



A LEADING POLYTECHNIC  
COMMITTED TO STUDENT SUCCESS

# Wireless Systems Engineering Technology

PLAR (Prior Learning Assessment and Recognition)



Candidate Guide

A LEADING POLYTECHNIC COMMITTED TO STUDENT SUCCESS

[www.nait.ca](http://www.nait.ca)



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## Acknowledgements

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The Wireless Systems Engineering Technology program is dedicated to removing barriers and broadening the access to programs at NAIT. NAIT recognizes that knowledge and skills are gained through a variety of processes including life and work experiences that may align with courses within our programs. We are committed to supporting a community in which learners will receive appropriate credit or recognition for prior learning.

<b>Developed by program</b>	Wireless Systems Engineering Technology			
<b>Revised</b>	January 29, 2015			
<b>Web ready – RPL office</b>	January 29, 2015			



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## Why consider a PLAR assessment?

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*Recognition of Prior Learning (RPL)* refers to the combination of flexible ways of evaluating peoples' lifelong learning, both formal and informal against a set of established standards. You can receive academic credit for your relevant lifelong learning. The Wireless Systems Engineering Technology program recognizes prior learning in a number of ways.

We recognize:

- Previous formal learning from a recognized post-secondary institution through transfer of credit and credential recognition.
- Previous non-formal and in-formal learning through a comprehensive prior learning assessment and recognition process (PLAR).

## What are the PLAR options?

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To be eligible for PLAR, a candidate must have first applied and have been accepted to a NAIT credit program (the non-refundable tuition deposit has been paid). Open Studies students are **not** eligible to apply for PLAR. Please note that your PLAR request will be reviewed within 6 weeks of receipt of the PLAR application form, all supporting documents (in English) and verification of fee payment. Submit your PLAR request early!

### Individual Course Challenge

If you have

- Formal learning (credit courses and programs offered at post-secondary institutions) that does not qualify for transfer credit. (transfer credit courses must be completed within the last 2 years)
- Non – formal learning (non credit courses, on the job training, and professional workshops)
- 3 or more years successful work experience in the wireless industry

and have learned the skills and knowledge for **one or more** of the Wireless Systems Engineering Technology courses, you may apply to be assessed for each applicable course. Please note that NAIT has a 50% residency criterion. Applicants can only receive credit for up to 50% of any NAIT credit program (See [NAIT Academic Regulations and Procedures](#) under **Residence Requirements**). Students should enrol in their courses until official confirmation has been received that credit was granted.

### Fees:

- The PLAR evaluation fee is \$150.00 **per** course challenge.
- The course assessment fees must be paid prior to submitting a PLAR request.
- All fees are non-refundable.
- Call NAIT and ask to speak to an Advising Centre Representative at 780-471-6248 or Toll Free at 1-877-333-6248 or [AskNAIT@nait.ca](mailto:AskNAIT@nait.ca)



## How many courses can be challenged through PLAR in the Wireless Systems Engineering Technology program?

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Due to the Wireless Systems Engineering Technology program and its industry partners recently participating in a curriculum review and remapping process, only 03 out of 23 diploma courses have PLAR challenges available.

Implementation of the new curriculum is scheduled for completion in April of 2016. As curriculum is implemented new PLAR challenges will become available. For list of courses available see the Wireless Systems Engineering Technology PLAR Candidate Guide.

Credit is granted per course – partial credit will not be granted. Please note that NAIT has a 50% residency criterion. Applicants can only receive credit for up to 50% of any NAIT credit program. (See [NAIT Academic Regulations and Procedures](#) under **Residence Requirements**)

## Is PLAR available at any time of the year?

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Contact the program at 780.378.5201 or [wset@nait.ca](mailto:wset@nait.ca) for more details. Your request will be reviewed within 6 weeks of receipt of the request form, all supporting documents (in English) and verification of fee payment. Submit your PLAR request early!

**Please Note:** You should enrol in your courses until official confirmation has been received that credit was granted. The program sends an email notification that the application has been processed.

### It is the student's responsibility to:

- Contact the program area with any questions or concerns related to the assessment results. [Appeal process](#) available.
- Notify the program if they have decided to decline a course credit that has been granted. Any changes must be requested before the [add/drop deadline](#).



## Which courses are PLAR ready?

Wireless Systems Engineering Technology Program Profile			
COURSE CODE	COURSE NAME	PLAR Challenge(s) available through program	PLAR Challenge(s) not available
ELTR1141	Introduction to Electric Circuits	✓	
ENGL1159	Effective Communications		*See note below
MATH1118	Technical Math and Statistics		*See note below
PHYS1186	Physical Science		*See note below
WRLS1110	Computing Systems and Technical Documentation		X
WRLS1120	Professional Practice and Safety		X
WRLS1130	Digital Electronics	✓	
ELTR1241	Electronic Circuits and Troubleshooting	✓	
MATH1218	Calculus		*See note below
ELTR1230	Electronic Communication Signal Analysis		X
WRLS1240	Transmission Media		X
WRLS1270	Communication Systems Installation		X
WRLS2310	Fundamentals of Data Networks		X
WRLS2330	Communication Engineering Techniques		X
WRLS2340	Optical Transmission Media		X
WRLS2350	Land Mobile Communication Systems		X
WRLS2360	Broadband Wireless Communication Systems		X
WRLS2370	Applications of Telecommunications		X
WRLS2410	Advanced Data Networks		X
WRLS2450	Industrial Communication Systems		X
WRLS2460	Cellular Communication Systems		X
WRLS2470	Site Planning		X
WRLS2480	Capstone Project		X

Note\* PLAR for service courses will be made available through the service program area.

For assistance contact NAIT and ask to speak to an Advising Centre Representative at 780-471-6248 (Toll Free: 1-877-333-6248) or [askNAIT@nait.ca](mailto:askNAIT@nait.ca)



## Is it easier to challenge a course through PLAR – OR – take the course?

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Neither is easier. By using PLAR you may reduce the repetition of studying information that you already know. The PLAR process allows you to demonstrate knowledge you already have.

PLAR is not an easy way to certification, rather a “different” way to obtain certification. Your personal level of skill and experience will dictate which courses you choose to challenge. The self-audit section found later in this guide will help you to decide if you have a good match of skill and knowledge for a specific course.

## Methods of assessing prior learning

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Assessment methods measure an individual’s learning against course learning outcomes. The assessment methods listed below are the ones most commonly used, but other forms of flexible assessment may be considered. These assessments may include one or a combination of the following assessment tools:

- Product validation and assessment
- Challenge exam
- Standardized tests
- Performance evaluations (including skill demonstrations, role plays, clinical applications, case studies)
- Interviews and oral exams
- Equivalency (evaluations of learning from non-credit training providers)
- Evidence or personal documentation files (providing evidence of learning from life and work experiences and accomplishments)

## If I live out of town, do I have to travel to the NAIT main campus to do PLAR?

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Depending on the mode of assessment, there may be times that you will need to meet with the program on campus. However, we will try to keep travel to a minimum.

## What services or resources can I access if I have a disability?

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Identify any possible needs related to your disability during your PLAR Audit meeting with the program. If you have a disability and want to know more about what services or resources you may be able to access for your PLAR assessment, please contact [Services for Students with Disabilities](#).



## Are there other methods to gain NAIT course credits for prior learning?

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### Transfer Credit and Credential Recognition

Yes, NAIT may grant credit for previous post-secondary training from a recognized institution that is similar in content, objectives, and evaluation standards to NAIT training. Transfer of credit is different from the PLAR process. Transfer credit and credential recognition guidelines may be found at:

<http://www.nait.ca/86612.htm>

**Please Note:** This process should be completed prior to your PLAR challenge. If these credits cannot be used for transfer credit or credential recognition, you may be able to use these accredited courses as part of your evidence for your PLAR challenge.

If more information is required, please contact:

- A NAIT Advising Centre Representative at 780-471-6248 (Toll Free: 1-877-333-6248) or email [AskNAIT@nait.ca](mailto:AskNAIT@nait.ca)
- Program Advanced Credit contact ([www.nait.ca](http://www.nait.ca) under programs & courses and contacts)

## What are the implications of receiving PLAR or Transfer Credit for my full time student status?

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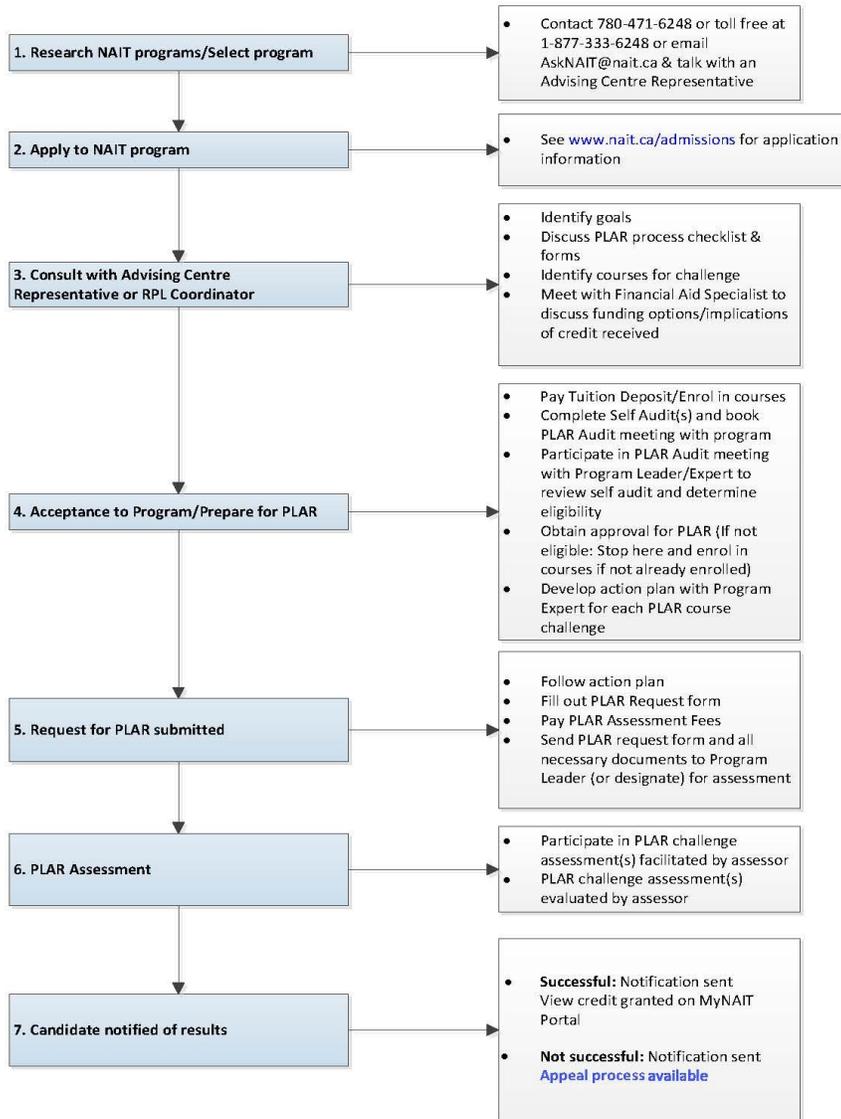
While RPL can mean fewer classes to take and pay for, students should be aware that the definition of full-time status for Financial Aid may be different than NAIT's definition of full-time status. Questions regarding financial assistance should be directed to the [NAIT Financial Aid Office](#). A student who qualifies for advanced credit should review the [NAIT Academic Regulations and Procedures](#), Academic Honors and if necessary, seek further consultation with Advising or Program staff since eligibility for semester honors, Dean's Honor Roll, an honors diploma/certificate or awards may be affected.



# The PLAR Process

## Prior Learning Assessment & Recognition (PLAR) Process

PLAR is the process of identifying, assessing, and recognizing skills and knowledge acquired through non-formal and informal learning for a specific goal such as advanced credit.



Revised January 5, 2015



## Guiding principles for developing a PLAR evidence file

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1. As you begin the PLAR process you will be advised if any evidence is required. This will be identified in your action plan. Check with the PLAR designated contact (see program home page Advanced Credit Contact) for your program **before** you begin to gather evidence.
2. Evidence must be valid and relevant. Your evidence **must match the learning outcomes identified for each course.**
  - It is your responsibility to create, collect and compile relevant evidence.
3. Learning must be current within the last 5 years.
4. The evidence should demonstrate the skills and knowledge from your experiences.
5. The learning must have both a theoretical and practical component.

### Types of evidence

There are three types of evidence used to support your PLAR request:

1. Direct evidence – what you can demonstrate for yourself.
2. Indirect evidence – what others say or observe about you.
3. Self-evidence – what you say about your knowledge and experience.

It is the student's responsibility to provide enough relevant evidence to prove previous formal learning, non-formal learning or evidence of work experience. Ensure that you provide full evidence to your Wireless Systems Engineering Technology Program PLAR assessor so that your prior learning application is assessed appropriately. Well organized, easy to track evidence will also ensure that none of the evidence is missed or assessed incorrectly.

Here are some examples of evidence that you may be requested to submit as part of your evidence file:

- Evidence of Formal Learning – evidence of credit courses that do not qualify for transfer credit
  - course descriptions
  - course outlines/syllabuses
  - outcomes
  - course hours breakdown - theoretical vs. practical (lab) component
  - post-secondary parchments (certificates, diplomas or degrees)
  - IQAS evaluations
  - professional certification
  - other relevant documents
- Evidence of Non-Formal Learning – evidence of non-credit courses, on the job training, and professional workshops
  - description of courses, training or workshops
  - course, training or workshop outlines/syllabuses
  - course, training or workshop outcomes
  - course, training or workshop breakdown of hours - theoretical vs. practical (lab) component
  - proof of successful completion (certificates etc.)
  - other relevant documents



- Evidence of Work Experience – evidence of 3 or more years of successful work experience in the wireless industry
  - written descriptions and analysis of work experience
  - experience (activity) outlines
  - personal resume
  - observations
  - workplace/employer validation
  - work samples
  - photos of environments
  - observations
  - other relevant documents

All documents that are submitted to NAIT may be returned to the student after the final results have been given and the advanced credit appeal deadline of 10 days has passed. A copy of transcripts and certificates may be included in your evidence file, but original transcripts that were submitted at the time of application to NAIT will be available online. Be prepared to show original parchments at the PLAR audit meeting for validation.



## How long will it take to prepare evidence for PLAR?

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Since the requirements are different for each course, and each candidate has different experiences, the amount of time it takes to prepare your evidence will vary.

### Steps to complete a self-audit

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1. Read through the levels of competence as listed below.

<b>Mastery:</b>	I am able to demonstrate the learning outcome well enough to teach it to someone else.
<b>Competent:</b>	I can work independently to apply the learning outcome.
<b>Functional:</b>	I need some assistance in using the outcome.
<b>Learning:</b>	I am developing skills and knowledge for this area.
<b>None:</b>	I have no experience with the outcome.

#### Learning outcomes

For each learning outcome listed, please self-evaluate your competency levels and record in the appropriate column for each self-audit.

2. Take a few minutes and read through the following self-audit for each course you are interested in as a PLAR candidate.
3. Check your level of competence as you read through each of the learning outcomes for each course. The information will help you in your decision to continue with your PLAR application.
4. In order to be successful in a PLAR assessment, your abilities must be at the competent or mastery level for the majority of the learning outcomes (**at least 80%**). Some things to consider when determining your level of competence are:
5.
  - How do I currently use this outcome?
  - What previous training have I had in this outcome: workshops, courses, on-the-job?
  - What personal development or volunteer experience do I have in this area?

Be prepared to explain the reason you chose this level if asked by an assessor.

6. Bring the completed self-audit to a consultation meeting with the program head or faculty member in **Step 4** – of *The PLAR Process* for prior learning assessment. Select [Program Advanced Credit Contact \(PLAR\)](#) to book consultation. Self-audit Guide(s)



**ELTR1141 – Introduction to Electric Circuits** - Wireless communication devices and systems are comprised of electrical and electronic circuits. This course is an introduction to fundamental electrical quantities and characteristics of electrical components and their behaviour in Wireless communication devices. Wireless Systems Engineering Technology students utilize appropriate test equipment to measure, test, and analyze the behaviour of standard electrical components used in DC, AC, and RF applications.

**Credit unit(s):** 3

**Equivalent course(s):** None

**Prerequisite(s):** None

<b>ELTR1141 – Introduction to Electric Circuits</b>		<b>Mastery</b>	<b>Competent</b>	<b>Functional</b>	<b>Learning</b>	<b>None</b>
<b>Mastery:</b>	I am able to demonstrate it well enough to teach it to someone else.					
<b>Competent:</b>	I can work independently to apply the outcome.					
<b>Functional:</b>	I need some assistance in using the outcome.					
<b>Learning:</b>	I am developing skills and knowledge for this area.					
<b>None:</b>	I have no experience with the outcome.					
Explain fundamental characteristics of electronic components.						
Calculate and measure fundamental electrical qualities.						
Use appropriate test equipment to verify behavior of standard analog circuits.						
Analyze behavior of standard electrical components in DC circuits.						
Analyze behavior of standard electrical components in AC circuit.						
Analyze behavior of standard electrical components in RF circuits.						

### PLAR assessment methods

PLAR is a method of assessing if an individual has the skills, knowledge and abilities equivalent to the required outcomes for the course(s) being requested. As the majority of the courses within the Wireless Systems Engineering Technology program have both a theory and practical component, the applicant is required to prove theoretical knowledge and practical hands on skill.

In order to receive recognition of prior learning the applicant must:

1. Provide evidence of one of the following:
  - formal learning that does not qualify for transfer credit
  - non-formal learning
  - work experience.
2. Successfully obtain a **minimum** letter grade of D or Percentage of 50% on a Written Challenge Exam – assessment of theoretical knowledge
3. Successfully obtain a **minimum** letter grade of D or Percentage of 50% on a Practical Demonstration – assessment of practical hands on skills



**WRLS1130 - Digital Electronics** - Analog and digital circuits form the backbone of wireless communication devices and systems. This course introduces the student to numbering systems and simple logic components. The Wireless Systems Engineering Technologist is prepared to design logic circuits to achieve specified behaviour, use appropriate test equipment to verify behaviour, troubleshoot digital components, and to analyze behaviour of complex logic components used in communication systems.

**Credit unit(s):** 3

**Equivalent course(s):**

**Prerequisite(s):**

<b>WRLS1130 – Digital Electronics</b>					
<b>Mastery:</b> I am able to demonstrate it well enough to teach it to someone else.	<b>Mastery</b>	<b>Competent</b>	<b>Functional</b>	<b>Learning</b>	<b>None</b>
<b>Competent:</b> I can work independently to apply the outcome.					
<b>Functional:</b> I need some assistance in using the outcome.					
<b>Learning:</b> I am developing skills and knowledge for this area.					
<b>None:</b> I have no experience with the outcome.					
Perform mathematical operations with numbering systems.					
Analyze behavior of simple logic components.					
Use appropriate test equipment to verify behavior and troubleshoot digital circuits.					
Design logic circuits to achieve specified behavior.					
Analyze behavior of complex logic components as used in communication systems.					

### PLAR assessment methods

PLAR is a method of assessing if an individual has the skills, knowledge and abilities equivalent to the required outcomes for the course(s) being requested. As the majority of the courses within the Wireless Systems Engineering Technology program have both a theory and practical component, the applicant is required to prove theoretical knowledge and practical hands on skill.

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2. Successfully obtain a **minimum** letter grade of D or Percentage of 50% on a Written Challenge Exam – assessment of theoretical knowledge
3. Successfully obtain a **minimum** letter grade of D or Percentage of 50% on a Practical Demonstration – assessment of practical hands on skills



**ELTR1241 - Electronic Circuits and Troubleshooting** - Wireless communication devices and systems are comprised of electrical and electronic circuits which are susceptible to failure. This course introduces the student to semiconductor components and the various instrumentation used in studying communication signals. The course also teaches the Wireless Systems Engineering Technologist to create and implement experimental testing and troubleshooting procedures, and use appropriate test equipment to verify the behavior of semiconductor devices in communication circuits.

**Credit unit(s):** 3

**Equivalent course(s):**

**Prerequisite(s):** ELTR1141, WRLS1120

<b>ELTR1241 – Electronic Circuits and Troubleshooting</b>					
<b>Mastery:</b> I am able to demonstrate it well enough to teach it to someone else.					
<b>Competent:</b> I can work independently to apply the outcome.					
<b>Functional:</b> I need some assistance in using the outcome.					
<b>Learning:</b> I am developing skills and knowledge for this area.					
<b>None:</b> I have no experience with the outcome.					
	<b>Mastery</b>	<b>Competent</b>	<b>Functional</b>	<b>Learning</b>	<b>None</b>
Analyze behavior of diodes in wireless circuits.					
Analyze behavior of transistors in wireless circuits.					
Analyze behavior of operation amplifiers in wireless circuits.					
Use appropriate test equipment to verify behavior of semiconductor devices in a circuit.					
Create and implement a troubleshooting procedure.					

### PLAR assessment methods

PLAR is a method of assessing if an individual has the skills, knowledge and abilities equivalent to the required outcomes for the course(s) being requested. As the majority of the courses within the Wireless Systems Engineering Technology program have both a theory and practical component, the applicant is required to prove theoretical knowledge and practical hands on skill.

In order to receive recognition of prior learning the applicant must:

1. Provide evidence of one of the following:
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2. Successfully obtain a **minimum** letter grade of D or Percentage of 50% on a Written Challenge Exam – assessment of theoretical knowledge
3. Successfully obtain a **minimum** letter grade of D or Percentage of 50% on a Practical Demonstration – assessment of practical hands on skills



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## Appendix A: Title Page

# Wireless Systems Engineering Technology

ABCD 1234 – Course Name

Student name:

Date:



## Appendix B: Employer Validation Letter

### Prior Learning Assessment and Recognition

**Instructions:** The employment validation letter provides a statement of verification of employment in a setting relevant to the course(s) being challenged through PLAR. The employment validation letter must be printed on letterhead of your current employer and signed by the human resources department indicating the length of employment and working environment(s). A letter template has been provided for your use. Please copy the content below and fill-in the fields as directed. The completed letter should be included with your PLAR evidence and submitted to the PLAR assessor for the Wireless Systems Engineering Technology program.

**Letter template** (On employer's business letterhead)

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Date

To Whom It May Concern:

I have reviewed the employment records of \_\_\_\_\_ and  
Name of employee/candidate

I can verify that the above candidate has been employed by \_\_\_\_\_  
Name of employer

for \_\_\_\_\_  
Length of employment

Please contact me at \_\_\_\_\_ or \_\_\_\_\_  
Phone email

with any questions or for additional information.

Sincerely,

\_\_\_\_\_  
Name Job title

\_\_\_\_\_  
Signature



## Appendix C: Evidence Binder Cover Page

**Evidence File for:** \*Insert Course Name\*

**Program Name:** Wireless Systems Engineering Technology

**Student Name:**

**Address:**

**City:**

**Phone:**

**Fax:**

**Email:**

**NAIT Student ID:**

### Type of Evidence

- Formal Learning that does not qualify for transfer credit
- Non-Formal Learning
- Work Experience

**I attest that the enclosed evidence are correct and have been compiled by myself. I attest that I am the person named in this application and the evidence unless otherwise signified.**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_