

PERICLES Modular Training Package – PMTP

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Introduction

This is a final report on PERICLES Modular Training Package (PMTP), which is a collection of training material that was developed as part of the training efforts in the PERICLES' project.

PERICLES was a four-year project, funded by the European Union that aimed to address the challenge of ensuring that digital content remains accessible in an environment that is subject to continual change. This encompassed not only technological change, but also changes in semantics, academic or professional practice, or society itself, affecting the attitudes and interests of the various stakeholders that interact with the content. PERICLES took a 'preservation by design' approach that involves modelling, capturing and maintaining detailed and complex information about digital content, the environment in which it exists, and the processes and policies to which it is subject.

The PMTP is an online, open access, content rich, self-explanatory, and dynamic training material collection. It is intended to enable a broad range of users to independently learn about the topic areas and research results of PERICLES and encourage the use of the methods and tools developed by the project. It can also be used as a complementary resource for educators and different educational programmes in which subject areas of PERICLES are of relevance.

Modular design

As the potential audiences, their backgrounds, areas of interest, and levels of previous knowledge can vary, PMTP is designed in separate modules to allow flexibility and user customization. The idea has been to find topical areas from the project that could be included in this training package. With direct knowledge of the research conducted in the project, the project members identified a number of different topics to be included in the collection. Despite the diversity in the actual contents, a uniform format of presentation has been followed in all subsections of PMTP, so that a potential user can soon grasp the structure of the package and be able to easily navigate among the different sections.

The PMTT is, accordingly, a collection of nine different modules. As illustrated in Figure 1, each module is subdivided into a number of parts and each part includes a number of elements (i.e. content such as recorded lectures, instructions, study questions, reading material, etc).

For this to become possible, some guidelines and conventions were produced and then followed in content design, production and submission by those producing or preparing the contents.



Figure 1. A sketch of the basic information structure in the PMTP.

The modules can be studied individually or together with other modules in the package. When a progression scheme from one module or part to the next is present, this is clearly indicated. As part of this training package, references to other related resources sourced from within the PERICLES project or externally (e.g. complementary, prerequisite, related, alternative views, etc.) have been identified and included.

Clear introductory texts to each of the levels (module, part, element) guide the audience as to the prerequisite knowledge required to fully engage with that particular subsection, the time required for completion, expected learning outcomes, and more. The target audiences for the various modules include students, researchers, instructors, digital content producers, and professionals.

PMTP Contents

PMTP was made available online in early 2016, initially with two finalized modules, while the rest of modules continued to be developed until March 2017. At the time of writing this report PMTP comprises of eight modules. Two further modules have been initiated and the partners involved have indicated their intentions to finalize even those modules however this will not be accomplished in the time of the project.

A brief outline of the each of the eight finalized modules is provided in this section.

Dynamics of Knowledge Organisation – The module studies the involvement and application of semantics in Digital Preservation and focuses on two different but potentially interrelated approaches: (a) vectors, matrices, and vector fields; (b) graph-based structures and ontologies.

The module comprises of 6 parts as follows:

- 1. Semantics and DP: basic concepts, theories and trends
- 2. Vectors and matrices: word meaning for advanced access
- 3. Vector fields: a new approach to evolving semantics
- 4. The Semantic Web & the Emergence of Ontologies
- 5. Semantic Technologies & DP
- 6. Evolving Semantics: Ontology Evolution & Semantic Drifts

The intended target audiences include:

- Digital Preservation and Digital Humanities practitioners who are interested in investigating the deployment of semantics and relevant cutting-edge technologies.
- Researchers working on semantics who are interested in investigating the application of relevant methods and technologies in a Humanities field.

The expected learning outcomes are listed as:

- Get a first glance at cutting-edge methods and technologies (semantic technologies, vector fields, ontologies).
- Relate theories of word meaning to vector-based information representation.
- Learn about the foundations of the Semantic Web initiative and its core concepts and technologies.
- Explore the relevance of semantic technologies to vastly interdisciplinary fields, like Digital Preservation.
- Get a better view of the emerging paradigm of knowledge representation through ontologies.
- Discuss how ontology evolution (i.e. the change of ontologies over time) can serve as a means for studying semantic drift.

Sheer curation – This module explores sheer curation as a means and strategy of integrating curation activities into environments in which digital objects are created and altered, without affecting the workflows, data privacy, or performance of the environment.

The module comprises of 5 parts as follows:

- 1. Introduction to the notion of sheer curation
- 2. From Metadata to Environment Information
- 3. Filling the gap: Significant Environment Information (SEI)
- 4. A tool to extract SEI: the PERICLES Extraction Tool (PET)
- 5. Information encapsulation

The intended target audiences include:

- Professionals and prospective professionals in the field of data curation, repository management and digital preservation.
- Producers/depositors of digital content.

- Researchers exploring solutions for data management and digital preservation
- Teachers/trainers in this field
- Solution providers for organisations in demand of solutions for data / repository management and digital preservation

The expected learning outcomes are listed as:

- Understand the motivation behind promoting sheer curation
- Get an overview of current tools and techniques for extraction and encapsulation
- Understand what significant environment information is and how it supports long-term preservation
- Understand what extraction and encapsulation tool can be applied for archiving and preservation

Digital Ecosystem Model – This module explains the notion of digital ecosystems and the approach taken by PERICLES to model them and use them to support change management. The EcoBuilder tool is a core part of the module.

The module comprises of 2 parts as follows:

- 1. Introduction to the notion of Digital Ecosystem Model
- 2. Demonstration of the EcoBuilder

The intended target audiences include:

- Professionals and prospective professionals in the field of data curation, repository management and digital preservation.
- Researchers exploring solutions for data management and digital preservation
- Teachers/trainers in this field
- Solution providers for organisations in demand of solutions for data / repository management and digital preservation

The expected learning outcomes are listed as:

- Understand the notion of a digital ecosystem
- Understand the motivation behind modelling the ecosystem
- Understand the relation of data management and preservation to modelling the ecosystem
- Understand how the EcoBuilder works and what potential it has

New Perspectives on Appraisal – This module centres around a support functionality for appraisal processes developed in the PERICLES project. In the context of PERICLES, we are focusing on ways of automating or guiding the appraisal process taking into account changes in the demands for content, e.g. due to evolving community requirements or changes in the user community.

The module comprises of 2 parts as follows:

- 1. What is it about appraisal?
- 2. A proposal for automated appraisal support

The intended target audiences include:

- Professionals and prospective professionals in the field of data curation, repository management and digital preservation.
- Producers/depositors of digital content.
- Researchers exploring solutions for data / repository management and partial automation of the appraisal task
- Teachers/trainers in this field
- Solution providers for organisations in demand of solutions for data / repository management and digital preservation

The expected learning outcomes are listed as:

- Understand the motivation behind appraisal
- Get an overview of current state of the art
- Understand the difference types of appraisal and importance in the context of risk-impact assessment
- Understand the methods and associated tools for automating the evaluation of specific appraisal criteria.

Policy management using the Policy Editor – This module aims to show how policy creation and management can be facilitated by using the PERICLES Policy Editor. The course will highlight the features and why we see those features to be beneficial. There is no prior knowledge required. Afterwards, students should have a better understanding of how policy creation and management can benefit from automation and interaction with existing infrastructures. In addition, we hope that this course will spawn critical thinking and that it invites both new ideas, new uses of existing ideas or reasons why current decisions might be suboptimal.

The module comprises of 1 part as follows:

1. PERICLES Policy Editor

The intended target audiences include:

 People interested in the creation and maintenance of policies and Data Management Plans.

The expected learning outcomes are listed as:

- Understand how the creation and management of policies can benefit from tools such as the Policy Editor.
- Understand how policy management tools can benefit from interaction with other software.

Contextualising semantics – This module explores the ways in which technologies can be incorporated into the process of content annotation for Digital Preservation and beyond. The module focused on two automated tools drawing on computer science research which (a) relate to the generation of ontologies ('PROPheT') and (b) relate to the annotation of images ('PeriCoDe').

The module comprises of 5 parts as follows:

- 1. Background to contextual semantics
- 2. Introducing ontologies
- 3. PROPheT

- 4. Introducing image annotation
- 5. PeriCoDe

The intended target audiences include:

- Digital Preservation professionals and students who are interested in learning more about cutting edge technologies in this area, but who are ultimately interested in the application of these tools into their own work.
- Researchers exploring solutions for data management, digital preservation and image annotation
- Teachers/trainers in this field
- Solution providers for organisations in demand of solutions for data / repository management and digital preservation

The expected learning outcomes are listed as:

- The student will begin to appreciate the issues surrounding digital object annotation, with particular reference to ontologies and image annotation
- Learn about two tools which address ontology population and image annotation.

Space data: specificities and lifecycle – This module describes space data from experiment design to long-term preservation and reuse. It emphasises the need of a data management plan as required by NASA and other agencies since proposal level. The data flow from acquisition to the scientific products is described, as well as the different standard formats and the possible evolution of science objectives during the duration of a space mission. These formats include compliance with standards such as the space agency's CCSDS (Consultative Committee on Space Data Standards) and the E.U. INSPIRE directive for geolocalised data. Examples of failures and successes in data management plans will be presented, together with the way the PERICLES concept would have avoided these failures. The student will learn that space data is far from simply being a table of time-tagged numbers, and will learn to manage this complexity.

The module comprises of 6 parts as follows:

- 1. Space data: history
- 2. Space project phasing: data levels and data use
- 3. Examples of past failures in data management
- 4. An example of success: LANDSAT
- 5. Solutions: data standards and data management plans
- 6. Examples of semantic change in space data
- 7. Conclusion: Data life cycle after the decommissioning of the space segment

The intended target audiences include:

- The module's target audience can range from future and early career space scientists to curators of digital data.
- The module could be of interest to curators of big data in other sciences than observation sciences.
- Due to space data specificities, it is less suited for students in the humanities and curators of data that were not originally digital.

The expected learning outcomes are listed as:

• Students will gain the capability to draft a data management plan and understand the requirements of funding agencies in terms of data management.

Ontology Engineering & Linked Data – This module focuses on the basic principles of ontology engineering, i.e. the best practices for developing "good" ontologies, followed by a brief introduction to Linked Data and the respective technologies.

The module comprises of 3 parts as follows:

- 1. Lecture on Ontology Engineering & Linked Data–Part 1
- 2. Lecture on Ontology Engineering & Linked Data–Part 2
- 3. Lecture on Ontology Engineering & Linked Data–Part 3

The intended target audiences include:

- Knowledge engineers interested in ontology engineering best practices.
- Practitioners wishing to get familiarized with the emerging paradigm of Linked Data.
- Researchers who are interested in getting a deeper insight into ontologies and the pertinent array of semantic technologies

The expected learning outcomes are listed as:

- Understand what "ontology engineering" entails.
- Learn the basic steps in ontology development.
- Explore the key constructs comprising an ontology.
- Understand what "ontology reuse" is and explore key existing third-party resources that can help you construct your own ontologies.
- Get familiarized with popular open-source software tools for constructing and validating ontologies.
- Get a better view of the Linked Data paradigm through a practical running example.

Evaluation

To ensure quality a number of measures were put in place. PMTP was developed by following good design guidelines (e.g. consistency of format to ensure user familiarity and ease of use). In the development of the PMTP people with different speciality areas were included comprising of educators, web-editors, researcher, and potential users. Furthermore, various templates (e.g. see Appendix A) were developed to ensure consistency and quality so that, for example, all contributions followed the three level format of PMTP, and included essential information such as target audiences, expected learning outcomes, time needed for completion and more. Furthermore, throughout the training efforts the idea has been to improve our output based on feedback, different metrics, and in dialogue with different audiences.

Since PMTP would be accessible by anyone from anywhere, without our direct access to them, rather than face to face dialogue with the users, we needed alternative methods of evaluations. Three different modes of feedback and measures were

planned. These included (i) taking advantage of different metrics and use statistics; (ii) promoting an option for feedback on the PMTP page; (iii) receiving feedback from targeted audiences, and (iv) soliciting feedback in dialogue.

Usage metrics – For this we had planned to use Google analytics (an advanced tool that can track a big range of metrics such as number of visits, downloads, visitor acquisition etc), which was already used for tracking similar data on the PERICLES website. Unfortunately, Google analytics was somehow not enabled as intended. We therefore extracted PMTP related monthly usage statistic from the web server as listed below. This was done in the last week of March 2017. Other types of information proved to be too complicated to extract as PMTP statistics were mixed with the PERICLES website statistic which was also hosted on the same domain and the same server.

Table 1

Total number of hits per month on the PMTP website (data collected on March 27, 2017)

Month	Total number of hits
04/2016	571
05/2016	2914
06/2016	3928
07/2016	363
08/2016	4377
09/2016	4485
10/2016	2112
11/2016	1114
12/2016	1054
01/2017	561
02/2017	657
03/2017	1647

The terminology used is worth noting. The term 'hits' here may be different to the term 'page views'. A page view is counted each time a visitor visits a single page, however this page view may result to a number of "hits", since hits include the loading of images, static resources etc on this page.

Once the miss in activating Google analytics was noticed, it was rectified by activating it on March 15, 2017. Since that time and until the writing of this report May 8, 2017 (see Figure 1)¹, some statistics have been gathered as presented below.

¹ Image in Figure 2, updated on May 17th



Figure 2. Pattern of PMTP access March 15 – May 17 2017.

Figure 2 depicts the spread of access in different countries. While much access from Sweden was expected due to promotional efforts, it has been encouraging to see the broad spread of access to PMTP in many other areas around the world.



Figure 3. The spread of use of PMTP across the world.

The detailed statistics about the access from different countries is provided in Table 2. As shown, in this short time period, people from 45 countries have access the PMTP. The table clearly indicates both returning and new users (see also Figure 3). It is hoped that returning users are an indication of the usefulness of these pages and the new users would be an indication that the use of these pages are still spreading further.



Figure 4. The ratio of new vs returning users.

Table 2PMTP access from different countries

	Country		Sessions	% New		New Users
			410	Sessions		250
			418	61.72%		258
			% of Total:	Avg for View:		% of Total:
			(418)	(0.00%)		(258)
1	Sweden	117	(27.99%)	35.04%	41	(15.89%)
2	United Kingdom	63	(15.07%)	49.21%	31	(12.02%)
3	United States	45	(10.77%)	73 33%	33	(12.02/0)
4	Greece	18	(4 31%)	55 56%	10	(3.88%)
5	India	17	(4.07%)	88 24%	15	(5.81%)
6	Australia	16	(3.83%)	56.25%	9	(3.49%)
7	Germany	15	(3.59%)	66 67%	10	(3.88%)
8	Netherlands	13	(3.11%)	92.31%	12	(4.65%)
9	Canada	11	(2.63%)	90.91%	10	(3.88%)
10	Kenva	10	(2.39%)	90.00%	9	(3 49%)
11	France	9	(2.15%)	88 89%	8	(3.10%)
12	Italy	7	(1.67%)	71 43%	5	(1.94%)
13	Portugal	7	(1.67%)	85.71%	6	(2.33%)
14	Belgium	6	(1.44%)	50.00%	3	(1.16%)
15	Spain	6	(1.44%)	100.00%	6	(2.33%)
16	Indonesia	6	(1.44%)	33 33%	2	(0.78%)
17.	Austria	4	(0.96%)	100.00%	4	(1.55%)
18	Japan	4	(0.96%)	25.00%	1	(0.39%)
19	Nigeria	4	(0.96%)	100.00%	4	(1.55%)
20.	Poland	4	(0.96%)	100.00%	4	(1.55%)
21.	Russia	3	(0.72%)	66.67%	2	(0.78%)
22.	Czechia	2	(0.48%)	100.00%	2	(0.78%)
23.	Denmark	2	(0.48%)	100.00%	2	(0.78%)
24.	Croatia	2	(0.48%)	100.00%	2	(0.78%)
25.	Hungary	2	(0.48%)	100.00%	2	(0.78%)
26.	Iran	2	(0.48%)	100.00%	2	(0.78%)
27.	Latvia	2	(0.48%)	100.00%	2	(0.78%)
28.	Romania	2	(0.48%)	100.00%	2	(0.78%)
29.	Thailand	2	(0.48%)	100.00%	2	(0.78%)
30.	Turkey	2	(0.48%)	100.00%	2	(0.78%)
31.	Brazil	1	(0.24%)	100.00%	1	(0.39%)
32.	Switzerland	1	(0.24%)	100.00%	1	(0.39%)
33.	China	1	(0.24%)	100.00%	1	(0.39%)
34.	Colombia	1	(0.24%)	100.00%	1	(0.39%)
35.	Finland	1	(0.24%)	100.00%	1	(0.39%)
36.	Hong Kong	1	(0.24%)	100.00%	1	(0.39%)
37.	Israel	1	(0.24%)	100.00%	1	(0.39%)
38.	Kazakhstan	1	(0.24%)	100.00%	1	(0.39%)
39.	Sri Lanka	1	(0.24%)	100.00%	1	(0.39%)
40.	Norway	1	(0.24%)	100.00%	1	(0.39%)
41.	New Zealand	1	(0.24%)	100.00%	1	(0.39%)
42.	Pakistan	1	(0.24%)	100.00%	1	(0.39%)
43.	Rwanda	1	(0.24%)	100.00%	1	(0.39%)
44.	Vietnam	1	(0.24%)	100.00%	1	(0.39%)
45	South Africa	1	(0.24%)	100.00%	1	(0.39%)

The 161 cities from which the PMTP pages have accessed are listed below.

Aalborg	Canberra	Innsbruck	Noordwijk	Strasbourg
Aberdeen	Cape Town	Ioannina	North	Stuttgart
Abuja	Cardiff	Karachi	Berwick	Sydney
Agra	Catonsville	Karlstad	Novokuybys	Tallahassee
Ajax	Chennai	Kauniainen	hevsk	Tarragona
Amritsar	Clifton	Kigali	Oradea	Teddington
Amsterdam	Colombo	Kostanay	Ostersund	Tel Aviv-
Ankara	Copenhagen	Krakow	Ottawa	Yafo
Arboga	Courtenay	Lagos	Oxford	Telford
Arlington	Delft	Lansing	Palermo	The Hague
Athens	Denpasar	Lebanon	Palmira	Thessaloniki
Auckland	Dortmund	Leeds	Paris	Tonekabon
Aurangabad	Druid Hills	Linkoping	Patna	Tonsberg
Bad Vilbel	Dusseldorf	Lisbon	Phoenix	Toronto
Bangkok	Edinburgh	Liverpool	Pisa	Toulouse
Barcelona	Erba	Livingston	Portland	Trabzon
Basingstoke	Gatineau	London	Porto	Urbana
Beijing	Gavle	Los Alamos	Prague	Vienna
Bengaluru	Getzville	Lucknow	Pune	Vigo
Berlin	Gillett	Lund	Quebec City	Vila Nova
Birkenhead	Glasgow	Lyon	Reading	de Gaia
Bonn	Gothenburg	Madison	Riga	Visby
Boone	Greeley	Madrid	San	Wantagh
Boras	Hachioji	Melbourne	Francisco	Warsaw
Brasilia	Halmstad	Meylan	San Mateo	Washington
Bremen	Hamilton	Milan	Sassenheim	Wavre
Bridgewater	Heraklion	Mooresville	Seattle	Wejherowo
Bristol	Ho Chi	Moscow	Seymour	Wroclaw
Broadbridge	Minh City	Mumbai	Silver	Zadar
Heath	Hong Kong	Munich	Spring	Zagreb
Brussels	Hove	Nairobi	Slough	Zaventem
Bucharest	Huntsville	Nerviano	Stamford	Zurich
Budapest	Huskvarna	New Delhi	Stockach	
Burkesville	Hyderabad	Noida	Stockholm	

Although we do not have access to similar statistics for the full duration of the time since PMTP launch, the information above is a good indication of the spread of use of this collection of material.

Online Evaluation Option - While this information is useful in indicating the spread of use, we wanted to get direct feedback from users about the usability of the package. To enable this, we promoted an option on the PMTP for feedbacks by drawing attention to it in the introductory text of the PMTP page (i.e. by the sentence: "Please also help us improve this material by completing the below evaluation/feedback form").

Unfortunately the number of responses (by the time the material was collated and summarised in early March 2017) were few. While we cannot draw too many conclusions from this, the general tone of the responses, as shown has been positive. The only negative response relates to question 6 in part one, where there has been some disagreement about the statement: "The purpose of the website is clearly

stated." We will take this (and other responses) into consideration in upgrading and improving the contents of the PMTP.

The Questions part1:

- 1. The texts on the webpages are easy to read.
- 2. The images and video clips are of good quality.
- 3. The pages are well-structured.
- 4. The information is presented in an interesting manner.
- 5. The website is relatively free from typographical and grammatical errors.
- 6. The purpose of the website is clearly stated.
- 7. The website does not exhibit any social biases (e.g. gender, racial, cultural, religious, age).
- 8. The website does not require the user to divulge personal information or to pay a usage fee.
- 9. The navigation within the webpages is fairly easy and intuitive.
- 10. Different sections provide clear authorship clues.



11. The overall site design is pleasing.

Figure 5. Summary of responses to feedback Questions part 1.

Questions part2:

- 1. The topics presented are relevant for the main subject areas of PERICLES.
- 2. The content is informative and current.
- 3. The content is comprehensible (given that the stated prerequisites are met).
- 4. Much of the content is original.
- 5. Each Module clearly states the target audience and prerequisites.
- 6. Within the Modules, concepts are explained clearly.
- 7. The content gave me a deeper insight into the topic.
- 8. The content developed my abilities and skills within the subject matter.
- 9. The Modules encouraged critical engagement with the material.
- 10. The Modules were successful in creating an environment that was conducive to learning.
- 11. The Module was an effective way to learn.
- 12. The Modules presented the information in a helpful sequence.

13. Following the Modules was an effective way to learn.

14. I found the content useful and informative.



Figure 6. Summary of responses to feedback Questions part 2.

Targeted feedback – As we did not have access to the online users for more in depth questioning, we also sent out a short survey via e-mail targeted at a few emailing lists for librarians, subject specialists, archivists and to students attending the PERICLES PhD course: Dynamics of knowledge organization. Again the level of response was not high. Several of those who responded to the questions had not actually used the material and had just formed a cursory overview of the material. For example one participant wrote:

"I didn't actually use the PMTP online course materials unfortunately - I only found them after I had submitted my report. Which was a shame as they looked really useful".

The general feedback was basically positive with comments such as: "The material is elaborate focused and detailed, and I like the chronological order."

The strengths of the PMTP were identified by respondents as follows:

- The topics are broad and is [sic] easy to use for different purposes.
- The content and innovative ideas presented in the cross-domain /collaborative research project. Bringing together knowledge and expertise from carious areas of science and humanities.
- Clear, concise, well produced.
- I like the structure of the modules and that the learning outcomes are clearly stated.
- It is good for borrowing ideas for courses.

The areas that could be improved were identified by respondents as:

• The connection to preservation.

- I do not know if you can say that the modules that are ready can by them self, represent the field of digital preservation.
- The design and presentation. Captions could be more accurate.
- Consistency in presentation, mainly of the website.

Feedback in dialogue – In order to be able to get direct feedback about the format and contents of the PMTP, HB colleagues were used to discuss different aspects of the contents. A number useful feedback has been collected that will be used in future modifications of the contents. Examples of feedbacks include, improved consistency of the references and links provided. There is also a list of editorial improvements.

It is intended that the contents of the PMTP (and other material available on the HB/PERICLES) pages will be improved and potentially extended over time. The above feedback and comments will be used as a basis for improvements in due course.



This is a tool designed to facilitate the collection of all the necessary supplementary information related to each module. In connection to the creation of your module, please fill in the requested fields below:

Field	Content	Туре
A the to	anisation)	
MODULE Title	Please enter your text here!! Note! The title should describe well what the module covers.	Required
An introductory text about the MODULE	Please enter your text here!!	Required
	Note! Each MODULE must have an introduction that describes the aim of the course. It should also provide information about what the students need to know before going through this module. Summarize what the MODULE covers, how it is taught, what students will learn, and what they will gain from the course. Are there other modules in the same topic area? If so, consider further differentiating your module to help stand out.	
Intended target audiences	Please enter your text here!!	Required
	Note! Set the right expectations by explaining who the module is best suited for, and who it is NOT for.Don't use generic terms e.g., the module is meant for "everyone".	

Expected learning outcomes for the whole MODULE	Please enter your text here!! Note! Walk the reader through the curriculum and focus on the skills students will gain, as well as the topics they will learn about. Highlight why your MODULE is valuable for students	Required
Level of advancement / prerequisites	Please enter your text here!! Note! Indicate the level of advancement: Beginner, intermediate, advance? Give an indication of what students need to know before they begin.	Required
Parts in the MODULE	Please enter your text here!! Note! Please provide the list of ALL parts in the MODULE. e.g. 1. Semantics and DP: basic concepts, theories and trends 2. Vectors and matrices: word meaning for advanced access 3. Vector fields: a new approach to evolving semantics 4 etc. [See to it that these parts correspond well with the aim set up for this module.]	Required
Chronological order	Please enter your text here!! Note! Whether the parts are to be followed in chronological order or can be viewed independently of one another. Indicate the relationship with other MODULEs (if any)	Required
Illustrations	Please enter your text here!!	Recommended

	Note! Do you have any nice graphics/photos that might be included on the first page of the MODULE?	
Estimated time required for completion of the MODULE	Please enter your text here!!	Required
	Note! Please provide reasonable estimation of the time required for someone to go through the module. You can base this on the summation of the times you have indicated for the different parts.	
At the level o	f each!! PART (e.g. Semantics and DP: basic concepts, theo	ories and trends)
PART Title	Please enter your text here!!	Required
	Note! The title should describe well what the module covers.	
A few lines of introduction	Please enter your text here!!	Required
	Note! Each PART must have a few lines of introduction that describes and summarizes what the PART covers, how it is taught, and the chronological order between different parts (if any).	
Expected learning outcome for this PART	Please enter your text here!!	Required
	Note! Announce the skills students will gain. [Here, if applicable, you could by all means think of learning outcomes in terms of (a) Knowledge and understanding, (b) Skills and abilities and (c) Professional judgments]	
Level of advancement	Please enter your text here!!	Required

	Note! Indicate the level of advancement: beginner, intermediate, advance? Give an indication of what students need to know before they begin.		
Elements in this PART	Please enter your text here!!	Required	
	 Note! Introduce ALL elements in this PART, e.g. 1. preparatory readings 2. study questions 3. recorded lecture on Semantics and DP: basic concepts, theories and trends [We already have this] 4. graphs and descriptions 5etc [Try to lead the student through the section by perhaps giving them some instructions, main study questions, and reading recommendations.] 		
Chronological order	Please enter your text here!!	Required	
	Note! Whether the elements are to be followed in chronological order or can be viewed independently of one another/ relationship with other parts (if any)		
Estimated time required for completion of the PART	Please enter your text here!!	Required	
	Note! Please provide reasonable estimation of the time required for someone to go through the part. (you can base this on the summation of the time required for each element)		
At the level of each!! ELEMENT (e.g. the study questions, the lecture, etc)			

ELEMENT Title (if any)	Please enter your text here!!	Required
	Note! The title should describe well what the Element covers.	
Introductory text about this ELEMENT	Please enter your text here!!	Required
	Note! Please provide an introductory text about the Element. e.g.In preparation for the recorded lecture (Element 2) you are to first read the following set of articles. While reading these articles please reflect on these questions: Q1: Q2: Or if the element is a recorded lecture, add a few lines saying that this is a recorded lecture about this particular topic and for example that it should be listened to after reading the mentioned literature. Make sure that all the required resources are provided (e.g. if applicable links, source codes, etc)	
The actual ELEMENT	Please enter your text here!!	Required
	Note! Please if possible provide the actual element (or links to it) here. When it comes to recorded lectures they can be between 5 and 20 minutes long each, so if you have more than 20 minutes to present, please find a good way of subdividing the lecture. Please avoid umms and ahhs and filler words. The recordings (whether audio or video) must be of high quality (video in HD, 720p minimum) and without distortions. Make sure that the microphone is placed at an appropriate distance for optimal recording (not too quiet or emphasised 'P' and 'T' sounds or echo, background noise or similar). Slides, screencasts, or any other visual element must be sharp and easy to read. Use text large enough to be user friendly across multiple platforms. (please consult the <u>Pericles Modular Training Package</u> document for precise technical requirement information)	
Estimated time required for going through each	Please enter your text here!!	Required

ELEMENT		
	Note! Please provide reasonable estimation of the time required for someone to go through this Element.	
Instructor bio	Please enter your text here!!	Recommended
	Note! Highlight your background and experience and credibility in the field.	