**Master Syllabus**

**Course:** ENGT 102 – Blueprint Reading **Course Credits: 3 – 0 - 3**

**Course Prerequisite:** None  **ICCB Code: PCS #12 151301**

**Mode of Delivery:** Traditional, Hybrid **IAI #:** N/A

**Developer:** William Mertell (217) 875-7211, ext. 435 **Dev/Rev Date: July 2014**

**Projected Date of Initial Offering:**

**(On Working Syllabus, include Course, Section, Semester, and Instructor Information.)**

**Course Description:**

* ENGT 102 – Blueprint Reading

…provides experiences in reading industrial prints and some sketching of orthographic and pictorial drawings. Topics covered include the interpretation of detail and assembly drawings; auxiliary views; sections, dimensions, and tolerances; lists of materials; notes; drawing change systems; threads; callouts for machine processes; positional and form tolerances; gears; splines; CNC documents; and sheet metal, welding, and control diagrams. Students will produce engineering drawings using manual drafting tools and computer-aided design systems.

Offered in Fall and Spring.

This course has been modified in content and delivery to meet the critical objectives for the INAM grant program.

Applicable toward graduation where program structure permits:  
Certificate or Degree - All Certificates, AAS, ALS  
Group Requirement - Not Applicable  
Area of Concentration - Not Applicable

**Course Objectives/Outcomes:**

List what the students will be able to perform or demonstrate at the end of the course and connect where applicable to cross-disciplinary outcomes.

|  |  |
| --- | --- |
| **Course Outcomes:** | **RCC Cross-Disciplinary Outcomes:** |
| Interpret and explain the “alphabet of lines” | Communicate effectively  Manage technology and evaluate information in various research and applied contexts. |
| Communicate effectively using the proper terminology and nomenclature. | Communicate effectively  Think critically and creatively  Manage technology and evaluate information in various research and applied contexts. |
| Measure accurately using proper technologies. | Think critically and creatively  Manage technology and evaluate information in various research and applied contexts. |
| Design geometric, multiview, and dimensional drawings. | Communicate effectively  Think critically and creatively  Manage technology and evaluate information in various research and applied contexts. |
|  |  |
| Design and integrate welding joints, tolerances and surface finish symbology. | Communicate effectively  Think critically and creatively  Manage technology and evaluate information in various research and applied contexts. |
| Design a project blueprint from defined instructions. | Think critically and creatively  Manage technology and evaluate information in various research and applied contexts.  Act professionally and responsibly |
| Interpret both basic and advanced welding fabrications blueprints including: welding symbols, weld testing symbols, structural steel shapes, and welding specifications. | Communicate effectively  Think critically and creatively  Manage technology and evaluate information in various research and applied contexts. |

**Cross-Disciplinary Outcomes**

1. *The degree-seeking student will be able to communicate effectively (read, write, speak and listen).*
2. *The degree-seeking student will think critically and creatively.*
3. *The degree-seeking student will manage technology and evaluate information in various research and applied contexts.*
4. *The degree-seeking student will act professionally and responsibly.*

**Topical Outline**

|  |  |
| --- | --- |
| **Week** | **Topic** |
| 1 | Introduction to Drafting and Blueprint Reading |
| 2 | Introduction to the “Alphabet of Lines” |
| 3 | Geometric Terms and Construction |
| 4 | Multiview Drawings |
| 5 | Drawing Sectional Views |
| 6 | Integrating Auxiliary Views |
| 7 | Screw Thread Representation |
| 8 | Measurement and Dimensioning |
| 9 | Tolerancing |
| 10 | Machining Specifications and Drawing Notes |
| 11 | Surface Texture Symbols |
| 12 | Geometric Dimensioning and Tolerancing |
| 13 | Drawing Revision Systems |
| 14 | Industrial Detail & Assembly Drawings |
| 15 | Precision Sheet Metal and Welding Prints |
| 16 | FINAL EXAM |

**Methods of Evaluation and Weights:**

Assignments 15%

Reviews 15%

Quizzes 10%

Unit Exams 25%

Final Exam 25%

Participation 10%

**Grading Scale:**

100 – 90 = A

89 – 80 = B

79 – 70 = C

69 – 60 = D

59 – below = F

**Texts:**

*Print Reading For Industry* – 2011 Edition  
AUTHOR – R. Brown, W. Brown  
PUBLISHER – Goodheart-Wilcox  
ISBN: 978-1-60525-308-4

**Classroom Attendance Policy:**

The following attendance procedures are implemented throughout the semester.

* Students will be dropped for three consecutive misses or 5 total absences in one semester.
* Notice of absence is expected. Call or email notification is preferred.
* Attendance will be taken at the beginning of each scheduled class session (during the first 10 minutes).
* Tardiness may be counted as an absence.
* Students earning full point value in class attendance at the completion of the semester will earn exemption status from the final exam.
* A 10% deduction will be recorded for each absence but score will be reinstated if class time is substituted.
* Special circumstances will be granted as deemed necessary with instructor approval.

Regular attendance is necessary for satisfactory completion of a course. An instructor may drop a student who has failed to attend the first two class sessions. At midterm the College will drop any student who has failed to meet the attendance standard or attain sufficient progress as certified by the instructor. During the allotted timeframe as determined by the President of the College or the President’s designee, an instructor may drop a student who has failed to meet attendance standards or attain sufficient progress in the course but is not required to do so. This report will be used to determine certain financial aid award.

**Online Attendance Policy**

Online students are subject to the attendance policy for online courses as stated in the Catalog. Student attendance in an online course is defined as active participation in the course. Participation in this course may take the form of posting to discussion forums, submitting assignments to drop boxes, or completing quizzes or exams. Students need to participate each week in some way to satisfy the attendance requirement. ***(Note: logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement.)***

A student *can* be dropped seven calendar days after the start of the semester for the following reasons:

1. Failure to meet the attendance requirement (as defined above) during the first week of class, ***OR***
2. Failure to start the mandatory Canvas orientation during the first week of class, if not previously completed, ***OR***
3. Failure to contact the instructor during the first week of class regarding an inability to complete either #1 or # 2 above.

In addition, any student failing to meet the attendance requirement for more than two consecutive weeks may be sent a “stopped attending” letter. At midterm the College will administratively drop any student who has failed to meet the attendance requirement as set forth by the instructor. After midterm, students who stop participating in a class without officially dropping a class and who are not administratively dropped may receive a grade of “F” for the course. This may also have an impact on certain financial aid awards. It is ultimately the responsibility of the student to drop a course.

Any student who can’t meet the attendance requirements for a given week should contact his or her instructor immediately.

**Classroom Procedures: (not included in Master Syllabus)**

**Human Relations Policy:**

This course incorporates concepts regarding all races, creeds, sexes, and ethnic groupings and the belief that they must learn to live together.

**RCC Core Values:**

* **Commitment** - We are dedicated to meeting the needs of the communities we serve.
* **Respect** - We recognize the expertise of all members of the College community and encourage individual contributions.
* **Excellence** - We strive to develop and pursue higher standards.
* **Accountability** - We assume and demonstrate responsibility for our actions.
* **Diversity/Inclusiveness** - We believe that our similarities and differences are opportunities for establishing a common bond and strengthening the College.

**RCC Academic Integrity Policy:**

*All students are expected to maintain academic integrity in their academic work and honesty in all dealings with the College. A student who cheats, plagiarizes, or furnishes false, misleading information to the College is subject to disciplinary action up to and including failure of a class or suspension/expulsion from the College.*

**Safety & Labs/Clinicals**

### Core Abilities/SCANS:

* Identifies, organizes, plans, and allocates resourcess
* Acquires and evaluates information
* Interprets and communicates information
* Exercises leadership
* Applies technology to task
* Understands complex inter-relationships in systems
* Works well with others

**National/ State/ Local Skill Standards:**

* + - * If applicable, list appropriate Skill Standards.

**Learning Feedback System**

Students now have the opportunity to evaluate courses each semester through the Learning Feedback System available online. Faculty will announce when the Learning Feedback System is available for the course and explain the process for accessing the LFS. Some faculty may also use the LFS at midterm. Students are notified by e-mail when the LFS is available.

**my.richland.edu**

Richland uses my.richland.edu as the information portal for students. Users can access a wide variety of web-based services, including online registration, academic information, Richland e-mail, the Canvas Learning Management System, and the Library research databases. Academic information available includes current semester schedule, unofficial transcripts, grade point average projection, financial aid information review, online payment services, and degree auditing to determine degree completion progress. Student grades are posted only on the my.Richland.edu website. Grades will not be mailed to students unless requested.

Students with a “hold” placed on their records due to a financial obligation to the College or other unmet requirement will be unable to view academic records.

**Support Services**

**College Telephone Number: 217-875-7211**

*Faculty may add more information as applicable to specific courses.*

**Academic Success Center**

**Accommodations,** Room C148, Ext. 379

Responsibilities: Services for students with documented disabilities, including advisement, counseling, adaptive equipment and materials, instructional aids, tutors, note takers, interpreters, and testing accommodations

**Testing,** Room S116, Ext. 238

Responsibilities: Placement testing in English, mathematics, reading, health courses; make-up testing as arranged by instructor; testing for online courses

**Tutoring,** Room S118, Ext. 419

Responsibilities: Tutoring on walk-in or appointment basis, study groups, computers

**Student Success Center**

**Advising and Registration**, Room C129, ext 267

Responsibilities: Advisement, registration, general student services

**Career Services**, Room C129, Ext. 307, 205

Responsibilities: Career assessments, job placement information and transfer information and assistance

**Counseling Services**, Room C129, Ext. 252

Responsibilities: Academic advising, personal counseling

**Financial Aid and Veteran Affairs,** Room N136, Ext 274

Responsibilities: federal and state aid, veteran and entitlement benefits, scholarships

**Student Records**, Room C129, Ext. 257

Responsibilities: grades, transcripts, graduation

**Transfer Center**, Room C129, Ext. 222

Responsibilities: Transfer information, college visits, and campus representatives on campus

**Veteran Services**, Room C129, Ext. 307, 205

Responsibilities: assist veterans with comprehensive college services

**Learning Resources Center (Library)**, Room C152, Ext. 303

Responsibilities: Manages print and electronic resources for students, faculty, and the broader College community. Offers research assistance, information literacy sessions, course reserves, and individual and group study areas.

**Online Learning Support**, [ochelp@richland.edu](mailto:ochelp@richland.edu) Room W143, Ext. 376

Responsibilities: Assists students with navigation in an online course, access and navigation in the student information system, and technical questions regarding personal computer system requirements and troubleshooting. Assistance is also given to students in hybrid and technology enhanced courses. Staff provide technical support through e-mail, telephone, and walk-in service.

The best way for students to contact the Online Help Desk:

From Canvas – click on the “Help” link in the upper right corner and choose Report a Problem.

Non-Canvas related issues: e-mail [ochelp@richland.edu](mailto:ochelp@richland.edu). The Request goes directly to the Help Desk e-mail and is checked regularly.

**Open Computer Labs**

Students may use computers in the Learning Resources Center and in the Academic Success Center.

**Perkins Program:**

The Perkins program is a federally-funded program designed to assist students in helping them become academically successful. For a student to be eligible for the Perkins Program they must be enrolled in an occupational program.

If a student is enrolled in an occupational area, they are automatically enrolled in the Perkins Program. Students may call the Perkins Program Coordinator for more information 875-7211, Ext. 223 or stop by E185.

All students should apply for financial aid (forms can be obtained from Student Development and Services on the first floor). Funding for the Carl Perkins Program is based on the number of students requesting financial aid.

**Student Engagement**

**Student Success**, Room C131, Ext. 314

Responsibilities: Passport workshops, academic success strategies and workshops, Success.net, (assist with early identification of academic need), and work with probation and suspension students.

**Student Support Services/TRiO Program,** Room C143, Ext. 440.

Responsibilities: Program designed for college students identified as first-generation, low-income, and/or with disabilities, offering academic and personal support.

**INAM Grant**

This workforce solution was funded by a grant awarded by the U.S. Department of Labor’s Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timelines, usefulness, adequacy, continued availability, or ownership. This solution is copyrighted by the institution that created it. Internal use, by an organization and/or personal use by an individual for  non-commercial purposes, is permissible. All other uses require the prior authorization of the copyright holder.