



# Northwest Louisiana Technical College

Charles T. Strong, Regional Director

P. O. Box 835  
814 Constable Street  
Minden, Louisiana 71055-0835  
318-371-3035  
Fax 318-371-3055

October 17, 2013

Dr. Derrick Manns  
LCTCS Director of Educational Programs  
265 South Foster Drive  
Baton Rouge, LA 70806

Dear Dr. Manns

Northwest Louisiana Technical College is requesting your recommendation and LCTCS Board approval of the following academic action:

Northwest Louisiana Technical College

- a. New Technical Diploma in Industrial Manufacturing Technology (CIP: 150613) 45 credit hours and 1350 clock hours with concentrations in Automation and Controls, Millwright, Machine Tool Tech, and Industrial Instrumentation/Electrical Tech at the Natchitoches Campus and Minden Campuses.

Please place this item on the November LCTCS Board Agenda. Thank you for your help.

Regards

*Laurie Morrow*

Laurie D. Morrow  
Chief Academic Officer

Mansfield  
P.O. Box 1236  
943 Oxford Road  
Mansfield, LA 71052  
318-872-2243

Natchitoches  
P.O. Box 657  
6587 Hwy 1 Bypass  
Natchitoches, LA 71457  
318-357-3162

Sabine Valley  
P.O. Box 790  
1255 Fisher Road  
Many, LA 71449  
318-256-4101

Shreveport  
P.O. Box 78527  
2010 North Market Street  
Shreveport, LA 71107  
318-676-7811

## INDUSTRIAL MANUFACTURING TECHNOLOGY (15.0613)

### TECHNICAL DIPLOMA

SPECIAL COMMENTS: This degree consists of a core set of courses and 4 concentration areas from which the student can choose to make up the diploma.

Optional prep course is CPTR 1002 (Computer Literacy & Applications)

### CURRICULUM

| Course No.   | Course Title   | Lecture | Lab | Total Credit Hrs. | Total Clock Hrs. |
|--|--|---------|-----|-------------------|------------------|
| <b>CORE COURSES:</b>   |  |         |     |                   |                  |
| ORNT 1000  | Freshman Seminar   | 1       | 0   | 1                 | 15               |
| IMFG 1100  | Introduction to Manufacturing                                | 3       | 0   | 3                 | 45               |
| IMFG 1120  | Tools and Equipment Used in Manufacturing                    | 1       | 3   | 4                 | 135              |
| IMFG 1200  | Automation   | 1       | 3   | 4                 | 120              |
| IMFG 1300  | Introduction to Fabrication, Process Technology, & Machining | 1       | 3   | 4                 | 135              |
| <b>CTS – Certification for Manufacturing (C4M)</b>                   |  |         |     | <b>16</b>         | <b>450</b>       |
| <b>AUTOMATION AND CONTROLS CONCENTRATION: (Core + the following)</b> |  |         |     |                   |                  |
| IMFG 1140  | Hydraulics Applications                                      | 0       | 3   | 3                 | 90               |
| IMFG 1130  | Pneumatics Applications                                      | 0       | 2   | 2                 | 90               |
| IMFG 1215  | Basic Electronics  | 2       | 2   | 4                 | 90               |
| IMFG 1220  | Digital Electronics  | 1       | 2   | 3                 | 105              |
| <b>CTS- INDUSTRIAL ELECTRONICS TECHNICIAN</b>                        |  |         |     | <b>28</b>         | <b>825</b>       |
| IMFG 1230  | Introduction to Programming                                  | 1       | 2   | 3                 | 105              |
| IMFG 1235  | Motor Controls   | 0       | 3   | 3                 | 105              |
| IMFG 1250  | Advanced PLC Applications                                    | 0       | 3   | 3                 | 105              |
|  | Elective or Co-op  | 0       | 3   | 3                 | 90               |
|  | Elective or Co-op  | 0       | 3   | 3                 | 90               |
| JOBS 2450  | Job Seeking Skills   | 2       | 0   | 2                 | 30               |
| <b>TD – AUTOMATION AND CONTROLS CONCENTRATION</b>                    |  |         |     | <b>45</b>         | <b>1350</b>      |
| <b>MILLWRIGHT CONCENTRATION: (Core + the following)</b>              |  |         |     |                   |                  |
| IMFG 1320  | Millwright I   | 3       | 0   | 3                 | 45               |
| IMFG 1321  | Millwright I Lab   | 0       | 2   | 2                 | 90               |
| IMFG 1420  | Millwright II  | 2       | 0   | 2                 | 60               |
| IMFG 1421  | Millwright II Lab  | 0       | 3   | 3                 | 105              |
| IMFG 1130  | Pneumatics Applications                                      | 0       | 2   | 2                 | 90               |
| <b>CTS – MILLWRIGHT APPRENTICE</b>                                   |  |         |     | <b>28</b>         | <b>840</b>       |
| IMFG 1325  | Pipefitting  | 0       | 2   | 2                 | 60               |
| IMFG 1140  | Hydraulics Applications                                      | 0       | 3   | 3                 | 90               |
| IMFG 1210  | Material Handling  | 1       | 1   | 2                 | 60               |
| IMFG 1315  | Welding  | 0       | 2   | 2                 | 90               |
|  | Elective or Co-op  | 0       | 3   | 3                 | 90               |

|  |  |   |   |    |      |
|--|--|---|---|----|------|
|  | Elective or Co-op  | 0 | 3 | 3  | 90   |
| JOBS 2450  | Job Seeking Skills   | 2 | 0 | 2  | 30   |
|  | TD –MILLWRIGHT CONCENTRATION   |   |   | 45 | 1350 |
| <b>MACHINE TOOL TECHNOLOGY CONCENTRATION: (Core + the following)</b>                     |  |   |   |    |      |
| IMFG 1110  | Shop Mathematics   | 2 | 1 | 3  | 75   |
| IMFG 1310  | Machine Shop I   | 3 | 3 | 6  | 150  |
| IMFG 1340  | Basic Lathe  | 0 | 3 | 3  | 135  |
| IMFG 1440  | Basic Mill   | 0 | 3 | 3  | 135  |
|  | CTS-CNC OPERATOR   |   |   | 31 | 945  |
| IMFG 1410  | Machine Shop II  | 3 | 3 | 6  | 150  |
| IMFG 2710  | CNC  | 1 | 2 | 3  | 135  |
|  | Elective or Co-op  | 0 | 3 | 3  | 90   |
| JOBS 2450  | Job Seeking Skills   | 2 | 0 | 2  | 30   |
|  | TD – MACHINE TOOL TECHNOLOGY CONCENTRATION                           |   |   | 45 | 1350 |
| <b>INDUSTRIAL INSTRUMENTATION &amp; ELECTRICAL CONCENTRATION: (Core + the following)</b> |  |   |   |    |      |
| INST 1110  | Introduction to Industrial Instrumentation                           | 1 | 2 | 3  | 75   |
| IJET 1433  | Wiring/Electrical Blueprint Interpretation                           | 2 | 1 | 3  | 90   |
| IJET 1214  | Basic Electronics  | 1 | 2 | 3  | 90   |
| ELMT 2520  | National Electrical Code   | 0 | 2 | 2  | 90   |
|  | CTS -  |   |   | 27 | 795  |
| IJET 2123  | Understanding Programmable Controllers                               | 1 | 2 | 3  | 90   |
| IMFG 1235  | Motor Controls   | 0 | 3 | 3  | 105  |
| INST 1330  | Pressure and Level Measurement                                       | 1 | 3 | 4  | 150  |
| IJET 1413  | Flow and Final Control   | 2 | 1 | 3  | 90   |
| IJET 2733  | Introduction to Temperature & Analytical Processes                   | 2 | 1 | 3  | 90   |
| JOBS 2450  | Job Seeking Skills   | 2 | 0 | 2  | 30   |
|  | TD –INDUSTRIAL INSTRUMENTATION & ELECTRICAL TECHNICIAN CONCENTRATION |   |   | 45 | 1350 |
|  |  |   |   |    |      |