

IECE 130 or coordinator's approval. (Equivalent to FAM 256 Guidance Strategies)

**IECE 170 – Observation and Assessment (3)**  
(Spring 2006)

Presents the process of observation, documentation, and assessment. Includes assessment skills, identification of appropriate methods and instruments, and linking results to planning, guidance, and instruction. Emphasizes recommended practices, ethical and legal responsibilities for educators, and the role of the family in the process. Required: 20 hours of field experience. Prerequisite: IECE 101, IECE 102, IECE 130 or coordinator's approval. (Equivalent to EC 130 Observing Young Children)

**IECE 180- Approaches to Early Childhood Education Curriculum (3)**

This course introduces the student to theoretical perspectives for curriculum in early childhood programs. It teaches the design of curriculum and examines the societal factors that impact programming for young children. Prerequisite: IECE 101, IECE 102, IECE 130 or coordinator's approval. (Equivalent to EC 200 Curriculum Development)

**IECE 190- Applied Experiences in Early Childhood Education (3)**

Students will participate in supervised teaching experiences in early childhood settings. Skills will include observing, planning, implementing, and assessing, learning experiences based on developmentally appropriate practices. (CDA ONLY) Prerequisite: Any 100 level IECE course or coordinator's approval

**IECE 216- Literacy & Language in Interdisciplinary Early Childhood Education (3)**

This course will aid the student in bringing together language theory with classroom instruction techniques to promote language and literacy development in young children. Required 10 hours of field experience. (This requirement may be waived by faculty for students who are concurrently enrolled in IECE 190 or IECE 290. Prerequisite: IECE 180 or coordinator's approval

**IECE 221- Creative Expressions in Interdisciplinary Early Childhood Education (3)**

This course addresses the role of creativity as it relates to the development of young children. A variety of art, music, drama, and movement experiences that encourage creative expression in young children are studied. Implementation of appropriate creative activities in a child-centered environment is included. Required: 10 hours of field experience. (This requirement may be waived by faculty for students who are concurrently enrolled in IECE 190 or IECE 290.) Prerequisite: IECE 180 or coordinator's approval

**IECE 230 – Business Administration of ECE Programs (3)**

Students are introduced to the many facets of establishing, operating and/or owning an early childhood program. Topics include legal forms for early childhood programs, finance, accounting, insurance, governmental regulations and assistance, economics, marketing and management principles.

**IECE 235- Introduction to Inclusive Education (3)**

This course introduces and sensitizes the student to exceptionalities that occur in the development of children. Topics include the law as related to serving children with exceptionalities and their families, various disabling conditions, the gifted, advocacy, home-based intervention, referral sources and the process of diagnosing, treating, and educating children with exceptionalities. Required: 20 hours of field experience. (This requirement may be waived by faculty for students who are concurrently enrolled in IECE 190 or IECE 290.) Prerequisite: IECE 180 or coordinator's approval (Equivalent to EC 220 Children with Exceptionalities)

**IECE 240- Administration of Early Childhood Education (3)**

This course focuses on the administrative responsibilities of creating and implementing quality education programs for young children and their families. This course will develop an understanding of administrative, organizational, and legal responsibilities in operating early childhood programs. Required: 10 hours of field experience. (This requirement may be waived by faculty for students who are concurrently enrolled in IECE190 or IECE 290.)

**IECE 246- Life Sciences in Interdisciplinary Early Childhood Education (3)**

This course provides a study of applying the concepts and principles of natural sciences, social sciences, and mathematics in learning experiences for young children. Students will plan and prepare developmentally appropriate curriculum including activities, materials, and units. Required: 10 hours of field experience. (This requirement may be waived by faculty for students who are concurrently enrolled in IECE 190 or IECE 290.) Prerequisite: IECE 180 or coordinator's approval

**IECE 250- School Age Child Care (3)**

This course provides the student with specialized knowledge, skills, and abilities for working with school age children.

**IECE 260- Infant/Toddler Programming (3)**

This course examines the development and educational needs of children from birth to age three. Students will learn to plan, prepare, and implement the care and educational environment for children birth to age three by integrating an understanding of the physical, social, emotional, and cognitive development with developmentally appropriate practices for each stage. Required: 10 hours of field experience. (This requirement may be waived by faculty for students who are concurrently enrolled in IECE 190/290.)

**IECE 291- Practicum/Cooperative Education in IECE (3)**

This course requires participation in supervised teaching experiences in early childhood settings where practical skills are applied. Skills include observing, planning, implementing, and assessing learning experiences based on developmentally appropriate practices. Required: 225 field hours of experience. Prerequisite: IECE 101, IECE 102, IECE 120, IECE 130, IECE 140, IECE 180, or coordinator's approval

**IECE 299 – Special Topics in Interdisciplinary Early Childhood Education (1-3)**

An in-depth knowledge of a selected topic in early childhood education is the goal of this course. The topic of study may be the student's choice per instructor's approval or an issue or topic developed by an instructor for course presentation. Pre-requisite: Coordinator's Approval

**INFORMATION MANAGEMENT AND DESIGN**

**IMD 100 Introduction to Information Systems (3)**

Essential computer concepts and terminology are introduced in this course. An overview of operating systems software, a graphical user interface environment and multitasking concepts, disk and file management, Internet capabilities, and telecommunications are included. Introduction to word processing, spreadsheets, databases, and the integration of these three applications are included.

**IMD 114 Information Literacy (3)**

This course is an introduction to the use of information resources, both traditional print materials and online materials, for academic and professional research. Topics include development of search strategy, evaluation of resources, use of database search techniques, ethical and legal aspects of information management and documentation of sources.

**IMD 115 Introduction to Computer Graphic Design (3)**

In this course, students will be introduced to the theory and techniques behind computer graphic design. Students will be introduced to layout; color theory and use; design, photo and illustration techniques; and exploration of media in respect to digital design. Also, students will be introduced to the production process including pre-press, printing, other production techniques and distribution. Prerequisite: IMD 100 or CIS 105 or equivalent skills.

**IMD 116 Keyboarding (2)**

Students use a microcomputer and software to develop proper techniques of touch keyboarding. Speed, accuracy and control are emphasized.

**IMD 117 Keyboarding and Basic Word Processing (3)**

Students use a microcomputer and software to develop proper techniques of touch keyboarding. Basic word processing skills are integrated with a thorough study of form, style, and arrangement of business documents. Speed, accuracy and control are emphasized.

**IMD 118 Document Processing (3)**

Document formatting and word processing techniques are integrated to produce a wide variety of business documents. Emphasis is placed upon planning, organizing, and formatting business documents and upon meeting production standards essential to the operation of modern offices. Prerequisite: IMD 117 or consent of instructor.

**IMD 120 Introduction to the Internet (1)**

In this course, students will develop skills in understanding and using Internet technologies. Topics include the World Wide Web, e-mail, chat, mailing lists, newsgroups, video conferencing and webcasting. In addition, current issues surrounding the Internet such as free speech, viruses, privacy concerns, Internet culture and the exponential rise of misinformation will be explored.

**IMD 126 Introduction to Desktop Publishing (3)**

The use of microcomputers for designing and producing various publications is introduced. Hands-on experience is provided in using desktop publishing software and a laser printer to produce high-resolution publications, such as flyers, brochures, business forms, and newsletters. Students are also introduced to basic design techniques, type and graphics layout, and the related terminology. Prerequisite: IMD 100 or equivalent skills.

**IMD 127 Vector Design with Adobe Illustrator (3)**

In this course, students will be introduced to and develop vector (line-based) graphics using industry-standard application(s). Topics covered will include examining the theory behind vector graphics, investigating the advertising and print industries' use of this type of graphic, creation of graphics from simple to increasingly complex, as well as development of a portfolio of vector art. Prerequisite: IMD 115 or concurrent or consent of instructor.

**IMD 128 Raster Design with Adobe PhotoShop (3)**

In this course, students will be introduced to and develop raster (photo or pixel-based) graphics using industry-standard application(s). Topics covered will include examining the theory behind raster graphics, investigating the advertising and print industries' use of this type of graphic, creation and manipulation of raster-based graphics from simple to increasingly complex, as well as development of a portfolio of raster art and photo editing and manipulation samples. Prerequisite: IMD 115 or concurrent or consent of instructor.

**IMD 130 Introduction to Web Pages (2)**

An introduction to the creation and publication of a web site. The course will cover Hypertext Markup Language (HTML), using HTML codes for web design, incorporating graphics and images into web pages, and publishing pages on the web. Prerequisite: IMD 120 or equivalent.

**IMD 132 Web Page Editors (1)**

In this course, students will be introduced to basic web base authoring and publishing software. Students will use a web page editor to create effective web pages and upload them to the World Wide Web. Prerequisite: IMD 130 or consent of instructor.

**IMD 133 Beginning Web Design (3)**

This course is an introduction to the creation and publication of a web site. The course covers hypertext markup language (HTML), using HTML code and web authoring application software for web design, incorporating graphics into web pages, and publishing a web site.

**IMD 150 Presentations (3)**

In this course, students will learn to produce and present digital presentations, making effective use of correct grammar, presentation writing style, topography, graphics, sound and video. Students will install and use current digital hardware and software.

**IMD 160 Introduction to E-commerce (3)**

Students are introduced to the concepts, issues and application of business on the Internet. Students will examine the business as well as technical aspects of e-commerce. Topics include the relationship of business and the Internet, types and specific examples of e-business, the planning and development of an e-business as well as security issues, monetary transaction options, international concerns, legal and regulatory issues, ethical concerns, and the future of e-commerce. Specific technical issues will include examination of Internet infrastructure including the options, functions of the web server as well as e-commerce software options. Students will create an e-commerce business website plan and develop it into a simple, effective e-business website. Prerequisite: IMD 100 or CIS 105 or consent of instructor.

**IMD 175 Web Usability Design (3)**

Students focus on effective communication through web design. Topics include web planning, navigation and usability based on market research (audience capabilities and preferences) as well as site content and goals, financial considerations and technical capabilities. Other issues such as browser compatibility, marketing and site "gimmicks", customer tracking, and site redesign will be addressed. Prerequisite: IMD 133 or consent of instructor.

**IMD 180 Intermediate Web Design (3)**

Students develop advanced hypertext markup language (HTML) skills as well as examine new standards and technologies. Topics include extensible hypertext markup language (XHTML), well-formed documents, tables, frames, forms, image maps, multimedia, image optimization, cascading style sheets (CSS), site planning, working with clients and the web design business. Students will complete a well formed website on a specific topic utilizing the theories and technologies learned. Prerequisite: IMD 133 or consent of instructor.

**IMD 185 Web Graphics Design (3)**

In this course, students will be introduced to the theory and techniques behind the design of high-quality and efficient graphics for the World Wide Web. Topics covered include theory behind design for the Web, creation of gifs, animated gifs and jpegs, text as graphics, and sliced images for the web. Prerequisite: IMD 133

**IMD 205 Computerized Accounting Systems (3)**

In this course, students will be introduced to financial accounting software. Topics and issues addressed in this applications-based course include analyzing business transaction; recording and posting business transactions; recording period end adjustments and completing the end-of-period closing process; implement internal cash controls: processing payroll activities; and recording transactions for merchandising businesses.

**IMD 210 Microsoft Office Applications (3)**

Students expand their Microsoft Office skills utilizing word processing, spreadsheet, database management, presentation and desktop information management applications for the creation and integration of information. Prerequisite: IMD 100 or equivalent.

**IMD 212 Advanced Microsoft Office Application (3)**

Students learn advanced Microsoft Office skills utilizing spreadsheet and database management applications through creation, management and integration of documents. Prerequisite: IMD 210 or consent of instructor.

**IMD 215 Administrative Office Procedures (3)**

The roles and responsibilities of the office professional and the inter-relationships of people, procedures, and technology are introduced, with emphasis on appropriate decision-making techniques and productivity in the office. Prerequisite: IMD 118 or consent of instructor.

**IMD 220 Administrative Office Simulations (3)**

Students use administrative procedures to complete office simulations with an emphasis on accuracy, productivity, efficiency, and problem solving. Students will be utilizing skills in word processing, spreadsheet, database management, presentation, and e-mail applications. Standard business transactions will be completed through electronic commerce. Prerequisite: IMD 150; IMD 235; IMD 212 or concurrent; or consent of instructor

**IMD 225 Applied Web Graphics (3)**

Students focus on developing advanced web graphic design skills. Topics include creation of sophisticated gifs, jpegs, pngs and sliced images for integration into complex layouts involving tables, frames, cascading style sheets (CSS) and layers. Practical applicability also will be cultivated through the design of a professional website. Prerequisite: IMD 180 and IMD 185, or consent of instructor.

**IMD 226 Advanced Desktop Publishing (3)**

In this course, students will learn to design and produce text- and image-intensive publications. Industry-standard desktop publishing software will be utilized to create brochures, newsletters, proposals and other documents. Students also will use drawing and image-editing software for the purpose of creating and editing graphics for publications. Emphasis will be placed on importing text and graphics from word processing and graphics programs into desktop publishing software. Students will study the desktop publishing process from concept and creation through pre-press and printing. Prerequisite: IMD 126; IMD 127, 128 and 150 or concurrent; or consent of instructor.

**IMD 227 Vector and Raster Design (3)**

In this course, students will be introduced to vector (line-based) and raster (photo or pixel-based) graphics. Topics covered will include theory behind vector and raster graphics as well as creation of graphics in vector and raster art software packages. Prerequisite: IMD 115 or concurrent or consent of instructor.

**IMD 230 Advanced Web Design (3)**

In their role as web designers, students will be exposed to existing and emerging web technologies. Topics and issues include modification of prewritten scripts and applets as well as discussion of current client and server-side technologies including JavaScript, DHTML, Java, CGI/Perl, PHP, Cold Fusion, SQL, ASP and XML. Prerequisite: IMD 180 or consent of instructor.

**IMD 232 Professional Web Editors (3)**

Students learn how to use and customize advanced web authoring software. A professional WYSIWYG (what-you-see-is-what-you-get) editor will be used to develop and create web pages, automate

production, and manage and maintain entire websites. Students will build on their Hypertext Markup Language (HTML) and web development knowledge to customize features and integrate applications. This class will also focus on efficiency and working in a team-based environment. Prerequisite: IMD 180 or consent of instructor.

**IMD 235 Advanced Word Processing (3)**

Students will learn current word processing software from intermediate skills through advanced utilities. Topics include producing customized documents, enhancing the visual display of documents, creating customized desktop publishing documents, organizing text in documents using advanced features, and integrating data utilizing various applications. Emphasis will be on mastering the software for optimal use. Prerequisite: IMD 210 or CIS 130, or equivalent skills.

**IMD 240 Animation for the Web (3)**

Students learn to design and deliver low-bandwidth web animations with professional, industry-standard applications. Students will also use industry-standard vector-based applications to create graphics for integration with animation. Prerequisite: IMD 180, IMD 185, IMD 232, or consent of instructor.

**IMD 245 Multimedia for the Web (3)**

Students develop multimedia products for information delivery, training and advertising on the web using industry-standard applications. Students will storyboard, plan, produce and execute a multimedia product; integrate the final product into a web environment; and test for product performance and correct production flaws. Students will also explore topics such as platform and server considerations and limitations and the basics of continuity in multimedia design. Prerequisite: IMD 180 and IMD 185; or consent of instructor.

**IMD 250 Digital Video Editing with Final Cut Pro (3)**

Students will capture and edit digital video using industry-standard desktop video software and export to DVD, VHS, and the Internet for use in entertainment, documentary films, commercials, and newscasts. Students will learn to storyboard, plan, and produce a digital video project from conception to final packaging and explore topics such as compositing, alpha channels, and special effects. IMD 100 or IMD 133 or consent of instructor

**IMD 270 Professional Practices (3)**

This course is designed to assist students develop strategies for entering the Information Management & Design profession by editing and refining portfolios and creating correspondence to meet professional standards, designing resumes and other self-promotional materials, developing a job search strategy, practicing interview techniques and professional presentations. IMD 210 or IMD 235 or consent of instructor

**IMD 271 Internship (1-3)**

On-the-job experience will be required of the Information Management & Design student. A minimum of 40 clock hours of appropriate experience per credit hour will be required. The learning plan will be discussed and agreed upon by the student, instructor and site supervisor. Prerequisite: Consent of instructor, 2.0 G.P.A., and the completion of 12 credit hours of IMD course work (including IMD 270).

**IMD 275 Workplace Management (3)**

Management principles and techniques and their applications to the contemporary business workplace are included. Emphasis is on information management, team concepts and the role of personnel management.

**IMD 276 Legal Office Procedures (3)**  
Legal office procedures and the transcription of legal forms and documents are included in this course. Prerequisite: IMD 118 or BE 267.

**IMD 278 Medical Office Procedures (3)**  
Medical office procedures using a medical practice management software program, medical coding, and the transcription of medical forms, histories, and reports are included in this course. Prerequisite: IMD 118, CLA 131, or consent of instructor.

**IMD 280 Applied Computer Graphic Design (3)**  
In this course, students will study graphic and commercial design techniques in conjunction with exploration of advanced computer graphic software. Students will also apply and integrate theory and techniques explored in earlier graphics classes. This course will be the capstone for students choosing the graphics option. Presentation, vector, raster, desktop publishing, web development and multimedia software will be utilized to create design-intensive, portfolio pieces. Prerequisite: IMD 224, IMD 226, IMD 227 or IMD 127 and IMD 128,, or consent of instructor.

**IMD 292 Portfolio Practicum: Web Design (3)**  
In this capstone course, students will assemble a comprehensive web site design portfolio using skills learned in the IMD Web Design core courses. The purpose of the portfolio will be to assess students' overall skills learned in the web design option. It will also be used to provide IMD students with a professional design portfolio to aid in the search for employment. Students will use Macromedia Fireworks, Dreamweaver, Flash, Adobe Photoshop/ImageReady, and dynamic scripting languages to assemble the comprehensive design portfolio. Prerequisite: IMD 225, 232, 240 or consent of instructor.

**IMD 299 Selected Topics in Information Management and Design (1-3)**  
This course is designed to expand course offerings as new technology is developed, as well as consider contemporary and/or emerging trends in information management and design. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of instructor.

## JAPANESE

**JPN 101 Beginning Japanese I (4)**  
A course in first semester Japanese language.

**JPN 102 Beginning Japanese II (4)**  
A course in second semester Japanese language. Prerequisite: JPN 101 or equivalent.

## JOURNALISM

**JOU 101 Introduction to Journalism (3)**  
This course surveys the history and social theories of journalism and introduces students to contemporary journalistic practice. Student will learn about the function and operation of print, electronic and on-line news media. Issues and concepts to be covered include the relationship of government to media; press freedom and controls; media ethics, and the impact of global communications. The course also covers the relationship of journalism to advertising, public relations and telecommunications, particularly with regard to new technologies. Prerequisite: JOU pre-majors only or consent of instructor.

**JOU 204 Writing for the Mass Media (3)**  
An introduction to the concepts and techniques of media writing.

This course offers hands-on instruction in information gathering, organization, and writing for print, broadcast and on-line media. Lecture: one hour; laboratory: four hours per week. Prerequisite: JOU pre-major status; JOU 101 or consent of instructor.

## KINESIOLOGY AND HEALTH PROMOTION

**KHP 100-KHP 135 Service Courses (1)**  
Instruction in a variety of motor skills activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit.

**KHP 230 — Human Health and Wellness (3)**  
The study of health promotion, wellness, and disease prevention concepts as applied to individual, familial, and community health.

## LIBRARY INFORMATION TECHNOLOGY

**LIT 115 Introduction to Reference Services (3)**  
This course presents an introduction to library reference sources and services. Reference interview techniques, use of standard print and online reference tools, bibliographic databases, web search engines and subject guides, and online full-text books, periodicals, documents, and interlibrary loan services are among the topics included. This is a web-based distance course that involves service learning activities.

**LIT 124 Library Administration (3)**  
This course provides an introduction to basic principles of library organization and management. Emphasis is on the practical application of management concepts to the effective administration of library systems. This is a web-based distance course. Prerequisite: LIT 115 or consent of instructor.

**LIT 132 Library Technical Services (3)**  
This course is an introduction to library technical services. Acquisitions, processing, cataloging and classification are introduced. This is a web-based distance course. LIT 115 or consent of instructor.

**LIT 200 Seminar in Kentucky Literature (Subtitle Required) (3)**  
This is an online or computer-assisted seminar course in Kentucky literature recognizing, examining, and studying distinct regional differences and similarities with concentration on major contemporary and traditional Kentucky writers and their texts. Topics will vary, from a group of authors, and historical period or aesthetic movement, to a genre, a theme, or an aspect of literary theory.

**LIT 230 Web Publishing for Libraries (3)**  
This is a course in web publishing for library web sites, including HTML code, web page authoring software, web page and web site design, and trends in library web sites. This is a distance education course with a service learning component. Prerequisite: LIT 115 or consent of instructor.

**LIT 240 Literature of Appalachian Kentucky (3)**  
This is an online or computer-assisted introductory survey course in the Appalachian literature of Kentucky concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period or aesthetic movement, a genre, a theme, or an aspect of literary theory.

**LIT 241 Literature of Central Kentucky (3)**  
This is an online or computer-assisted introductory course in the

literature of Central Kentucky concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period or aesthetic movement, a genre, a theme, or an aspect of literary theory.

**LIT 242 Literature of Western Kentucky (3)**

This is an online or computer-assisted introductory survey course in the literature of Western Kentucky which concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period, or aesthetic movement, a genre, a theme or an aspect of literary theory.

**LIT 243 Library Services for Children (3)**

This course is a study of library services for children. Topics include library programming development and production, children's literature, collection development, Internet resources, and legal issues. This is a web-based distance course that involves service learning activities. Prerequisite: LIT 115 or consent of instructor.

**LIT 245 Library Services for Young Adults (3)**

This course is a study of library services for young adults from 6<sup>th</sup> to 12<sup>th</sup> grades. Topics include programming, collection development, the use of the Internet, and ethical and legal issues. Emphasis is on the development and promotion of young adult library services. This is a web-based distance course that involves service learning activities. Prerequisite: LIT 115 or consent of instructor.

**LIT 247 Library Services for Adults (3)**

This is a study of library services for adults. Topics include adult literature, collection development, reader's advisory service, programming, circulation services, reference services, and customer relations. This is a web-based distance course that involves service learning activities. Prerequisite: LIT 115 or consent of instructor.

**LIT 248 Library Services for Preschool Children (3)**

This course is a study of library services for preschool children, age infant to 5 years. Topics include library programming development and production, preschool children's literature, services for parents and for child care services, collection development, and legal issues. This is a web-based distance course that requires service learning activities. Prerequisite: LIT 115.

**LIT 280 Genealogy Services in Libraries (3)**

This course prepares librarians to provide quality services to genealogical patrons. Topics include: definitions of genealogy and motivations of patrons; genealogical data, sources, and research methods; reference interviews; orientation of patrons to genealogical resources; collection development; interlibrary loan; patron referral; and legal and ethical issues relating to genealogical research. This is a web-based distance course that requires a service learning project. Prerequisite : LIT 115 or consent of instructor.

**LIT 285 History of Libraries (3)**

This course is a survey of the development of libraries from ancient times to the present, with emphasis on academic and public libraries in the United States. Attention is given to the interaction of libraries with economic, social and political trends in the larger society. LIT 115 or consent of instructor

**LIT 299 Selected Topics in Library Information Technology: Topic (1-3)**

This course is designed to expand library course offerings as new technologies develop, new issues evolve, and/or to address local library issues. Topics may vary from semester to semester at the discretion of the instructor. Course may be repeated with different topics to a maximum of nine credit hours. This is a web-based distance course that

involves service learning activities. Prerequisite: LIT 115 or consent of instructor.

## **MACHINE TOOL TECHNOLOGY**

**MTT 110 — Fundamentals of Machine Tools – A (3)**

Provides the basic principles needed for a solid foundation in machine tool technology. Areas and machines covered include shop safety, benchwork, drill press, power saw, measurement, and mills. Components: Laboratory, Lecture.

Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours/30:1 ratio).

**MTT 112 — Fundamentals of Machine Tools – B (4)**

Provides the basic principles needed for a solid foundation in machine tool technology. Areas and machines covered include shop safety, benchwork, drill press, power saw, measurement, and mills. Components: Laboratory, Lecture.

Lecture: 2 credits (30 contact hours); Laboratory: 2 credits (60 contact hours/30:1 ratio). Prerequisites: MTT 110 with a grade of C or greater or Consent of Instructor.

**MTT 114 — Fundamentals of Machine Tools (7)**

Provides the skills and knowledge that is needed to progress through the machine tool program. It will include safety and benchwork. The student will be introduced to the basic power equipment and machine tools that are used in the machine trades which includes: drill presses, power saws, measurement instruments, mills and lathes. Components: Laboratory, Lecture. Lecture: 3 credits (45 contact hours); Laboratory: 4 credits. (120 contact hours/30:1 ratio).

**MTT 118 — Metrology/Control Charts (3)**

Provides the basic principles in using precision measurement instruments and their application to inspection and quality control. Components: Lecture. Lecture: 3 credits (45 contact hours).

**MTT 120 — Applied Machining I (3)**

Consists of intermediate level skills using machining machines and surface grinders. It will include the selection of grinding wheels. Components: Laboratory, Lecture. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours/30:1 ratio). Prerequisites: MTT 110 and 112 or MTT 114 with a grade of C or greater in the MTT course(s) or Consent of Instructor.

**MTT 122 — Applied Machining II (4)**

Carries the student to higher levels in the operation of machine tools. Components: Laboratory, Lecture. Lecture: 2 credits (30 contact hours); Laboratory: 2 credits (60 contact hours/30:1 ratio). Prerequisites: MTT 120 with a grade of C or greater or Consent of Instructor.

**MTT 124 — Applied Machining (7)**

Allows the student to begin performing skills that will combine the use of different types of machines and begin to give them a complete picture of the machine tool career. Components: Laboratory, Lecture. Lecture: 3 credits (45 contact hours); Laboratory: 4 credits (120 contact hours/30:1 ratio). Prerequisites: MTT 110 and 112 or MTT 114 with a grade of C or greater in the MTT course(s) or Consent of Instructor.

**MTT 130 — Manual Programming (3)**

Introduces the student to CNC codes and programming, set-up and operation of CNC machine tools. Components: Laboratory, Lecture. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours/30:1 ratio).