Computer Systems Technology
PLAR Candidate Guide
Prior Learning Assessment and Recognition (PLAR)
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The Computer Systems Technology program is dedicated to removing barriers and broadening the access to programs at Saskatchewan Polytechnic. We believe that adults acquire knowledge and skills through life and work experience that may align with courses within our programs.

<table>
<thead>
<tr>
<th>Developed by program</th>
<th>February 2009</th>
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</thead>
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<tr>
<td>Revised</td>
<td>September 2009</td>
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<td>December 2014</td>
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Why consider a PLAR assessment?

PLAR refers to the combination of flexible ways of evaluating people’s lifelong learning, both formal and informal against a set of established standards. You can receive academic credit for your relevant lifelong learning. The Computer Systems Technology program recognizes prior learning in a number of ways.

We recognize:

- Previous formal learning from an accredited training institution through transfer of credit.
- Previous informal learning or experiential learning through a comprehensive prior learning and recognition process.

What are the PLAR options?

To be eligible to receive PLAR credit, you must submit the PLAR application form, signed by the appropriate program head, and pay the PLAR fee(s) to Registration Services. If you are not already a Saskatchewan Polytechnic student, you become an enrolled student once your application for PLAR is completed.

Option A: Individual course challenge

If you have recent (within the last five years) successful experience in the computer science field, and have learned the skills and knowledge for one or more of the Computer Systems Technology courses, you may apply to be assessed for each applicable course.

Fees:

- There will be a charge for each individual course assessment.
- For a listing of the specific PLAR fees, check the PLAR database or call Saskatchewan Polytechnic and ask to speak to the PLAR advisor/counsellor assigned to the Computer Systems Technology program at: 1-866-467-4278.

Option B: Block Challenge

Block Challenges are available in this program for two subjects that are covered by an introductory course followed by an advanced course. The subjects are (1) Java programming and (2) systems project development. If you successfully complete the advanced course level challenge for either subject, you will receive credit for both the introductory and advanced course. If unsuccessful, you may re-apply and pay another PLAR fee to challenge the introductory course only, but you cannot re-challenge the advanced course. Please consult with the Computer Systems Technology program head when considering a block challenge.

1. **Java programming block challenge eligibility**: If you have recent (within the last five years) successful experience in the Java programming language where you have used advanced Java concepts you may apply to be assessed for a block challenge of COSC 180 Introduction to Programming and COSC 190 Intermediate Programming.

2. **Systems project development block challenge eligibility**: If you have recent (within the last five years) successful experience in systems project development, you may be assessed for a block challenge of COSA 195 Systems Project and CPMG 195 Systems Project Management.
Fees:
- There will be a charge for each block assessment.
- For a listing of the specific PLAR fees, check the PLAR database or call Saskatchewan Polytechnic and ask to speak to the PLAR advisor/counsellor assigned to the Computer Systems Technology program at: 1-866-467-4278.

How many courses can be challenged through PLAR in the Computer Systems Technology program?

Currently we have 18 out of 38 certificate courses with PLAR challenges available. There is no limit. You may challenge as many of these courses as you are able to prove prior skills and knowledge through assessment.
### Which courses are PLAR-ready?

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE NAME</th>
<th>PLAR Challenge(s) available through program</th>
<th>PLAR Challenge(s) not available</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td></td>
<td></td>
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<tr>
<td>ADMN 220</td>
<td>Organizational Behaviour</td>
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<tr>
<td>BCOM 120</td>
<td>Business Communications 1</td>
<td>✕*see note</td>
<td></td>
</tr>
<tr>
<td>COOS 181</td>
<td>Operating Systems Fundamentals</td>
<td>✕</td>
<td></td>
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<tr>
<td>CNET 184</td>
<td>Data Communication and Networks 1</td>
<td>✕</td>
<td></td>
</tr>
<tr>
<td>COAP 173</td>
<td>Data and Document Management</td>
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<td>CWEB 180</td>
<td>Web Site Development</td>
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<td></td>
</tr>
<tr>
<td>COSC 180</td>
<td>Introduction to Programming</td>
<td>✕</td>
<td></td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
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<td></td>
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<tr>
<td>TCOM 190</td>
<td>Technical Communications</td>
<td>✕*see note</td>
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<tr>
<td>COHS 190</td>
<td>Hardware</td>
<td>✕</td>
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<tr>
<td>COSA 190</td>
<td>System Analysis and Design</td>
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<td>CDBM 190</td>
<td>Database Management</td>
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<td>CWEB 190</td>
<td>Internet Programming/Web Applications 1</td>
<td>✕</td>
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<tr>
<td>COOS 190</td>
<td>Network Administration 1</td>
<td>✕</td>
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<tr>
<td>COSC 190</td>
<td>Intermediate Programming</td>
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<td><strong>Semester 3</strong></td>
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<tr>
<td>CPMG 195</td>
<td>Systems Project Management</td>
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<td>COSA 195</td>
<td>Systems Project</td>
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<tr>
<td>CWEB 195</td>
<td>Website Interface Design</td>
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<tr>
<td>COSC 195</td>
<td>Mobile Applications Programming</td>
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<td><strong>Semester 4</strong></td>
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<td>CNET 280</td>
<td>Data Communication and Networks 2</td>
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<td>COHS 280</td>
<td>Service and Support</td>
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<tr>
<td>CPMG 280</td>
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<td>COSA 280</td>
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<td>CDBM 280</td>
<td>Database Management Systems</td>
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<td>CWEB 280</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>COSC 286</td>
<td>Advanced Programming 1</td>
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<tr>
<td>MATH 282</td>
<td>Mathematics of Computation</td>
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<td>SEM 283</td>
<td>Seminar</td>
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**Semester 5**

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<tbody>
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<td>COOS 291</td>
<td>Advanced Operating Systems</td>
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</tr>
<tr>
<td>COOS 293</td>
<td>Systems Administration 2</td>
<td></td>
</tr>
<tr>
<td>COOS 294</td>
<td>Enterprise Server Administration</td>
<td></td>
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<tr>
<td>CPMG 290</td>
<td>IT Development Project Management 2</td>
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<td>COSA 290</td>
<td>IT Development Project 2</td>
<td></td>
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<tr>
<td>COSC 292</td>
<td>Advanced Programming 2</td>
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<td>COSC 295</td>
<td>Advanced Mobile Application Programming</td>
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<td>TCOM 291</td>
<td>Career Path Search</td>
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**Semester 6**

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<td>CSEC 295</td>
<td>Security Topics</td>
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</tr>
<tr>
<td>COET 295</td>
<td>Emerging Technologies</td>
<td></td>
</tr>
<tr>
<td>COOS 295</td>
<td>Systems administration 3</td>
<td></td>
</tr>
</tbody>
</table>

*Note:*

Four courses in the Computer Systems Technology program are delivered by other programs.

ADMN 220 is a Business Certificate program course. The Program Head of the Business program at Saskatoon Campus will sign the PLAR application form and conduct the assessment for this course.

BCOM 120, TCOM 190, and TCOM 291 are Arts and Sciences courses. The Program Head of the Arts and Sciences Communications department at Saskatoon Campus will sign the PLAR application form and conduct the assessment for these courses.

To proceed with PLAR for one or more of these four courses, please contact the Call Centre at 1-866-467-4278 and ask to be transferred to the appropriate program head.

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

PLAR challenges are currently offered anytime except from mid-June until mid-September. If you are an incoming student for the next fall program intake, be sure to initiate PLAR for first semester courses in the preceeding April or May. You must complete all requirements for a PLAR challenge prior to starting the same course in-class or online.
Is it easier to challenge a course through PLAR or take the course?

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. The self-audit section found later in this guide, reviewed in consultation with the appropriate program head, will help you decide if you have a good match of existing skill and knowledge to successfully challenge a particular course.

Methods of assessing prior learning

Assessment methods can vary widely depending on the nature of each course and the kind of valid evidence you can provide. The evidence requested for each course may include some of the following examples. Please do not begin collecting evidence or preparing for exams/challenges until after you have consulted with the Program Head and registered to PLAR a particular course(s).

Collected evidence:
- samples of your work products
- video or audio recordings
- employment verifications
- employer’s verification of skills and knowledge
- resume and work history
- work-based training or self-guided learning history
- transcripts or certificates for informal or unrecognized training

Demonstrated evidence:
- theory exam
- practical exam
- written assignment
- assigned project
- live demonstration
- structured interview

All documents submitted to Saskatchewan Polytechnic may be returned to the student after the final results have been given and the grade appeal deadline of seven days has passed. Be prepared to show original or certified copies of any transcripts and certificates.

How long will it take to prepare evidence for PLAR?

Since requirements differ for each course, and each candidate has different experiences, the amount of time it takes to prepare your evidence will vary. Ask the PLAR assessor at a consultation meeting for an estimate of the time required to prepare and evaluate evidence.
If I live out of town, do I have to travel to a main campus to do PLAR?

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 if I have a disability & need equity accommodations?

At Saskatchewan Polytechnic, we understand that sometimes services must be provided to students in a variety of ways to achieve the goals of fair representation. Therefore, the range of services provided for Education Equity students is as diverse as the needs of those students. We strive for equity (not uniformity) and provide varied services for students with differing needs. If more information is required, please contact a Saskatchewan Polytechnic counsellor at a campus closest to you or refer to the Saskatchewan Polytechnic website: http://saskpolytech.ca/student-services/support/counselling-services.aspx

Are there other methods to gain Saskatchewan Polytechnic course credits for prior learning?

Transfer Credit

Yes, Saskatchewan Polytechnic will grant credit for previous training that is similar in content, objectives, and evaluation standards to Saskatchewan Polytechnic training. Transfer of credit is different from the PLAR process. Transfer Credit guidelines may be found at: http://saskpolytech.ca/admissions/resources/transfer-credit.aspx

It is the student’s responsibility to check with Registration Services for specific campus procedures on this policy. For specific information and guidelines regarding transfer of credit, contact a Saskatchewan Polytechnic educational counsellor. Counselling Services
Prior Learning Assessment and Recognition process

1. **Consult** with PLAR designated contact
   - call 1-866-goSaskatchewan Polytechnic & speak with education counsellor
   - identify goals
   - discuss process & forms
   - identify courses for challenge

2. Complete **application** to PLAR
   - meet with program head/faculty
   - review the self-audit
   - determine eligibility
   - obtain approval for PLAR

3. Schedule PLAR **audit meeting**

4. Develop an **action plan**
   - consult with program faculty responsible for each PLAR
   - confirm assessment methods & procedures
   • follow an action plan
   • review your skills & knowledge
   • collect, create & compile evidence
   • obtain validations
   • meet timelines

5. Pay assessment **fees**

6. **Prepare** for prior learning assessment

7. **Challenge facilitated** by assessor

8. **Challenge evaluated** by assessor

9. **Results submitted** to Saskatchewan Polytechnic registration services

10. **Candidate notified** of results

**Successful:** see academic transcript

**Not successful:** letter sent
- consult with program head
- register for course
- grade appeal process available
Self-audit guide(s)

The next section of this guide contains self-audit checklists, one for each course in this program that can be challenged through PLAR. Please complete the self-audit checklist for every course that you would consider challenging.

Steps to complete a self-audit

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

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

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 checklist for each course you are interested in as a PLAR candidate.

3. Consider and check off 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. Some things to consider when determining your level of competence are:
   - 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.

5. Print and bring the completed self-audit for each course you want to challenge to a consultation meeting with the program head or faculty member in step 3 – PLAR process of the candidate process for prior learning assessment.
ADMN 220 – Organizational Behaviour

You will study human behaviour in organizations and develop the skills needed to deal with people at work. The course content includes individual behaviour, values, interpersonal relationships and communications, groups and team dynamics, organizational culture, leadership, and change. All topics are dealt with in the context of diverse formal organizations.

Credit unit(s): 4.0
Equivalent course(s): BUS 182

<table>
<thead>
<tr>
<th>ADMN 220 – Organizational Behaviour</th>
<th>Mastery</th>
<th>Competent</th>
<th>Functional</th>
<th>Learning</th>
<th>None</th>
</tr>
</thead>
</table>

1. Describe organizational behaviour.
2. Explain how our perceptions, personalities, and emotions shape our behaviour.
3. Explain how values influence behaviour.
4. Develop effective teambuilding skills.
5. Explain conflict management.
6. Explain how power and organizational politics relate to performance.
7. Describe the appropriate leadership style in a situation using leadership theory.
8. Explain the benefits of, and the challenges faced with group decision making.
10. Explain organizational change and strategies to overcome resistance to change.

PLAR assessment methods

This course is delivered by the Business Certificate program. Please review the general information in this guide and complete the self-audit checklist above. Then, if you are interested in a PLAR challenge for this course, please call the Contact Centre at 1-866-467-4278 and ask for the Program Head of the Business Certificate program at Saskatoon.

Please do not begin preparing for assessment until you have consulted with the program head, completed a separate PLAR Application Form signed by the program head, and paid the fee to PLAR this course.

If you qualify for PLAR for this course, assessment may include one or more of the following methods. Specific instructions will be provided by the program head at a consultation meeting.

1. Evidence file: Instructions and contents will be clarified at a consultation meeting. The following items may be requested:
- Cover page (Appendix A)
- Employment validation letter(s) (Appendix B)
- Resume including references (if available)
- Relevant work based training or workshops—please include any certificates, statements of attendance, agendas or workshop outlines you may have.
- Statement of work value—a 350 word paragraph describing the importance of your work and what gives you satisfaction in your work.

The assessor may contact you for explanation or verification of submitted evidence.

**AND / OR**

2. **Assignment:** The assignment will consist of discussion or scenario based questions (case studies) related to organizational behaviour. This assignment must be completed within the time period determined by the program head and the ADMN 220 assessor. More information on the assignment can be obtained from the ADMN 220 assessor (lead instructor).

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing the following textbook for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.

BCOM 120 – Business Communications 1

You will develop fundamental employability skills by studying the principles of communication. The course content includes developing effective writing skills. You will apply the principles and skills by writing letters and memorandums for routine and negative purposes. You will develop teamwork employability skills and examine ways to apply communication skills to team and cross-cultural situations.

Credit unit(s): 4.0
Equivalent course(s): BCOM 104, TCOM 180

### BCOM 120 – Business Communications 1

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

1. Explain the process of communication.
2. Illustrate the importance of cultural awareness in communications.
3. Discuss communication techniques in interpersonal and workplace situations.
4. Compose effective sentences and paragraphs.
5. Write routine business messages.
6. Write negative business messages.
7. Create formal documents using word processing applications.
8. Explain how to establish and maintain client relationships.
9. Use email features and electronic calendaring to manage business communication.

**PLAR assessment methods**

This course is delivered by the School of Arts and Sciences. Please review the general information in this guide and complete the self-audit checklist above. Then, if you are interested in a PLAR challenge for this course, please call the Contact Centre at 1-866-467-4278 and ask for the Program Head of Arts and Sciences Communication courses at Saskatoon.

Please do not begin preparing for assessment until you have consulted with the program head, completed a separate PLAR Application Form signed by the program head, and paid the fee to PLAR this course.

If you qualify for PLAR, assessment may include one or more of the following methods. Specific instructions will be provided at a consultation meeting with the program head.

1. **Evidence file.** Instructions and contents will be clarified at a consultation meeting. Requested evidence may include one or more of the following:
   - Cover page (see Appendix A)
   - 2 routine business memos
- 2 routine business e-mails
- 2 routine business letters
- 2 negative business letters
- Employment validation letter(s) (see Appendix B)
- Performance checklist to validate communication skills

If your evidence does not sufficiently demonstrate mastery of all learning outcomes for BCOM 120, one or more of the following additional assessment methods will be assigned.

2. Assignments
Memos, emails, and/or letters may be assigned if the evidence file is incomplete.

   **AND/OR**

3. Challenge exam
- Passing mark of 60%
- Learning outcomes 1 – 4 are weighted at 20% of the exam
- Critical learning outcome 6 is weighted at 40% of the exam
- Critical learning outcome 7 is weighted at 40% of the exam

**Resources**
Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing the following textbook for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.

CDBM 190 – Introduction to Database Management

You will receive instruction and practice in using an industry standard database management application program. You will learn how to design queries, forms and reports to manage an underlying database. You will also create functions and procedures to add advanced functionality to the database management system.

Credit unit(s): 5.0
Prerequisite(s): COSC 180 Introduction to Programming

<table>
<thead>
<tr>
<th>CDBM 190 – Introduction to Database Management</th>
<th>Mastery</th>
<th>Competent</th>
<th>Functional</th>
<th>Learning</th>
<th>None</th>
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<tbody>
<tr>
<td><strong>Mastery:</strong> I am able to demonstrate it well enough to teach it to someone else.</td>
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<tr>
<td><strong>Competent:</strong> I can work independently to apply the outcome.</td>
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<tr>
<td><strong>Functional:</strong> I need some assistance in using the outcome.</td>
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<tr>
<td><strong>Learning:</strong> I am developing skills and knowledge for this area.</td>
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<tr>
<td><strong>None:</strong> I have no experience with the outcome.</td>
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</tbody>
</table>

1. Use database tools with an existing database.
   - Describe the function of a database
   - Identify the components of a database
   - Perform program startup and shutdown
   - Describe the Access interface
   - Manage records in datasheet view
   - Use the Help feature

2. Create a database and tables.
   - Create a new database
   - Create a table
   - Populate a table
   - Validate data

3. Apply data relationships to maintain data integrity.
   - Identify the different types of table keys
   - Recognize the different relationship types
   - Implement the different relationship types
   - Differentiate between inner joins, outer joins, and self joins
   - Assess a problem and implement the appropriate join type
   - Discuss referential integrity, cascade updates, and cascade deletes
   - Implement referential integrity, cascade updates, and cascade deletes where appropriate

4. Create queries that select data from tables.
   - Explain the term query as it relates to relational databases
### CDBM 190 – Introduction to Database Management

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- Discuss Structured Query Language (SQL) advantages
- Use the Query By Example window to create simple select queries
- Sort data result sets
- Using SQL, identify the parts of a SELECT query
- Use query comparison operators
- Use query logical operators
- Use SQL operators

5. **Compose queries that manipulate data.**
   - Use the Query By Example window to create advanced queries
   - Distinguish between the terms operators, literals, identifiers, functions, and expressions
   - Utilize relational, mathematical, string, Boolean, date/time and other operators to construct expressions
   - Construct queries using the appropriate functions
   - Construct total queries and determine if the data should be restricted before or after the grouping is applied
   - Demonstrate the creation and execution of a parameter query
   - Apply the four types of action queries
   - Create crosstab queries
   - Solve database questions by applying the appropriate query

6. **Design forms to create a user interface.**
   - Identify form layout and design style guidelines
   - Identify naming conventions
   - Identify properties associated with form elements and controls
   - Create a form using the Form Wizard
   - Create a form using the Form Design Window
   - Create a form based on a table or query
   - Modify the appearance of form elements and controls
   - Distinguish between forms that can and cannot update the underlying database
   - Design bound, unbound and calculated controls
### CDBM 190 – Introduction to Database Management

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7. **Manage data using forms.**

- Associate a query with an unbound combo or list box control
- Create an auto lookup form control
- Create combo or list boxes based on a value list
- Design forms requiring a subform(s)
- Add calculated field(s) to subforms in tabular layout
- Add tab controls to a form
- Add ActiveX controls to a form
- Construct a switchboard using the switchboard manager
- Customize buttons and menus associated with an Access application
- Design a form to solve a specific business problem

8. **Create reports to summarize and consolidate data.**

- Determine steps to create a report
- Describe the parts of a report
- Create a report with no grouping
- Create advanced reports using formatting options
- Create a multilevel grouping report with calculated controls
- Adding presentation quality to reports
- Incorporate subreports
- Create a mail merge using a report

9. **Code procedures and functions for database management systems.**

- Explain the purpose of adding Visual Basic for Applications (VBA) code to enhance Access
- Identify the different types of VBA modules
- Identify the different data types
- Describe the scope and duration of variables
- Describe VBA code window components
- Use the immediate and locals windows to debug code
- Write VBA code using control structures
Prior Learning Assessment and Recognition

CDBM 190 – Introduction to Database Management

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- Write VBA code using decision statements
- Write VBA code using repetition structures
- Create a Form Event Procedure using Database Objects
- Create user-defined procedures and functions

10. Apply advanced functionality to forms and reports.
- Create dynamic queries based on form selections
- Populate form controls based on dynamic queries
- Create a dynamic report based on form selections
- Use advanced queries to alter how data is displayed in form controls
- Call VBA modules based on form events
- Provide graceful error handling

PLAR assessment methods

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Please do **not** begin preparing for assessment until you have consulted with the program head, completed a **PLAR Application Form** signed by the program head, and paid the fee to PLAR this course.

If you qualify for PLAR for this course, assessment may include **one or more** of the following methods. Specific instructions will be provided by the program head at a consultation meeting.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover page (see Appendix A),
   - An employer validation checklist (provided at consultation if required) or a self-guided learning summary, and/or
   - Examples of projects that you have previously created that demonstrate your skills and abilities related to the creation of Access Database Objects.

   The assessor will review the evidence file to determine whether criteria for some critical course outcomes have been met. If those criteria are **not** met, then assessment is ended and PLAR credit will **not** be granted for this course. If those criteria are **met**, then the remaining critical course outcomes will be assessed with a structured interview.
2. **Structured interview**

The structured interview is a set of 7 questions that are based on the submitted sample documents and general Access concepts. Each question is tailored to help the assessor determine if you have met the criteria for a particular critical course outcome.

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
**COHS 190 – Hardware**

You will be introduced to various computer hardware components. Your studies will cover the terminology associated with computer systems and peripherals. Additionally your studies will provide you with the opportunity to install components, connect peripherals, and configure computer systems. Your studies will include operational and safety procedures.

**Credit unit(s):** 4.0  
**Equivalent course(s):** CNET 106, ELTR 287

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1. Discuss operational and safety procedures.
   - Describe safety procedures
   - Explain environmental impacts
   - Explain the purpose of environmental controls

2. Identify computer components.
   - Differentiate between motherboard components
   - Differentiate among various CPU types
   - Compare connection interfaces and explain their purpose
   - Explain differences between printer types
   - Compare and contrast laptop features
   - Compare Memory types and features
   - Identify connector types and associated cables
   - Identify laptop display components

3. Install and configure components and peripherals.
   - Install and configure expansion cards
   - Install and configure storage devices
   - Install a power supply
   - Install and configure laptop components
   - Install and configure various peripheral devices
   - Install and configure printers

4. Recommend computer components.
   - Evaluate appropriate components for a custom configuration
COHS 190 – Hardware

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- Evaluate display devices
- Evaluate vendors and warranties

5. Practice the maintenance of hardware.
- Perform component diagnosis
- Perform power supply diagnosis
- Perform printer maintenance

6. Demonstrate professionalism.
- Demonstrate communication
- Demonstrate professionalism
- Explain fundamentals of dealing with prohibited content/activity

PLAR assessment methods

This course is delivered by the Computer Systems Technology program. PLAR assessment for this course may be under development. Please review the general information in this guide and complete the self-audit checklist above. Then, if you want to know if PLAR is available for this course, please call the Contact Centre at 1-866-467-4278 and ask for the Program Head of the Computer Systems Technology program in Saskatoon.

Please do not begin preparing for assessment until you have consulted with the program head, completed a PLAR Application Form signed by the program head, and paid the fee to PLAR this course.

If this course is ready for a PLAR challenge, specific instructions will be provided by the program head at a consultation meeting. Assessment may include one or more of the following methods:
- Evidence file,
- Structured interview, and/or
- Challenge exam and/or assignments

Resources

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
**COOS 190 – Network Administration 1**

In this course you will install and configure Microsoft Server 2012 for use as a network operating system. You will install and configure basic network services Active Directory, Domain Name Services (DNS), Dynamic Host Configuration Protocol (DHCP) services and virtualization. You will use the Microsoft Official Academic Course (MOAC) curriculum and training materials. On the completing of this course, you will have covered the learning objectives required in the Microsoft 70-410 certification exam. The Computer Systems Technology program does not provide exams for Microsoft certification.

**Credit unit(s):** 4.0

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1. **Install network software.**
   - Plan a network operating system installation
   - Perform a clean installation
   - Perform an upgrade
   - Plan a migration

2. **Configure basic network services.**
   - Manage file services
   - Manage print services
   - Manage remote management

3. **Manage server virtualization.**
   - Install virtualization services
   - Configure virtualization services
   - Manage virtualization storage
   - Manage virtual networks

4. **Manage adapter configurations.**
   - Plan a networking addressing scheme
   - Configure network adapters
   - Manage DHCP services
   - Manage DNS services

5. **Manage active directory.**
   - Install domain controllers
PLAR assessment methods

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- Evidence file,
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- Challenge exam and/or assignments

Resources

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CNET 184 – Data Communications and Networking 1

You will be introduced to computer network standards, models and protocols. You will study the TCP/IP protocol and how computers communicate in small and large networks. You will identify network hardware and examine network troubleshooting. This course follows current Network+ certification curriculum.

Credit unit(s): 5.0
Co-requisite(s): COOS 181 Operating Systems Fundamentals
Equivalent course(s): CAD 191, CNET 180

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1. **Use computer numbering systems.**
   - Represent numbers in binary, octal, and hexadecimal
   - Convert numbers into different base systems
   - Represent negative numbers using 2’s complement notation

2. **Describe computer networks.**
   - Define a network
   - Identify network terms
   - Identify network services

3. **Describe computer networks.**
   - Define a network
   - Identify network terms
   - Identify networking standards organizations
   - Describe the 7 OSI layers and their functions
   - Describe network communication within the OSI model

4. **Describe network communications, topologies and Ethernet standards.**
   - Describe data communication parameters
   - Identify different LAN topologies
   - Describe network access methods
   - Describe Ethernet networks

5. **Describe network protocols.**
   - Identify network protocols
   - Discuss the TCP/IP protocol
   - Discuss TCP/IP addressing
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- Calculate TCP/IP v4 subnet masks

6. Describe network media and devices.
   - Recognize the types of network media
   - Discuss Network Interface Cards (NICs)
   - Discuss structured cabling and cable installation
   - Identify network connectivity devices

7. Explain Network Operating Systems (NOS) and network administration operations.
   - Compare NOS characteristics
   - Discuss NOS features
   - Explain common network administration tasks

8. Describe network troubleshooting.
   - Identify the steps in troubleshooting methodologies
   - Identify and describe the function of common troubleshooting tools

9. Discuss network integrity and availability.
   - Discuss preventative maintenance
   - Discuss power problems and protection
   - Discuss fault tolerance
   - Describe backup and recovery options
   - Discuss disaster recovery

**PLAR assessment methods**

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If you qualify for PLAR for this course, assessment may include (1) an evidence file and (2) either a challenge exam or current and relevant industry certification. Specific instructions will be provided at a consultation meeting with the program head.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover letter (see Appendix A),
   - An employer validation checklist (provided at consultation if required) or a self-guided learning summary, and/or
   - A personal resume, and/or
   - A signed Employment Validation Letter (see Appendix B).

   The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, then assessment is concluded and PLAR credit will not be granted for this course. If those criteria are met, then the remaining critical course outcomes will be assessed with either a challenge exam or verification of current industry certification.

2. **Challenge exam**
   A minimum 60% grade is required for a challenge exam assessing learning outcomes 1 – 9. The exam consists of multiple choice, completion, short answer and calculation questions. The exam is closed book. This means you may not bring in books or notes to assist you during the exam. You will not be allowed to use online help or online tools or any electronic device. The exam will be offered in a paper version.

   **OR**

   **Current relevant certification**
   The following current accreditation will be recognized in place of the challenge exam:
   - COMP TIA Network+ certification

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
COAP 173 – Data and Document Management

You will be introduced to document management systems used to create, retrieve and process unstructured data in a quick and efficient manner. You will learn about the functionality and features of document management. You will be introduced to data management concepts using an industry standard electronic spreadsheet. Your studies will focus on the appropriate application of an electronic spreadsheet with a focus on information management.

Credit unit(s): 5.0

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1. Manage communication tools.
   - Compose effective emails
   - Organize emails for storage and retrieval
   - Use collaborative technology tools
   - Use social media
   - Explain accessibility issues

2. Use SharePoint apps.
   - Describe SharePoint Sites, Wiki Content Pages, and Web Part Pages
   - Add a Wiki Content Page to a SharePoint site
   - Edit a Wiki Content Page
   - Add a Web Part Page to a SharePoint site
   - Add Web Parts to a SharePoint page
   - Describe SharePoint apps
   - Add a standard app to a SharePoint site
   - Add a custom app to a SharePoint site

3. Use SharePoint social media features.
   - Add a blog to a SharePoint site
   - Add a blog entry to a SharePoint blog
   - Add a comment to a SharePoint blog entry
   - Add a discussion board to a SharePoint site
   - Use a SharePoint discussion board
   - Follow a SharePoint site
COAP 173 – Data and Document Management

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- Use a SharePoint Newsfeed
- Add a SharePoint Alert
- Add a mobile view to a SharePoint site

4. Manage document workflow with SharePoint.
   - Add a Library app to a SharePoint site
   - Add a document to a SharePoint library
   - Edit a SharePoint document’s properties
   - Check out a SharePoint document
   - Check in a SharePoint document
   - Configure Content Approval for a SharePoint document
   - Approve a SharePoint document

5. Create a spreadsheet.
   - Navigate in a spreadsheet application
   - Use text, values, functions and formulas
   - Edit a spreadsheet
   - Format a spreadsheet
   - Print a spreadsheet

6. Generate a chart.
   - Identify elements of a chart
   - Select best chart type to solve a business problem
   - Create a chart
   - Modify a chart
   - Format a chart

7. Use integration features.
   - Embed spreadsheet and/or charts in documents
   - Use mail merge
   - Insert internal and external links in documents

8. Manage spreadsheet tables.
### COAP 173 – Data and Document Management

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- Design a table
- Maintain a table
- Sort data
- Filter data
- Summarize a table
- Analyze a table
- Use advanced filters

9. Manage multiple workbooks and worksheets.

- Arrange a workbook
- Use 3-D references to manage data
- Combine data from multiple workbooks
- Create a workbook using a template

### PLAR assessment methods

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1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover page (see Appendix A),
   - An employer validation checklist (provided at consultation if required) or a self-guided learning summary, and/or
   - Work sample documents. These documents are examples of projects that you have previously created. They will demonstrate your skills and abilities regarding the creation of emails, documents, and spreadsheets as well as using collaborative technology tools.

   The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, then assessment is...
concluded and PLAR credit will not be granted for this course. If those criteria are met, then the remaining critical course outcomes will be assessed with a structured interview.

2. **Structured interview**

   The structured interview is a set of nine (9) questions that are based on the submitted sample documents as well as general data and document concepts from the learning outcomes for this course (see self-audit checklist above). Each question addresses criteria for a particular critical course learning outcome.

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
You will be provided with the knowledge and skills required to install and configure Windows based computers/devices in a corporate environment. You will learn how to install and customize Windows operating Systems and Apps and configure local and remote network connectivity and storage. You will also learn how to configure systems for Security and maintain/update and recover Windows based systems. You will also be provided with an overview of desktop management tools available in Linux and Apple operating systems that provide similar functionality to that which was discussed for Windows Based systems.

**Credit unit(s):** 5.0  
**Co-requisite(s):** CNET 184  
**Equivalent Courses(s):** COOS 180

### COOS 181 – Operating Systems Fundamentals

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1. **Install an operating system.**
   - Describe historical evolution of desktop operating systems
   - Choose how to install an operating system
   - Upgrade an existing operating system
   - Install an operating system
   - Perform post deployment tasks

2. **Configure an operating system.**
   - Describe various tools to configure an operating system
   - Implement IP network connectivity
   - Describe wireless network connectivity
   - Manage user accounts

3. **Manage storage and files.**
   - Describe disks and management tools
   - Manage disks, partitions and volumes
   - Maintain disks, partitions and volumes
   - Describe and manage alternative storage systems
   - Configure file permissions
   - Create and manage file shares

4. **Manage hardware.**
   - Describe hardware management features
### COOS 181 – Operating Systems Fundamentals

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- Describe printing components
- Install a printer
- Manage a shared printer

### 5. Manage applications.

- Describe options for application deployment
- Install and manage applications
- Manage browser settings

### 6. Manage security.

- Describe operating system security features
- Describe and manage data encryption
- Configure security settings

### 7. Maintain an operating system.

- Explain methods of updating an operating system
- Monitor an operating system
- Optimize performance
- Describe recovery features
- Perform system recovery

### 8. Troubleshoot an operating system.

- Explain troubleshooting options
- Perform troubleshooting

### 9. Manage a Linux operating system.

- Describe Linux concepts
- Configure the Linux operating system
- Configure a Linux backup
- Utilize the Linux shell

### 10. Manage an Apple operating system.

- Describe the Apple operating system history
- Configure an Apple operating system
PLAR assessment methods

This course is delivered by the Computer Systems Technology program. **Please review the general information in this guide and complete the self-audit checklist above.** Then, if you are interested in a PLAR challenge for this course, please call the Contact Centre at 1-866-467-4278 and ask for the Program Head of the Computer Systems Technology program in Saskatoon.

Please do not begin preparing for assessment until you have consulted with the program head, completed a PLAR Application Form signed by the program head, and paid the fee to PLAR this course.

If you qualify for PLAR for this course, assessment may include one or more of the following methods. Specific instructions will be provided by the program head at a consultation meeting.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover letter (see Appendix A),
   - An employer validation checklist (provided at consultation if required) or a self-guided learning summary, and/or
   - A personal resume, and/or
   - A signed Employment Validation Letter (see Appendix B).

   The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, then assessment is concluded and PLAR credit will not be granted for this course. If those criteria are met, then the remaining critical course outcomes will be assessed with either a challenge exam, or verification of required industry certification.

2. **Challenge exam**

   A minimum 60% grade is required on a challenge exam assessing learning outcomes 1 – 9. The exam consists of two parts. The first part is written and may contain multiple choice, short answer or scenario questions. The second part is practical and performed on a computer in the program’s testing centre.

   The exam is closed book: you may not bring in books or notes to assist you during the exam. You will not be allowed to use online help or online tools or any electronic device other than the computer used for the practical part.

**OR**
Current relevant certification
Verification of all of the following industry accreditations will be required in place of the challenge exam:
- Exam 70-698: Installing and Configuring Windows 10
- CompTIA Linux+ Powered by LPI.

Resources
Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
COSA 190 – Systems Analysis and Design

You will explore and apply the concepts required to analyze, design, create, install and document a systems project. You will be exposed to key project management concepts and practices. You will be introduced to an industry standard modeling graphical language.

Credit unit(s): 4.0
Prerequisite(s): COSC180 Introduction to Programming

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1. Describe the software life cycle.
   - Discuss the nature of software and software projects
   - Discuss the software life cycle stages
   - Discuss the major activities within each stage
   - Discuss common software development methodologies

2. Explain project management concepts.
   - Explain projects and ongoing operations
   - Define common terms in project management
   - Explain roles and characteristics of a project team
   - Explain the importance of client/project team collaboration
   - Examine common meeting and reporting procedures

3. Analyze methods for initiating a project.
   - Explain methods of problem identification
   - Identify stakeholders, their interests, involvement and impact on a project
   - Describe requirements
   - Practice common methods and activities for discovering requirements
   - Describe methods of identifying risk
   - Describe risk mitigation planning and quality assurance
   - Explain the importance of planning for change

4. Prepare project analysis.
   - Describe use case diagram
   - Develop use case diagram
   - Describe user stories
### COSA 190 – Systems Analysis and Design

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- Identify user stories and scenarios
- Develop activity diagram
- Describe acceptance tests
- Design acceptance tests from use case diagram, user scenarios and user stories
- Discuss traceability of requirements to testing

5. Prepare project plans.
- Describe methods of detecting dependencies between stories
- Describe methods of project estimation
- Explain the importance of evidence based scheduling
- Define scope
- Explain the importance of scope control
- Explain requirements document
- Prepare requirements document

6. Discuss ongoing project operations.
- Explain the importance of iteration and reflection
- Describe the process of refining estimates as a project progresses
- Explain methods of schedule compression
- Explain the importance of ongoing monitoring and control
- Explain the use of spikes and prototypes

7. Prepare unified modeling language (UML) models for software design.
- Discuss principles of graphical user interface (GUI) design
- Describe processes for extracting classes and methods from specifications
- Develop analysis and design class diagrams
- Plan class to database schema conversion
- Develop ER model from class diagram
- Develop sequence diagrams
- Develop state transition diagrams
### COSA 190 – Systems Analysis and Design

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#### 8. Describe concepts of object-oriented programming.

- Describe classes, instances and methods
- Describe abstraction
- Describe polymorphism
- Describe inheritance
- Describe encapsulation
- Describe utility classes


- Describe the single responsibility principle
- Describe the principle of separation of concerns
- Describe the principle of “tell, don’t ask”
- Describe the dependency inversion principle
- Describe common design patterns
- Apply design patterns to simplify software construction
- Produce a class design using object-oriented design best practices

#### 10. Prepare project tests.

- Describe the properties of a good unit test
- Describe the differences between unit and integration tests
- Construct a test plan
- Identify testable methods of software construction
- Describe test driven development
- Construct unit tests
- Describe testing coverage

#### 11. Prepare a software project for deployment.

- Explain an installation plan
- Explain data conversion issues
- Discuss user training
- Prepare a software user manual
COSA 190 – Systems Analysis and Design

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- Discuss data privacy and disposal

PLAR assessment methods

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Please do not begin preparing for assessment until you have consulted with the program head, completed a PLAR Application Form signed by the program head, and paid the fee to PLAR this course.

If you qualify for PLAR for this course, assessment PLAR assessment may include (1) an evidence file and (2) a structured interview. Specific instructions will be provided at a consultation meeting with the program head.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover page (see Appendix A),
   - An employer validation checklist (provided at consultation if required) or a self-guided learning summary, and/or
   - Work sample documents. These documents are examples of projects that you have previously created. They will demonstrate your skills and abilities regarding systems analysis and design.

   The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, assessment is concluded and PLAR credit will not be granted for this course. If the requirements are met, proceed to the structured interview. If those criteria are met, then the remaining critical course outcomes will be assessed with a structured interview.

2. **Structured interview**

   The structured interview is a set of 21 questions that are based on the submitted sample documents and general project management and systems analysis and design principles. Each question is tailored to determine whether you have met the criteria for a particular course learning outcome (see self-audit checklist above).

Resources

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
**COSA 195 – Systems Project**

You will gain experience in small systems analysis, design and implementation. You will be assigned to groups and given the specifications for a software system. You will work together as a team to develop a working system for the client. Emphasis is on the software development process.

**Credit unit(s):** 4.0  
**Prerequisite(s):** CDBM 190, COSA 190, COSC 190  
**Co-requisite(s):** CPMG 195  
**Equivalent course(s):** COSP 191

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1. **Apply project processes in a team environment.**
   - Practice professional interaction with students and staff
   - Practice assigned software development processes
   - Practice assigned corporate standards

2. **Prepare project requirements document.**
   - Review project proposal
   - Apply requirement questioning techniques
   - Identify project requirements
   - Prepare requirements document

3. **General acceptance test results.**
   - Document business level acceptance tests
   - Create acceptance tests procedures based on analysis models
   - Execute acceptance tests procedures

4. **Generate analysis models.**
   - Create use case diagrams
   - Create user stories
   - Create scenarios
   - Create analysis class diagrams
   - Create activity models

5. **Generate design models.**
   - Develop GUI mockups
**COSA 195 – Systems Project**

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- Create implementation class diagrams
- Create sequence diagrams
- Create state transition diagrams
- Create entity relationship diagrams
- Participate in design review process
- Use feedback from design review process to improve design

6. Create a software implementation of a project design.

- Follow coding standards
- Create code based on design models
- Create database based on design models
- Participate in code review process
- Use feedback from code review process to improve code

7. Generate unit test results.

- Create unit tests based on design models
- Execute unit tests

8. Use software version control.

- Explain software version control
- Describe use of a software version control system
- Use a software version control system to manage multiple versions of software


- Discuss the user manual template
- Prepare a user manual based on the user manual template
- Discuss installation instructions template
- Prepare installation instructions based on the installation instructions template

**PLAR assessment methods**

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866-467-4278 and ask for the Program Head of the Computer Systems Technology program in Saskatoon.

Please do not begin preparing for assessment until you have consulted with the program head, completed a PLAR Application Form signed by the program head, and paid the fee to PLAR this course.

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1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover page (see Appendix A),
   - An employer validation checklist (provided at consultation if required), and/or
   - Work sample documents. These documents are examples of projects that you have previously created. They will demonstrate your skills and abilities regarding systems analysis and design.

   The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, then assessment is concluded and PLAR credit will not be granted for this course. If those criteria are met, then the remaining critical course outcomes will be assessed with a structured interview.

2. **Structured interview**
   The structured interview is a set of questions that are based on the submitted sample documents as well as general data and document concepts from the learning outcomes for this course (see self-audit checklist). Each question addresses criteria for a particular critical course learning outcome.

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
CPMG 195 – System Project Management

You will practice project management, documentation, meeting and presentation skills. As a contributor to a computer system development project, you will prepare for and participate in project meetings, prepare project management documentation, manage progress using project management techniques, maintain storage of project documentation and deliver a presentation on the project to the client.

Credit unit(s): 1.0
Prerequisite(s): COSA 190, TCOM 190;
Co-requisite(s): COSA 195
Equivalent course(s): COSP 190

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**CPMG 195 – Systems Project Management**

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1. Use project management skills to manage systems project.
   - Use project charter
   - Discuss task card format
   - Prepare task cards
   - Describe time tracking requirements
   - Use time tracking techniques
   - Participate in standup meeting

2. Prepare project plan for systems project.
   - Discuss work breakdown structure template
   - Use work breakdown structure of tasks required to complete the project
   - Schedule tasks to be completed by team members
   - Use estimation techniques
   - Prepare project plan

3. Use client meetings to facilitate the progress of the systems project.
   - Prepare meeting agendas
   - Prepare meeting minutes
   - Participate in client meetings
   - Demonstrate project release functionality
   - Identify story card priority
   - Discover story card business level acceptance tests
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- Use appropriate customer service techniques when interacting with the client

4. Use a documentation management system.
   - Store project documentation on a content management system
   - Use appropriate organization structure for documents in a content management system

5. Prepare release plans for systems project.
   - Describe release plan format
   - Discuss the requirements for a release plan
   - Identify client’s requirements for each release
   - Prepare a release plan for each release

6. Present a systems project.
   - Identify appropriate format for the presentation
   - Describe the project, its goals and relevant background
   - Demonstrate the systems project
   - Use verbal, vocal, and visual presentation skills
   - Summarize and answer questions about a systems project

**PLAR assessment methods**

This course is delivered by the Computer Systems Technology program. Please review the general information in this guide and complete the self-audit checklist above. Then, if you are interested in a PLAR challenge for this course, please call the Contact Centre at 1-866-467-4278 and ask for the Program Head of the Computer Systems Technology program in Saskatoon.

Please do not begin preparing for assessment until you have consulted with the program head, completed a PLAR Application Form signed by the program head, and paid the fee to PLAR this course.

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1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
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• Work sample documents. These documents are examples of projects that you have previously created. They will demonstrate your skills and abilities regarding systems analysis and design.

The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, then assessment is concluded and PLAR credit will not be granted for this course. If those criteria are met, then the remaining critical course outcomes will be assessed with a structured interview.

2. **Structured interview**

The structured interview is a set of questions that are based on the submitted sample documents as well as general data and document concepts from the learning outcomes for this course (see self-audit checklist). Each question addresses criteria for a particular critical course learning outcome.

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
Systems Project Block Assessment
COSA 195 Systems Project
CPMG 195 System Project Management

If you have recent (within the last five years) successful experience in systems project development, you may be assessed for a combined block challenge of COSA 195 Systems Project and CPMG 195 Systems Project Management. If you are unsuccessful in a block challenge, you will not receive credit for either course. Also, if you are unsuccessful, you cannot repeat a PLAR challenge for CPMG 195, but you can re-apply and pay the PLAR fee to challenge COSA 195 only.

Please complete the self-audit checklists on previous pages for both COSA 195 and CPMG 195. Then, if you are interested in PLAR for these courses, please call the Contact Centre at 1-866-467-4278 and ask to consult with the Program Head for Computer Systems Technology at Saskatoon before deciding to PLAR the courses individually or together in a block challenge.

PLAR assessment methods

Please do not begin preparing for assessment until you have consulted with the program head, completed a PLAR Application Form signed by the program head, and paid the fee to PLAR this block of two courses.

A block PLAR assessment for these two courses is similarly structured but more comprehensive than assessment for one course only. It includes (1) an evidence file and (2) a structured interview. Specific instructions will be provided at a consultation meeting with the program head.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested.
   - Cover page (see Appendix A),
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2. **Structured interview**
   The structured interview is a set of questions that are based on the submitted sample documents as well as general data and document concepts from the learning outcomes for both courses (see self-audit checklists). Each question addresses criteria for a particular critical course learning outcome.
COSC 180 — Introduction to Programming

You will develop problem-solving skills through the use of detailed algorithms and be introduced to structured and object oriented design techniques. The course content includes standard program syntax, variable types, operators, input/output statements, decision and loop control structures, methods, encapsulation, instantiating and using objects.

Credit unit(s): 7.0

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1. Explain programming terminology and categories.
   - Explain what a program is
   - Explain the different generation of languages: high-level, low-level and machine language
   - Explain the different classifications of higher level languages: procedural programming and object oriented programming
   - Explain the difference between compiling and interpreting a program
   - Describe the characteristics of Java

2. Describe processes involved in programming.
   - Identify the program development steps
   - Explain syntax, semantic and runtime error

   - Explain algorithms
   - Analyze problems
   - Develop an algorithm from a problem definition
   - Explain pseudocode
   - Translate a problem solution into pseudocode

4. Create a program using tools & styling conventions.
   - Describe the process that is followed to create and execute a Java program
   - Describe source code, bytecode, and object code
   - Set the paths needed for one-line commands
   - Download and install an IDE
   - Translate an algorithm into source code
   - Create a Java program
COSC 180 – Introduction to Programming

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| Learning: I am developing skills and knowledge for this area. |
| None: I have no experience with the outcome. |

- Compile the Java program using javac
- Run the Java program using java
- Run the Java program using an Integrated Development Environment (IDE)
- Describe the style conventions
- Use the style conventions

5. Create a program that uses variables.
   - Identify Java primitive types
   - Explain variables
   - Create a Java program that declares, initializes and assigns variables
   - Create a Java program that utilizes typecasting
   - Create a Java program that uses named constants

6. Create a program that uses input and output.
   - Create a program that displays output
   - Create a program that accepts input from the keyboard

7. Create a program that uses strings.
   - Identify strings
   - Demonstrate ability to concatenate strings
   - Demonstrate ability to display strings
   - Use standard string methods

8. Create a program that uses operators.
   - Identify arithmetic, increment and decrement operators
   - Create a program that utilizes arithmetic, increment and decrement operators
   - Utilize logical, equality and relational operators
   - Solve operator expressions by following the order of precedence rules
   - Create Boolean expressions combining logical, relational and equality operators

9. Create a program using decision statements.
   - Describe the logic of a decision statement
### COSC 180 – Introduction to Programming

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<tr>
<th>Mastery:</th>
<th>Competent:</th>
<th>Functional:</th>
<th>Learning:</th>
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- Create a program with an if statement
- Create a program with an if else statement
- Create a program using nested if statements
- Create a program using else-if statements
- Create a program using a switch statement
- Create a program using a conditional operator

10. Create a program using repetition structures.
   - Describe the logic of a repetition structure
   - Create a program using a for loop structure
   - Create a program using an enumerated data type and the for-each loop structure
   - Create a program using a while loop structure
   - Create a program using a do-while loop structure
   - Create a program using a sentinel controlled loop structure
   - Create a program using nested loops

11. Use a debugging tool.
   - Describe debugging tools
   - Explain breakpoints and watches
   - Demonstrate how to step through a program
   - Use debugging tools to find errors in a program

12. Create a program using methods.
   - Explain methods
   - Use pre-existing Java Math class methods
   - Create a method that performs an action, but does not return a value or receive data
   - Create a method that returns a single value
   - Create a method passing in value(s)
   - Explain call-by-value
   - Differentiate between an argument and a formal parameter
   - Create an overloaded method
### COSC 180 – Introduction to Programming

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<thead>
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#### PLAR assessment methods

This course is delivered by the Computer Systems Technology program. **Please review the general information in this guide and complete the self-audit checklist above.** Then, if you are interested in a PLAR challenge for this course, please call the Contact Centre at 1-
866-467-4278 and ask for the Program Head of the Computer Systems Technology program in Saskatoon.

Please do not begin preparing for assessment until you have consulted with the program head, completed a PLAR Application Form signed by the program head, and paid the fee to PLAR this course.

If you qualify for PLAR for this course, assessment may include one or more of the following methods. Specific instructions will be provided by the program head at a consultation meeting.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover page (see Appendix A),
   - An employer validation checklist (provided at consultation if required) or a self-guided learning summary, and/or
   - Work sample documents. These documents are examples of projects that you have previously created. They will demonstrate your skills and abilities regarding Java programming.

   The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, then assessment is concluded and PLAR credit will not be granted for this course. If those criteria are met, then the remaining critical course outcomes will be assessed with a structured interview.

2. **Structured interview**
   The structured interview is a set of 15 questions that are based on the submitted sample documents and general Java programming. Each question is tailored to help the assessor determine if you have met the criteria for a particular critical course outcome.

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
COSC 190 – Intermediate Programming

You will receive a further introduction to the concepts of object-oriented programming. You will study the design of classes and objects, and utilize standard file input/output techniques. You will become familiar with and be able to manipulate such advanced data structures as stacks and queues. The course content includes introductory GUI and thread-based programming.

Credit unit(s): 6.0
Prerequisite(s): COSC180

### COSC 190 – Intermediate Programming

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

1. **Design reusable classes through inheritance and interfaces.**
   - Design classes that inherit from another class
   - Design abstract super classes and concrete sub classes
   - Design interfaces to specify behaviors

2. **Design extensible classes through polymorphism.**
   - Explain how polymorphism makes systems extensible and maintainable
   - Explain the concept of dynamic binding
   - Create extensible classes that use inheritance and polymorphism

3. **Create recursive methods.**
   - Define recursion
   - Identify the three components of a recursive method
   - Create recursive methods

4. **Troubleshoot a defective program.**
   - Describe strategies
   - Troubleshoot a defective program

5. **Develop programs using test driven development techniques.**
   - Describe test driven development
   - Develop unit test drivers
   - Execute unit test drivers to test code

6. **Analyze common array algorithms for searching and sorting.**
   - Use linear searching techniques on unsorted and sorted arrays
   - Use binary searching techniques on sorted arrays
## COSC 190 – Intermediate Programming

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- Use selection-sort and merge-sort algorithms to sort arrays
- Estimate the performance of algorithms
- Compare the performance of algorithms
- Develop recursive methods to implement sort and search algorithms

### 7. Design robust programs using appropriate exception handling.
- Describe the flow of program execution when an exception occurs
- Use pre-defined exception classes
- Create programmer-defined exceptions
- Write code using exception handling clauses (try/catch/finally)
- Create code that can throw exceptions
- Apply assertions to help ensure program correctness

### 8. Use dynamic data structures.
- Discuss the Vector and ArrayList classes for storing generic objects
- Use generic types to have type-safe collections of objects
- Describe Java Collections framework
- Describe stacks and queues
- Demonstrate programs that use stacks and queues
- Choose between a stack and queue to best suit an application
- Demonstrate the use of iterators

### 9. Design programs that present information through a Graphical User Interface (GUI).
- Design applications that use the various GUI components (labels, text fields, buttons, menus)
- Plan appropriate interfaces by using various layout management schemes
- Create interactive GUI programs
- Design GUI programs that will be executed through a web browser
- Design HTML web pages that embed applets
- Explain the default security restrictions in place when running an applet

### 10. Design programs for data storage and retrieval from files.
COSC 190 – Intermediate Programming

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- Describe an input/output stream
- Distinguish between binary files and text files
- Create programs that write data to and read data from text files
- Create programs that write data to and read data from binary files
- Create programs that use Object Serialization to store and retrieve the state of objects

11. Create programs that use multithreading.
- Discuss the advantages of multi-threaded programming
- Discuss the life cycle of a thread
- Create multithreaded programs that create, manage and destroy threads
- Design multithreaded programs using synchronization

12. Create programs that use network programming techniques.
- Describe socket communication
- Explain concepts of server and client
- Create programs that can communicate with each other using a socket

PLAR assessment methods

This course is delivered by the Computer Systems Technology program. **Please review the general information in this guide and complete the self-audit checklist above.** Then, if you are interested in a PLAR challenge for this course, please call the Contact Centre at 1-866-467-4278 and ask for the Program Head of the Computer Systems Technology program in Saskatoon.

Please do not begin preparing for assessment until you have consulted with the program head, completed a PLAR Application Form signed by the program head, and paid the fee to PLAR this course.

If you qualify for PLAR for this course, assessment may include one or more of the following methods. Specific instructions will be provided by the program head at a consultation meeting.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - Cover page (see Appendix A),
   - An employer validation checklist (provided at consultation if required) or a self-guided learning summary, and/or
- Work sample documents. These documents are examples of projects that you have previously created. They will demonstrate your skills and abilities regarding Java programming.

The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, then assessment is concluded and PLAR credit will not be granted for this course. If those criteria are met, then the remaining critical course outcomes will be assessed with a structured interview.

2. **Structured interview**

The structured interview is a set of 17 questions that are based on the submitted sample documents and general Java programming. Each question is tailored to help the assessor determine if you have met the criteria for a particular critical course outcome.

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
Java Programming Block Assessment  
**COSC 180 Introduction to Programming**  
**COSC 190 Intermediate Programming**

If you have recent (within the last five years) successful experience in the Java programming language where you have used advanced Java concepts you may apply to be assessed for a block challenge of COSC 180 Introduction to Programming and COSC 190 Intermediate Programming. If you are unsuccessful in this block challenge, you will not receive credit for either course. Also, if you are unsuccessful, you cannot repeat a PLAR challenge for CPMG 195, but you can re-apply and pay the PLAR fee to challenge COSA 195 only.

Please complete the self-audit checklists on previous pages for both COSC 180 and COSC 190. Then, if you are interested in PLAR for these courses, please call the Contact Centre at 1-866-467-4278 and ask to consult with the Program Head for Computer Systems Technology at Saskatoon before deciding to PLAR the courses individually or together in a block challenge.

**PLAR assessment methods**

A combined block assessment for these two courses is similar to but more comprehensive than assessment for one course only. It includes (1) an evidence file and (2) a structured interview. Specific instructions and templates for the evidence file will be provided at a consultation meeting with the program head. Please do not begin collecting evidence or preparing for an interview, exam, or assignment until those have been provided and you have registered and paid the fee for PLAR.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover page (see Appendix A),
   - An employer validation checklist (provided at consultation if required), and/or
   - Work sample documents. These documents are examples of projects that you have previously created. They will demonstrate your skills and abilities regarding systems analysis and design.

   The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, then assessment is concluded and PLAR credit will not be granted for this course. If those criteria are met, then the remaining critical course outcomes will be assessed with a structured interview.

2. **Structured interview**

   The structured interview is a set of questions that are based on the submitted sample documents as well as general data and document concepts from the learning outcomes for both courses (see self-audit checklists). Each question addresses criteria for a particular critical course learning outcome.

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
COSC 195 – Mobile Applications Programming

You will develop mobile application programs. Your studies will focus on the Android mobile environment and include an understanding of the mobile application development environment. You will develop simple and advanced mobile applications as well as understand mobile environment limitations and security issues with mobile applications. You will have an opportunity to publish mobile applications.

Credit unit(s): 3.0  
Prerequisite(s): COSC 190 Intermediate Programming

<table>
<thead>
<tr>
<th>COSC 195 – Mobile Applications Programming</th>
<th>Mastery</th>
<th>Competent</th>
<th>Functional</th>
<th>Learning</th>
<th>None</th>
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</thead>
<tbody>
<tr>
<td>Mastery: 1. Use mobile application development tools.</td>
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<tr>
<td>Competent:</td>
<td>Description of Android development environment</td>
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<tr>
<td>Functional:</td>
<td>Explain basic considerations of mobile programming</td>
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<td>Learning:</td>
<td>Use Eclipse to create an Android project</td>
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<td>None:</td>
<td>Describe Android manifest file</td>
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<td>Use the Android SDK to create an Android emulator</td>
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<td>Use Eclipse to run a sample Android application on the emulator</td>
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<td>2. Create a mobile application that uses basic user interface concepts.</td>
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<td></td>
<td>Discuss user interface options in mobile devices</td>
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<td>Describe context, activity, intent and fragment in an Android environment</td>
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<td></td>
<td>Discuss lifecycle of an Android activity</td>
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<td>Describe common layout and view classes</td>
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<td>Describe resource files</td>
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<td>Describe the Android Support Library</td>
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<td>Describe the usage of the Android Action Bar</td>
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<td>Discuss the Android fragment as a reusable UI component</td>
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<td>Describe specialized user interface classes</td>
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<td>Create layout files and resources to support an adaptive user interface</td>
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</table>
COSC 195 – Mobile Applications Programming

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

- Create an Android application using Fragments and the Action Bar

4. Create a mobile application that interacts with other applications.
   - Explain the differences between Implicit and Explicit Intents
   - Create a mobile application that uses Intents to interact with system Activities
   - Create an application which uses Intents to fetch data from other Activities

5. Create a mobile application that stores and accesses data on a device.
   - Describe data and storage APIs available in Android
   - Describe how database access is performed from Android
   - Create an Android application that can read and write from a SQLite Database

6. Create a mobile application that uses mobile device features.
   - Describe notifications
   - Create a mobile application that uses notifications
   - Describe a location based services (LBS) APIs
   - Create mobile application that uses location based services (LBS) APIs

7. Create a mobile application for deployment on a mobile device.
   - Describe best practices for testing mobile applications
   - Design successful test strategies
   - Perform testing on a mobile application
   - Describe process for publishing a mobile application
   - Prepare mobile application for publishing
   - Discuss distribution of mobile applications

8. Create a mobile application incorporating advanced Android development concepts.
   - Identify advanced patterns and tools in the Android environment
   - Create an Android application using advanced Android technologies

PLAR assessment methods

PLAR assessment for this course includes (1) an evidence file and (2) a structured interview. Specific instructions and templates for the evidence file will be provided at a consultation.
meeting with the program head. Please do not begin collecting evidence or preparing for an interview, exam, or assignment until those have been provided and you have registered and paid the fee for PLAR.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover page (see Appendix A),
   - An employer validation checklist or a self-guided learning summary, and/or
   - Work sample documents. These documents are examples of projects that the candidate has previously created. They will demonstrate the skills and abilities of the candidate regarding Android programming.

   The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, then assessment is concluded and PLAR credit will not be granted for this course. If those criteria are met, then the remaining critical course outcomes will be assessed with a structured interview.

2. **Structured interview**
   The structured interview is a set of 10 questions that are based on the submitted sample documents as well as general concepts from the learning outcomes for this course (see self-audit checklist). Each question addresses criteria for a particular critical course learning outcome.

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
CWEB 180 – Web Site Development

You will learn how to use HyperText Markup Language (HTML) to develop Web pages for delivery over the World Wide Web. You will also learn how to plan and develop HTML documents to build a Web site based on W3 standards and enhance HTML documents using current techniques such as Cascading Style Sheets (CSS) site management using current software.

Credit unit(s): 5.0
Equivalent course(s): CNET 191

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<th>CWEB 180 – Web Site Development</th>
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<tbody>
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1. Explore the basics of the World Wide Web and Hyper Text Markup language.
   - Explain web terminology
   - Create a basic web page
   - Insert block level elements in a web page
   - Insert inline elements in a web page
   - Insert empty elements and special characters in a web page
   - Apply standards to web pages

2. Create hypertext documents.
   - Discuss website structures
   - Create hypertext links to other documents in the same website
   - Link to locations within documents
   - Create image maps
   - Link to e-mail addresses and internet resources

3. Design web pages using fonts, colours and graphics.
   - Describe Cascading Style Sheets (CSS)
   - Discuss the difference between inline styles, embedded styles, and linked style sheets
   - Discuss style precedence and style inheritance
   - Apply colours to web pages
   - Modify the appearance of text
   - Discuss different types of images
   - Format element backgrounds
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- Manage element wrapping
- Apply styles selectively

4. Design web pages using multimedia resources.

- Discuss multimedia issues
- Enhance a website with sound
- Enhance a website with video clips
- Enhance a website with applets

5. Design web pages using tables.

- Create web pages that contain tables
- Format web tables
- Design layouts for web pages with tables and with row groups and row columns

6. Use XML to create a web document.

- Explain XML
- Create an XML document
- Display XML data in a web table

7. Maintain websites using frames.

- Describe HTML editors
- Create a website using a web authoring tool
- Create a frame layout with columns or rows
- Control the appearance and placement of frames
- Control the behaviour of hyperlinks on a web page with frames
- Use reserved target names to specify a target for a hypertext link
- Implement floating frames

8. Design websites formatted using Cascading Style Sheets (CSS).

- Use selector patterns to apply styles to selected elements
- Use classes and pseudo-classes
- Position objects with CSS
- Create style sheets for different media
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9. Create web page forms.
   - Discuss form design
   - Create a web form and form controls
   - Discuss form submission actions

10. Use tools to provide consistent website design.
    - Design a website using a web template system
    - Publish a website

11. Incorporate HTML5 features into website development.
    - Discuss HTML5 development
    - Discuss new tags in HTML5
    - Update an existing website with HTML5 capabilities

**PLAR assessment methods**

PLAR assessment for this course includes (1) an evidence file and (2) either validated industry certification or a structured interview. Specific instructions and templates for the evidence file will be provided at a consultation meeting with the program head. Please do not begin collecting evidence or preparing for an interview, exam, or assignment until those have been provided and you have registered and paid the fee for PLAR.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover page (see Appendix A);
   - Your recent resume, including any position that made use of webpage development skills or any self-taught web design, web development materials; and/or.
   - Two samples of your webpage development work. Each one should each contain at least three html pages and necessary CSS pages. One sample should include XHTML code or HTML 4.01 code. The second sample should include HTML5 code.

2. **Validated industry certification**
   The following industry validation will earn credit for the course without requiring a structured interview. The industry certification course requires that exams must have been passed in order for credit to apply.
   - MCSD Web Application – Exam 70-480 – Programming html5 with Javascript and CSS3.
   - CIW Site Development Associate (formerly Site Development Foundations) – Exam 1DO-51B
   - CIW Web Design Specialist (CS5) (formerly CIW Site Designer) – Exam 1DO-520
   - Adobe Dreamweaver (any of CS4, CS5,CS6)
OR

Structured interview
If the candidate has proven to have worked, taken a non-credit course or self-taught themselves the subject material, then a structured interview is required. There are ten questions each worth 5 marks. Each question is based on course learning objectives (see self-audit list) and industry standards. It is expected that correct terminology will be used in answering the questions.

Resources
Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
CWEB 190 – Internet Programming / Web Applications 1

You will receive instruction and practice in the development of client-side web applications. You will use JavaScript to improve web page design, validate forms, detect browsers, create cookies, and detect and respond to user actions.

Credit unit(s): 4.0
Prerequisite(s): COSC180 Introduction to Programming, CWEB 180 Web Site Development
Equivalent course(s): CNET 191

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

1. Identify how JavaScript functions with web pages.
   - Describe the JavaScript language
   - Describe the process used to create and execute JavaScript code on web pages
   - Describe how JavaScript code is structured

2. Use JavaScript language constructs.
   - Program using JavaScript constructs
   - Create JavaScript functions
   - Use event-driven JavaScript programming to produce dynamic effects on a web page
   - Create anonymous JavaScript functions

3. Construct custom JavaScript objects.
   - Discuss built-in JavaScript classes
   - Declare and define custom JavaScript objects
   - Describe JSON (JavaScript Object Notation) syntax
   - Declare and define custom JavaScript objects and functions utilizing JSON syntax

4. Use the Browser Object Model.
   - Describe the Document Object Model (DOM)
   - Use DOM functions to reference HTML objects
   - Reference a DOM based JavaScript library (jQuery) from a web page
   - Use jQuery JavaScript functions to access elements on a web page
   - Use jQuery JavaScript functions to place elements on a web page
   - Demonstrate how jQuery can alleviate problems associated with writing cross-browser scripts

5. Manage form data with JavaScript.
CWEB 190 – Internet Programming / Web Applications

**PLAR assessment methods**

PLAR assessment for this course includes (1) an evidence file and (2) a structured interview. Specific instructions and templates for the evidence file will be provided at a consultation meeting with the program head. Please do not begin collecting evidence or preparing for an interview, exam, or assignment until those have been provided and you have registered and paid the fee for PLAR.

1. **Evidence file.** Instructions and content will be clarified at a consultation meeting. One or more of the following items may be requested:
   - A cover page (see Appendix A), and
   - An employer validation checklist or a self-guided learning summary, and/or
   - Work sample documents. These documents are examples of projects that the candidate has previously created. They will demonstrate the skills and abilities of the candidate regarding JavaScript and jQuery programming.
The assessor will review the evidence file to determine whether criteria for some of the critical course outcomes have been met. If those criteria are not met, then assessment is concluded and PLAR credit will not be granted for this course. If those criteria are met, then the remaining critical course outcomes will be assessed with a structured interview.

2. **Structured interview**

The structured interview is a set of 14 questions that are based on the submitted sample documents and general JavaScript and jQuery programming. Each question addresses criteria for a particular course learning outcome (see self-audit checklist).

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
TCOM 190 – Technical Communications

You will be introduced to the basic principles of effective technical writing in the computer industry. The necessity of following company standards for documentation will be emphasized. You will review grammar and style, and learn technical formats and report design. The production of technical documentation for a variety of user groups will also be emphasized.

Credit unit(s): 3.0
Pre-requisite: BCOM 120 Minimum Grade of 60
Equivalent course(s): BCOM 121, TCOM 103

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<tr>
<th>TCOM 190 – Technical Communications 1</th>
<th>Mastery</th>
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1. Identify documentation types required in the workplace.
2. Conduct situational analyses.
3. Plan documentation.
5. Perform revisions and editing of documentation.

PLAR assessment methods

TCOM 190 is an Arts and Sciences department course offered in the CST program. If, after completing the Self-Audit above and reviewing this guide, you want to PLAR this course, please print a separate PLAR Application Form for Arts and Sciences courses in this program. Then contact Deanna Herman, A&S Communications Program Head at Saskatoon Campus (306-659-4671) for the required signature and assessment consultation before paying the fee and registering to PLAR any Arts and Sciences courses at Registration Services.

If you qualify for PLAR, you may be asked to demonstrate your learning in one or more of the following ways:
- Evidence file
- Challenge exam and/or assignments
- Structured interview

Specific instructions and templates for the evidence file will be provided at a consultation meeting with the program head. Please do not begin collecting an evidence file or preparing for a challenge assignment or exam until you have clarified all assessment requirements and you have registered and paid the fee for PLAR.

Resources

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from
online or other sources. Purchasing the following textbook for this course, if recommended, is not required for a PLAR challenge.

**TCOM 291 – Career Path Skills**

You will prepare a career path portfolio based on your accumulated skills, qualifications and accomplishments. You will revise your resume and cover letter to target and IT job opening. In a simulated job interview, you will answer behavioural questions and demonstrate the use of a career path portfolio.

**Credit unit(s):** 1.0  
**Equivalent course(s):** JOBS 288, TCOM 295

<table>
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1. Develop a portfolio.  
2. Prepare a resume and cover letter.  
3. Demonstrate the use of a portfolio in a job interview.

**PLAR assessment methods**

TCOM 291 is an Arts and Sciences department course offered in the CST program. If, after completing the Self-Audit above and reviewing this guide, you want to PLAR this course, please print a separate PLAR Application Form for Arts and Sciences courses in this program. Then contact Deanna Herman, A&S Communications Program Head at Saskatoon Campus (306-659-4671) for the required signature and assessment consultation before paying the fee and registering to PLAR any Arts and Sciences courses at Registration Services.

If you qualify for PLAR, you may be asked to demonstrate your learning in one or more ways such as the following examples:

- Evidence file
- Challenge exam and/or assignment
- Structured interview

Specific instructions and templates for the evidence file will be provided at a consultation meeting with the program head. Please do not begin collecting an evidence file or preparing for a challenge exam, assignment or interview until you have clarified all assessment requirements and you have registered and paid the fee for PLAR.

**Resources**

Please ask the program head or PLAR assessor at a consultation meeting to recommend resources to prepare for a PLAR assessment. You can also search for related resources from online or other sources. Purchasing study materials for this course from the Sask. Polytechnic Book Store, if recommended, is not required for a PLAR challenge.
Computer Systems Technology

Appendices
Appendix A: Cover Page for Evidence File

*Prior Learning Assessment and Recognition*

**Instructions:** The cover letter identifies your evidence file as your submission for a particular course. It does not need to be precisely as shown below, but it does need to have at least your name and the name and code of the course(s) you are challenging. The purpose of the cover page is to ensure that the evidence you submitted is easily identified for evaluation.

---

**PLAR Evidence File**

Submitted by: *Your full name here*

Course: *CODE 123, Name of course*

Program: *Computer Systems Technology*

Submission Date: *the date that you submitted the evidence file*
Appendix B: Employment validation letter

**Instructions:** The employment validation letter provides a statement of verification of employment in an exceptionality focused setting. 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 Computer Systems Technology program.

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

Date

To Whom It May Concern:

I have reviewed the employment records of ___________________________ and ___________________________

Name of employee/candidate

...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