

Building Inspection Technology

Careers & Technology

Dean
TBD
Phone
(916) 691-7391
Area Office
T 108

Counseling
(916) 691-7316
Cooperative Work Experience
(916) 691-7372

DEGREE

A.S.—Building Inspection Technology

CERTIFICATE OF ACHIEVEMENT

Building Inspection Technology

CERTIFICATES OF PROFICIENCY

- Concrete Construction Inspection
- Electrical Construction Inspection
- H.V.A.C. Inspection
- Masonry Construction Inspection
- Plumbing Inspection
- Soils & Asphalt Construction Inspection
- Steel Construction Inspection
- Wood Frame Construction Inspection

See also:

Green Buildings: Environmental Design, Energy Management and Performance Based Construction (page 75)

Program Description

This CRC program has been developed to prepare individuals for employment in building inspection.

Graduates may be employed by contractors, government agencies, architects, finance companies and developers.

A wide variety of employment opportunities exist in the fast-growing construction industry in the Sacramento Valley.

Career Opportunities

Building Inspector	Plan Checker
Construction Foreman	Supervisor
Government Building Official	Construction Management

Some Career Opportunities may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some Career Opportunities or for preparation for transfer to a university program.

Highlights

- Field trips to a variety of construction sites to study inspection technologies and code interpretations (instructor option)
- Association with instructors who are county and city building officials and inspectors

NOTE TO TRANSFER STUDENTS:

If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an associate's degree in this major may be different from the requirements needed for the bachelor's degree.

For information about the student learning outcomes for this program, see <http://www.crc.losrios.edu/pslo>

DEGREE

A.S.—Building Inspection Technology
CODE #1045

REQUIRED PROGRAM.....Units

BIT 100	Introduction to International Building Code.....	3
BIT 102	Reading and Non-Structural Plan Review or	
CMT 300	Intro to Construction Plans/Specifications.....	3
BIT 104	International Building Code - Fire and Life Safety	3
BIT 112	Building Inspection Principles for Disabled Access..	2
CMT 310	Materials of Construction.....	3
CISC 302	Computer Familiarization	2

Plus a minimum of twenty-one units selected from:21

BIT 110	Engrg & Structural Principles for Bldg. Constr. (3)	
BIT 120	Mechanical I / Plumbing Code Requirements (3)	
BIT 121	Mechanical II / H.V.A.C. Code Requirements (3)	
BIT 130	Intro to Inspection of Wood Frame Construction (3)	
BIT 132	Steel Construction Principles and Inspection (3)	
BIT 134	Soils and Asphalt Principles and Inspection (3)	
BIT 136	Concrete Principles and Inspection (3)	
BIT 138	Masonry Principles and Inspection (3)	
BIT 140	Electrical I (3)	
BIT 141	Electrical II (3)	

TOTAL UNITS REQUIRED37

Suggested Electives: ADT 310; CMT 120; BUS 340

G.E. Graduation Requirements for this degree - see pages 20-21

CERTIFICATE OF ACHIEVEMENT

Building Inspection Technology
CODE #1045

REQUIRED PROGRAMUnits

BIT 100	Introduction to the International Building Code.....	3
BIT 102	Reading and Non-Structural Plan Review (3) or	
CMT 300	Intro to Construction Plans and Specifications (3).....	3
BIT 104	International Building Code - Fire & Life Safety	3
CMT 310	Materials of Construction	3
CISC 302	Computer Familiarization	2
MATH 106	Mathematics for Technical Fields.....	3

A minimum of twelve (12) units from the following:12

BIT 110	Engineering and Structural Principles for Building Construction (3)	
BIT 112	Building Inspection Principles for Disabled Access (2)	
BIT 120	Mechanical I/Plumbing Code Requirements (3)	
BIT 121	Mechanical II / H.V.A.C. Code Requirements (3)	
BIT 130	Intro to Inspection of Wood Frame Construction (3)	
BIT 132	Steel Construction Principles & Inspection (3)	
BIT 134	Soils and Asphalt Principles and Inspection (3)	
BIT 136	Concrete Principles & Inspection (3)	
BIT 138	Masonry Principles & Inspection (3)	
BIT 140	Electrical I (3)	
BIT 141	Electrical II (3)	

TOTAL UNITS REQUIRED29

Suggested Elective: ADT 310

CERTIFICATE OF PROFICIENCY
Concrete Construction Inspection
 CODE #1338

REQUIRED PROGRAM.....	Units
BIT 100 Introduction to International Building Code	3
BIT 102 Reading and Non-Structural Plan Review	3
CMT 310 Materials of Construction	3
CISC 302 Computer Familiarization	2
BIT 136 Concrete Principles and Inspection	3
TOTAL UNITS REQUIRED.....	14

Suggested Elective: ADT 310

CERTIFICATE OF PROFICIENCY
Electrical Construction Inspection
 CODE #1340

REQUIRED PROGRAM.....	Units
BIT 100 Introduction to International Building Code	3
BIT 102 Reading and Non-Structural Plan Review	3
CMT 310 Materials of Construction	3
CISC 302 Computer Familiarization	2
BIT 140 Electrical I	3
BIT 141 Electrical II	3
TOTAL UNITS REQUIRED.....	17

Suggested Elective: ADT 310

CERTIFICATE OF PROFICIENCY
H.V.A.C. Inspection
 CODE #1334

REQUIRED PROGRAM.....	Units
BIT 100 Introduction to International Building Code	3
BIT 102 Reading and Non-Structural Plan Review	3
CMT 310 Materials of Construction	3
CISC 302 Computer Familiarization	2
BIT 121 Mechanical II: H.V.A.C. Code Requirements	3
TOTAL UNITS REQUIRED.....	14

Suggested Elective: ADT 310

CERTIFICATE OF PROFICIENCY
Masonry Construction Inspection
 CODE #1339

REQUIRED PROGRAM.....	Units
BIT 100 Introduction to International Building Code	3
BIT 102 Reading and Non-Structural Plan Review	3
CMT 310 Materials of Construction	3
CISC 302 Computer Familiarization	2
BIT 138 Masonry Construction Inspection	3
TOTAL UNITS REQUIRED.....	14

Suggested Elective: ADT 310

CERTIFICATE OF PROFICIENCY
Plumbing Inspection
 CODE #1333

REQUIRED PROGRAM.....	Units
BIT 100 Introduction to International Building Code	3
BIT 102 Reading and Non-Structural Plan Review	3
CMT 310 Materials of Construction	3
CISC 302 Computer Familiarization	2
BIT 120 Mechanical I: Plumbing Code Requirements	3
TOTAL UNITS REQUIRED.....	14

Suggested Elective: ADT 310

CERTIFICATE OF PROFICIENCY
Soils and Asphalt Construction Inspection
 CODE #1337

REQUIRED PROGRAM.....	Units
BIT 100 Introduction to International Building Code	3
BIT 102 Reading and Non-Structural Plan Review	3
CMT 310 Materials of Construction	3
CISC 302 Computer Familiarization	2
BIT 134 Soils and Asphalt Principles and Inspection	3
TOTAL UNITS REQUIRED.....	14

Suggested Elective: ADT 310

CERTIFICATE OF PROFICIENCY
Steel Construction Inspection
 CODE #1336

REQUIRED PROGRAM.....	Units
BIT 100 Introduction to International Building Code	3
BIT 102 Reading and Non-Structural Plan Review	3
CMT 310 Materials of Construction	3
CISC 302 Computer Familiarization	2
BIT 132 Steel Construction Principles and Inspection	3
TOTAL UNITS REQUIRED.....	14

Suggested Elective: ADT 310

CERTIFICATE OF PROFICIENCY
Wood Frame Construction Inspection
 CODE #1335

REQUIRED PROGRAM.....	Units
BIT 100 Introduction to International Building Code	3
BIT 102 Reading and Non-Structural Plan Review	3
CMT 310 Materials of Construction	3
CISC 302 Computer Familiarization	2
BIT 130 Introduction to Inspection of Wood Frame Construction	3
TOTAL UNITS REQUIRED.....	14

Suggested Elective: ADT 310

BUILDING INSPECTION TECHNOLOGY (BIT)

BIT 100

Introduction to the International Building Code 3 Units

Prerequisite: None
Hours: 54 hours LEC

This basic course is designed to provide background material on which the International Building Code was founded and the legal basis for the code. Emphasis will be placed on the development and proper use of the code.

BIT 102

Reading and Non-Structural Plan Review 3 Units

Prerequisite: None
Advisory: BIT 100 and ADT 300
Hours: 54 hours LEC

This course provides a thorough understanding of the plan reading and non-structural plan review process undertaken by the building departments prior to plan approval.

BIT 104

International Building Code - Fire & Life Safety 3 Units

Prerequisite: None
Advisory: BIT 100 and CMT 300
Hours: 54 hours LEC

The course covers the use and application of International Building Code for construction supervision and inspection.

BIT 110

Engineering and Structural Principles for Building Construction 3 Units

Prerequisite: None
Hours: 54 hours LEC

This course covers the basic engineering and structural principles used in the construction industry. This course includes civil engineering plan reading, site layout, mechanics or materials, soil fundamentals, and the construction and inspection of foundations.

BIT 112

Building Inspection Principles for Disabled Access 2 Units

Prerequisite: None
Hours: 36 hours LEC

This is a course designed to examine the state regulations that govern the design and construction of public buildings, publicly funded living accommodations, hotels and motels, and multi-family dwellings for individuals with mobility and sensory impairments. The course is designed specifically for building inspectors to develop knowledge and skills in disabled access inspections.

BIT 120

Mechanical I/Plumbing Code Requirements 3 Units

Prerequisite: None
Advisory: CMT 300
Hours: 54 hours LEC

This course covers the use and interpretation of the Uniform Plumbing Code, legal and administrative enforcement procedures, field inspection techniques and procedures, methods and techniques used in plumbing installations.

BIT 121

Mechanical II / H.V.A.C. Code Requirements 3 Units

Prerequisite: None
Advisory: CMT 300
Hours: 54 hours LEC

This course covers the use and interpretation of the Uniform Mechanical Code, and legal and administrative enforcement procedures used in heating, ventilating, air conditioning and related installations.

BIT 130

Introduction to Inspection of Wood Frame Construction 3 Units

Prerequisite: None
Advisory: BIT 100
Hours: 54 hours LEC

This is a basic course designed to provide a thorough understanding of wood frame construction requirements for building plan review and inspection. The course will cover inspections for floor, roof and wall framing, and wall bracing for seismic design. Simple beam calculations will be made.

BIT 132

Steel Construction Principles & Inspection 3 Units

Prerequisite: None
Advisory: BIT 100 and CMT 310
Hours: 54 hours LEC

This is a course in steel construction principles for building inspectors. The course will cover materials used in steel construction; quality control and testing; general construction practice and layout; welding principles and inspection; bolting principles and inspection; and International Building Code standards relating to steel construction.

BIT 134

Soils and Asphalt Principles and Inspection 3 Units

Prerequisite: None
Advisory: BIT 100
Hours: 54 hours LEC

This course examines the use of asphalt and soils in building construction for inspectors. The course will cover soils testing and inspection; principles of soils for construction purposes, materials used in asphalt paving; asphalt materials and inspection, and International Building Code standards relating to soils and asphalt.

BIT 136
Concrete Principles & Inspection **3 Units**

Prerequisite: None
Advisory: CMT 300
Hours: 54 hours LEC

This course provides technical knowledge of concrete construction and inspection. This course also includes mix design, material testing, aggregate selection, reinforcing bars, handling field problems, crack control, and repairs and restoration.

BIT 138
Masonry Principles & Inspection **3 Units**

Prerequisite: None
Advisory: BIT 100 and CMT 310
Hours: 54 hours LEC

This is a course in masonry principles for building inspectors. The course will cover materials used in masonry construction; quality control, sampling and testing; general construction practice and layout; reinforcing steel, grouting of concrete masonry walls; and International Building Code standards relating to masonry.

BIT 140
Electrical I **3 Units**

Prerequisite: None
Advisory: CMT 300
Hours: 54 hours LEC

This course covers a review of basic electricity for building inspection. In addition, the course covers the basic electrical code requirements for residential and commercial structures as required in the National Electrical Code and the California Utility Code.

BIT 141
Electrical II **3 Units**

Prerequisite: None
Advisory: BIT 140
Hours: 54 hours LEC

This course is an in-depth study of the National Electrical Code (NEC) text adopted into the California Building Standards Code (Title 24). Study will include the most critical aspects of the NEC for electrical wiring systems found in residential, commercial and industrial premises.

BIT 150
**California Energy Code -
 Building Energy Efficiency Standards** **3 Units**

Prerequisite: None
Hours: 54 hours LEC

This course introduces the interpretation and use of the California Energy Code, and legal and administrative enforcement procedures with emphasis on heating, ventilating, air conditioning and related installations.

BIT 295
**Independent Studies in
 Building Inspection Technology** **1-3 Units**

Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB

BIT 298
**Work Experience in
 Building Inspection Technology** **1-4 Units**

Prerequisite: None
Hours: 300 hours LAB

This course provides students with opportunities to develop marketable skills in preparation for employment or advancement within their current job. Course content will include understanding the application of education to the workforce; completion of required forms, which document the student's progress and hours spent at the work site; and developing workplace skills and competencies. During the course of the semester, the student is required to fulfill an 18 hour orientation and 75 hours of related paid work experience, or 60 hours of unpaid work experience for one unit. An additional 75 or 60 hours of related work experience is required for each additional unit. The course may be taken again when there is new or expanded learning on the job for a maximum of 16 units.

BIT 299
**Experimental Offering in
 Building Inspection Technology** **.5-4 Units**

Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB