

**DISABLED STUDENTS, CONTINUED**

**EDDEV 030  
ENGLISH SKILLS**

**3 Units/Corequisite: EDEV 030W.**

This course is designed for students with learning disabilities who need to improve basic writing skills. A process approach to writing is integrated with reading assignments to provide a variety of writing experiences. Students practice strategies to develop thinking, language, and writing skills. This course is the beginning level of composition; it prepares students for success in English 035 or 101. This is a non-degree credit course and is offered on a credit/no credit basis. Students are required to concurrently enroll in Educational Development 030W English Skills Workshop.

0610 TTh 9:40-11:05 AM MARKS J Rm S211

**\*Students are required to concurrently enroll in the following Section #0611 Educational Development 30W English Skills Workshop.**

**EDDEV 030W  
ENGLISH SKILLS WORKSHOP**

**1 Unit/Corequisite: EDEV 030.**

This course is a skills class to assist students with learning disabilities in improving writing and language skills through instruction with the Learning Disability Specialist. Students will perform writing tasks designed to complement the activities of their composition class. This is a non-degree course and is offered on a credit/no credit basis. Students are required to concurrently enroll in Educational Development 030, English Skills.

0611 TTh 11:15 AM-12:05 PM MARKS J Rm S211

**EDDEV 101  
COLLEGE AND CAREER EXPLORATION**

**3 Units/Advisory: READ 023 or appropriate assessment, ENGL 030 or ESL 197 or appropriate assessment.**

**Transfers to: CSU**

This course is designed to facilitate a student's acquisition of the necessary information and personal awareness for a successful college experience. Special strategies will be utilized to particularly benefit the student with specific learning difficulties. The value of higher education will be explored with particular emphasis on the policies and procedures of Rio Hondo College and four year institutions. Special attention will be directed toward the understanding of "Certificate Programs," "Associate Degrees," "General Education" and "Transfer" requirements. Students will investigate the various support services available at Rio Hondo and develop a working knowledge of how a student may benefit from such services.

0616 TTh 9:40-11:05 AM LOUIE M Rm S203

**EDDEV 134  
STUDY TECHNIQUES**

**3 Units/Advisory: READ 022 or appropriate assessment and ENGL 030 or ESL 197 or appropriate assessment.**

**Transfers to: CSU**

This is a course in college study skills which also addresses the needs of students identified with special learning needs. Students are taught specific techniques, principles, and strategies which enable them to effectively acquire, integrate, store, and retrieve information and thus become more successful students. Topics in this course include in-depth instruction in critical reading and thinking, time management, memory techniques, note-taking, test-taking, creativity, and communication. Students are encouraged to utilize appropriate college resources.

0614 TTh 12:50-2:15 PM MC CONNELL P Rm S203

**DRAFTING/CAD – ARCHITECTURE &  
CIVIL & ANIMATION**

**DIVISION OF CAREER TECHNICAL EDUCATION**  
www.riohondo.edu/cad

**FOR 3D DRAWING AND RENDERING PLEASE SEE ANIMATION**

**STUDENTS WITH EXPERIENCE FROM INDUSTRY SHOULD CONTACT PROGRAM COORDINATOR PROFESSOR JAY SUNYOGH AT EXT. 7369 FOR COURSE WAIVERS OR PREREQUISITES.**

**ANIMATION-SEE ANIMATION**  
(Formerly DRAF 201, 202, 203)

**ARCH 095  
BLUEPRINT READING FOR CONSTRUCTION**

**2 Units/Advisory: READ 023 or appropriate assessment and ENGL 030 or ESL 197 or appropriate assessment.**

The course is beneficial for apprentices, students of architecture and employees in all areas of the construction industry, and covers residential, light commercial and industrial building construction. The course is a requirement for both the certificate and A.S. Degree in Architecture Drawing and Design. This course presents an introduction to the use of blueprints and construction documents as used in the building industry. Principles of reading working drawings, plans, H.V.A.C. specifications, details, elevations and electrical specifications are included.

**Students are required to concurrently enroll in Section 5081.**

★ 1372 TTh 5:30 - 6:55 PM MOTTA O Rm S310

**ARCH 115  
INTRODUCTION TO RESIDENTIAL ARCHITECTURE:  
DRAWING AND DESIGN**

**4 Units/Advisory: DRAF 101 or two years of high school drafting**

**Transfers to: CSU**

This introductory course is for any student interested in the field of Architecture Design and Drawing. The course is a requirement for both the A.S. degree and certificate in Architecture Design and Drawing and Engineering Design Drafting. The course includes the study of architectural graphic standards related to drawing construction drawings such as floor plans, electrical plans, exterior elevations, roof plans and plot plans for a one or two story residential structure. Emphasis is placed on symbology, conventions, and techniques to develop technical skills necessary for an entry level architectural drafter and may lead to careers in environmental planning and design, architectural engineering, and construction technology. Construction methods, building codes, design factors, planning, and use of reference materials are discussed and applied.

**Students are required to concurrently enroll in Section 5081.**

★ 1279 TTh 7:05-10:15 PM ALVAREZ R Rm S310

**LEARNING COMMUNITY: "BUILDING & CONVEYING SOLID IDEAS"**

1360 MW 12:40-3:50 PM GONZALEZ E Rm S310

**AND**

0289 SPCH 101 MW 11:10 AM-12:35 PM CUIRELL Rm S305

**Students are required to concurrently enroll in Section 1360 & 0289**


**For information about the Learning Communities Program contact instructor at egonzalez@riohondo.edu.**

**Engineering Careers  
& Applications**

CIV 138 Section #1016  
MW 11:10 AM - 12:35 PM

This course explores the career opportunities and training requirements in the field of engineering and engineering technology. Topics will include the history of engineering, careers in engineering, ethics and responsibilities of the engineer. It also includes hands-on problem solving.

**LEARNING COMMUNITY**  
**"Building and Conveying Solid Ideas:  
A Solid Foundation in Presenting Architectural Ideas"**



**\*Speech 101: #0289 MW 11:10 AM -12:35 PM**  
**AND**  
**Arch 115: #1360 MW 12:40 - 3:50 PM**  
**OR**  
**Arch 215: #1283 MW 7:55 - 11:05 AM**

**Take public speaking combined with an architecture class to get the benefits of paired classes including a friendly group environment, improved student success rate, field trips, meaningful learning, and integrated projects.**

**\*Must enroll in at least one of the architecture classes to be eligible to enroll in Section 0289 of Speech 101**

SEC. #	DAY(S)	TIME	INSTRUCTOR	ROOM	SEC. #	DAY(S)	TIME	INSTRUCTOR	ROOM
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**DRAFTING/CAD, CONTINUED**

**ARCH 215  
ARCHITECTURAL PERSPECTIVE AND RENDERING**

4 Units/Prerequisite: ARCH 115.

Advisory: DRAF 105.

Transfers to: CSU

**THIS COURSE WILL NOT BE OFFERED AGAIN UNTIL FALL 2010**

This course is for all students interested in developing skills in architectural perspective drawing and is a requirement for both the Architecture and Architecture Design and Drawing A.S. degrees. The students will be introduced to the theory of and practical application of perspective drawing and rendering as used in architecture. Topics include one, two, and three point perspectives, entourage, and introduction to rendering techniques, such as water color, markers, film, pastels, pencil, pen and ink. Presentation techniques will also be discussed.

Students are required to concurrently enroll in Section 5081.

**LEARNING COMMUNITY: "BUILDING & CONVEYING SOLID IDEAS"**

1283 ARCH 215 MW 7:55-11:05 AM TABATA F Rm S310

AND

0289 SPCH 101 MW 11:10 AM-12:35 PM CURIEL L Rm S305

Students are required to concurrently enroll in Section 1283 AND 0289

For information about the Learning Communities Program contact the instructor at [egonzalez@riohondo.edu](mailto:egonzalez@riohondo.edu).

**ARCH 225  
COMMERCIAL WOOD AND MASONRY DESIGN AND CONSTRUCTION**

4 Units/Prerequisite: ARCH 115.

Advisory: ARCH 125, DRAF 150 or DRAF 170.

Transfers to: CSU

**THIS COURSE WILL NOT BE OFFERED AGAIN UNTIL FALL 2010**

This advanced level course is for students pursuing an A.S. Degree or Certificate in Architecture and Architectural Design and Drawing. The course includes the study of construction methods, building ordinances and codes. As a component of the course students will complete construction documents for concrete block, steel and wood commercial buildings and retail space. Emphasis is placed on effective space utilization, technical plans, elevations, aesthetics, handicap requirements, site utilization and development, traffic flow, landscape, foundation design and construction details.

Students are required to concurrently enroll in Section 5081.

1432 TTh 7:55-11:05 AM GONZALEZ E Rm S310

★ 1391 MW 7:05-10:15 PM HARDY R Rm S310

**ARCH 260  
ADVANCED CADD FOR ARCHITECTURAL APPLICATIONS**

4 Units/Prerequisite: Draf 150 and Arch 115

Advisory: DRAF 200

Transfers to: CSU

This course is for all students pursuing an A.S. Degree in Architecture and Architectural Design and Drawing and presents an intensive study of CADD and BIM applications as they relate to architecture. Utilizing the latest releases of CADD software such as Revit and AutoCAD Architecture and previously learned technical and architectural drafting conventions, students will produce two and three dimensional CADD generated architectural drawings and 3D virtual models. High technology skills which are necessary to function as a designer or CADD Drafter are emphasized. Course may be counted once towards the major and repeated three times for credit to enhance student's skills and proficiency levels, or repeated due to content change or software updates.

Students are required to concurrently enroll in Section 5081.

0305 MW 12:40-3:50 PM SUNYOGH J Rm S307

★ 1314 TTh 7:05-10:15 PM WALLS C Rm S307

SECTION 0305 ONLY OFFERED IN THE FALL SEMESTER

**ARCH 290  
COOPERATIVE WORK EXPERIENCE/INTERNSHIP FOR ARCHITECTURE RELATED FIELDS**

1-4 Units/Advisory: READ 023 or appropriate assessment and ENGL 035 or ESL 198 or appropriate assessment.

Transfers to: CSU

This course supports and reinforces on-the-job training in business and industrial establishments under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational

interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of architecture and have completed or enrolled in the appropriate coursework. This course may be taken once and repeated for a maximum of 16 units.

Students are required to concurrently enroll in Section 5081.

For more information you can contact the instructor at [jsunyogh@riohondo.edu](mailto:jsunyogh@riohondo.edu)

1383 TBA Times to be arranged 1 unit SUNYOGH J Rm TBA

1384 TBA Times to be arranged 2 unit SUNYOGH J Rm TBA

1385 TBA Times to be arranged 3 unit SUNYOGH J Rm TBA

1390 TBA Times to be arranged 4 unit SUNYOGH J Rm TBA

**CIVIL 138  
ENGINEERING CAREERS & APPLICATIONS**

2 Units/Advisory: READ 023 or appropriate assessment and ENGL 035 or ESL 198 or appropriate assessment.

Transfers to CSU

**THIS COURSE WILL NOT BE OFFERED AGAIN UNTIL FALL 2010**

This course is for all students interested in the career field of engineering Design Drafting. Engineering Careers and Applications will explore the career opportunities and training requirements in the field of engineering and engineering technology. Topics will include the history of engineering, careers in engineering, ethics and responsibilities of the engineer, communicating and problem solving.

Students are required to concurrently enroll in Section 5081.

1016 MW 11:10 AM-12:35 PM PEREZ, M Rm S306

**CIVIL 140  
CIVIL DRAFTING FUNDAMENTALS**

3 Units/Prerequisite: DRAF 150 or DRAF 170 and DRAF 122 or ARCH 115

Advisory : READ 023 or appropriate assessment, ENGL 030 or ESL197 or appropriate assessment.

Transfer to: CSU

**THIS COURSE WILL NOT BE OFFERED AGAIN UNTIL FALL 2010**

This course is for all students interested in the career field of Civil Design Drafting and Civil Engineering. The course is a study of civil design drafting practices and the preparation of drawings used in the civil engineering field. Students will use Computer Aided Drafting (CADD) software to complete projects relating to interpretation of survey data, profiles and cross sections, land subdivision site and grading plans, underground utilities and structures, concrete and structural detailing.

Students are required to concurrently enroll in Section 5081.

1019 MW 7:55-11:10 AM GONZALEZ E Rm S306

**CIVIL 142  
INTRO TO SURVEYING AND GPS**

4 Units/Advisory: GIS or working knowledge of GIS software, READ 023 or appropriate assessment, ENGL 035 or ESL 198 or appropriate assessment.

Transfers to: CSU

**THIS COURSE WILL NOT BE OFFERED AGAIN UNTIL FALL 2010**

This course is for all students interested in the career field of Civil Design Drafting and Civil Engineering. Introduction to Surveying and GPS will cover the principles and practices of land surveying which will include the measuring of distance, direction, elevation and position, topographic mapping, and use and care of surveying equipment. The fundamentals of global positioning systems (GPS) and their applications in land surveying will also be introduced. This course will also be beneficial for those in the construction industry who need to acquire property data.

Students are required to concurrently enroll in Section 5081.

0416 Sat 9:00 AM-4:20 PM SEBOURN G Rm S309

**CIVIL 245  
CIVIL ENGINEERING DESIGN & MODELING**

3 Units/Prerequisite: DRAF 170 or DRAF 150

Advisory: READ 023 or appropriate assessment and ENGL 035 or ESL 198 or appropriate assessment.

Transfers to CSU

**THIS COURSE WILL NOT BE OFFERED AGAIN UNTIL FALL 2010**

This course is for all students interested in the career field of Civil Design Drafting and Civil Engineering. Civil Design & Modeling is an advanced level class which includes design analysis and the preparation of drawings used in the civil engineering field. The student will use civil engineering software, such as In-Roads and 3D Civil to design, analyze and develop projects relating to transportation, site development, grading, drainage and road alignment and alternatives. Other topics to be covered are train modeling, surface editing, alignment editing, plan, profile, cross-sections, earth work computations and site planning design.

Students are required to concurrently enroll in Section 5081.

1015 MW 4:00 PM-7:10 PM JIA X Rm S306

SEC. #	DAY(S)	TIME	INSTRUCTOR	ROOM	SEC. #	DAY(S)	TIME	INSTRUCTOR	ROOM
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**DRAFTING, CONTINUED**

**CIVIL 290**

**COOPERATIVE WORK EXPERIENCE/INTERNSHIP FOR CIVIL DRAFTING RELATED FIELDS**

1-4 Units/Advisory: READ 023 or appropriate assessment and ENGL 035 or ESL 198 or appropriate assessment.

Transfers to: CSU

This course supports and reinforces on-the-job training in business and industrial establishments under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of Civil Drafting and have completed or enrolled in the appropriate coursework. This course may be taken once and repeated for a maximum of 16 units.

Students are required to concurrently enroll in Section 5081.

For more information you can contact the instructor at egonzalez@rio-hondo.edu

0349	TBA	Times to be arranged	1 unit	GONZALEZ E	Rm TBA
0354	TBA	Times to be arranged	2 unit	GONZALEZ E	Rm TBA
0362	TBA	Times to be arranged	3 unit	GONZALEZ E	Rm TBA
0374	TBA	Times to be arranged	4 unit	GONZALEZ E	Rm TBA

**DRAF 101**

**INTRODUCTION TO TECHNICAL DRAWING AND GRAPHICS**

3 Units/Advisory: READ 023 or appropriate assessment and ENGL 035 or ESL 198 or appropriate assessment.

Transfers to: CSU.

This is a basic course in technical drawing and graphics for students with no previous drafting skills or training. This course is designed for students who wish to pursue training in fields and career related to architecture and engineering design. Practical application will be provided with the tools, techniques, standards, and practices used in the industries that need technical drawings and graphics.

Students are required to concurrently enroll in Section 5081.

1319	MW	7:55 - 11:10 AM		HALVORSON G	Rm S304
1321	MW	12:40 - 4:00 PM		HALVORSON G	Rm S304
★ 1338	TTh	7:15 - 10:30 PM		SACCONI A	Rm S304

**DRAF 105**

**ARCHITECTURAL AND TECHNICAL FREEHAND SKETCHING**

2 Units/Advisory: READ 023 or appropriate assessment and ENGL 035 or ESL 198 or appropriate assessment.

Transfers to: CSU

This course is designed to develop skill in freehand drawing as used by the design professionals in both architectural and technical applications. Using pen, pencil, markers, basic principles of proportion, composition and freehand technique, students will prepare preliminary design sketches in isometric, diametric, oblique perspective and orthographic. This course is open to all students who wish to develop freehand drawing skills, it is required for all students working towards a degree or certificate in the Architecture and Engineering Design Drafting program.

Students are required to concurrently enroll in Section 5081.

1343	MW	4:45 - 6:55 PM		BEAUCHMEIN R	Rm S310
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**DRAF 122**

**ENGINEERING DESIGN GRAPHICS**

4 Units/Advisory: DRAF 101 or two years of high school drafting.

Transfers to: UC, CSU.

This course is an introduction to graphics as used in engineering design and the systematic use of graphic solutions and descriptive geometry to solve three dimensional engineering problems involving space, points, planes and lines. Technical drawing using I.S.O. and A.N.S.I. standards including geometric dimensioning and tolerancing, will be stressed with a conceptual design project and preparation of working drawings. This course is required for all students working towards a degree or certificate in the Architecture and Engineering Design Drafting program. The course is also recommended for students interested in transferring to Schools of Engineering.

Students are required to concurrently enroll in Section 5081.

1336	TTh	7:55-11:05 AM		HALVORSON G	Rm S304
★ 1280	MW	7:05-10:15 PM		BEAUCHEMIN R	Rm S304

**DRAF 131**

**ENGINEERING AND MANUFACTURING APPLICATIONS OF TECHNICAL DRAWING**

4 Units/Prerequisite: DRAF 122

Advisory: DRAF 150 or DRAF 270 or CADD experience.

Transfers to: CSU

**THIS COURSE WILL NOT BE OFFERED AGAIN UNTIL FALL 2010**

This intermediate course is the study of technical drawing as used in manufacturing applications of design and engineering technology. This course is for all students in areas of study related to Engineering, Technical Drafting, Design and Computer Graphics. The course incorporates orthographic projection, introduction to tool design, and applications of descriptive geometry through layouts and developments. The course will also cover ANSI Y14.5, precision dimensioning, geometric tolerancing, manufacturing terminology and processes. Lab exercises and drawings will be used to reinforce lecture and demonstration concepts.

Students are required to concurrently enroll in Section 5081.

1354	MW	3:50-7:00 PM		HALVORSON G	Rm S304 & S307
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**DRAF 150**

**AUTOCAD FOR BASIC CADD APPLICATIONS**

4 Units/Advisory: DRAF 101 or two years of high school drafting, READ 023 or appropriate assessment and ENGL 035 or ESL 198 or appropriate assessment.

Transfers to: CSU

This course is for students preparing for high technology careers who need the skills necessary to function as an entry level CADD operator or to apply CADD to specific disciplines of mechanical and architectural design, manufacturing, illustration and engineering related documents. An overview of computer graphics and CADD (Computer Assisted Design and Drawing) utilizing the latest release of AutoCAD software will be provided. Students will produce 2D orthographic, isometric, and basic 3D models solutions of mechanical and architectural applications. This course may be taken once for credit towards the major and repeated three times for credit to enhance student skills and proficiency levels, or repeated due to content change form software revision upgrades.

Students are required to concurrently enroll in Section 5081.

1281	MW	7:55-11:05 AM		SUNYOGH J	Rm S307
★ 1316	MW	7:05-10:15 PM		VASQUEZ D	Rm S306
1430	Sat	8:00 AM-2:30 PM		GONZALEZ E	Rm S304

**DRAF 170**

**MICROSTATION FOR BASIC CADD APPLICATIONS**

4 Units/Advisory: DRAF 101 or two years of high school drafting, READ 023 or appropriate assessment and ENGL 035 or ESL 198 or appropriate assessment.

Transfers to: CSU

This course is for students preparing for high technology careers who need the skills necessary to function as an entry level CADD operator or to apply CADD to specific disciplines of mechanical and architectural design, manufacturing, illustration and engineering related documents. An overview of computer graphics and CADD (Computer Assisted Design and Drawing) utilizing the latest release of Microstation software will be provided. Students will produce 2D orthographic, isometric, and basic 3D models solutions of mechanical and architectural applications. This course may be taken once for credit towards the major and repeated three times for credit to enhance student skills and proficiency levels, or repeated due to content change from software revision upgrades.

Students are required to concurrently enroll in Section 5081.

1318	TTh	11:10 AM-2:20 PM		SUNYOGH J	Rm S307
1315	Sat	8:00 AM-2:30 PM		STAFF	Rm S310

**DRAF 101**

## Intro to Technical Drawing

Section #1319 MW 7:55 - 11:05 AM  
 Section #1321 MW 12:40 - 3:50 PM  
 Section #1323 TTh 7:05 - 10:15 PM

**Everything that is made starts first as an idea. To communicate that idea a drawing is made. Take Drafting 101 and learn the "Language of Industry"**

**Drafting 101 is an entry level course for all students with thoughts of being a CADD Technician, Engineer, Architect or entering any other design based career.**

SEC. #	DAY(S)	TIME	INSTRUCTOR	ROOM	SEC. #	DAY(S)	TIME	INSTRUCTOR	ROOM
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**DRAFTING, CONTINUED**

**DRAF 200**  
**INTERMEDIATE AUTOCAD FOR DESIGN & PRODUCTION**  
 3 Units/Prerequisite: DRAF 150 with a grade of "C" or better.  
 Advisory: Knowledge of the Windows operating system is highly recommended.

Transfers to: CSU  
 This course is for students pursuing degrees or certificates in the Architecture and Engineering Design Drafting Program and for those who wish to enhance their AutoCAD skills for workplace productivity. The course is an intermediate application study in computer aided design, drafting, and graphics using the latest version of AutoCAD. Combined with previously learned technical drafting conventions and basic AutoCAD operational skills, students will use AutoCAD to produce detailed drawings that involve model space and paper space, 2D and 3D objects, block attributes and viewport scales. The course may be taken once for credit towards the major and repeated 2 times for credit to enhance student skills and proficiency level.

Students are required to concurrently enroll in Section 5081.  
 1332 TTh 7:55-11:10 AM SUNYOGH J Rm S307

**DRAF 250**  
**PARAMETRIC MODELING 3D APPLICATIONS FOR MECHANICAL DESIGN**  
 4 Units/Prerequisite: DRAF 150

Transfers to: CSU  
**THIS COURSE MAY NOT BE OFFERED AGAIN UNTIL FALL 2010**  
 This course presents advanced applications of 2D and 3D Computer Aided Design Drafting (CADD) and an introduction to parametric modeling and rapid prototyping utilizing the latest releases of Autodesk Inventor series, SolidWorks, and other parametric modeling software to produce solutions for mechanical applications. This course benefits all students in areas of study related to Engineering, Drafting, Design and Computer Graphics, emphasizes CAD generated three dimensional graphics using wire frame, surface modeling and parametric solids. Course may be counted once towards the major and repeated two times for credit to enhance student skills and proficiency levels.

Students are required to concurrently enroll in Section 5081.  
 ★ 1339 MW 7:05-10:15 PM STAFF Rm S307

**DRAF 270**  
**SOLIDWORKS FOR 3D MODELING AND PROTOTYPE APPLICATIONS**  
 4 Units/Prerequisite: DRAF 150 or DRAF 170.

Transfers to: CSU  
**THIS COURSE MAY NOT BE OFFERED AGAIN UNTIL FALL 2010**  
 This course presents an intensive study in 3D computer graphics and CADD (Computer Assisted Design and Drafting) utilizing the latest release of SolidWorks Software. This course benefits all students in areas of study related to Engineering, Drafting, Design and Computer Graphics. Students will produce three dimensional parametric computer generated virtual models incorporating mechanical design refinements. The course emphasizes high technology skills which are necessary to function as a design professional to apply 3D design graphics technology to specific disciplines of mechanical engineering, machine drafting and design, manufacturing, animation, modeling and illustration. Students will be introduced to a variety of means to directly produce prototype models from CADD generated solid geometry. This course may be taken once for credit toward the major and repeated 2 times to enhance student skills and proficiency levels.

Students are required to concurrently enroll in Section 5081.  
 1304 Sat 8:00 AM - 2:30 PM ZAKI N Rm S305

**DRAF 280**  
**ADVANCED MICROSTATION AND 3D APPLICATIONS**  
 4 Units/Prerequisite: DRAF 170 with a grade of "C" or better, or verifiable work experience and proficiency in MicroStation/J or SE.

Transfers to: CSU  
**THIS COURSE MAY NOT BE OFFERED AGAIN UNTIL FALL 2010**  
 This second level CAD (Computer Aided Design Drawing) course provides further study in MicroStation's advanced 2D applications and an introduction to 3D solids modeling, utilizing the latest versions of Modeler, TriForma and Bentley Architecture. The course will emphasize basic modeling principles to create 3D solid models and design drawings for mechanical and architectural applications. Rendered surfaces and lighting will also be studied and applied to the 3D models. This course benefits all students in areas of study related to Architecture, Engineering, Drafting, Design and Computer Graphics. Course may be taken once for credit toward the major and repeated 2 times for credit to enhance student skills and proficiency levels, or due to content change from software revisions and upgrades.

Students are required to concurrently enroll in Section 5081.  
~~1303 Sat 8:00 AM - 2:30 PM MARTIN D Rm T402~~

**DRAF 290**  
**COOPERATIVE WORK EXPERIENCE/INTERNSHIP FOR DRAFTING RELATED FIELDS**  
 1-4 Units/Advisory: READ 023 or appropriate assessment and ENGL 035 or ESL 198 or appropriate assessment.

Transfers to: CSU  
 This course supports and reinforces on-the-job training in business and industrial establishments under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of drafting and have completed or enrolled in the appropriate coursework. This course may be taken once and repeated for a maximum of 16 units.

For more information you can contact the instructor at ghalvorson@rio-hondo.edu

1378	TBA	Times to be arranged	1 unit	HALVORSON G	Rm TBA
1379	TBA	Times to be arranged	2 unit	HALVORSON G	Rm TBA
1380	TBA	Times to be arranged	3 unit	HALVORSON G	Rm TBA
1381	TBA	Times to be arranged	4 unit	HALVORSON G	Rm TBA

**EGNT 265**  
**PRESSURE PIPING DESIGN**  
 3 Units/Advisory: DRAF 150 or DRAF 170 or industry experience in CAD applications  
 READ 023 or appropriate assessment and ENGL 035 or ESL 198 or appropriate assessment

**THIS COURSE WILL NOT BE OFFERED AGAIN UNTIL FALL 2010**  
 This course is for those students with CAD experience who are interested in the career field of pressure piping design engineering. This course presents the preparation of engineering detail drawings of piping systems for commercial, utilities and industrial plants. Included is information and work dealing with the location, installation, operation, and maintenance of pumps, steam turbines, compressors, tanks, heaters, coolers, cooling towers, condenser, reactors, boilers, chillers, heat exchangers and special equipment.

Students are required to concurrently enroll in Section 5081.  
 ★ 0413 TTh 7:05-10:15 PM VELARDE R Rm S306

## Drafting 280

### Advanced Microstation and 3D Applications

**Section #1303 Saturday 8:00 AM - 2:40 PM**

The course is an introduction to 3D Architectural and Mechanical Solids Modeling using Microstation V8i and Bentley Architecture. Students will create 3D virtual models for design analysis, visualization and creation of fabrication and construction drawing.

This course features the new BIM/CAD (Building Information Modeling) technology. It can benefit all design, manufacturing, and construction industry students and professionals who desire to enhance their employability and project outcomes.



## Landscape Design & Maintenance

**LAND 095 Section #0937 F 9:00 AM - 1:15 PM**

This course focuses on providing support to the local landowner and landscape designer to learn how to design using water conserving practices, drawing design plans, identifying plants and basic irrigation methods. The classes are taught by landscape architects and are the first offerings of courses in a soon to be new degree & certificate.

★ = Evening

📡 = Online/Hybrid Classes

SEC. #	DAY(S)	TIME	INSTRUCTOR	ROOM
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**DRAFTING, CONTINUED**

**CAD/DRAFTING INDIVIDUALIZED STUDY PROJECTS**

Tutorial assistance in basic skills for Drafting, Architecture, Civil, CAD & GIS Students using open lab time.  
5081 open entry/open exit

SUNYOGH J	Rm S304, S305, S306, S307& S310
HALVORSON G	
ROBERTS W	
GONZALEZ E	
DAWSON D	

**LAND 095  
INTRODUCTION TO LANDSCAPE DESIGN & MAINTENANCE**

3 Units/Advisory: READ 023 or appropriate assessment and ENGL 030 or ESL 197 or appropriate assessment DRAF 105.

This introductory landscape design course is designed for the non-scientist and specifically for amateur garden enthusiasts interested in learning landscape design from a professional landscape architect. The class is a comprehensive overview of general landscape design including topics of landscape design, hands-on design lessons and plant identification. There will be a field trip to a local nurseries or demonstration garden.

0937	F	9:00 am-1:15 pm	ROBERTS W	Rm S305
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**LAND 102  
INTRODUCTION TO LANDSCAPE ARCHITECTURE & DESIGN**

4 Units/Prerequisite: DRAF 101  
Advisory: READ 023 or appropriate assessment and ENGL 030 or ESL 197 or appropriate assessment DRAF 105.

This introductory course is for students interested in the field of Landscape Architecture or Landscape Design. Fundamental principles and concepts essential to landscape design development will be introduced through lectures, readings, discussions, field trips, and assignments. Natural and human determinants that shape the landscape will be explored in addition to the study of the theory, history and role of the landscape architecture profession in environmental design.

0938	MW	7:55-11:05 AM	STAFF	Rm S305
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**ECONOMICS**

DIVISION OF SOCIAL SCIENCE, HUMANITIES & PHILOSOPHY

**ECON 101  
PRINCIPLES OF MACROECONOMICS**

3 Units/Advisory: ENGL 035 or ESL 198 or appropriate assessment, READ 023 or appropriate assessment and MATH 050 or appropriate assessment.  
Transfers to: UC, CSU

This is an introductory course in which students learn to describe and analyze the performance and policies of national economic systems, with an emphasis on the US economy. It is intended for Economics or Business majors as well as to satisfy General Education requirements. Topics include production possibilities and tradeoffs; comparative economic systems; functions of government; national income and employment; business cycles; money and banking; monetary and fiscal policy; comparative advantage and trade policy; economic growth and stability; and income distribution and poverty.

1202	MW	8:05-9:30 AM	ELBAZ O	Rm A225
1243	TTh	8:05-9:30 AM	MIKALSON B	Rm A225
1201	MW	9:40-11:05 AM	ELBAZ O	Rm A225
1204	TTh	9:40-11:05 AM	MIKALSON B	Rm A225
★ 1273	M	7:00-10:10 PM	CUMMINS M	Rm A225
★ 0295	W	7:00-10:10 PM	MIKALSON B	Rm A225

ONLINE COURSE ACCESS: ONLINE.RIOHONDO.EDU/LOGIN

8100 24HRS/7DAYS JAVANMARD M INTERNET

Important information-pp 13-14. Instructor email: mjavanmard@riohondo.edu  
THE FOLLOWING SECTION MEETS OCTOBER 5-DECEMBER 12, 2009

8017	24HRS/7DAYS	JAVANMARD M	INTERNET
8215	24HRS/7DAYS	JAVANMARD M	INTERNET

Important information-pp 13-14. Instructor email: mjavanmard@riohondo.edu

SEC. #	DAY(S)	TIME	INSTRUCTOR	ROOM
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**HONORS**

**ECON 101H  
PRINCIPLES OF MACROECONOMICS**

3 Units/Prerequisite: ENGL 101 with a "C" or better. Advisory: MATH 070 or appropriate assessment and READ 023 or appropriate assessment.

Transfers to: UC, CSU

This is an introductory course in which students learn to describe and analyze the performance and policies of national economic systems, with an emphasis on the US economy. It is intended for Economics or Business majors as well as to satisfy General Education requirements. Topics include production possibilities and tradeoffs; comparative economic systems; functions of government; national income and employment; business cycles; money and banking; monetary and fiscal policy; comparative advantage and trade policy; economic growth and stability; and income distribution and poverty. See page 5.

★ 1213	W	7:00-10:10 PM	MIKALSON B	Rm A225
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**ECON 102  
PRINCIPLES OF MICROECONOMICS**

3 Units/Advisory: ENGL 035 or ESL 198 or appropriate assessment, READ 023 or appropriate assessment and MATH 050 or appropriate assessment.

Transfers to: UC, CSU

This is an introductory course in economic analysis of markets, intended for Economics and Business majors as well as to satisfy General Education requirements. It may be taken prior to Econ 101. Students will learn how markets work to coordinate consumers and producers in an economy, various causes of the failure of free markets and policies used to correct or regulate market behavior.

1811	TTh	11:15 AM-12:40 PM	MIKALSON B	Rm A225
0810	MW	12:50-2:15 PM	PREWITT D	Rm A225
★ 0265	T	7:00-10:10 PM	MIKALSON B	Rm A225

HYBRID COURSE ACCESS: ONLINE.RIOHONDO.EDU/LOGIN

8519 W 11:15 AM-12:40 PM PREWITT D Rm A225

Important information-see pg. 14. Instructor email: mjavanmard@riohondo.edu

ONLINE COURSE ACCESS: ONLINE.RIOHONDO.EDU/LOGIN

8095 24HRS/7DAYS MIKALSON B INTERNET

Important information-pp 13-14. Instructor email: bmikalsen@riohondo.edu

THE FOLLOWING SECTION MEETS OCTOBER 5-DECEMBER 12, 2009

8023 24HRS/7DAYS MIKALSON B INTERNET

Important information-pp 13-14. Instructor email: bmikalsen@riohondo.edu

**EDUCATION**

DIVISION OF SOCIAL SCIENCE, HUMANITIES & PHILOSOPHY

**ED 110  
INTRODUCTION TO TEACHING**

3 Units/Advisory: ENGL 035 or ESL 198, READ 023 or appropriate assessment.

Transfers to: CSU, UC.

This course is designed to introduce students to the profession of teaching through lecture and observation of K-12 classrooms and public schools. The major aspects of the teaching profession will be examined, the diversity of the public school system will be discussed, and students will gain experience in all three levels of the K-12 system. This course is intended for students considering a career in teaching. Two hours of offsite classroom observations per week to be arranged.

1203	TTh	9:40-11:05 AM	LYNCH K	Rm A208
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**Important Notice About Grades!**

Students can access semester grades in the following way:

- Touchtone telephone system
- College website to access grades online at:  
**RIOWEB.riohondo.edu**