MA program in Global Sustainability
Academic Capstone Experience (ACE)

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<th>Capstone Research Project</th>
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<td>3-6 credit hours</td>
</tr>
<tr>
<td>Semester</td>
<td>Fall, Spring and Summer</td>
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COURSE DESCRIPTION:
The Kiran C. Patel College of Global Sustainability (PCGS) offers a Master of Arts Degree in Global Sustainability. In our innovative MA program, students pursue a multidisciplinary study of sustainability through environmental, technical, social, and economic dimensions. The Academic Capstone Experience (ACE) is a major component of the MA program. It provides students an opportunity to get practical experience, apply a skill set to a real world situation or conduct sustainability research beyond your coursework. All Patel College students are required to complete a capstone project in the US and/or abroad prior to graduation. This capstone course is variable 3-6 credit hours. A topic or project relevant to your concentration area should be the focus of your capstone course. The capstone will help you prepare for future careers in sustainability.

IDS 6935 – CAPSTONE RESEARCH PROJECT:
The capstone research project course provides academic flexibility and viable alternatives to capstone Internships. This course is designed to give students a rich and diverse research experience. The capstone research project should be practical research, using quantitative or qualitative methods, with or without human subjects. Each capstone research project will be supervised by their PCGS Concentration Director/Project Supervisor and a Secondary Advisor or an External Supervisor. While it is possible for the Concentration Director or Project Supervisor could oversee the student’s research alone, it is recommended that the student get the benefit of additional advice, insights and expertise on content, methodology, strategy, analysis, interpretations, etc. from another USF professor or an expert in the field during the course of the project.

Having a Secondary Advisor has its advantages when that person has more expertise on a subject than the Concentration Director or has more time to oversee the student’s progress for some reason. The Secondary Advisor can be another faculty member in PCGS or one within the USF System and can act as the Project Supervisor in behalf of or in the absence the Concentration Director under certain circumstances.

An External Supervisor is someone outside of USF with a particular expertise in the student’s research area that is not available within the USF System. If the student is conducting research off campus and with a specific company, agency or organization, his or her External Supervisor could be someone within that host institution who has access to information or data, grants the student permission to gather data in that environment, and directly observes or participates in the research effort.
Choosing a Research Topic
Selecting a research topic can be difficult for some students, but it is possible to do fairly quickly. It is recommended to select a topic that best suits your scholastic objectives and career goals. The Concentration Director and Secondary Advisor or External Supervisor can assist you in selecting the capstone topic, but you must also be proactive in this endeavor. The topic should contribute to the development of a new or existing body of knowledge about an issue, program, or policy, or confirm existing data through replication of earlier work. Alternatively, having access to pre-existing research and a viable project location can help with the selection of a research project, if the topic is relevant to your concentration(s) and research interests. Often students can draw inspiration and guidance from the host partners and their research projects. Whether you pick your own research topic and methodology and apply it to the host site, or you collaborate in an ongoing study, it is important that your project focuses on sustainability or sustainable development, has local, national, regional or global implications, and provides a quality capstone experience.

Research Project Agreement (RPA)
The specific content and procedures of your capstone research project are based on the Research Project Agreement (RPA) as approved by your PCGS Concentration Director, an External Supervisor or a USF Secondary Advisor, and the PCGS Dean, Director or Designate. The student will only be allowed to register for IDS 6935 once all signatures are present on the RPA following careful discussion and planning, since it will form the basis of the capstone experience and be the foundation of Capstone Research Project. The RPA will be graded by your Project Supervisor based on content, quality and effort described later in syllabus.

Research Project Guidelines
IDS 6935 – Capstone Research Project registration should be done in your final semester of the MA program. Final project design should begin one or two semesters prior, and it is recommended that you begin writing your final paper during your capstone period so you can graduate on time. You will be expected to become familiar with the literature surrounding the concentration, topic or problem, and be knowledgeable about the methods necessary to complete the project. You will also be expected to generate recommendations, programs, policies or further research in a specified field that emerge from the capstone experience.

A Research Project Update will be submitted to the Concentration Director/Project Supervisor midway through the semester, if you are taking 3 credit hours. This Research Project Update will act as a progress report and be graded as the First draft of your Capstone Research Project. There will be a second update draft if you are taking the course for 6 credit hours. An outline of the content required for the Research Project Update(s) is described later in the syllabus.

When the Capstone Research Project is finished, copies of your Capstone Research Final Paper will be submitted via Canvas to the Project Supervisor at least two weeks prior to the end of the semester. The page length of the Capstone Research Final Paper will be 15-30 pages (3 credit hours) or 30-60 pages (6 credit hours). The paper should be prepared in American Psychological Association (APA) style. You should use APA rules throughout your course of study. http://owl.english.purdue.edu/owl/resource/560/01/ is an excellent APA style resource. The Concentration Director/Project Supervisor will approve the Capstone Research Final Paper as a gradable paper represented in the content, quality and effort expressed in the written document and grade it.

Capstone Project Presentation
A Project Presentation of your research will be conducted with your Concentration Director/Project Supervisor under special circumstances and/or in a public forum during the last week of the semester that you plan to graduate. The project presentation will be graded by your Project Supervisor based on content, quality and effort.
Grading of Capstone Course (3 credit hours)
A specific letter grade (A, B, C, D, or F with a +/- gradient scale) will be assigned to your Final Grade on Canvas in the Capstone Course based on the cumulative grades of the four (4) Capstone Tasks specific to Patel College requirements for research projects.

Course Grading System (IDS 6935 – Capstone Research Project: 3 credit hours)

Capstone Tasks %:
1) Research Project Agreement (RPA) (10%)
2) Project Update (30%)
3) Research Project Final Paper (40%)
4) Project Presentation (20%)

Patel College Capstone Tasks Rubric: 500 points
1) Research Project Agreement (RPA) (50 pts.)
2) Project Update (150 pts.)
3) Global Sustainability Research Project Final Report: Submit completed 20-30 page PCGS Capstone Research Project Final Paper to be graded on content, quality and effort. (200 pts.)
4) Project Presentation: 10-slide PowerPoint. (100 pts.)

Grading of Capstone Course (6 credit hours)
A specific letter grade (A, B, C, D, or F with a +/- gradient scale) will be assigned to your Final Grade on Canvas in the Capstone Course based on the cumulative grades of the five (5) Capstone Tasks specific to Patel College requirements for research projects.

Course Grading System (IDS 6935 – Capstone Research Project: 6 credit hours)

Capstone Tasks %:
1) Research Project Agreement (RPA) (5%)
2) Project Update 1 (15%)
3) Project Update 2 (20%)
4) Research Project Final Paper (40%)
5) Project Presentation (20%)

Patel College Capstone Tasks Rubric: 1000 points
1) Research Project Agreement (RPA) (50 pts.)
2) Project Update 1 (150 pts.)
3) Project Update 2 (200 pts.)
4) Global Sustainability Research Project Final Report: Submit completed 30-60 page PCGS Capstone Research Project Final Paper to be graded on content, quality and effort. (400 pts.)
5) Project Presentation: 20-slide PowerPoint. (200 pts.)
**Student Learning Outcomes (SLO):**

**Primary Content:** Students will demonstrate the ability to apply the concepts and principles of sustainability to socially, environmentally, or economically based research issues. *(Assessment of SLO based on performance in Capstone Research Project Final Paper)*

**Critical Thinking:** Students will demonstrate the ability to conduct research on local, national, regional, or global issues related to their academic concentration, and offer recommendations and solutions to sustainability problems based on research findings. *(Assessment of SLO based on performance in Capstone Research Project Final Paper)*

**Communication:** Students will demonstrate the ability to communicate effectively in public their study’s research design, methods, analysis and findings, and through their research explain their knowledge, discoveries and insights to individuals and communities at local, national, regional, or global levels as related to their academic concentration. *(Assessment of SLO based on performance in Capstone Research Project Presentation)*

**COMMUNICATION:**
Email is the best way to reach PCGS faculty and staff. If you are asking a question or making a comment regarding The Capstone Research Project process, in general or specifically, please send your email to Dr. Joseph Dorsey, Director, Academic Capstone Experience (ACE) at: dorseyjw@usf.edu. Use the subject line effectively by using A meaningful line of what your email is about. Any personal, course related, or confidential issues should be Directly communicated to the Concentration Director via email.

**ACADEMIC MISCONDUCT:**
The University of South Florida policies apply to all aspects of this course. There is zero tolerance for cheating, Plagiarism, and other forms of academic dishonesty. Plagiarism will result in a grade of F for the course and may be referred to the University of South Florida for disciplinary action.

**STUDENT DISABILITY SERVICES:**
Students in need of academic accommodations for a disability may consult with the Office of Services for Students with Disabilities to arrange appropriate accommodations. Students are required to give reasonable notice (typically 5 working days) prior to requesting an accommodation.

**TITLE IX MANDATORY REPORTING:**
Per [USF's Title IX Policy (0-0004)](http://www.usf.edu/diversity/title-ix/index.aspx), all faculty (including adjunct instructors and graduate teaching assistants) are considered "responsible employees" and are required to promptly report allegations or instances of sexual harassment (including sexual violence) by or against any USF System employee(s), student(s), or group(s). Responsible employees are required to attend Title IX training, which can be accessed via [MyUSF](http://www.usf.edu/diversity/title-ix/index.aspx) under GEMS Self-Service (navigate to Learning and Development/Request Training Enrollment/Search by Course Name). For more information visit [http://www.usf.edu/diversity/title-ix/index.aspx](http://www.usf.edu/diversity/title-ix/index.aspx)
### IDS 6935 – Capstone Research Project
#### Research Project Agreement (RPA)

### Personal Information

<table>
<thead>
<tr>
<th>Student Name (First name and Surname):</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration(s):</td>
<td>Phone Number(s):</td>
</tr>
<tr>
<td>USF Email:</td>
<td></td>
</tr>
<tr>
<td>Are you employed by the State of Florida?</td>
<td>Yes</td>
</tr>
<tr>
<td>Are you an ONLINE ONLY student?</td>
<td>Yes</td>
</tr>
<tr>
<td>What is your ACE Project track?</td>
<td>3 Credit hour course</td>
</tr>
<tr>
<td>If you are taking the 3 credit hour track, have you completed the research methods course prior to starting your ACE?</td>
<td>Yes</td>
</tr>
<tr>
<td>Credit Hours Earned prior to internship:</td>
<td>Core</td>
</tr>
<tr>
<td>Research Abroad?</td>
<td>Yes</td>
</tr>
<tr>
<td>If YES, also register with USF World. Go to istart to register</td>
<td></td>
</tr>
<tr>
<td>If International Student, have you applied for CPT or Research Abroad?</td>
<td>CPT</td>
</tr>
<tr>
<td>(see page 4 for details)</td>
<td></td>
</tr>
</tbody>
</table>

### Research Project Information

| Title of Project and/or Position: |  |
| Proposed Location:               |  |
| Name of Organization:            |  |
| Type of project                  | Office based | Fieldwork | Lab-work | Other |  |
| External Supervisor & Contact information (Email, Phone and Address) |  |
| Proposed Project Duration (See page 3, Note 4) |  |
| Help required from PCGS? If yes, Explain: |  |
| Concentration Director:          |  |

For official use only: CRN #:
**RESEARCH PROJECT DETAILS** (Proposal)

**Title:** Your topic should be informative, specific, and concise yet convey the main ideas clearly

**Background:** The background should describe the context from which the research idea has emerged. It should also provide evidence that justifies the research’s significance and the urgency to study a problem in order to better understand it and/or contribute to its solution.

**Problem Statement:** The problem statement aims to define the research problem that has been detected and needs a better understanding and/or solution in the practical and/or theoretical world. It should clearly state the nature of the problem and its known or estimated magnitude/extent.

**Objectives:** The research objectives are a statement or listing of the specific aims arising directly from the general purpose of the study. Research objectives are similar to goals and should spell out what the research is supposed to accomplish.

**Research Questions:** The research questions should be relevant to the problem statement, related to the research objectives and support the investigative curiosity underlying the intended study.

**Significance of Study:** This refers to the relevance of the study in terms of academic contributions and practical use that might be made of the findings. The significance should reflect on the practical relevance of the findings to organizations.

**Scope of Study:** The scope provides the boundaries of the research in terms of depth of investigation, content, sample size, geographical and theoretical coverage as well as the scope of time.

**Literature Review:** The literature review deals with the analysis of existing literature on the subject and critical discussion of contributions and contradicting views as well as possible weaknesses or gaps. Your aim is to convey the knowledge and ideas that have been established and their relative strengths and weaknesses. Your literature review should be defined by a guiding concept (e.g., your research objective, the problem you are discussing or your thesis). It is not just an annotated list of the material available, or a set of summaries.

**Methodology:** This is a detailed description of the chosen research methods and instruments to solving the research problem. You should not only tell the reader “what” you will do, but “how” and “why” as well. It should include the research design, description of the data source(s), description of data collection methods, data quality control (which refers to reliability and validity of instruments), and measurements (statistics, formulae or scales in the study and data analysis).

**Expected Outcomes:** Research experience allows students to better understand the topic under study, provides the ability for the student to form a stance on the subject matter. More so, it helps the student find gaps in the area of study and allows the student to add on the literature that is already available. Graduate research projects provide a starting point for students planning to pursue their doctoral studies.

**References:** An existing and/or potential list of information sources for the study. A reference list should be in APA style, in alphabetical order and contains the works cited in the text.
It is understood that:

1. The Capstone Research Project is a 3 – 6 credit graded course that fulfils the capstone requirement. Please ensure that tuition fees are paid, or a hold may be placed on your account which may prevent you from graduating.

2. All courses must be completed by the student before enrolling in the capstone course.

3. If a student is traveling abroad, he/she must complete ALL required documents with USF World before he/she is enrolled in the capstone course.

4. Capstone Research Project Timelines MUST begin and end within the USF Academic Calendar for all semesters. No Overlaps.

5. A copy of the final paper must be submitted to both the student’s Concentration Director and Secondary Advisor or External Supervisor and uploaded onto Canvas before a grade will be assigned by the Project Supervisor. Late work will be penalized.

6. During the research, students must abide by the guidelines that they agree upon with both their Concentration Director and Secondary or External Supervisor.

7. All international students should apply for reduced course load if they are only doing the research project in their last semester to graduation.

8. The Final Presentation is mandatory and will be graded by the Concentration Director. If a student cannot attend the presentation in person, they must present in an approved format agreed upon by both the Concentration Director and the student.

Partners:

Please email a copy of your research rules and regulations to the students and the PCGS Internship Coordinator if available to the Internship Coordinator, Winnie Mulamba: wmulamba@usf.edu

If a student does not follow the partner’s rules and regulations, the internship partner has the right to terminate the research partnership after this agreement is signed.
Guide for International Students Participating in Global Sustainability Internships

Internships inside the US Requires You to Obtain CPT Approval on Your I-20

To apply for CPT you will need to:

- Log into istart (www.istart.usf.edu)
- Click on F-1 Practical Training – Apply
- Click on CPT Application
- Read the CPT Online Presentation
- Obtain an offer letter on the companies letterhead with the stated information
  - The student's name
  - The company name and address
  - Description of CPT employment
  - Start and end dates
  - Number of hours per week you will be employed
  - Name of supervisor
  - Signature of Hiring Official
- Click on Start a New Request
- Pass the quiz with a 100%
- Upload the offer letter
- Fill out the application
  - Be sure to list Randy Pape has your Graduate Coordinator and select Type 2 CPT

Once you have submitted the request let your Graduate Coordinator (Randy Pape) know that he will receive an email to verify and confirm the internship is a part of your program of study. He will need to go to the email to complete and submit his section of the request. Once he does we will see the request and will review it. If it is okay we will approve it and issue you a new I-20 with the CPT approval on it. You cannot start your internship until you have the new I-20 with the CPT Approval on it.

Internships outside the US Requires You to Obtain Approval for Research Abroad

To apply for Research Abroad you will need to:

- Log into istart (www.istart.usf.edu)
- Click on Other Services
- Click on Study or Research Abroad Approval
- Select I wish to participate is research or an internship abroad
- Select the appropriate Term of participation
- Be sure to list Randy Pape has your Graduate Coordinator

Once you have submitted the request let your Graduate Coordinator (Randy Pape) know that he will receive an email to verify that the internship is abroad. He will need to go to the email and complete his section of the request. Once he does we will see the request and will review it. If it is okay we will approve it and issue you a new I-20. You should use this I-20 to travel.
Deadlines for Research Applications (Project Update Report) deadlines are subject to changes:

*Failure to meet deadline will result in cancelation of capstone*
Fall Research- June 1\textsuperscript{st}
Spring Research- September 1\textsuperscript{st}
Summer Research- February 1\textsuperscript{st}

**Deadlines for RPA:**

*Failure to meet deadline will result in cancelation of capstone*
Fall Research- August 1\textsuperscript{st}
Spring Research- December 1\textsuperscript{st}
Summer Research- May 1\textsuperscript{st}

**Deadlines for Project Update:**

Failure to meet deadline will result in cancelation of capstone*
Fall Research- October 12\textsuperscript{th}
Spring Research- March 15\textsuperscript{th}
Summer Research- June 15\textsuperscript{th}

**Deadlines for Final Paper:**

**Failure to meet deadline will result in cancelation of graduation**
Fall Research- November 28\textsuperscript{th}
Spring Research- April 24\textsuperscript{th}
Summer Research- July 25\textsuperscript{th}

**Oral Presentation:**

***An in person presentation or an approved format agreed upon by both the Concentration Director and the student is mandatory on these days, ***
Summer Research- Thursday before Commencement
Fall Research- Thursday before Commencement
Spring Research- Thursday before Commencement

Sign in order:

______________________________/__________________________/ ______________
Student’s Name (Print)                               (Signature)                        (Date)

_____________________________/_____________________________/ ______________
PCGS Concentration Director (Print)          (Signature)                          (Date)

_______________________________/_______________________________/ ______________
Secondary or External Supervisor (Print)          (Signature)                          (Date)

___________________________/_______________________________/ ________________
Dean, Director or Designate (Print)             (Signature)                                   (Date)
“Title of the Project”

Name

U-ID

Submission Date
1 Introduction

(The introduction should give a comprehensive overview of the entire research report, highlighting the background, and stating the problem, purpose of the study, objectives, questions, significance, and scope.)

1.1 Background
The background should describe the context from which the research idea has emerged. It should also provide evidence that justifies the problem's significance and the urgency to study it in order to better understand it and/or contribute to its solution.

1.2 Problem Statement
This section aims to define the research problem that has been detected and needs a better understanding and/or solution in the practical and/or theoretical world. It should clearly state the nature of the problem and its known or estimated magnitude/extent.

1.3 Objectives
The research objectives are a list of the specific aims arising directly from the general purpose of the study. The research objectives should spell out what the research is supposed to accomplish.

1.4 Research Questions
The research questions should come directly from the research objectives and state the investigative curiosity underlying the intentions study.

1.5 Significance/Justification
This refers to the relevance of the study in terms of academic contributions and practical use that might be made of the findings. The significance should reflect on the practical relevance of the findings to organizations.
1.6 Scope of this Project

The scope provides the boundaries of the research in terms of depth of investigation, content, sample size, geographical and theoretical coverage as well as the scope of time.

2 Literature Review

The literature review deals with the analysis of existing literature on the subject and critical discussion of contributions and contradicting views as well as possible weaknesses or gaps. Your aim is to convey the knowledge and ideas that have been established and their relative strengths and weaknesses. You literature review should be defined by a guiding concept (e.g., your research objective, the problem you are discussing or your thesis). It is not just an annotated list of the material available, or a set of summaries.

3 Methodology/Materials/Methods

This is a detailed description of the chosen research methods and instruments to solving the research problem. You should not only tell the reader “what” you will do, but “how” and “why” as well. It should include the research design, description of the data source(s), description of data collection methods, data quality control (which refers to reliability and validity of instruments), and measurements (statistics, formulae or scales in the study and data analysis). In some approved cases, a business plan would be acceptable as a method of inquiry, project development and professional competence and serve as a supplement for applied project research.

4 Expected Outcomes

This section presents your assumed or potential research results by allowing you to form a stance on the subject matter and predict certain outcomes in the study.
References

An existing and/or potential list of information sources for the study. A reference list should be in APA style, in alphabetical order and contains only the works cited in the text.
University of South Florida

Patel College of Global Sustainability

Capstone Research Project Update 2

(200 points, only if taking 6 credit hours)

“Title of the Project”

Name

U-ID

Submission Date
1. Introduction

(The introduction should give a comprehensive overview of the entire research report, highlighting the background, and stating the problem, purpose of the study, objectives, questions, significance, and scope.)

Background
The background should elaborate the context of your research and justify its significance and urgency as a study in order to better understand its contribution to the relevant body of knowledge.

Problem Statement
This section continues to define the research problem that has been detected and needs a better understanding and/or solution in the practical and/or theoretical world. Clearly state the nature of the problem and its known or estimated magnitude/extent.

Objectives
The research objectives are the goals arising directly from the general purpose of the study. The research objectives should clarify what your research seeks to accomplish.

Research Questions
The research questions support the research objectives and demonstrate the investigative curiosity underlying the study.

Significance/Justification
Focus on the relevance of the study in terms of academic contributions and practical use that might be made of the findings. The significance should reflect on the practical relevance of the findings to organizations.
Scope of this Project

The scope provides the boundaries of the research in terms of depth of investigation, content, sample size, geographical and theoretical coverage as well as the timeline to conduct the study.

2. Literature Review

Expand your analysis of existing literature on the subject and critical discussion of contributions and contradicting views as well as possible weaknesses or gaps in the literature. Your literature review should be defined by a guiding concept (e.g., your research objective, the problem you are discussing or your thesis).

3. Methodology

Fine tune your description of the chosen research methods and instruments used to solving the research problem. It should include the research design, description of the data source(s), description of data collection methods, data quality control (which refers to reliability and validity of instruments), and measurements (statistics, formulae or scales in the study and data analysis). In some approved cases, a business plan would be acceptable as a method of inquiry, project development and professional competence and serve as a supplement for applied project research.

4. Proposed Results of Research

This section presents your assumed or potential research results based on where you are currently in your study currently.

5. References

Update 2 should have additional reference material than previous draft and provide the information necessary to identify and retrieve each source. A reference list should be in APA style, in alphabetical order and contains only the works cited in the text
Patel College of Global Sustainability

Capstone Research Final Paper

(200 points, if 3 cr. hrs. or 400 points, if 6 cr. hrs.)

Insert relevant project photo, image or figure

Title of the Project

Name and U-ID

Submission Date
Master of Arts in Global Sustainability
Research Project Final Paper

by

(Your Name)

Supervisors: Concentration Director

Name (PCGS)
Secondary or External Supervisor Name (PCGS, USF or Organization)

University of South Florida
Patel College of Global Sustainability

(Submission date)
Abstract

The abstract is a short summary informing readers of the report’s contents. It should present the important aspects of the research project such as its purpose and goals, describe the problem being investigated, discuss the conceptual framework, outline the method of investigation, summarize the candidate's principal research findings, describe the results obtained, and state the conclusions reached. The abstract should be objective, precise, easy to read, and no more than 400 words.
Acknowledgements

Acknowledge individuals that helped you in your research.
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Figure 2: Insert figure title.................................................................................................x

Figure n: Insert figure title.................................................................................................x

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Table 2: Insert table number and caption............................................................................x

Table n: Insert table number and caption............................................................................x

List of Notations

CBA Cost Benefit Analysis (example)
GIS Geographic Information Systems (example)

Note: Use Arial, size 12 pt., line spacing 1.5 for all lists of figures, tables and notations, it applicable. List notations in alphabetical order, see examples.
1 Introduction

The introduction should immediately follow the chapter heading and does not require its own header. The introduction should give a comprehensive overview of the entire research report, highlighting the background, and stating the problem, purpose of the study, objectives, questions, significance, and scope.

1.1 Background (3-5 Pages)

The background should describe the context from which the research idea has emerged. It should also provide evidence that justifies the problem’s significance and the urgency to study it in order to better understand it and/or contribute to its solution.

1.2 Problem Statement (1-2 Pages)

This section aims to define the research problem that has been detected and needs a better understanding and/or solution in the practical and/or theoretical world. It should clearly state the nature of the problem and its known or estimated magnitude/extent.

1.3 Objectives (1/2 Page)

The research objectives are a statement of the specific aims arising directly from the general purpose of the study. The research objectives should spell out what the research is supposed to accomplish.

1.4 Research Questions (1/2 Page)

The research questions should come directly from the research objectives and state the investigative curiosity underlying the intended study.

1.5 Significance/Justification (1/2 Page)

This refers to the relevance of the study in terms of academic contributions and practical use that might be made of the findings. The significance should reflect on the practical relevance of the findings to organizations.

1.6 Scope of this Report (1/2 Page)

The scope provides the boundaries of the research in terms of depth of investigation, content, sample size, geographical and theoretical coverage as well as the scope of time.
2  \textbf{Literature Review} (5-10 Pages)

The literature review deals with the analysis of existing literature on the subject and critical discussion of contributions and contradicting views as well as possible weaknesses or gaps. Your aim is to convey the knowledge and ideas that have been established and their relative strengths and weaknesses. Your literature review should be defined by a guiding concept (e.g., your research objective, the problem you are discussing or your thesis). It is not just a descriptive list of the material available, or a set of summaries.

2.1 \textbf{Subheadings}

Note that Subheadings are headings of subsections. If you have several topical areas in the Literature Review, be sure to number them accordingly and provide the appropriate subheading.

\textbf{Citation:} Citations are a major component of a review of the literature and should be in accordance with the approved format (see reference format guidelines).

\textbf{Captions:} Note that table captions are given above the table, whereas figure captions are placed below the figure.

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|c|}
\hline
Soil type          & Total porosity (%) & Hydraulic Conductivity (m/d) & Bulk density (g/cm) \\
\hline
Peat (Fibric)     & > 90              & >1.3                         & <0.09                      \\
Mineral (Gravel)  & 20                & 100-1000                     & ~2.1                       \\
\hline
\end{tabular}
\caption{Insert table name}
\end{table}

\textit{Example if Inserting a Table}

\textit{Source:} adopted from Faulkner and Richardson, 1989
3 Methodology/Materials/Methods (3-12 Pages)

This is a detailed description of the chosen research methods and instruments to solving the research problem. You should not only tell the reader “what” you will do, but “how” and “why” as well. It should include the research design, description of the data source(s), description of data collection methods, data quality control (which refers to reliability and validity of instruments), and measurements (statistics, formulae or scales in the study and data analysis). In some approved cases, a business plan would be acceptable as a method of inquiry, project development and professional competence and serve as a supplement to applied project research.

3.1 Subheadings

Note that Subheadings are headings of subsections. If you have several topical areas in the Methodology section, be sure to number them accordingly and provide the appropriate subheading. For example, 3.1 Research Design...3.2 Research Methodology...etc.

5) Research Results / Findings (5-10 Pages)

This section presents your research results in an objective and comprehensive manner. Where appropriate, the findings should be illustrated or summarized with tables and figures. In any case, tables and figures must be drawn in such a way that they can be read on their own, independent of the surrounding text.
Do not forget to include measurement units and an explanation of abbreviations. References to tables and figures should be made in the text (e.g., see Table 1).

5 Discussion and Interpretation of Results / Findings (3-10 Pages)

The discussion section links your own findings presented in the results section with those of others. What do your results mean? Argue for and against the findings and the related theoretical concepts. Discuss your findings in the background, and remember to discuss the extent to which the findings may have been influenced by the chosen methods.

6 Recommendations (2-3 Pages)

This section focuses on the reflective thoughts on the findings, which are essential to providing meaning to the research. Answering the research questions and research objectives is the main purpose of this section. It is here that the main findings, recommendations, practical application of the results and the way forward are discussed.

7 Conclusion (1-3 pages)

This final section consist of your summary, closing thoughts and reflections on the research project and the topic of study.

References (list as many as cited and relevant to your study)

This should be at the end of the report and provide the information necessary to identify and retrieve each source. A reference list should be in APA style, in alphabetical order and contains only the works cited in the text.

Appendix

The appendix should include information that can be missed in the direct text body. It is relevant for the understanding of the research and important steps taken. This could be inclusion of the original data, further detailed statistical analysis, instruments, program implementation codes, maps, areas visited, etc.