



IPAI HISTORICAL COURSE DESCRIPTIONS

These are courses that are not currently being offered at conferences or workshops by the IPAI. The course descriptions are available for you to review for your historical records.

Over the years, several course titles have been changed. When determining whether you have taken a course or not, please refer to the course numbers, not the course titles. Course numbers have not changed.

Students may not take both the seminar and exam sections of the same course. Credit will only be issued for one or the other. It is also important to read the "Special Notes" associated with each course to determine if there are restrictions associated with the course.

#002-102 **Collection, Interpretation & Model Building of Income & Expense Data**

(Seminar)

The purpose of this workshop is to assist appraisers in the collection and interpretation of income and expense data for the construction of income models for establishing market value. This workshop will concentrate on the following areas: review of the income approach, forms and methods of data gathering and additional data sources, templates for storing and use of data, review of reconstructing income and expense statements, data analysis, interpretation and model building, extraction and development of capitalization rates, testing the income models, and data write-ups and documentation.

Special Note: Students who have successfully completed course 019-935, Collection, Interpretation and Model Building of Income and Expense Data, offered in Cook County are not eligible for credit for this course. This course was developed by TEAM Consulting.

#002-110 **Introduction to the Sales Comparison Approach to Market Value** *(Exam)*

#002-779 **Introduction to the Sales Comparison Approach to Market Value** *(Seminar)*

Students will understand the underlying concepts that pertain to determining the value of real estate using market-extracted data. Key areas of study include: the mechanics of markets, the foundational economic principles that drive purchasing habits and value,

the concept of neighborhoods, and the factors that influence value and determine comparability, as well as, the computational aspects of the sales comparison approach.

Special Note: Students may receive continuing education credit for either the exam course (#002-110) or the seminar course (#002-779), but not both. It is worth 15 credit hours and is a Theory, Beginner Course.

#002-126 **Commercial Construction** *(Seminar)*

This course will familiarize students with various types of commercial property, building classes, and how construction quality grade specifications determine value. The various steps involved in basic commercial construction, from site preparation through completion of the building, will be illustrated with slides of the construction of a commercial building. Working with and collecting information from blueprints basics will also be covered. It is worth 15 credit hours and is a Commercial, Intermediate-level course.

#002-128 **Market Factors in Residential Valuation** *(Exam)*

#002-859 **Market Factors in Residential Valuation** *(Seminar)*

This course concentrates on the various influences on the valuation of residential property. Topics covered in this course include: graphing, concepts and types of markets, deed types, editing procedures, matching property characteristics to sales,



factoring, trending, market derivatives and the cost approach, cost tables, depreciation, market derivatives and the sales comparison approach, time adjustments, and simple linear regression.

Special Note: Students may receive continuing education credit for either the exam course (#002-128) or the seminar course (#002-859), but not both. It is worth 15 credit hours and is a Residential, Intermediate-level course.

#002-131 Illinois Freedom of Information Act (Exam)

#002-132 Illinois Freedom of Information Act

(Seminar)

The Freedom of Information Act (FOIA) remains an active battleground as a balance is sought between the public's right to know vs. personal privacy. This course will provide an in-depth look at Illinois FOIA. Topics will include specifics about who must comply, types of records considered "public records", and what is exempt from disclosure to name a few. Students will discuss recent court cases to show how the courts have weighed personal privacy and the public's right to know. The course will conclude by looking at case studies of issues relevant to today's assessment office.

Special Note: Students may receive continuing education credit for either the exam course (#002-131) or the seminar course (#002-132), but not both. It is worth 7.5 credit hours.

#002-133 Residential Factor Analysis Using Statistical Software (Seminar)

This is a hands-on computer class which uses a generic statistical software package, NCSS (Number Cruncher Statistical Software) to analyze an actual set of sales data. This course begins with an overview of basic appraisal models and sales ratio analysis of those models using the statistical software. Topics covered include factor definitions, model building, data analysis, ratio statistics, graphics, stratification and factoring techniques.

The goal is to enable the assessment professional to fine tune existing appraisal models and improve uniformity within the jurisdiction.

Recommended Prerequisite: A familiarity with sales ratio statistics, as well as, an understanding of the use of a computer. It is worth 15 credit hours and is a Residential, Advanced-level course.

#002-134 Valuation of Green Buildings (Seminar)

Purpose of this workshop is to provide some guidance and suggestions on the process of analysis and valuation of green buildings. Information from various areas of the U.S. will be used to help establish some processes and procedures. Images and property characteristics of sold properties will be used. Topics discussed include: appraisal concepts, three approaches to value and articles of interest. This is a course developed by TEAM Consulting. It is worth 7.5 credit hours and is a Residential, Intermediate-level course.

#002-135 Valuation of Lodging Properties (Seminar)

#002-136 Valuation of Lodging Properties (Exam)

Purpose of this workshop is to provide guidance and suggestions on the valuation process of hotel/motel properties. The workshop will look at the different classifications of hotel/motel properties, lodging terminology and how all three approaches to value can be used to value these types of properties. The workshop will provide websites where additional information on the hotel/motel industry can be discovered. Included is information on what authorities in the field say lies ahead for the industry in the upcoming year or two. It is worth 7.5 credit hours and is a Commercial, Intermediate-level course.



#002-137 Unique Appraisal Problems *(Seminar)*

#002-138 Unique Appraisal Problems *(Exam)*

This one-day workshop deals with unique appraisal problems. By use of case studies using actual market data, participants are guided through the appraisal process of measuring value and/or value loss. Examples of topics include Mold Contamination, Mercury Contamination, Meth Labs, Snake Infestation, Out of Town Buyers, Metal-Sided Dwellings and Valuation Using Limited Sales. This course was developed by TEAM Consulting.

#002-201 Budgeting for the Assessment Office

(Exam)

This course begins with a detailed review of the property tax system in order to provide an understanding of the environment in which budgeting exists. This is followed by an overview of the different types of budgets, a discussion of the budgeting process, a survey of different types of budgets, a discussion of how to effectively present a budget to the oversight authority, and a case study using an actual township budget.

Special Note: Students that have received credit for courses #002-600, #002-608, #002-702, and #002-707 are ineligible for credit for this course. It is worth 7.5 credit hours and is an Administration, Beginner-level course.

#002-204 Valuation of Big Box Stores *(Seminar)*

The purpose of this workshop is to provide guidance and suggestions on the valuation process of big box properties. Information from actual appraisals of big box properties will be utilized to help illustrate some processes and procedures. Topics discussed include: USPA preview, general information, market value versus value in use, highest and best use analysis, land valuation, the cost approach, the sales comparison approach and the income approach. This course was developed by TEAM Consulting. It is worth 7.5 credit hours and is a Commercial, Intermediate-level course.

#002-222 Communication for Assessment Professionals *(Exam)*

#002-221 Communication for Assessment Professionals *(Seminar)*

Communication for Assessment Professionals is designed to increase students' knowledge about the important role that communication plays in their professional lives. Students in this course will learn about the communication process, audience analysis, listening, group communication, ethical communication, effective customer service, leadership, and conflict management. This course specifically draws from the assessment field to provide real-life examples and activities that will assist professionals at improving their communication skills within their office and when dealing with taxpayers. Students will gain an in-depth understanding of who they are as communicators.

Special Note: Students taking this as a course to qualify for their CIAO must take the exam section. This course was previously offered as two 1-day seminars (#002-147 & #002-782). This course is now only available as a 2-day exam course. Students cannot receive credit for both this course and either of the two 1-day seminars listed above. It is worth 15 credit hours and is an Administration, Intermediate-level course.

#002-290 Valuation of Senior Housing *(Seminar)*

The Senior Housing Valuation Workshop provides an overview of and valuation guidelines for the four main types of senior housing (Independent Living, Assisted Living, Skilled Nursing, and Continuum of Care Retirement Facilities). The seminar also addresses Alzheimer/Dementia care units in the various property types. Specific topics include: Property Rights; Components/Allocation of Value; Ownership Types; Market Analysis; Property Data and Analysis; Cost Approach; Sales Comparison (Market) Approach; and Income Approach. Due to the fact the valuation of senior



housing properties are income driven, significant time will be spent on the Income Approach to value, with emphasis on the collection and analysis of rent, occupancy, demographic, income/ expense, and capitalization rate data. Examples include single property and mass appraisal applications. This course was developed by TEAM Consulting.

Special Note: This course was previously offered as a 1-day seminar (#002-202). This course is now only available as a 2-day course. Students cannot receive credit for both this course and the 1-day seminar listed above. It is worth 15 credit hours and is a Commercial, Intermediate-level course.

#002-307 Defending Assessments Before Appeal Agencies (Exam)

#002-308 Defending Assessments Before Appeal Agencies (Seminar)

This course will assist assessment officials in constructing more relevant responses to appeals filed in their jurisdictions. Reviewing the duties, powers, and pressures placed on review agencies as well as the ramifications of their decisions, will allow assessment personnel to provide review agencies the information they need to justify well-constructed decisions. Court imposed burdens of proof are reviewed for both uniformity and market value cases. The course will provide students numerous procedures that will enable them to mathematically quantify many of the subjective aspects of the appraisal process. Learning how to quantify subjective appraisal processes will allow assessment officials to critically judge the quality of evidence submitted for assessment reductions and enhance chances that assessments will be upheld and not lowered based on non-market, arbitrary and subjective data. It is worth 15 credit hours and is a Statistics, Advanced-level course.

#002-309 Valuation of Fast Food Restaurants (Seminar)

The purpose of this course is to provide guidance and suggestions on the valuation process of fast food restaurant properties. Information from actual appraisals of fast food properties will be utilized to help illustrate some processes and procedures. Topics discussed include: USPAP review, general information, market value versus value in use, highest and best use analysis, land valuation, the cost approach, the sales comparison approach and the income approach. This course was developed by TEAM Consulting.

#002-314 Developing Winning Arguments for Residential Appeals (Seminar)

#002-315 Developing Winning Arguments for Residential Appeals (Exam)

This course is the sequel to Defending Assessments before Appeal Agencies. The goal of this course is two-fold. First, the course discusses techniques for formulating logical arguments and using fundamental presentation dos and don'ts in order to present effective oral and narrative defenses of calculated assessments. Secondly, the course will present several additional mathematical calculations that will allow assessors to quantify subjective aspects of the appraisal process. It is worth 15 credit hours and is a Statistics, Advanced-level course.

#002-316 Valuation of Historic Properties (Seminar)

The purpose of this workshop is to provide some guidance and suggestions on process of data collection and analysis of historic properties. Information from various sources and areas of the United States will be used to help establish some processes and procedures to determine if the market reacts differently to historic versus non-historic properties. Topics discussed are: USPAP, background information on National Register of Historic Places, definitions and designation as an historic place, websites and data sources, highest



and best use analysis, review of economic principles and the three approaches to value. This course was developed by TEAM Consulting.

#002-318 Development of Capitalization Rates

(Seminar)

When using the income approach to estimate the value of real estate one of the components that will need to be determined by the assessor/appraiser is the capitalization rate. This workshop will explore the difference between capitalization rates used in direct capitalization and a yield rate used in yield capitalization. We will discuss the difference between an overall capitalization rate, a land capitalization rate and a building capitalization rate along with some other common terms used in capitalization rates discussion such as unloaded versus loaded capitalization rates, terminal capitalization rates. This course was developed by TEAM Consulting.

#002-350 Residential Drawings, Fieldwork, and Photographs *(Exam)*

#002-351 Residential Drawings, Fieldwork, and Photographs *(Seminar)*

Knowledge of and skill in standard practices in documenting residential property using drawings and photographs are important elements of the assessment profession. Drawings and photographs allow us to better visualize the property as a whole. Regardless of our purpose, drawings and photographs are one of the most important tools we have as we seek to understand a property or as we help others do the same. Whether we are working with a property owner to explain an assessment or with a hearing officer to identify details and characteristics of a property under appeal, drawings and photographs can aid communication. This course will provide students with the background and basic skills necessary to graphically document

single family residential property for assessment purposes.

Special Note: Students taking this as a course to qualify for their CIAO must take the exam section. It is worth 15 credit hours and is a Residential, Intermediate-level course.

#002-425 Precision Data Collection *(Seminar)*

Accurate data collection is the foundation of a fair property valuation. This course covers the basics of data collection. Topics covered in this course include: general data collection issues, determining data needs, tools and equipment used, describing and coding characteristics, types of data, designing property record forms, actual data collection, elementary computerized considerations and pulling all of the information together. It is worth 15 credit hours and is a Residential, Beginner-level course.

#002-427 Evaluating Real Estate Appraisals *(Exam)*

#002-430 Evaluating Real Estate Appraisals *(Seminar)*

The purpose of this course is to acquaint the student with the knowledge and tools required to make an accurate review of an appraisal. The Preamble and Uniform Standards of Professional Appraisal Practice are utilized as a guide to test proper appraisal methodology and reporting procedures. Various aspects of the three approaches to value are covered so that the student has a grasp of some of the less often utilized materials. The second day will deal primarily with case studies where the student can review reports in class with the instructor's supervision.

Special Note: Students may receive continuing education credit for either the exam course (#002-427) or the seminar course (#002-430), but not both. It is worth 15 credit hours and is a Residential, Intermediate-level course.



#002-602 Appeal Practice & Procedure (Seminar)
Students will review the timing and jurisdictional issues related to the appellate process. Students will become familiar with the three common appeal types and develop an analysis framework for the two most common, uniformity and valuation; which is examined in detail and various analysis tools will be developed. The order of a Property Tax Appeal Board hearing will be discussed, as well as, burdens of proof, standards of review and a discussion of evidence, how to introduce and examine a witness/expert at hearing and understanding the difference between testimony as a witness and as an expert witness will be addressed. The course will conclude with a mock hearing.

Special Note: Students that have received credit for the IPAI course entitled "Preparation & Analysis of Evidence for the Appeal Process" are not eligible to receive continuing education credit for this course. It is worth 15 credit hours and is a Theory, Intermediate-level course.

#002-604 Fundamentals of Sales Ratio Analysis (Exam)

#002-777 Fundamentals of Sales Ratio Analysis (Seminar)
Sales ratio analysis is the fundamental tool assessment officials use to measure if their work is complying with Illinois statutes relative to the assessment of property. This course is designed to familiarize students with the basics of a sales ratio analysis. The course begins with an overview of mathematical concepts and procedures that are necessary to perform and understand a sales ratio analysis. Students will learn how to calculate the ratios, apply appropriated statistical procedures to determine the quality of the assessment and to identify recommendations to improve the current assessment quality. In addition, multipliers and standard deviation will be discussed. A case study will allow students to pull together all the formulas and skills that

have been developed throughout the class. This is an introductory course.

Special Note: Students may receive continuing education credit for either the exam course (#002-604) or the seminar course (#002-777), but not both. It is worth 15 credit hours and is a Statistics, Beginner-level course.

#002-605 Word Processing Applications for the Assessment Office (Seminar)

This class focuses on the fundamentals of word processing – the computerized production of letters, reports, and other documents. Topics covered in this course include: managing files, producing and printing documents, editing documents with special features, spell and grammar check, help features, mail merge, and an introduction to graphics. This course is an introductory course. Recommended Prerequisites: A basic understanding of the operation of a personal computer. Students must provide their own laptop or tablet in class.

Special Notes: Students may receive credit for only one "Introductory" computer course during their career. It is worth 15 credit hours and is an Administration, Beginner-level course.

#002-611 The Economics of Markets (Seminar)

#002-612 The Economics of Markets (Exam)

The academic discipline that drives all aspects of real estate valuation is economics. Economics is simply a structured and disciplined way of looking at the world that tries to explain how people chose, organize and use limited resources to produce other goods and services. Students will learn to recognize fundamental economic factors at work that will enable the to: understand what money is and how its manipulation can shift the direction of the economy and real estate values; appreciate the role the Federal Reserve plays in our everyday lives; identify and interpret those factors that



explain and help predict economic activity and real estate values; learn the effects of inflation and employment have on the general economy; and how the worlds largest economy is managed to ensure continued, steady growth and prosperity.

Special Note: Students may receive continuing education credit for either the exam course (#002-612) or the seminar course (#002-611), but not both. It is worth 15 credit hours and is an Administration, Beginner-level course.

#002-613 Legal Descriptions (Exam)

#002-775 Legal Descriptions (Seminar)

This course provides an in-depth, hands-on examination of legal descriptions and its uses within the identification and assessment of taxable property.

Special Note: Students that took IPAI Level 1 course #002-603 entitled "Legal Descriptions" are not eligible to receive continuing education credit for this course. It is worth 15 credit hours and is a Land, Intermediate-level course.

#002-614 Condominiums (Exam)

#002-621 Condominiums (Seminar)

This course will provide students with the necessary information for developing accurate and defensible assessments for residential condominiums. Students will discuss various valuation techniques concerning the mass appraisal of condominiums and will work problems relating to land valuation, common elements, and unit value. This course will also familiarize students with the Illinois Condominium Property Act, 765 ILCS 605/1 et seq. and students will look in more detail at specific Sections of the Act. In addition, the course distinguishes concepts and trends for additional, specialty forms of housing such as those found in Planned Unit Developments, row houses, and town homes.

Special Note: Students may receive continuing education credit for either the exam course

(#002-614) or the seminar course (#002-621), but not both. It is worth 15 credit hours and is a Commercial, Beginner-level course.

#002-620 Analysis of Commercial Appraisal Reports (Exam)

#002-625 Analysis of Commercial Appraisal Reports (Seminar)

This course begins with a review of the income approach to value. This course then concentrates on the types of commercial reports, the body of the report, the valuation of land, the cost approach to value, the income approach to value, and the sales comparison approach as it pertains to commercial reports. The remainder of the course consists of a comprehensive case study.

Special Note: Students may receive continuing education credit for either the exam course (#002-620) or the seminar course (#002-625), but not both. It is worth 15 credit hours and is a Commercial, Intermediate-level course.

#002-657 Valuation of Residential Land (Exam)

#002-849 Valuation of Residential Land (Seminar)

This course is intended to provide students with a comprehensive examination of the valuation of land. The foundation of any successful assessment system lies in uniform and accurate land values. This course will provide assessment officials with the knowledge and tools to facilitate that process by analyzing market dynamics and studying market behavior. Valuation models are presented to assist both those students in areas with few sales as well as those students who witness sufficient sales. It is worth 15 credit hours and is a Land, Beginner-level course.

#002-781 Introduction to Excel (Seminar)

This course is designed as a basic course in the use of Microsoft Excel and general applications in Assessment Administration. It assumes little to no experience with spreadsheet software by the attendee.



There are many reports and calculations involved in preparing assessments as well as running any efficient office. Microsoft (MS) Excel provides tools to perform these most common tasks quickly, allowing more time to analyze the data. MS Excel can also be set for basic database purposes, enter the information for several properties including PINs, addresses, market value, sales price and other datum once and sort, analyze, calculate and report many times using the same information.

Students taking this course must provide their own laptop or tablet with the latest version of Microsoft Excel installed. It is worth 15 credit hours and is an Administration, Beginner-Level course.

#002-821 The Income Approach: Assessing Real Property Investments (*Exam*)

#002-829 The Income Approach: Assessing Real Property Investments (*Seminar*)

This course explains the importance of investing and reviews the alternatives available to investors, besides real estate, that competes for the investment dollar. Compound interest tables and the six functions of a dollar will be discussed and the affects and power of compounding. Additional topics include; what a capitalization rate represents (risk aspects) and introducing the key determinants or factors investors consider when analyzing real estate as an investment option; analysis on types of leases, tenant mix, terms of the leases and variations in risk across property type as a means of understanding how these factors affect the price paid by investors and concludes with by looking at the numerous techniques that are used to develop capitalization rates.

Special Note: Students may receive continuing education credit for either the exam course (#002-821) or the seminar course (#002-829), but not both. It is worth 15 credit hours and is a Commercial, Advanced-level course.

#002-822 Beyond Mapping: GIS in Local Government (*Exam*)

#002-776 Beyond Mapping: GIS in Local Government (*Seminar*)

The class is broad in scope, attempting to give the students a sense for many of the issues surrounding GIS. This course presents topics ranging from traditional cartographic principles and map design to the role of relational database systems and the underlying geometric principles that support even the most casual use of GIS.

Special Note: Students may receive continuing education credit for either the exam course (#002-822) or the seminar course (#002-776), but not both. It is worth 15 credit hours and is a Land, Intermediate-level course.

#002-839 Public Relations for the Assessment Office (*Seminar*)

Public Relations for the Assessment Office will help students develop the skills needed to work with the media, and other audiences, such as taxpayers. Students will learn introductory public relations definitions and techniques. The chapters will build upon one another, offering students the ability to improve on their presentation and public speaking abilities, in addition to showcasing how to build PR materials for an assessment office. It is worth 15 credit hours and is an Administration, Beginner-level course.



#002-850 Legal Implications of Employment Practices (*Exam*)

#002-852 Legal Implications of Employment Practices (*Seminar*)

This course begins with a historical survey of the evolution of human resources. Several theories, principles, and definitions are covered to allow the student to achieve a level of competency in this important field. The course introduces several laws that affect employment in the assessment field and discusses the pitfalls that can be avoided, ensuring that legal challenges will be reduced to a minimum. Knowing the laws that affect good business practices and the consequences of not following these laws will enlighten the student as to the realities of the present-day job market. Special Note: Students may receive continuing education credit for either the exam course (#002-850) or the seminar course (#002-852), but not both. It is worth 15 credit hours and is an Administration, Beginner-level course.

#002-920 Marshall & Swift Commercial Cost Approach (*Seminar*)

This course will provide the student with a basic understanding of the Marshall & Swift Cost Services Manual. Topics of discussion will include: quality grading and what determines quality, the Calculator and Segregated Cost methods and estimating depreciation from both market extraction and from the Marshall & Swift tables. Students will have an opportunity to use the various sections from the Marshall & Swift cost manual to calculate many sample problems to determine the value of various commercial and industrial properties. At the conclusion of the course, students will have learned how to apply Marshall's valuation techniques to various types of properties. Special Note: Students who successfully completed courses 020-950, 020-951 or 020-952 will not be eligible for credit for this course. It is worth 15 credit hours and is a Commercial, Beginner-level course.

#002-872 Real Estate Applications Using the HP-12C Calculator (*Seminar*)

#002-873 Real Estate Applications Using the HP-12C Calculator (*Exam*)

This course is intended to give students a basic working knowledge of the HP-12C calculator. Upon completion of this course, students will be able to solve practical assessment and real estate problems. This course assumes you have a basic understanding of real estate and lending terminology. No prior use of the HP-12C is necessary. Students must bring a HP-12C with them to class. Special Note: All students must bring an HP-12C calculator with them to class. Students may receive continuing education credit for either the exam course (#002-873) or the seminar course (#002-872), but not both. It is worth 15 credit hours and is a Statistics, Advanced-level course.

#002-921 Valuing Property affected by Environmental Laws & Regulations (*Seminar*)

Valuing contaminated commercial or industrial property will probably be one of the most interesting, and, perhaps, challenging moments that an assessing official or appraiser will ever have. This course will provide an introduction to the arguments that a contaminated property owner will make that it has a lower value than it would have were it clean, introduce examples of information the owner will use to support that argument and present the ways contamination has been addressed, not always successfully, in the three approaches to value. Environmental laws that affect value will first be reviewed. By the end of the course, students will be working with case studies based on actual cases in Illinois and from other states to gain a better understanding of how to deal with the issues presented by contaminated property. It is worth 15 credit hours and is a Commercial, Advanced-level course.



#002-922 Analyzing the Appraisal of Fuel Stations & Convenience Stores *(Seminar)*

Students will become familiar with the market dynamics that shape the design and operation of retail fuel stations and attached convenience stores and carwash facilities. Key to understanding the contributory factors shaping market value are the students' familiarity with industry trends, property functionality, forces of competition, and the retail business operation of petroleum-dispensing stores. It is worth 15 credit hours and is a Commercial, Advanced-level course.

#002-949 Assessment of Oil & Coal *(Seminar)*

This course addresses the responsibilities of the assessment official in valuing oil and coal. Oil and coal schedules are reviewed, and the methods used to calculate oil and coal are also covered. It is worth 15 credit hours and is a Land, Intermediate-level course.

#002-954 Residential Construction *(Seminar)*

This course will familiarize students with basic house types, quality grades, construction terminology and how construction quality grade specifications, techniques and materials determine quality. The various residential construction phases from site preparation through completion of the building will be illustrated with slides of the construction of a residential building. The advantage and disadvantage of certain building materials will also be discussed and many building products will be available for examination. It is worth 15 credit hours and is a Residential, Intermediate-level course.

#002-957 Sales Ratio Analysis Using Spreadsheet Software *(Seminar)*

This course takes advantage of the math functions and graphing capabilities of Microsoft Excel. During the course, students will build a sales ratio template for use in their own office. Even though the

course uses Microsoft Excel, the concepts demonstrated are quite applicable to other spreadsheet programs. This course introduces the student to sales ratio studies and spreadsheet programs. It is not intended to be an exhaustive treatment of either subject. Recommended Prerequisite: A general working knowledge of a personal computer and basic spreadsheet function. Students must bring their own laptop or tablet to class. Special Notes: Students that have received credit for the IPAI course entitled "Sales Ratio Analysis with Lotus 1-2-3" are not eligible to receive continuing education credit for this course. It is worth 15 credit hours and is a Statistics, Intermediate-level course.

#002-996 Cadastral Mapping *(Seminar)*

#002-997 Cadastral Mapping *(Exam)*

This course gives students an overview of cadastral mapping techniques, which will prepare assessment officials to create a map to an aerial photo base. It is recommended that students have a basic understanding of land records, legal descriptions, and mapping, prior to attending class. Special Note: Students that have received credit for the IPAI course entitled "Sidwell Cadastral Mapping Workshop", course (#002-996), are not eligible for credit for this course. Special Note: Students may receive continuing education credit for either the exam course (#002-125) or the seminar course (#002-996), but not both. It is worth 15 credit hours and is a Land, Intermediate-level course.