surveyor and should include such topics as advanced boundary resolution, subdivision design, site planning and layout, zoning and land use regulations, professional ethics, and professional land surveying business practice.

S5+: Land Surveying Additional Topics

Other courses in land surveying and/or related applicable fields could include higher level material such as GIS,

geodesy, geodetic surveying, photogrammetry, advanced boundary law, remote sensing, dendrology, spatial analysis, and survey measurement adjustments. Partial credit may be given for some courses which contain partially applicable material. The board strongly suggests that students fulfill the remaining coursework requirements with mapping science topics.

Hydrology Design Course Requirements

HP1: Hydrology Prerequisite 1. This course should follow a physics sequence and cover the general engineering principles of mechanics and statics.

<u>HP2: Hydrology Prerequisite 2:</u> This course should follow the mechanics/statics course and concentrate in fluid mechanics, pressurized flow, and hydraulics.

<u>AH: Applied Hydrology:</u> This course should cover watershed analysis and the design of culverts, multi-structure systems, retention ponds, and open channel flow.