This learning and assessment plan outlines how this unit or cluster of units will be delivered and assessed. The schedule of learning topics, assessments and the due date for assessments is included.

|  |  |
| --- | --- |
| Qualification national  code and title: | **UEE30811 Certificate III in Electrotechnology - Electrician** |
| Delivery Period: | **29th Jul to 9th Aug 2019** |

|  |  |
| --- | --- |
| National ID | Name of unit |
| **UEENEEG102A** | **Solve Problems in Low Voltage A.C. Circuits** |
| Delivery Location/s (Campus/Room): | Midland Campus – Room E103 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Student Learning Resources, text, equipment (Required) | | | | |
| Student to supply: PPE (Safety glasses, safety boots), writing materials, calculator & danger tag, AS/NZS 3000:2018& AS/NZS 3008.1.1:2017. | | | | |
| College to supply: UEENEEG102A Resource Book | | | | |
| **Lecturer Name:** | **Phone:** | **Email:** | **Contact times** | **Campus / Room** |
| Geoff Fielding | 93746334 | Geoff.fielding@nmtafe.wa.edu.au | 08.00 – 16.30 | E103, Midland |
|  |  |  |  |  |

# Assessment Summary

| Assessment | Title | Due Date |
| --- | --- | --- |
| Part A – Portfolio | Part A – Single Phase Portfolio |  |
| Part A – Knowledge | Part A – Single Phase Written - Knowledge |  |
| Part A – Skill | Part A – Single Phase Skill - Practical |  |
| Part B – Portfolio | Part B – Three Phase Portfolio |  |
| Part B – Knowledge | Part B – Three Phase Written - Knowledge |  |
| Part B – Skill | Part B – Three Phase Skill - Practical |  |

**You will receive more detailed instructions on each assessment from your lecturer.**

The regular learning requirements to develop the skills and knowledge for this unit are outlined below.

Please refer to your timetable for session times.

Please note: This program is to be used as a guide and may be adapted to meet the needs of students.

You will be notified of changes as they occur.

|  |  |
| --- | --- |
| Your training will include **structured in and out of class activities\*** to be completed for this unit. | |
| *\*Out of class activities* may include(🗹): | |
| **🗹** lectures or tutorials, online tasks and forums  **🗹**  assessments (when integrated with learning)  **🞏**  workplace experience  **🞏**  prescribed reading and research | **🗹** workshop activities  🗹 portfolios  **🞏** prescribed follow-up activities  **🗹** on-the-job profiling (Q Tracker) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **SESSIONS**  **(Hours)** | | | **TOPIC (incl. Elements addressed)** | **RESOURCES**  **to be supplied by student**  **(if required)** | **Structured out of class activities\*** | |
| **Week/ Session** | | **Hrs** |  |  | **Activity** | **Hrs** |
| Week 1 | 1 | 4 | **Trigonometrical functions.**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities. | UEENEEG102A Resource Book  Writing materials & Calculator | Complete worksheets & Q Tracker tasks | 2 |
| 2 | 4 | **AC Wave forms and Phasors.**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  Writing materials & Calculator.  PPE & Danger Tag | Complete worksheets & Q Tracker tasks | 2 |
| Week 2 | 3 | 2 | **CRO operation.**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  PPE & Danger Tag. |  |  |
| 4 | 6 | **Single Element a.c. Circuits.**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  Writing materials & Calculator.  PPE & Danger Tag | Complete worksheets & Q Tracker tasks | 2 |
| Week 3 | 5 | 8 | **Parallel a.c. Circuits.**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  Writing materials & Calculator.  PPE & Danger Tag | Complete worksheets & Q Tracker tasks | 4 |
| Week 4 | 6 | 8 | **Series a.c. Circuits.**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  Writing materials & Calculator.  PPE & Danger Tag | Complete worksheets & Q Tracker tasks | 4 |
| Week 5 | 7 | 4 | **Revision** | UEENEEG102A Resource Book  Writing materials & Calculator. |  |  |
| 8 | 4 | **PART A-Single Phase Written Assessment and Observed Practical Assessment - KS01-EG102A Alternating current power circuits** | **Part A- Single Phase Portfolio Due** | | |
| Week 6 | 9 | 4 | **Power Factor Improvement.**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  Writing materials & Calculator.  PPE & Danger Tag | Complete worksheets & Q Tracker tasks | 2 |
| 10 | 4 | **Three Phase Systems.**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  Writing materials & Calculator.  PPE & Danger Tag |  |  |
| Week 7 | 11 | 8 | **Three Phase Systems.**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  Writing materials & Calculator.  PPE & Danger Tag | Complete worksheets & Q Tracker tasks | 2 |
| Week 8 | 12 | 4 | **Three Phase Systems**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  Writing materials & Calculator.  PPE & Danger Tag |  |  |
| 13 | 4 | **Three Phase Power and Energy Measurement**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  Writing materials & Calculator.  PPE & Danger Tag | Complete worksheets & Q Tracker tasks | 2 |
| Week 9 | 14 | 4 | **Using AS/NZS 3008.1.1 to calculate voltage drop and fault loop impedance**  1. Prepare to solve single & 3 phase low voltage circuit problems  2.Solve single & 3 phase low voltage circuit problems  3. Complete work and document problem solving activities | UEENEEG102A Resource Book  Writing materials & Calculator.  PPE & Danger Tag |  |  |
| 15 | 4 | **PART B-Three Phase Written Assessment and Observed Practical Assessment** | **Part B- Three Phase Portfolio Due** | | |
| **Total Hours** | | **72** |  |  | **Total hours out of class activities** | 20 |
| Total amount of training for this unit: **64 hours of Training** plus 8 hours of Assessment | | | | |  | |

Reasonable Adjustment  
  
We recognise that every student has different learning styles and needs. Please let your lecturer know if there is anything that may have an effect on your learning so they may be able to adjust your plan.

## Results and Appeals

Students may lodge an appeal against an academic result. Appeals must be lodged within four weeks of the date of your statement of academic record being issued. Please contact the Student Experience Team relevant to your portfolio area.

## Absences

If you are unable to attend any class or assessment session you must inform your lecturer as soon as possible.

If you miss an assessment due to illness, please provide your lecturer with a medical certificate in order to negotiate an alternate time for the assessment.

## Plagiarism

Plagiarism is using another person's ideas and words without clearly acknowledging the source of the information. It is not acceptable to submit an assessment that is based on another person's work and claim it as your own. If you submit an assessment that is significantly or recognizably the same or similar in content as submitted by another student (current or past) you may have to submit another assessment.

## Assessment Resit/Resubmission

You may qualify for (1) re-assessment per each assessment event when:

* you have made a reasonable attempt to complete the assessment satisfactorily

AND

* you have submitted the original assessment by the due date

OR

* you have attended and participated in the original assessment event

In the case of a re-assessment opportunity, your lecturer will give you a due date for your second attempt. Should you not achieve a Satisfactory result on the second attempt, you will need to re-enrol (R) in the unit.

In certain situations a re-assessment is not possible; please refer to your assessment instructions.