



## COURSE OUTLINE: ELN210 - CAD/TOOLS

Prepared: Jon Pasiak

Approved: Corey Meunier, Chair, Technology and Skilled Trades

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| <b>Course Code: Title</b>                                                                                                                                                  | ELN210: COMPUTER AIDED DESIGN                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Program Number: Name</b>                                                                                                                                                | 4026: ELECTRICAL TN-PROC<br>4029: ELECTRICAL TY-PROCES<br>4127: ELECTRICAL TN-TRADES                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Department:</b>                                                                                                                                                         | ELECT./INSTRUMENTATION PS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Semesters/Terms:</b>                                                                                                                                                    | 21W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Course Description:</b>                                                                                                                                                 | This course is designed to develop skills in the use of the AutoCAD, to generate and modify AutoCAD drawings, electrical/electronic schematics and diagrams. This course will prepare the student for the automated drafting environment.                                                                                                                                                                                                                                                                 |
| <b>Total Credits:</b>                                                                                                                                                      | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Hours/Week:</b>                                                                                                                                                         | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Total Hours:</b>                                                                                                                                                        | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Prerequisites:</b>                                                                                                                                                      | ELN100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Corequisites:</b>                                                                                                                                                       | There are no co-requisites for this course.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Substitutes:</b>                                                                                                                                                        | ELR508                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>This course is a pre-requisite for:</b>                                                                                                                                 | ELR216                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Vocational Learning Outcomes (VLO's) addressed in this course:</b><br><br>Please refer to program web page for a complete listing of program outcomes where applicable. | <b>4026 - ELECTRICAL TN-PROC</b><br>VLO 1 Interpret and produce electrical and electronics drawings including other related documents and graphics.<br><br><b>4029 - ELECTRICAL TY-PROCES</b><br>VLO 1 Analyze, interpret, and produce electrical and electronics drawings, technical reports including other related documents and graphics.<br><br><b>4127 - ELECTRICAL TN-TRADES</b><br>VLO 1 Interpret and produce electrical and electronic drawings including other related documents and graphics. |
| <b>Essential Employability Skills (EES) addressed in this course:</b>                                                                                                      | EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.<br>EES 6 Locate, select, organize, and document information using appropriate technology and information systems.<br>EES 10 Manage the use of time and other resources to complete projects.                                                                                                                                                    |

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2020-2021 academic year.



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| <b>Course Evaluation:</b>                                                                                                           | <p>Passing Grade: 50%, D</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |                                          |                                                                                                                                     |                                                                                                                                                                                         |                       |     |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----|
| <b>Other Course Evaluation &amp; Assessment Requirements:</b>                                                                       | <p>Grade<br/>Definition Grade Point Equivalent<br/>A+ 90 - 100% 4.00<br/>A 80 - 89%<br/>B 70 - 79% 3.00<br/>C 60 - 69% 2.00<br/>D 50 - 59% 1.00<br/>F (Fail) 49% and below 0.00</p> <p>CR (Credit) Credit for diploma requirements has been awarded.<br/>S Satisfactory achievement in field /clinical placement or non-graded subject area.<br/>U Unsatisfactory achievement in field/clinical placement or non-graded subject area.<br/>X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.<br/>NR Grade not reported to Registrar's office.<br/>W Student has withdrawn from the course without academic penalty.</p> |                  |                                          |                                                                                                                                     |                                                                                                                                                                                         |                       |     |
| <b>Books and Required Resources:</b>                                                                                                | Instructor handouts / Internet resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |                                          |                                                                                                                                     |                                                                                                                                                                                         |                       |     |
| <b>Course Outcomes and Learning Objectives:</b>                                                                                     | <table border="1"> <thead> <tr> <th>Course Outcome 1</th><th>Learning Objectives for Course Outcome 1</th></tr> </thead> <tbody> <tr> <td>1. Correctly utilize AutoCAD menu and command structure to produce and modify AutoCAD drawings, electrical schematics and diagrams.</td><td>           1.1 Correctly utilize the AutoCAD menus and commands.<br/>           1.2 Produce and modify schematic diagrams and electrical related diagrams with correct and accurate connections and labelling.         </td></tr> </tbody> </table>                                                                                                                                                                                 | Course Outcome 1 | Learning Objectives for Course Outcome 1 | 1. Correctly utilize AutoCAD menu and command structure to produce and modify AutoCAD drawings, electrical schematics and diagrams. | 1.1 Correctly utilize the AutoCAD menus and commands.<br>1.2 Produce and modify schematic diagrams and electrical related diagrams with correct and accurate connections and labelling. |                       |     |
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| <b>Evaluation Process and Grading System:</b>                                                                                       | <table border="1"> <thead> <tr> <th>Evaluation Type</th><th>Evaluation Weight</th></tr> </thead> <tbody> <tr> <td>In Class Work</td><td>25%</td></tr> <tr> <td>Take Home Assignments</td><td>75%</td></tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Evaluation Type  | Evaluation Weight                        | In Class Work                                                                                                                       | 25%                                                                                                                                                                                     | Take Home Assignments | 75% |
| Evaluation Type                                                                                                                     | Evaluation Weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |                                          |                                                                                                                                     |                                                                                                                                                                                         |                       |     |
| In Class Work                                                                                                                       | 25%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |                                          |                                                                                                                                     |                                                                                                                                                                                         |                       |     |
| Take Home Assignments                                                                                                               | 75%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |                                          |                                                                                                                                     |                                                                                                                                                                                         |                       |     |
| <b>Date:</b>                                                                                                                        | September 2, 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |                                          |                                                                                                                                     |                                                                                                                                                                                         |                       |     |
| <b>Addendum:</b>                                                                                                                    | Please refer to the course outline addendum on the Learning Management System for further information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |                                          |                                                                                                                                     |                                                                                                                                                                                         |                       |     |

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