# MODEL ROUTE

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|---|---|---|---|
| **School:** | School of Engineering Technology and Applied Science - SDRE | **Program Number:** | 3777 |
| **Program Title:** | **Energy Systems Engineering Technology PTY** | **Credential:** | ☐ Certificate   ☐ Graduate Certificate   ☐ Degree<br>☐ Diploma   ☑ Advanced Diploma |
| **Program Delivery Mode:** | ☑ Co-Op   ☐ Online<br>☑ Fast Track   ☐ Hybrid<br>☐ Non Co-op | **Duration :** | ☐ 2 Semesters   ☐ 3 Semesters<br>☐ 4 Semesters   ☑ 6 Semesters<br>☐ 8 Semesters |
| **Campus:** | **Progress Campus** | | |
| **Intake:** | **Fall 2022/Winter 2023** | | |

| Course Code | Course Title | Co/Pre Requisite (Course Code) | Lab Hours | Lecture Hours | Field Placement Hours | Course Delivery ODL=Online BLD=Blended HYB = Hybrid | Total Course Hrs (Lab + Lecture + Field) | Weeks (14) | Total Hours |
|---|---|---|---|---|---|---|---|---|---|
| Semester 3 | | | | | **Fall 2022/Winter 2023** | | | | |
| COMM170/171 | College Communications 2 | | 0 | 3 | | | 3 | 14 | 42 |
| ESET-211 | Digital & Power Electronics | | 2 | 2 | | | 4 | 14 | 56 |
| ESET-212 | Boilers & Auxiliairies | | 2 | 2 | | HYB | 4 | 14 | 56 |
| ESET-213 * | Renewable Energy System | | 2 | 2 | | | 4 | 14 | 56 |
| ESET-217 | Introduction to AutoCad | | 3 | 0 | | | 3 | 14 | 42 |
| ESET-215 | Electronic Devices & Digital Electronics | | 2 | 3 | | | 5 | 14 | 70 |
| ESET-216 | Mechanics and Materials | | 1 | 2 | | ODL | 3 | 14 | 42 |
| | | | | | | | **Total** | | 364 |
| Semester 4 | | | | | **Winter 2023/Summer 2023** | | | | |
| ESET-121 | Fabrication and Installation | ROBO-115 or MT-151 or ESET217 | 3 | 0 | | | 3 | 14 | 42 |
| ESET-221 | Fluid Mechanics & Dynamics | PHYS-100, MATH-170 or FT code | 1 | 3 | | | 4 | 14 | 56 |
| ESET-222 * | Wind and Solar Energy | ESET-213 | 2 | 2 | | | 4 | 14 | 56 |
| ESET-223 | Power Engineering and HVAC | ESET-212 | 2 | 2 | | | 4 | 14 | 56 |
| ESET-225 | Pneumatic/PLC | ESET-211 | 2 | 3 | | | 5 | 14 | 70 |
| GNED-500 | Global Citizenship: From Social Analysis to Social Action◈ | | 0 | 3 | | ODL, BLD, HYB | 3 | 14 | 42 |
| | | | | | | | **Total** | | 322 |
| Break (Summer 2023) | | | | | | | | | |
| Semester 5 | | | | | **Fall 2023** | | | | |
| COOP-721 | Employment Preplacement | Minimum C-grade in COMM-170, minimum 2.5 CGPA ,and completion of all core courses are required for COOP-221 and subsequent PTY work-placements. Department Academic Standards for PTY eligibility also apply | 0 | 1 | | | 1 | 14 | 14 |
| ESET-312 | Power Generation 1 | ESET-223 | 2 | 2 | | | 4 | 14 | 56 |
| ESET-314 | Motion Controls and Network | ESET-225 | 2 | 2 | | | 4 | 14 | 56 |
| ESET-315 | Refrigeration and HVAC | ESET-223 | 2 | 2 | | | 4 | 14 | 56 |
| ESET-316 | Microcontrollers | ESET-211 | 2 | 2 | | | 4 | 14 | 56 |
| ESET-317 | Statistics and Energy Auditing | ESET-222 | 0 | 4 | | ODL | 4 | 14 | 56 |
| ESET318 | Thermodynamics 1 | ESET-221 or MT-318 | 1 | 3 | | HYB | 4 | 14 | 56 |
| | | | | | | | **Total** | | 350 |
| Work Term 1 (Winter 2024) | | | | | | | | | |
| COOP-222 | Co-op Work Placement 1 | | | | | | | | |

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| **Program Title:** | **Energy Systems Engineering Technology PTY** | **Credential:** | ☐ Certificate  ☐ Graduate Certificate  ☐ Degree<br>☐ Diploma  ☑ Advanced Diploma |
| **Program Delivery Mode:** | ☑ Co-Op  ☐ Online<br>☑ Fast Track  ☐ Hybrid<br>☐ Non Co-op | **Duration :** | ☐ 2 Semesters  ☐ 3 Semesters<br>☐ 4 Semesters  ☑ 6 Semesters<br>☐ 8 Semesters |
| **Campus:** | **Progress Campus** | | |
| **Intake:** | **Fall 2022/Winter 2023** | | |

| Course Code | Course Title | Co/Pre Requisite (Course Code) | Lab Hours | Lecture Hours | Field Placement Hours | Course Delivery ODL=Online BLD=Blended HYB = Hybrid | Total Course Hrs (Lab + Lecture + Field) | Weeks (14) | Total Hours |
|---|---|---|---|---|---|---|---|---|---|
| **Work Term 2 (Summer 2024)** | | | | | | | | | |
| COOP-331 | Co-op Work Placement 2 | | | | | | | | |
| | | | | | | | | | |
| **Semester 6** | **Winter 2025** | | | | | | | | |
| ENGL-250 | Report Writing in a Technical Environment | COMM-170 | 0 | 2 | | | 2 | 14 | 28 |
| ESET-322 | Power Generation 2 | ESET-312 | 2 | 2 | | | 4 | 14 | 56 |
| ESET-323 | Distributed Generation and Transmission | ESET-316, ESET-317 | 2 | 2 | | | 4 | 14 | 56 |
| ESET-324 | Geothermal Heat Pumps:  Installation & Design | MT-309 or ESET-318 | 0 | 4 | | ODL | 4 | 14 | 56 |
| ESET-325 | Building Automation Systems | ESET-314 | 2 | 2 | | | 4 | 14 | 56 |
| ESET-326 | Final Project | ESET-312, 315, 317 | 3 | 1 | | | 4 | 14 | 56 |
| ESET-328 | Energy Storage and Management | ESET-315 | 0 | 3 | | | 3 | 14 | 42 |
| | | | | | | | **Total** | | 350 |
| | | | | | | | **Total Program Hours:** | | **1386** |

**C = Co-Requisite; P = Pre-Requisite**

**Notes:**

◈This course may be offered in one of the following modalities (Online, Hybrid or Blended)

* Minimum "C" grade required for technologist graduation.

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| **Signature:** | *Clarence Cheung* | 24-Mar-22 |
| | School Dean/Chair | Revised Date |