Master of Science in Public Policy and Management
Master of Science in Public Policy and Management (Digital Transformation and Analytics specialisation)
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1. **INTRODUCTION**

This handbook provides specific information on the curriculum and program requirements for the Master of Science in Public Policy and Management Program. CMU-A also publishes a separate handbook which details campus-wide policies and procedures pertaining to educational planning, program committee, teaching, scheduling and course credit, performance standards, academic standing, ethics and discipline, student privacy rights and major forms and deadlines. Students should familiarize themselves with both handbooks as they include information that is critical for your success. Both handbooks can be obtained from the CMU-A website.

2. **MISSION STATEMENT**

The mission of the Master of Science in Public Policy and Management program is to educate innovative, ethical leaders who create and implement policy, manage organizations effectively, transform organizations, and develop new solutions to important social issues.

Students in the MSPPM should be able to:

- Describe the theoretical foundations of government, public policy development and adoption and professional management;
- Develop and apply technical and analytical tools, skills and techniques in real world projects;
- Become leaders who function effectively in diverse groups and operate in an increasingly connected world.

We achieve this mission through:

- Rigorous yet practical, innovative curricula and programs; An academic community that values diversity, promotes creative thought, and mandates ethical behavior;
- Individual attention to the needs and aspirations of all students; and
- A culture that nurtures personal commitment to serve the public interest.
3. CURRICULUM

3.1 MSPPM – 12 month track

Studying full time, you will complete the MSPPM program in three consecutive semesters. Studying part time, you may take up to five years (15 semesters) to complete the program. The MSPPM curriculum is structured with a set of core courses and electives. In order to successfully complete the MSPPM program, you must complete the following:

- 168 units of course credit which includes:
  - 138 units of core requirements
  - 30 units of electives, and
- Achieve a cumulative quality point average of at least 3.0.
- Attendance of at least five convocations.

<table>
<thead>
<tr>
<th>Core Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-705</td>
<td>Policy Analysis I</td>
<td>12</td>
</tr>
<tr>
<td>90-706</td>
<td>Public Finance: Theories and Cases</td>
<td>12</td>
</tr>
<tr>
<td>90-707</td>
<td>Statistical Reasoning</td>
<td>12</td>
</tr>
<tr>
<td>90-710</td>
<td>Applied Economic Analysis I</td>
<td>12</td>
</tr>
<tr>
<td>90-728</td>
<td>Introduction to Database Management</td>
<td>6</td>
</tr>
<tr>
<td>90-738</td>
<td>Applied Economic Analysis II</td>
<td>12</td>
</tr>
<tr>
<td>90-740</td>
<td>Systems Synthesis</td>
<td>12</td>
</tr>
<tr>
<td>90-747</td>
<td>Cost Benefit Analysis</td>
<td>6</td>
</tr>
<tr>
<td>91-820</td>
<td>Strategic Planning</td>
<td>12</td>
</tr>
<tr>
<td>94-700</td>
<td>Organizational Design and Implementation</td>
<td>6</td>
</tr>
<tr>
<td>94-702</td>
<td>Professional Writing</td>
<td>6</td>
</tr>
<tr>
<td>94-718</td>
<td>Strategic Presentation Skills</td>
<td>6</td>
</tr>
<tr>
<td>94-728</td>
<td>Business Intelligence and Analytics</td>
<td>6</td>
</tr>
<tr>
<td>95-760</td>
<td>Decision Making Under Uncertainty</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Core</strong></td>
<td></td>
<td><strong>138 units</strong></td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td></td>
<td><strong>30 units</strong></td>
</tr>
<tr>
<td><strong>TOTAL UNITS</strong></td>
<td></td>
<td><strong>168 units</strong></td>
</tr>
</tbody>
</table>

Note: students must ensure all required pre-requisites are met prior to enrolment.
3.2 MSPPM – 21 month track

Studying full time, you will complete the MSPPM program in five consecutive semesters. The MSPPM curriculum is structured with a set of core courses and electives. In order to successfully complete the MSPPM program, you must complete the following:

- 198 units of course credit which includes:
  - 138 units of core requirements
  - 60 units of electives;
- 400 hours internship (spread over 10 – 12 weeks); and
- Achieve a cumulative quality point average of at least 3.0.
- Attendance of at least eight convocations.

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<td>90-707</td>
<td>Statistical Reasoning</td>
<td>12</td>
</tr>
<tr>
<td>90-710</td>
<td>Applied Economic Analysis I</td>
<td>12</td>
</tr>
<tr>
<td>90-724 OR 95-715 AND 95-716</td>
<td>Financial Analysis</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>OR Financial Accounting</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Principles of Finance</td>
<td>6</td>
</tr>
<tr>
<td>90-728</td>
<td>Introduction to Database Management</td>
<td>6</td>
</tr>
<tr>
<td>90-738</td>
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</tr>
<tr>
<td><strong>Electives</strong></td>
<td></td>
<td><strong>60 units</strong></td>
</tr>
<tr>
<td><strong>TOTAL UNITS</strong></td>
<td></td>
<td><strong>198 units</strong></td>
</tr>
</tbody>
</table>

Note: students must ensure all required pre-requisites are met prior to enrolment.
3.3 Specialisation in Digital Transformation and Analytics

Students enrolled in the 21 month MSPPM program may choose to complete a specialisation offered at CMU-A by completing a selected set of electives listed below. The courses taken for specialisation are regarded as part of the elective courses required for the program. Students should consult the advisor and carefully plan course selection to ensure all courses (taking into consideration any pre-requisites) can be completed within the expected duration of program. Students must not exceed the maximum enrolment of 54 units in each semester.

Please note that you are not required to declare a specialisation. Students can complete the MSPPM program without a specialisation.

Course requirements for specialisation in Digital Transformation and Analytics

Students wishing to complete a specialisation in Digital Transformation and Analytics must complete the following 42 units of coursework:

- 95-722 Digital Transformation – 6 units
- 95-791 Data Mining – 6 units
- 90-802 Public Policy Analytics: Cases & Issues – 6 units
- 94-802 Geographic Information Systems – 12 units

AND

At least 12 units from the following list:

- 95-888 Data Focused Python – 6 units
- 94-842 Programming R for Analytics – 6 units
- 95-737 NoSQL Database Management – 6 units
- 95-797 Data Warehousing – 6 units (*pre-requisite* – 95-728 Introduction to Database)
- 95-799 Linux and Open Source – 6 units
- 95-869 Big Data and Large Scale Computing – 6 units (*pre-requisite* – 95-791 Data Mining)
- 95-865 Unstructured Data Analytics – 6 units (*pre-requisite* 95-888 Data Focused Python)
- 94-867 Decision Analytics for Business and Policy – 12 units (*pre-requisite* – 95-760 DMUU)

*Any courses not listed above would require approval (from the Director of Programs) prior to enrolment.*

Important Note:

Full time students enrolled in the 12 month MSPPM program must obtain approval from the Program Director to enrol in the Digital Transformation and Analytics specialisation.
3.4 Sample Elective courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-814</td>
<td>Public Private Partnerships</td>
<td>6 units</td>
</tr>
<tr>
<td>90-823</td>
<td>Program Evaluation</td>
<td>12 units</td>
</tr>
<tr>
<td>90-827</td>
<td>Economics of Development</td>
<td>12 units</td>
</tr>
<tr>
<td>90-847</td>
<td>Grand Corruption and Rule of Law</td>
<td>6 units</td>
</tr>
<tr>
<td>90-859</td>
<td>Understanding and Preventing Corruption</td>
<td>6 units</td>
</tr>
<tr>
<td>90-868</td>
<td>Contemporary Public Management</td>
<td>6 units</td>
</tr>
<tr>
<td>91-843</td>
<td>Power and Influence</td>
<td>6 units</td>
</tr>
<tr>
<td>91-855</td>
<td>Financial Management</td>
<td>12 units</td>
</tr>
<tr>
<td>94-800</td>
<td>Negotiation</td>
<td>6 units</td>
</tr>
<tr>
<td>94-802</td>
<td>Geographic Information Systems</td>
<td>12 units</td>
</tr>
<tr>
<td>94-803</td>
<td>Consulting Lab</td>
<td>6 units</td>
</tr>
<tr>
<td>94-854</td>
<td>Developing as a Leader</td>
<td>6 units</td>
</tr>
<tr>
<td>94-866</td>
<td>Design Thinking</td>
<td>6 units</td>
</tr>
<tr>
<td>94-869</td>
<td>Economics of the Digital Age</td>
<td>12 units</td>
</tr>
<tr>
<td>95-886</td>
<td>Enterprise for Innovators</td>
<td>6 units</td>
</tr>
</tbody>
</table>

The electives listed above represent only a selection of electives previously offered at CMU-A. Elective courses will be offered in a variety of areas related to the technology of business information and communication technology. These courses will be offered by CMU-A faculty as well as by faculty from other CMU campuses through video (synchronous) or asynchronous.

Notes:

Students must ensure all required pre-requisites are met prior to enrolment.

Students are advised to refer to the relevant class schedules for course offerings.
4. SYSTEMS SYNTHESIS

Systems Synthesis projects allow students to apply the diverse skills developed in the classroom to a “real world” problem with a “real world client” in the design of a specific functioning public or non-profit sector system. The term “system” refers to the fact that the particular entity studied has an identifiable objective or function and consists of several interacting components, and the word “synthesis” refers to the fact that the desired output is an integrated design, drawing on multiple disciplines, for improved operation of that system.

In a Systems Synthesis project, you will work in a group to structure a problem, do appropriate analysis using quantitative and analytical tools, generate recommendations to solve or ameliorate the problem, and present the analysis and recommendations to the client in both written and oral form. Increasingly, the written form consists of websites with summaries for stakeholders as well as downloadable materials such as reports. The experience will be designed to sharpen your problem-solving skills and skills in working effectively in groups.

The Systems Synthesis Project Course Guide provides more detailed information. It is distributed at the start of your systems project.
5. INTERNSHIP

5.1 Overview

All 21-month track students are required to undertake a 400 hours internship on a full time basis, usually spread over 10 – 12 weeks. The completion of an internship is a graduation requirement.

The campus’ preference is for students to take their internship in their final semester. There are two reasons. First, our part experience is that a number of internships have evolved into employment opportunities. This outcome is by no means guaranteed but it does appear to work better for students than completing their internships at an earlier point in their programs. Second, taking the internship at an earlier point in the program elevates the risk of students not completing the core subjects in time for their scheduled graduation. The university is not in a position to re-schedule core courses for semesters in which they are not currently offered. Students that are unable to take courses in the sequence in which those courses are offered may have their graduation delayed.

Students may intern with a company gaining professional experience in management and analysis by working in a public agency, non-profit organization, or private firm.

The internship duties must have significant educational value that directly relates to the program. The internship will train students in ways significantly different from classroom instruction. By working in a professional environment, students will solidify mastery of knowledge gained in coursework, refine career interests, and establish personal networks which might lead to later career opportunities. The internship also provides the faculty with feedback about the relevance of the curriculum and the effectiveness of the teaching program.

Students will not receive academic credit for the internship but it will be reflected on their academic transcript as a course with Pass/No Pass grade. The Internship needs to be approved before the beginning of the internship by CMU-A Programs Office.

5.2 Securing an Internship

Students are responsible for securing a suitable internship. The Career Services team provides assistance through counseling, workshops on resume preparation and interview skills, and listings of potential internships. Students can discuss their situation on a one to one basis and are encouraged to attend workshops that cover the essential skills for finding the right internship.

Before a student begins their internship, they must file an Internship Approval Form with the Career Services team on http://www.heinz.cmu.edu/jobs-and-internships/students/index.aspx and receive approval for the internship. Students will not be permitted to graduate if they accept or begin work at an internship which does not meet the program standards.

Once the internship has been approved, students will be registered for the zero-unit internship course. Students will not receive academic credit for the internship, but it will be reflected on their transcript as a course with P/F grade. If a student plan to exempt the internship, they will need to complete the Petition for Course Exemption.
5.3 Internship Standards

Students must complete an internship as an integral part of the degree program. Minimally, this requires 400 hours (spread over 10-12 weeks) of full time employment that has formal supervision, is professional in nature, includes work that is of importance to the organization, and has significant educational value.

During the course of the internship, the Career Services team will contact the supervisor to discuss students’ progress. The Career Services team will also get in touch with a student during their internship to discuss their progress and any problems that arise. Students must notify the Career Services team of any significant changes to the internship, such as length, location, hours of work.

At the end of your internship your Career Services Advisor will request that your supervisor complete an evaluation form about your internship performance. You are also required to complete an evaluation survey as well as a self-reflection statement describing how your internship fulfilled the educational goals of the program. If you do not successfully complete an eligible internship along with your survey and self-evaluation, you will not fulfill your internship requirement necessary for graduation.

Based on the supervisor’s evaluation, the contact between the supervisor and the student, and the self-evaluation, the Career Services team will advise the Faculty Committee if a student has satisfactorily completed the internship requirement. If a student does not successfully complete an eligible internship, they will have to complete one before they will be eligible to graduate.

The Career Services team encourages students to advise any job opportunities within the internship organization which might be available for future graduates or interns. These descriptions will be maintained for reference by both first and second year students.

Students are reminded to adhere to the Students Code of Ethics

6. CONVOCATIONS

Convocation is a regular forum in which students have an opportunity to discuss and learn about a variety of issues. The purpose of CMU-A convocation program is to inspire, motivate and open student’s thoughts to new ideas and areas. While topics are concentrated in the areas IT and PPM, the university actively seeks leaders that are leaders in their fields and have something to contribute to all-around education for our students from convocations. Sessions feature guest speakers, including those who lead organizations, analyze and develop policy as well as those who innovate in non-traditional ways.

This is a zero-credit course, with no assignments, but required attendance. Full-time students should attend five convocations during their first full year and, for those on the 21 month track, another three in their second year. Part-time students should attend at least five convocations over the period of their studies.
7. ACADEMIC INTEGRITY

Students at Carnegie Mellon are engaged in intellectual activity consistent with the highest standards of the academy. The relationship between students and instructors and their shared commitment to overarching standards of respect, honor and transparency determine the integrity of our community of scholars. The actions of our students, faculty and staff are a representation of our university community and of the professional and personal communities that we lead. Therefore, a deep and abiding commitment to academic integrity is fundamental to a Carnegie Mellon education. Honesty and good faith, clarity in the communication of core values, professional conduct of work, mutual trust and respect, and fairness and exemplary behavior represent the expectations for ethical behavior for all members of the Carnegie Mellon community.

Policy Statement

In any manner of presentation, it is the responsibility of each student to produce her/his own original academic work. Collaboration or assistance on academic work to be graded is not permitted unless explicitly authorized by the course instructor(s). Students may utilize the assistance provided by Academic Development, the Global Communication Center, and the Academic Resource Center (CMU-Q) unless specifically prohibited by the course instructor(s). Any other sources of collaboration or assistance must be specifically authorized by the course instructor(s).

In all academic work to be graded, the citation of all sources is required. When collaboration or assistance is permitted by the course instructor(s) or when a student utilizes the services provided by Academic Development, the Global Communication Center, and the Academic Resource Center (CMU-Q), the acknowledgement of any collaboration or assistance is likewise required. This citation and acknowledgement must be incorporated into the work submitted and not separately or at a later point in time. Failure to do so is dishonest and is subject to disciplinary action.

Instructors have a duty to communicate their expectations including those specific to collaboration, assistance, citation and acknowledgement within each course. Students likewise have a duty to ensure that they understand and abide by the standards that apply in any course or academic activity. In the absence of such understanding, it is the student’s responsibility to seek additional information and clarification.

Policy Violations

Cheating occurs when a student avails her/himself of an unfair or disallowed advantage which includes but is not limited to:

- Theft of or unauthorized access to an exam, answer key or other graded work from previous course offerings.
- Use of an alternate, stand-in or proxy during an examination.
- Copying from the examination or work of another person or source.
- Submission or use of falsified data.
- Using false statements to obtain additional time or other accommodation.
- Falsification of academic credentials.
Plagiarism is defined as the use of work or concepts contributed by other individuals without proper attribution or citation. Unique ideas or materials taken from another source for either written or oral use must be fully acknowledged in academic work to be graded. Examples of sources expected to be referenced include but are not limited to:

- Text, either written or spoken, quoted directly or paraphrased.
- Graphic elements.
- Passages of music, existing either as sound or as notation.
- Mathematical proofs.
- Scientific data.
- Concepts or material derived from the work, published or unpublished, of another person.

Unauthorized assistance refers to the use of sources of support that have not been specifically authorized in this policy statement or by the course instructor(s) in the completion of academic work to be graded. Such sources of support may include but are not limited to advice or help provided by another individual, published or unpublished written sources, and electronic sources. Examples of unauthorized assistance include but are not limited to:

- Collaboration on any assignment beyond the standards authorized by this policy statement and the course instructor(s).
- Submission of work completed or edited in whole or in part by another person.
- Supplying or communicating unauthorized information or materials, including graded work and answer keys from previous course offerings, in any way to another student.
- Use of unauthorized information or materials, including graded work and answer keys from previous course offerings.
- Use of unauthorized devices.

Submission for credit of previously completed graded work in a second course without first obtaining permission from the instructor(s) of the second course. In the case of concurrent courses, permission to submit the same work for credit in two courses must be obtained from the instructors of both courses.

Procedures for dealing with allegations of these policy violations are detailed in the university’s Academic Disciplinary Action Procedures for Undergraduate Students and the Academic Disciplinary Action Procedures for Graduate Students, which are published in The WORD student handbook. Periodic review of these procedures will be overseen by the Dean of Student Affairs or her/his designee in consultation with Faculty Senate and the relevant student governing bodies. Any amendments to these procedures are subject to the approval of Faculty Senate. Additional guidelines and procedures for graduate students may exist at the college/department/program level, in which case they are communicated in the college/department/program graduate student handbook.

If a student fails a course because of an academic integrity violation and then retakes the course, both the failing grade and the new grade will be used in evaluations of academic standing and the calculation of the student’s QPA.

Any student who violates the academic integrity policy may not be a Student Representative, Teaching Assistant, Research Assistant, Officer of a student club/organization and cannot graduate from the college with highest distinction or distinction or serve as commencement speaker. All academic integrity violations will be reported to the Heinz College Associate Dean and Carnegie Mellon’s Dean of Student Affairs or designee, as well as the Heinz College Office of Academic Services.

Cases of academic integrity violations will be reviewed by the Dean or designee, who may impose additional penalties. Students should understand clearly that such offenses are not tolerated at Carnegie Mellon. A first offense could result in being dropped from your program. In the event of a second offense, you will be dropped from your program.
Students who want to appeal an academic disciplinary action must state in writing to the College Dean their intention to do so within one week of the penalty date in question, and then must present their appeal to the College Dean no later than two weeks after said penalty date. Appeals must be in writing, with appropriate documentation. In cases where an appeal is filed, disciplinary actions will be held until the 2-week moratorium is complete.

If you dispute that your actions violated the University Policy on Academic Integrity or believe that your department did not follow the proper procedure for investigating or reporting a violation, the university has a formal appeal process in place that provides you with the ability to have your case heard before an Academic Review Board. The initial step of that process is writing a letter to the Provost requesting an appeal and you can find more information in the Student Appeals section of the Graduate Academic Disciplinary Actions Overview. Please note that requests for appeal are not granted automatically and the Provost will determine whether the appeal will move forward to a second-level review.

The University policy on Cheating and Plagiarism is posted on Carnegie Mellon’s website at: http://www.cmu.edu/student-affairs/theWORD/acad_standards/integrity.html.

7.1 Additional requirement at Carnegie Mellon University Australia campus

All students enrolling for programs at the campus in Adelaide are required to attend one of the two sessions programmed on Academic Integrity during their Orientation Week. At the end of that session, students will be asked to sign two documents. The first is an acknowledgement that they have attended the session. The second is an acknowledgement that they have understood the information presented on both the definitions of violations of academic integrity and the consequences of those violations.

Questions regarding the graduate policies and/or procedures pertaining to academic integrity violation should be directed to the following staff:

Pixie Yeap, Director of Programs at 08-8110 9953 or pyeap@australia.cmu.edu

Lourdes Almeda, Manager of Graduate Programs at 08-8110 9908 or lalmeda@australia.cmu.edu

7.2 Summary of practical actions

The actions students should take are:

- Make sure you understand the definitions of cheating, plagiarism and unauthorized assistance as set out in this document
- Study carefully the specific requirements of each course instructor as set out in the outline for each course. If in any doubt, raise queries with the instructor at the earliest opportunity
- Familiarize yourself with the consequences of breaches of academic integrity
- Refer any questions of the general policies referred to in this document to staff member from the Programs Office.