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Master of Natural Resources Management

Practicum Stream Process

1.0 The Practicum

The Natural Resources Institute is a unit of the Clayton H. Riddell Faculty of Earth, Environment, and Resources at the University of Manitoba. It provides interdisciplinary education at the Master’s and Ph.D. levels through courses and field experiences in the theory and practice of Natural Resources and Environmental Management. At the Master’s level, the Master of Natural Resources Management degree can be obtained through either the Thesis or Practicum streams. Both have the same coursework requirements with the difference being the type of field experience undertaken as part of the degree.

The MNRM practicum stream includes 21-30 credit hours of course work and an independent, creative work whose scope, span, and rigour are similar to that of a thesis. It differs from the MNRM thesis stream in that it is an exercise in the practical application of knowledge and skill to a problem or issue in natural resources and/or environmental management. Practicum refers to the process of developing a proposal to undertake an applied project, the undertaking of the project and the document that is produced as an outcome. The practicum demonstrates the candidate’s competence (knowledge & skills) to formulate and complete an applied project.

In general, the overall goal of the practicum is to build the knowledge and skills to work in a professional environment by working with a partner to complete a project. Therefore, the practicum will be based on the application of knowledge and skills to a problem, opportunity or challenge identified by a partner who requires this knowledge for their organization.

The purpose of the practicum is: (1) to develop the student's skills and abilities to apply knowledge through a project undertaken with a partner in a work context; (2) to develop expertise in preparing a Project Plan, a final product or service, and a record of the practicum (Practicum Document) consisting of the project plan, final product or service, and a critical reflection; and, (3) to develop experience in producing a final product or service consistent with a project plan and target dates for phased completion.

Students will work closely with a faculty member to identify a partner with whom they will work at the beginning of their programme. They will work with a faculty member and project partner to develop a project plan, secure financial support, produce a final product or service, and a record of the practicum.
2.0 The MNRM Practicum Process

The practicum has five distinct stages as outlined below. Please note that timing of the five stages may differ from candidate to candidate but it is anticipated that the student will present their practicum for adjudication in June of their second year allowing for completion within a two-year period. Although the student is expected to consult on a regular basis with the advisor and partner, the following meetings are required during the process:

- Project Charter Agreement (Advisor, Partner)
- Draft Project Plan Meeting (Advisor, Partner)
- Project Plan Approval (Advisor, Partner, FGS Member)
- Review of Final Product or Service Outline (Advisor, Partner)
- Review of Draft Final Product or Service (Advisor, Partner)
- Approval of Practicum Document for Adjudication (Advisor, Partner, FGS Member)

**STAGE 1 Project Plan Development**

During this stage, a number of activities take place: students participate in the required seminar NRI 7380, Project Management in NREM (fall of year of entry), other required courses and courses that will develop the student's knowledge base. During the Project Management in NREM seminar the student will work with a faculty advisor to identify a partner and develop an integrated project plan. In the winter semester the student will undertake further courses to build their knowledge and skills base and refine the project plan developed during the fall. The faculty advisor and partner will meet with the student to provide input as needed leading to a formal meeting to approve the integrated project plan prior to the end of the student's first year. The integrated project plan must be approved by the faculty advisor, partner and one other faculty who is a member of the Faculty of Graduate Studies (FGS) before proceeding to Stage 2. Once the integrated project plan is approved, the candidate must secure Animal Care and/or Human Ethics approval as necessary.

*Required Meetings during this Stage:*
- Project Charter Agreement (Advisor, Partner)
- Draft Project Plan Meeting (Advisor, Partner)
- Integrated Project Plan Approval (Advisor, Partner, FGS Member)

**STAGE 2 Practicum Implementation**

During this phase, students will work independently to compile information and data necessary for the practicum project. This will require close coordination and regular check-ins with the advisor and the partner to implement the integrated project plan. The student may work on-site with the partner organization, at a field location or at the
university depending upon the requirements of the integrated project plan. The student will be responsible to ensure that work undertaken is consistent with their human ethics/animal care protocols if they were required.

**STAGE 3  Development of Final Product or Service**

A final product or service will be developed as outlined in the project plan. Development of the final product or service may occur at the work site of the partner or at the university depending upon the needs of the project. The first step will be for student to develop an outline (e.g., storyboard, mock-up, etc.) for their final product or service. This will be developed as the project unfolds and will be one of the deliverables identified in the integrated project plan. This deliverable should be reviewed and approved by the advisor and partner and is considered a key milestone to ensure the student is on track to complete their practicum within the two year period. The student will then develop a draft of the final product or service for review by the faculty advisor and partner allowing time for assessment and changes to be made prior to the adjudication event.

Note: We use the terms deliverable to indicate any tangible outcome or item that is: (a) the result of a project phase; (b) a foundational piece for a subsequent phase; (c) an intermediate outcome that your advisor, sponsor, partner or committee believe they need to see when it is complete. Deliverables are tangible and their completion demonstrated. Deliverables are outcomes or items produced during the execution of your project and are necessary for the completion of your final product or service. The final product or service is similar in that it should be a tangible outcome or item like a map, film, exhibit or report. It will be included as Chapter 2 of your practicum document. Other deliverables may be included in Chapter 2 or in the appendices of your practicum document as appropriate to your project and under the guidance of your advisor and partner.

*Required Meetings during this Stage:*
  * Review of Final Product or Service Outline (Advisor, Partner)*
  * Review of Draft Final Product or Service (Advisor, Partner)*

**STAGE 4  Approval of Practicum Document for Adjudication**

The student will provide a document that includes the Project Plan, Final Product or Service, and a Critical Reflection on the practicum project as required components. This document will be provided to the faculty advisor, partner and other FGS member of committee for review and approval of the Practicum Document to proceed to adjudication.

*Required Meetings during this Stage:*
• Approval of Practicum Document for Adjudication (Advisor, Partner, FGS Member)

**STAGE 5 Adjudication**

The Practicum Document consisting of the project plan, final product or service and critical reflection prepared by the student will be presented at an adjudication event to be scheduled by the Director at least once per academic year. [Note: If needed a second event will be held for practicums which do not pass the first adjudication event]. At the adjudication event the student will present the final product or service developed as part of their practicum and provide an oral overview of the final product and service as well as critical reflections. The presentation will be 20 minutes in length and followed by up to 40 minutes of questions.

An adjudication panel made up of the faculty advisor, partner and one other FGS member will assess the Practicum Document and its oral presentation. The adjudication panel will meet following the event and provide an evaluation that will consist of a pass, pass with modifications or fail. If the product is passed changes will be suggested prior to submission to the Faculty of Graduate Studies (Acceptable, without modification or with minor revision(s)). If passed with modifications, the evaluation committee will indicate the changes required for a pass and plans for further desk review by the committee in order to issue a pass after revisions (Acceptable, subject to modification and/or revision(s)). Or, the committee could require substantive changes requiring the student to work further on the Practicum Document and present at the next adjudication event (Not acceptable).

Each of the preceding stages is described more fully in the material that follows.
### 3.0 Summary of Stages of Practicum Progression

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
<th>Stage 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Plan Development</td>
<td>Approval of Integrated Project Plan</td>
<td>Execution of Integrated Project Plan</td>
<td>Completion of Practicum Document for Adjudication</td>
<td>Adjudication</td>
</tr>
</tbody>
</table>

#### Timeline

<table>
<thead>
<tr>
<th>Fall Year 1</th>
<th>Winter / Spring Year 1</th>
<th>Summer Year 1</th>
<th>Fall / Winter Year 2</th>
<th>Summer Year 2</th>
</tr>
</thead>
</table>

#### Activities

<table>
<thead>
<tr>
<th>Activities</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
<th>Stage 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Meet with advisor to indicate interest in practicum stream</td>
<td>2.1 Finalize Project Charter and competencies acquisition plan with advisor and partner at beginning of semester</td>
<td>3.1 Work with partner to execute project.</td>
<td>4.1 Develop draft Practicum Document</td>
<td>5.1 Present Practicum Document at Adjudication Event</td>
<td></td>
</tr>
<tr>
<td>1.2 Register in NRI 7380 (Project Management in NREM)</td>
<td>2.2 Complete Project Plan</td>
<td>4.2 Submit final Practicum Document</td>
<td>4.3 Develop adjudication presentation</td>
<td>5.2 Complete revisions of Practicum Document as required</td>
<td></td>
</tr>
<tr>
<td>1.3 NRI Coursework</td>
<td>2.3 Develop knowledge and skills for project</td>
<td>4.4 NRI coursework as needed</td>
<td>5.3 Submit Practicum Document</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.4 NRI coursework</td>
<td></td>
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</tr>
<tr>
<td>Required Meetings &amp; Participants (A [Advisor]; P [Partner]; FGSM [2\textsuperscript{nd} FGS Member])</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Project Charter Agreement (A/P) [Review competencies acquisition plan]</td>
<td>Review of final product or service outline (A/P)</td>
<td>Approval of Practicum Document for adjudication (A/P/FGSM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Draft Integrated Project Plan Meeting (A/P)</td>
<td>Review of draft final product or service (A/P)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Integrated Project Plan Approval (A/P/FGSM)</td>
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</tbody>
</table>

#### Outcomes Contributing to Practicum Progression

<table>
<thead>
<tr>
<th>Identify Project &amp; Partner</th>
<th>Project Charter</th>
<th>Final product or service</th>
<th>Draft Practicum Document</th>
<th>Adjudication Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop Draft Project Charter</td>
<td>Project Plan</td>
<td></td>
<td>Practicum Document</td>
<td></td>
</tr>
<tr>
<td>Develop Draft Project Plan</td>
<td>Competencies (Knowledge and Skills) Acquisition Plan</td>
<td></td>
<td>Adjudication presentation</td>
<td></td>
</tr>
</tbody>
</table>

| Coursework completed |
PRACTICUM PROJECT PLANNING

1) Project Concept
2) Project Charter
3) Project Scope
4) Project Resource Needs
5) Stakeholder Register, Communications for Relationship Mgmt. and Promotion
6) Risk Management and Quality Plans
7) Integrated Project Plan

Students should concern themselves with 'what' and 'why'

Students should concern themselves with 'how' and 'why'

Student's work is formally assessed
Students should concern themselves with 'what' and 'why'

Students should concern themselves with 'how' and 'why'

Student's work is formally assessed
4.0 Detailed Stages of Practicum Progression

**STAGE 1  Project Plan Development**

The student (you) will develop a draft project plan during the Project Management in NREM seminar and in consultation with your faculty advisor and partner as the first step in the practicum process at the NRI.

The process begins by developing a Project Concept document that will identify the importance of the project to the partner, include a preliminary statement of project objectives and outcomes, develop a rough estimation of costs and timeframe and identify the internal and external stakeholders of the project. During the course you will then develop a Project Charter with partner and stakeholders to develop a draft description of the project followed by initial scoping of project stakeholders who can help with the development of the project plan. You will be provided with tools to further refine the project that identify the resources and needs of the project, develop project timelines, assess project risks and a plan to manage risks, and determine the need for a quality management plan. This work will then be drawn upon and compiled to produce a draft Integrated Project Plan that will guide the work and allow you to identify gaps in your knowledge and skills that will need to be developed to undertake the project. It will also include a plan to manage communications with internal and external stakeholders during project implementation and if appropriate to promote deliverables or the final product of the project.

Details of the process for developing the draft Project Plan are provided in the syllabus of NRI 7380, Project Management in NREM. The integrated project plan for the practicum will generally have the format as indicated in Appendix A – Integrated Project Plan - Front Matter.

**Developing Knowledge and Skills for Practicum**

As you complete the draft of your project plan during NRI 7380 you will identify knowledge and skills that you may lack to undertake your project and produce a deliverable. This will allow you to identify courses that may help you fill that gap or reading that you will need to review for your project. You may also find that you will need to find ways to develop skills related to techniques, tools or software. As you undertake your assessment of resources and skills needed for the project you will need to determine how to scope the project to a final product or service that meets your capabilities. In some cases, gaps may be filled with specialized expertise but these should be limited to specific tasks for which you direct the person providing the specialized expertise. A summary of the knowledge and skills developed to implement your practicum will be included in the background information report in the integrated project plan. This will use proper citation and will be supported by a bibliography as needed. It is expected that most knowledge and skills will be obtained during the fall and winter semesters although this
may be complemented by some specialized training needed as part of the implementation of the practicum. If so, these should be identified in the Integrated Project Plan approved by the advisor, partner and a FGS member.

The Advisor and Partner

The student’s advisor will identify projects and partners with whom the student may work or a student may have a project and partner that they identify. Partners will identify problems, opportunities or challenges that they would like addressed through a practicum and they will work with the advisor and student to develop a draft integrated project plan during the fall semester as part of NRI 7380. The student will refine this integrated project plan during the winter semester in close communication with the advisor and partner. The advisor and partner will also guide the student in developing a competencies acquisition plan to develop the knowledge and skills needed for the practicum project based upon the assessment included in the draft Integrated Project Plan. It is expected that the student will begin to fill their knowledge and skill gap during the winter semester and present their Integrated Project Plan for approval by June of their first year.

The Institute faculty advisor is formally appointed by the Director based on the student’s stated interests. The faculty advisor provides on-going guidance to the student, maintains communication with partners and facilitates meetings with the student and partner. The advisor will chair formal meetings at which the draft integrated project plan is discussed with the partner and the formal approval of the integrated project plan. In addition, the faculty advisor and the student are responsible for ensuring that all forms required by the Natural Resources Institute and the faculty of Graduate Studies are duly and accurately completed.

Each student, working in close consultation with their faculty advisor, is responsible for co-ordinating meetings and for ensuring that the partner is informed by the NRI, in writing, of meeting dates, time and location. Submission of documents to the advisor and partner must occur at least two weeks prior to any meeting. Students should consider the schedules of their advisor and partner in arranging meeting dates. Once the student has identified an appropriate date and time, the faculty advisor and General Office should be notified two weeks in advance using the appropriate form so that proper arrangements for the Project Plan meeting can be made (confirmation e-mails and seminar room booking).

If a student wishes to change faculty advisors at any time, written request for such a change must be provided to the Director, or Associate Head if the Director is the faculty advisor. If a student wants to switch from the MNRM practicum stream to the thesis stream, this is possible with the permission of the Director and Advisor. If a student chooses to switch they must complete all the requirements of the thesis stream.
Ethics Review Process

Ethical conduct related to research activities at the University is governed by Policy #1406. All students who carry out “human research” must consult this Policy, complete the Course on Research Ethics (CORE), and complete a “Human Subject Research Ethics Protocol Submission Form”. The Policy and forms can be obtained from the Office of Research Ethics Compliance. Submission forms should indicate that the protocol is to be submitted to the Joint-Faculty Research Ethics Board. Ethics protocol forms can only be submitted once the practicum proposal has been approved by the advisory committee.

Policy #1406 defines human research as: any project that involves the collection of specimens, data or information from persons, through intervention or otherwise. Included are procedures that have a low degree of invasiveness (e.g. surveys, interviews, naturalistic observation, exercise or psychometric testing, examination of patient records), as well as more invasive procedures (e.g. blood sampling, administration of a substance). A subject in human research is defined as “a person, who by virtue of his/her involvement in a data gathering situation or activity is a source of primary data or information”.

The full ethics review procedures can be obtained from the Office of Research Services. Forms and guidelines are available from http://umanitoba.ca/research/orce/ethics/human_ethics_REB_forms_guidelines.html.

Animal Care and Use Review Process

The Natural Resources Institute adheres to the University of Manitoba Policy and Procedures on the Care and Use of Animals for research and teaching. The use of animals is governed by the Senate Animal Care Policy Committee, which recommends policy for the entire University. All NRI projects involving animals must be reviewed and approved by a Protocol Management and Review Committee prior to beginning data collection. It is the responsibility of those needing to use animals to provide sufficient information to the Committee in order that an informed ethical decision can be made regarding their request to use animals. Approval is granted only after the proposed usage and care of the animals, i.e., the protocol of procedures, has been carefully examined.

STAGE 2  Practicum Implementation

Once the Integrated Project Plan for the practicum has been approved by the advisor, partner, and FGS member, and ethics and/or animal care clearance obtained, the job of executing the project can begin as specified in the Integrated Project Plan. The work may take place at the university, and/or with the partner at their office or field site. It is critical that the student follows the Integrated Project Plan and that changes are made as indicated in the change management section of their Integrated Project Plan.

Regular updates to the advisor and partner are recommended and a meeting to review the proposed final product or service outline is required. Updates and the required meeting will allow advisor, partner and student to assess if the project is on track for completion according to the Integrated Project Plan schedule.

STAGE 3  Development of Final Product or Service

The goal of each practicum will be to produce a final product or service that meets a need of the partner and is completed through the execution of the Integrated Project Plan. The final product or service will be identified early in the formulation of the project in the Project Charter. It will be progressively refined through the process of developing the Integrated Project Plan. While the student may obtain specialized knowledge and skills from the partner at the beginning of project execution, it is expected that following the approval of the integrated project plan the main focus will be on project execution.

As the final product or service can vary widely due to such things as student capability and partner needs there is no one type of format that is required. As such, the specification of the final product or service that will meet the needs of the project partner is required in the Integrated Project Plan. The final product or service will be provided to the faculty advisor and partner for review and approval with sufficient time for required changes to be made prior to the adjudication event.

Final Product or Service Outline and Approval for Adjudication

Students, advisor and partner must organize two meetings to ensure that the student receives feedback on the final product or service. The first should occur early enough during project execution so that the student receives input from the advisor and partner and any changes are identified. This may take the form of a detailed outline, or a mock-up of the final product or service. The student, advisor and partner will also organize a meeting to review a draft of the final product or service. If the final product or service is considered ready for adjudication the advisor and partner will approve proceeding to the next stage of developing the Practicum Document.

STAGE 4  Presentation of Practicum Document for Adjudication

Upon completion of the deliverable the student will prepare a Practicum Document that will be submitted for adjudication. The Integrated Project Plan will be provided at the beginning of the document. As a final product or service may be of different types and
produced on various types of media this component may the full text of a final product or service (e.g., report; trail maps and interpretive text) or a written description of the final product or service if not a text document (e.g., movie). If the latter, the final product or service should be accessible to be viewed (e.g., movie available on youtube). The Critical Reflection will include two central themes: (1) a reflection on what was learned through the execution of the project (more detail on reflection content provided in NRI 7380); and, (2) a critical reflection on what they learned through the production of the final product or service about project management in the context of resources and environmental management.

The Practicum Document will be presented to the advisor, partner and FGS member of their advisory committee allowing time for review and changes prior to the adjudication event. At this meeting (Approval of Practicum Document for Adjudication) students should look to the advisor, partner and FGS member to constructively suggest necessary changes to the document prior to its submission for adjudication. They should also discuss a plan for how they will present their final product or service at the adjudication event.

Each student is responsible for completing necessary revisions as suggested by the advisor, partner and FGS member at the Approval of Practicum Document for Adjudication meeting. Upon completing the required changes the advisor will review the final Practicum Document to be submitted for adjudication and decide whether it is ready and can be presented at the adjudication event. This document must include Figures, Tables and Maps in their final form as well as an Abstract and Acknowledgements. Proper bibliographic referencing should be used according to the appropriate style guide. The onus is on each student to complete a detailed final editing (grammar, punctuation, spelling and other mechanics) prior to submission for adjudication. In other words, the advisor will review a document that the student considers ready to proceed to adjudication.

The student must submit the Practicum Document to the Chair of the adjudication event for distribution to the adjudication panel at least two weeks prior to the adjudication event.

**Suggested Practicum Document Format**

While there may be many types of deliverables produced as part of a practicum there are three main components: (1) Project Plan; (2) Final Product or Service; and, (3) Critical Reflection.

A format that meets FGS and NRI regulations for the practicum is as follows:
Title Page (Same as Integrated Project Plan)
Faculty of Graduate Studies Copyright Page
Signature Page (to be included in one unbound copy given to the FGS)
Abstract
Acknowledgements
Dedication
Table of Contents
List of Tables
List of Figures
List of Copyrighted Material for which Permission was Obtained
Chapter One: Project Plan
Chapter Two: Final Product or Service (Can be printed reproduction of deliverable product, printed documentation of the exhibit, attached CD or hyperlink to web archive, for example. Formats will need to be those that can be accepted by MSpace)
Chapter Three: Critical Reflection (including summary of knowledge and skills developed with appropriate citation and bibliography)
Bibliography
Appendices

If the practicum includes copyrighted material, permission must be obtained from the copyright holder. A sample copyright permission letter is available from the Copyright Office website. Other forms are acceptable including electronic permission.

**STAGE 5 Adjudication**

As final products or services can vary widely, the student may present their work using a variety of presentation types, for example, a poster, exhibit panels, photo essay, video short or other form of communication that allows the student to present the final product or service in 20 minutes. In addition to presenting the final product or service, the student must also provide the committee with an overview of their critical reflection. Around 40 minutes will be allowed for questions and discussion and may focus on the deliverable or the critical reflection.

At the event the advisor, partner and the FGS member will form the examination committee. Following the event, each student’s practicum document and oral presentation of the final product or service will be assessed as a pass (no revisions, or minor revisions, minor corrections) or not acceptable (major corrections).
At the adjudication event the practicum and presentation of the final product or service shall be evaluated using the following standards:

- Does the Practicum Document meet the goals set out for the practicum in the Project Plan. Is the final product or service of an acceptable standard to meet professional practice and Faculty of Graduate Studies standards?

- Has the student demonstrated their knowledge and skills in the production of a deliverable within the field or NREM?

- Has the student demonstrated the ability to produce a final product or service using a project management approach?

The adjudication will normally be held at the University of Manitoba and normally be open to the public and members of the University community. The event is organized and curated by a member of the NRI faculty who will also chair the adjudication panel for the event. Each student will be responsible to provide the Chair with a presentation proposal as to how they will present the final product or service from their practicum along with what they will need for the presentation one month prior to the scheduled event. The Chair will ensure that necessary equipment is available for the adjudication event such as poster boards and video players although exhibit panels, or other standing displays, will be the responsibility of the student themselves. Time prior to the adjudication event will be available for the student to set up standing presentations and load presentations onto a computer. The panel will establish a schedule for presentations and an order of proceedings for the adjudication committee. Students will have 20 minutes to provide a presentation of their Practicum Document and should be prepared for 40 minutes of discussion based on questions of the adjudication committee. The Chair may exercise discretion in allowing informal discussion of the presentation by members of the public following completion of the question period of the adjudication committee. The adjudication event will have the following general order of proceedings:

- Set-up period.

- The adjudication panel chair opens the presentation period and invites the first candidate to present their practicum document to the adjudication committee and guests.

- Following the 20 minute presentation the adjudication committee will be provided with 40 minutes for questions.

- This process will be followed for each student candidate.
• Following the presentations, the adjudication committee will meet and make a decision on the acceptability of each candidate’s Practicum Document. The student is informed of the final decision by the chair in writing within one week of the event. The recommendations of the committee can include:

  (1) Pass / (Acceptable, without modification or with minor revision(s));

  (2) Pass / (Acceptable, subject to modification and/or revision(s));

  (3) Not acceptable.

• (1) When the committee recommendation is to pass the Practicum Document with no changes, the chair, advisor, partner and FGS member of adjudication committee assigned to examine the Practicum Document will sign the final practicum report, signifying that the document is acceptable in substance.

• (2) When minor revisions or corrections to the Practicum Document are required they will be specified by the committee. The student will make the necessary changes. The advisor, and if required the members of the examining committee, will undertake a desk review of the changes. Members will sign the final practicum report once the changes have been made.

• (3) When the Practicum Document is not considered acceptable the student is required to correct the specified deficiencies and is allowed to re-present at the next adjudication event. A second attempt is allowed.

• The Director or a designate will ensure that the required time limits for completion of revisions, the necessity of a second adjudication, and other such matters are carried out.

• The student is recommended for graduation after submitting the final copy to the NRI General Office one week prior to the Faculty of Graduate Studies deadline. Copy submission is as follows:

  **Unbound copies:**
  One copy, single-sided, black and white for Graduate Studies

  **Digital version:**
  One digital version submitted on the MSpace website
  One digital version for each committee member
  One digital version for the Advisor
  One digital version for the NRI General Office
• Students are required to submit the digital version to the Graduate Secretary of the Natural Resources Institute in person, and complete the necessary documentation prior to graduation.

• Upon completion and approval of the practicum by the examining committee, the student completes a Thesis/Practicum Copyright License Declaration.

Costs for duplicating and binding are the student's responsibility. As of 2015, the NRI no longer requires or stores hard copies of theses.

Authorship of Publications
Students are encouraged to publish the results of their practicum. Final products or services may be published as videos, booklets, books or other relevant forms. The right of first authorship rests with the student for a period of one year from the date of the adjudication event. Secondary authors should also be agreed upon prior to publication.

After the expiration of the one-year period identified above, or in cases where a practicum is not completed, the faculty advisor and/or partner may initiate discussion with the student involved respecting waiver of publication rights. Any dispute respecting publication rights shall be referred, in the first instance, to the Director or the Associate Head, by any party involved.

Electronic submission of Publication
The electronic version must be submitted in Portable Document Format (PDF), which can be done at one of the Library labs on campus. Students can request the Library to do the conversion for them at no charge. Once the practicum has been converted to PDF, students contact the Library to receive authorization to submit the file to MSpace (wendy.prystenski@umanitoba.ca, ph: 474-7895).

To submit an Electronic Disstertation and Thesis (EDT) or learn more about EDTs visit the MSpace website.
Appendix A – Integrated Project Plan Front Matter
(Stuff that goes at the beginning of the document)

An Interpretive Trail Plan for Moose Lake Conservation Reserve

Jane Doe

An Integrated Project Plan submitted to [A Practicum submitted to]
the Faculty of Graduate Studies of The University of Manitoba
in partial fulfilment of the requirements of the degree of

MASTER OF NATURAL RESOURCES MANAGEMENT

Clayton H. Riddell Faculty of Environment, Earth, and Resources
Natural Resources Institute
University of Manitoba
Winnipeg

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Table of Contents

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3 Project Scope
4 Project Schedule
5 Resource Plans
6 Managing Relationship
7 Risk Management
8 Quality Management
9 Budget Summary
10 Change Management

Appendices

Appendix A Background Information Report
Appendix B Project Concept
Appendix C Schedule Details
Appendix D Resource Needs Assessments & Skills Inventory
Appendix E Managing Relationships - Details
Appendix F Risk Management - Details
Appendix G Budget Details
Guide for Preparing the Executive Summary

Bear in mind that the executive Summary is intended to provide someone in an executive position the opportunity to get a clear and reasonably inclusive window on your integrated project plan (IPP) without having to read 40 pages. Thus you will need to cover the substance of your plan with enough detail to ensure the project and its context can be understood while refraining from weighing it down with non-essential detail.

The executive needs to feel confident after reading the executive summary that the proposal is sound, that it has been well planned, that the plan is resilient and adaptable and the intended outcomes are all but guaranteed.

An Executive Summary is typically two pages or less. You may extend beyond that but realize you do so at some peril that it will not be fully read and absorbed. An Executive Summary typically does not have headings or sub-headings within it, so focused and tight paragraphs are the key to capturing all important elements but still retaining a flow to the summary.

To that end, you should include the following.

- Provide an overview of your project that includes a summary of the key contextual components of it and where and with whom you will do your project.
- Share briefly the business justification for your project
- Identify your goal and objectives along with the deliverables that will be produced.
- Outline key methods that you will use to produce the deliverables.
- Provide a guide to the content of the integrated project plan in addition to the previously mentioned items (e.g. context, business justification, goals, objectives, deliverables, methods)*. In completing this, note that simply stating that the plan contains a risk assessment or a quality management plan, or a schedule, for example, is insufficient. Add one or two key sentences to each section included in the main body of the IPP (see Table of Contents guide in Assignment 7 description for those sections) along the lines of the following examples. You may choose to use a bulleted listing of the IPP sections:
  - “A rigorous assessment of risks to the project has been conducted. The most significant risk to emerge is the possibility that there will be insufficient uptake of the initial recommendations. Risk responses have been developed for this and other risks such that achievement of the intended outcomes is virtually assured,” or
  - “Strict adherence to quality standards is critical to this project. A policy and procedures are in place to assure that quality is attained and maintained, checked and re-checked throughout the duration of the project,” or
  - “The project schedule is practical. The project will be initiated by 2021–01-31 and will be completed by 2021-10-15. This meets the needs of all partners while flexible enough to allow for some unlikely but possible delays the causes of which may be beyond our control.”
• Typically, the Executive Summary will neither list nor provide specific insights into the appendices. However, a short paragraph noting and briefly describing the first appendix “Background Information” is important to have in your Executive Summary.

Finally, always bear in mind that the person who needs an executive summary may have a considerable role in deciding the fate of your integrated project plan. They may exercise their judgement on the fate of your plan solely on the basis of having read your Executive Summary. This could arise if your partner or sponsor needs higher-level approval of your project within their own organization.

*Do not confuse a guide to the contents with a Table of Contents. A Table of Contents for your proposal should be provided as a separate page. In your proposal, it should follow the title page and precede the Executive Summary.
### Integrated Project Plan

**Table of Contents and Section/Appendix Descriptions**

<table>
<thead>
<tr>
<th>Section Heading</th>
<th>Estimated Length</th>
<th>Description</th>
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<tbody>
<tr>
<td>1 Executive Summary</td>
<td>2-3 pages</td>
<td>Provides an overview of your project that includes a summary of the key contextual components of your project. Please see the guide for completing an executive summary.</td>
</tr>
<tr>
<td>2 Project Charter</td>
<td>Modified</td>
<td>From Assignment #2. As we are now compiling documents, as you create your IPP you may want to try and reduce redundancy by removing working estimates. The main one from the Charter is the resource and budget estimates that should now be clearly listed in your budget details appendix and summarized in your budget summary. You will want to keep an original of the project charter on file in case any questions emerge related to the original estimates and to have the sign off of project sponsors. Note: Once project begins you should track charter changes in your change management plan (see below).</td>
</tr>
<tr>
<td>3 Project Scope</td>
<td>As written</td>
<td>From Assignment #3. Note: Once project execution begins you will track scope changes in your change management plan (see below).</td>
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<tr>
<td>4 Project Schedule</td>
<td>As needed</td>
<td>You have been working toward your schedule through the development of a List of Activities, WBS, Sequence Diagramme, milestones, and through new work you will need to do to identify your critical path, availability of people, etc. These can now be drawn upon to create a schedule of activities, often organized by deliverables. Remember, we also noted you may want to include some activities related to managing relationships, risk or quality that are not specific to a deliverable. Milestones are also included in the schedule as a way to track progress. You will refer to the appendix that includes your List of Activities, WBS, Sequence Diagramme, Milestones, Critical Path Calculation as supporting materials. Note: You should use project management software or spreadsheet software to create your schedule.</td>
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<tr>
<td>5 Resource Plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Skills &amp; Knowledge</td>
<td>2 paragraphs</td>
<td>You will use your summary paragraphs from assignment 4 to complete this section. You will highlight missing skills knowledge and</td>
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<tr>
<td>ii. Materials, Supplies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>Pages</td>
<td>Content</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
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<tr>
<td>Equipment</td>
<td></td>
<td>how you will acquire them (training, contracts) in sub-section i Resource (Skills &amp; Knowledge) Needs Acquisition Plan. Paragraph 2 will be sub-section ii Resource Needs (Materials, Supplies &amp; Equipment) and Procurement Plan in which you will highlight any extraordinary material resource needs and their procurement. These will be supported by the tables you created that you will put into an appendix with a reference to those details in your plans.</td>
</tr>
<tr>
<td>6 Managing Relationships</td>
<td>As needed</td>
<td>You will use your work from assignment five with two sub-sections as indicated. Sub-section i will be supported by the material in an appendix, namely; Table 1 Considerations for Engagement … and Table 2 External Interested Parties Register. You should make appropriate reference to that appendix in your linking text for this section.</td>
</tr>
<tr>
<td>7 Risk Management</td>
<td>As needed</td>
<td>You will use your work from assignment 6 to create this section. In your linking text for this section you will indicate that you have analysed risk through the identification of risks in a probability and impact matrix and will monitor risk through the use of a risk register that can be found in the associated appendix. In this section you provide a risk response plan for those you considered to be most significant.</td>
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<tr>
<td>8 Quality Management</td>
<td>As needed</td>
<td>As quality management template is largely textual you will utilize the plan you developed in assignment 6 for this section as written.</td>
</tr>
<tr>
<td>9 Budget Summary</td>
<td>½ - 1 page</td>
<td>You may summarize your budget into a simple chart with key resource groups indicated (Personnel (stipends, wages, contracts), Travel (mileage, car rental, accommodations, meals), Equipment &amp; Supplies, etc. This can be supported by a detailed budget in the appendix if your project is complex with many budget items. You will draw upon your resource needs assessments to create your budget from assignment 4.</td>
</tr>
<tr>
<td>10 Change Management</td>
<td>½ - 1 page</td>
<td>Outline how you will manage change within your project. Change needs to include those changes demanded or requested by interested parties as well as those you choose to make for adaptive management reasons. Recognize that changes made in one area may affect another, therefore, at a minimum, your process must consider</td>
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charter, scope, budget, schedule, quality and risk. Remember, you had a charter & scope management plans for the planning phase, your change management plan will now be the way you manage project change during the execution and through to the close of the project. This section should also include a description of the process you will use to decide whether (eg. meeting with project sponsors) and how a change will be made (eg. revised charter, scope, etc.).

**Appendices**

<table>
<thead>
<tr>
<th>A. Background Information Report (Practicum Students for IPP meeting. Not required for course IPP)</th>
<th>As needed</th>
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<tr>
<td>(Conceptual, Context, Methodology) This will be something that is produced during project planning for your practicum and include enough conceptual, contextual and methodological detail for your committee to be satisfied you are ready to move to the execution phase of your project. You should have enough understanding of concepts you will use, the setting/context of your project and methodologies that you will need to employ. You may provide a short summary of the context and main methodologies in your executive summary and point the reader to this appendix for more detail. You will draw upon this material in your reflections that are a component of the final chapter in your practicum document.</td>
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<thead>
<tr>
<th>B. Project Concept</th>
<th>As written</th>
<th>From Assignment #1</th>
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<tr>
<td>C. Schedule Details (Activity List, WBS, Sequence Network, Milestones &amp; Critical Path Charts/Diagrammes)</td>
<td>As written</td>
<td>From Assignment #3</td>
</tr>
<tr>
<td>D. Resource Needs Assessments &amp; Skills Inventory</td>
<td>As written</td>
<td>From Assignment #4</td>
</tr>
<tr>
<td>E. Managing Relationships – Details (Considerations for Engagement … and External Interested Parties Register)</td>
<td>As written</td>
<td>From Assignment #5</td>
</tr>
<tr>
<td>F. Risk Management - Details (Probability &amp; Impact Matrix of Project Risks &amp; Risk Register)</td>
<td>As written</td>
<td>From Assignment #6</td>
</tr>
<tr>
<td>G. Budget Details</td>
<td>As needed</td>
<td>To be developed, build upon estimates from Assignment #4</td>
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