Course Proposal Form

Please see Page 2 for instructions on which parts of this form to complete, whom to consult with to avoid unnecessary effort, and where to send the completed form.

Proposer(s): Andreas Pieris **Date: November 28, 2019**

Cover page: Basic permanent course information

Unless otherwise noted, items in this section are entered into EUCLID and **cannot** be changed without creating an entirely new course.

Course Name	Principles of Data Management
Course Acronym *(used by the School only, e.g., for the Sortable Course List)*	PDM
Course Level If the course is **only** available to MSc students, then it must be classed as Postgraduate. All other courses, regardless of level, are Undergraduate.	__Undergraduate X Postgraduate
Normal Year Taken	__UG1 __UG2 __UG3 __UG4 __UG5 X MSc
Also available in years *[This can be changed later if need be.]*	__UG1 __UG2 __UG3 X UG4 X UG5 __MSc
SCQF Credit Level Level 8 should normally be used for pre-honours courses. Level 10 should normally be used for optional UG3 courses (so UG4 students may also take them) and for courses aimed mainly at UG4 students. Level 11 should be used for courses aimed mainly at MSc students, whether or not UG4 students can also take them.	__7 __8 __9 __10 X 11
SCQF Credit Points	X 10 __20 __40 __60 __80 __Other:
Delivery Location	X Campus __On-line Distance Learning
Course Type	X Standard (default) __Dissertation __Online Distance Learning __Other (specify: Placement, Student Led Individually Created Course, Year Abroad)
Marking Scheme By default, courses use a numerical marking scheme. If you wish to use a grade-only marking scheme, your course proposal below should justify this.	X Standard (numerical) __Letter grade only

Guidance for remaining sections:

For an initial course proposal, please complete the **cover page and Section 1 (Case for Support)**, which asks you to describe the need for this course and to provide an overview of the course design, including the learning outcomes. **Please discuss your plans as early as possible with the head of Curriculum Review to avoid unnecessary effort.**

Send the form with these sections completed to the BoS Academic Secretary and head of Curriculum Review (listed on the BoS page) to obtain their comments before filling out the remainder of the form.

If a full proposal is invited, please complete the remaining sections and send to **iss-bos@inf.ed.ac.uk**.

2. Student-facing course description and additional feedback and assessment information.
This section provides most of the information students see in the DRPS entry for this course, as well as related details for BoS consideration.

3. Further information for BoS consideration: sample materials.

4. Additional Course Details required for DRPS. *[Administrative information such as delivery timing and prerequisites.]*

5. Placement in degree programme tables. *[Required for all level 9-11 courses; used to determine where the course will be added to existing degree programme tables.]*

6. Comments from colleagues. *[All course proposal should be sent to relevant colleagues in the area as well as to the appropriate year organizer and BoS Academic Secretary for comment in good time before the BoS meeting. Use this section to indicate what feedback has been solicited and received.]*

Colour coding and item-by-item guidance:

Guidance is provided in italics for each item. Please also refer to the guidance for new course proposals at http://www.inf.ed.ac.uk/student-services/committees/board-of-studies/course-proposal-guidelines. Examples of previous course proposal submissions are available on the past meetings page http://web.inf.ed.ac.uk/infweb/admin/committees/bos/meetings-directory but note that the proposal form was updated in Jan 2019.

Sections in gold are for student view and are required before a course can be entered into DRPS. You must complete these sections even if your course has already been approved based on other documentation.
Sections in orange are for School use but are still required for all courses (even those that have already been approved based on other documentation).
Section in gray are for consideration by the Board of Studies. They are normally required for all new course proposals but may be omitted in some circumstances (e.g., for invited course proposals) if you obtain permission in advance.

1. Case for support

This section is for consideration by the Board of Studies. The final two boxes (Learning Outcomes, Graduate Attributes) will also go into the student-facing course description.

Overall contribution to teaching portfolio and relation to existing curriculum

Please explain (a) what motivates the course proposal (e.g. a previous course having become outdated/inappropriate, an emergent or maturing research area or new research activity in the School, offerings of our competitors) and (b) how it relates to existing courses and degree programmes (including any prerequisite courses). Every new course should make an important contribution to the delivery of our Degree Programmes.

The proposed course is a significantly revised version of the existing course Advanced Topics in Foundations of Databases (ATFD, INFR11122). The two main objectives of this revision are:

1. **Make the course content accessible to postgraduate students**
   The current version of the Advanced Topics in Foundations of Databases course aims to prepare students for conducting research on the foundations of data management. To this end, several cutting-edge topics are covered such as approximation of queries, semantic optimisation of queries under constraints, querying tree-structured data using Monadic Second-Order (MSO) logic and alternating tree automata, expressive graph query languages, and advanced aspects of knowledge-enriched data. However, the majority of our postgraduate students do not have the background on computational logic, complexity and computability theory for following the covered topics. Thus, the course in its current form does not serve its purpose, which is confirmed by the low number of registered students.
2. **Demonstrate the importance of studying real-life problems in a mathematically rigorous way**
   This second objective is not completely unrelated with the first one. Since, as discussed above, the course covers cutting-edge research topics, which are technically very challenging, it is difficult for the students to relate the content of the course with real-life database concepts. Moreover, it is extremely difficult for the students to understand the implications of the foundational studies covered in the course for real-life problems and applications.

The proposed course builds on the existing Database Systems course (INFR10070), which is an introduction to the principles underlying the design and implementation of database management systems. It also complements the postgraduate course Advanced Databases (INFR11011), which covers advanced aspects of database systems, in particular, the data structures and algorithms underlying modern database management systems.

Note that the three databases courses INFR10070, INFR11011 and INFR11122 have been revised in a coordinated way that takes into account their interconnections and overlaps.

Target audience and expected demand

Describe the type of student the course would appeal to in terms of background, level of ability, and interests, and the expected class size for the course based on anticipated demand. A good justification would include some evidence, e.g. by referring to projects in an area, class sizes in similar courses, employer demand for the skills taught in the course, etc

This course targets students that are interested to conduct research on the Principles of Data Management. It also targets students that, although are not planning to follow a research career, are willing to learn how data-intensive real-life problems can be formalised and studied in a

mathematically rigorous way, and also understand the implications of those foundational studies for real-life applications.

From our experience, it seems that such a foundational course is not very appealing to our students. However, we believe that the main reason for this is not the topic itself, but the fact that the current ATFD course is too challenging for our students (see second objective above). As a result, the ATFD course in its current form does not meet the expectations of our postgraduate students concerning the covered material. One of the main goals of this revision effort is precisely to rectify this sate of affairs, and attract a good number of students.

Anticipated Resource Requirements

Estimate how much lecturing, tutoring, exam preparation and marking effort will be needed in steady state, and any additional resources needed to set the course up initially. Provide estimates relative to class size where applicable and discuss how support staff will be recruited and supervised, if the class is likely to be very large. Please mention any scaling limits due to equipment or space. If equipment is required, say how it will be procured and maintained.]

As we shall see below, the course is structured into five main sections. We estimate that each section will take around 3-4 hours of lecturing; therefore, around 18 hours of lecturing for the overall course. Concerning marking, due to the technical and specialised nature of the course, it would be extremely difficult to find support stuff with the required background. In view of this fact, the marking will be solely done by the course organiser. Finally, given the theory nature of the course, no additional resources will be required.

Quotas, special arrangements or unusual characteristics

Please specify if this course requires any special arrangements such as quotas or other registration arrangements; is a collaboration with another school or institution, or has other atypical characteristics that may affect finances or student registration. Further justification/information may be requested for such courses.

Narrative description of the course aims and structure

Please describe the main goals of the course and how the course design will allow students to achieve those goals. This section should be consistent with the student-facing information provided below, but should provide additional information to help colleagues at BoS understand the vision and structure of the course. This description may refer to the learning outcomes and graduate attributes (next two boxes) and should explain how activities such as tutorials, labs, or in-lecture activities will support them, and how the proposed assessments will assess them.

For courses that are important pre-requisites for other courses, this section may also provide content/syllabus information which is too detailed for the student-facing description, such as a lecture-by-lecture syllabus.

As discussed above, the goal of this course is to demonstrate the importance of studying real-life data-intensive problems in a mathematically rigorous way, and also explain the implications of such foundational studies for real-life applications. To this end, the course will focus on the main data model that is heavily used in practice, that is, relational databases, and cover the main algorithmic tasks and concepts that we face in real-life applications.

The high-level structure of the course is as follows:

- Relational model and query languages
- Conjunctive queries
- Fast conjunctive query evaluation
- Adding recursion - Datalog
- Uncertainty - reasoning over possible worlds

Summary of Intended Learning Outcomes (MAXIMUM OF 5)

List the learning outcomes of the course. These must be assessable (i.e., observable), so must specify what the student should be able to do concretely, not simply what they should "understand". Use concrete verbs that indicate (a) what type of assessment would be appropriate, and (b) what level of knowledge/thinking is expected (from recall to analysis to novel creation). ***Example verbs:*** *define, explain, implement, compare, justify. Assessments (described later) should be tied to the learning outcomes.*

Outcomes should typically focus more on the types of thinking/skills developed than on the detailed course content, and the level of thinking should be appropriate to the level of the course: outcomes for a Level 11 course should include more higher-level thinking skills than for a Level 8 course. Further guidance on writing learning outcomes can be found at https://www.ncl.ac.uk/ltds/assets/documents/res-writinglearningoutcomes.pdf

On completion of this course, the student will be able to

1) Abstract relational data and relational queries from their physical implementation, and formalise them in a rigorous way.

2) Analyse the complexity of querying relational data, and isolate the source of complexity.

3) Explain the semantics of Datalog queries, analyse the complexity of evaluating Datalog queries, and model real-life queries in a declarative way.

4) Formalise uncertain data, analyse the complexity of querying uncertain data, and explain the reasons that lead to intractability.

5) Read and summarize research papers.

Graduate Attributes, Personal & Professional Skills

List the personal attributes and generic transferrable skills this course will help develop. Examples include

Cognitive skills: *problem-solving, critical/analytical thinking, handling ambiguity*

Responsibility, autonomy, effectiveness: *independent learning, self-awareness and reflection, creativity, decision-making, leadership, organization and time management, flexibility and change management, ethical/social/professional awareness and responsibility, entrepreneurship*

Communication: *interpersonal/teamwork skills, verbal and/or written communication, cross-cultural or cross-disciplinary communication*

Problem-solving, analytical thinking, independent learning, written communication.

2. Student-facing course description and additional feedback and assessment information

Except where noted, all fields are required and will go into the DRPS entry for the course (for use by students). Important: any text in DRPS is effectively a contract with students, so should not include details that are likely to change from year to year.

Summary Description *Provide a brief official description of the course, around 100 words. This should be worded in a student-friendly way, it is the part of the descriptor a student is most likely to read. If this course replaces another course, please say so in this summary.*	Data is everywhere, coming in different shapes and volumes, and needs to be stored and managed using appropriate data management technologies. The basic software package that supports the management of data is called a database management system (DBMS). The main goal of this course is to explain some of the underlying principles and characteristics of DBMSs. More precisely, this course will explain how real-life concepts (such as a database and a query) and phenomena (such as incompleteness and inconsistency of data), can be abstracted from their physical implementation and formalised using tools coming from other areas such as computational logic. This will pave the way towards the study of query evaluation, that is, the central task of extracting meaningful information from (possibly incomplete and inconsistent) data by means of queries, following a mathematically rigorous approach. This analysis will expose the source of complexity in evaluating a query over a database, which in turn provides ideas and tools on how to devise more efficient query evaluation algorithms. This course is a revised and simplified version of the course Advanced Topics in Foundations of Databases (INFR11122) offered until 2019-20.
Keywords *Give a list of searchable keywords.*	Relational data, relational queries, query evaluation, static analysis of queries, fast query evaluation, recursive queries, uncertain data.
Course Description *A more detailed student-facing description of the course, which should normally include (a) a more in-depth academic description of the learning aims, nature and context of the course, (b) a rough outline of the content or syllabus, often as bullet points, and (c) a description of how the course will be taught, how students are expected to engage with their learning and how they will be expected to evidence and demonstrate their achievement of the intended learning outcomes.]*	The course will cover the following topics: • Relational model: data model, relational algebra, relational calculus (first-order queries), first-order query evaluation, static analysis of first-order queries (satisfiability and containment). • Conjunctive queries (CQs): syntax and semantics (via the notion of homomorphism), CQ evaluation, static analysis of CQs (satisfiability, containment and the Homomorphism Theorem), minimization of CQs. • Fast conjunctive query evaluation: acyclic CQs, evaluating acyclic CQs (Yannakaki's algorithm), semantically acyclic CQs and their evaluation, size bounds for joins (AGM bound), worst-case optimal join algorithms.

	• Adding recursion - Datalog: inexpressibility of recursive queries, syntax and semantics of Datalog, Datalog query evaluation, static analysis of Datalog queries, Datalog vs. first-order queries. • Uncertainty - reasoning over possible worlds: incomplete databases, inconsistent databases, probabilistic databases, knowledge-enriched databases. Student will be assessed 100% by in-course assessment, split as follows: • Essay (formative): students will choose a research paper (from a given list) on the relational model, and present a summary of the paper, together with analysis and critical thoughts. • Project (50%): students will choose a research paper (from a given list) on a topic covered during the lectures, and present a summary of the paper, together with analysis and critical thoughts. In addition, they should present and thoroughly discuss ideas that could lead to a new contribution (e.g., extending some of the results of the paper to cover new cases). The project will be marked on its technical accuracy, and the ideas towards a new contribution relevant to the paper in question. • Final test (50%): students will complete a final test at the end of the course, which will consist of three problems on relational queries, Datalog queries, and uncertain data.
Assessment Weightings: *These should correspond approximately to the proportion of learning outcomes that each component assesses. More than 30% coursework requires specific justification.* *The expectation for a 10pt course is 20% coursework with the equivalent of one 15-20hr assessed assignment (but possibly split into smaller pieces). See 'components of assessment' below.*	Written Exam _____% Practical Exam _____% (*for courses with programming exams)* Coursework 100% Exams for a technical course of this type, which focuses on the mathematical side of data management, do not let one properly evaluate the students' knowledge of the material. Indeed, for proper evaluation, students must be presented with real problems and tasks, rather than "toy" ones which can be solved in a very limited time.
Further Assessment Information *Provide any further information that should go on DRPS for students. E.g., if the assessment includes required group work or if students must pass some individual component of assessment as well as the course overall.*	

Components of assessment and time spent on assignments (for BoS only) *If not already included in the course narrative description, please describe the type of assessments (oral presentation, report, programming, etc) and **how each component of assessment will assess the intended learning outcomes**. Where coursework involves group work, it is important to remember that every student has to be assessed individually for their contribution to any jointly produced piece of work.* *Also estimate **how many hours** students will spend on assignments. Please see the School policy on Workload and Assessment, which states that students should not be expected to spend more than 6-7 hrs/wk per 10 credits, including contact hours.* *Note that it often desirable to include formative assignments which are not formally assessed but submitted for feedback, often in combination with peer assessment.*	• Each component of the assessment will indirectly assess learning outcome 1 since, in order to solve a problem on relational data, or read and understand a research paper on relational data, the student should first understand the abstract definition of relational data and relational queries. • The project will also assess learning outcome 5. • The final test, which will cover relational queries, Datalog queries, and uncertain data, will also assess learning outcomes 2,3,4.
Feedback Information *Provide a high-level description of how and what type of feedback will be provided to students, for inclusion in DRPS.*	• Concerning the essay, students will be given feedback about their understanding and critical arguments. • Concerning the project, students will be given feedback about their understanding and critical arguments, as well as the relevance and correctness of their ideas towards a novel contribution. • Concerning the final test, students will be given feedback about the correctness of their solutions.
Additional Feedback Information (for BoS use only) *If not already included in the course narrative, provide further details on planned feedback arrangements. This includes how course feedback is solicited from the class and responded to, as well as what feedback students will get (either on work that contributes to their final mark, or not).* *The University is committed to a baseline of principles regarding feedback that we have to implement at every level, and the School encourages submission of at least one piece of written work for formative feedback.* *In general, formative feedback:* • *Should say how students can improve.* • *Need not be on individual work (e.g., consider a lecture or document summarizing common issues.)* • *Can include oral feedback during labs/tutorials*	

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- *Can include feedback from peers*
- *Clickers/TopHat/equivalents can provide in-class feedback for both students and lecturer.*
- *Is returned in time for other forms of assessment to which it relates, to allow feedforward.*

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Breakdown of Learning and Teaching Activities

State how many hours students spend on each part of the course. The total should be 10 x course credits, but please also see the School policy on Workload and Assessment.which states that students should not be expected to spend more than 6-7 hrs/wk per 10 credits, including contact hours.

Assume 10 weeks of lectures slots and 10 weeks of tutorials, but these need not all be used. As a guideline, a 10-pt course typically has 18-20 lecture hours, but should have only around 15 lectures of examinable material; the rest should be used for guest lectures, revision sessions, introductions to assignments, etc.

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Contact hours

Hours	Type
18	Lecture Hours
	Seminar/Tutorial Hours
	Dissertation Project Supervision Hours
	Supervised practical/Workshop/Studio hours
	Feedback/Feedforward hours
2	Formative assessment hours
4	Revision Session Hours

Non-contact hours

Hours	Type
76	Directed Learning & Independent Learning hours

Total hours:

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Reading List/Learning Resources

You are encouraged to create resource lists using LEGANTO

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Abiteboul, Hull, Vianu, Foundations of Databases, 1995

Libkin, Elements of Finite Model Theory, 2012

Bertossi, Database Repairing and Consistent Query answering, 2011

Suciu, Olteanu, Re, Koch, Probabilistic Databases, 2011

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3. Further information for BoS consideration: sample materials

A full proposal for a new course must include examples of exercises and assessment. Please provide these below, along with publicity information if the course is to be advertised outwith the School.

Course information and publicity *The course web page (typically the Learn landing page) will be linked from the Sortable Course List, and information such as timetables and assignment deadlines must be made available prior to the start of the academic year. Please specify here if any additional info/publicity is needed for your course: typically only if it is aimed largely at non-SoI students.*	
Sample tutorial/lab sheet questions *Provide a list of tutorial questions and answers and/or samples of lab sheets. These need not be fully fleshed out but should indicate what sort of exercises will be provided to help students learn the material.*	
Sample assessment materials *If the course is primarily assessed by **exam**, provide a sample exam question with model answers. Any non-standard exam format must be justified. The online list of past exam papers gives an idea of typical and alternative exam formats: http://www.inf.ed.ac.uk/teaching/exam_papers/.* *If the course is largely or primarily assessed by **coursework**, provide a sketch of a possible assignment with an estimate of effort against each sub-task and a description of marking criteria.*	• **Essay.** A list of conference/journal papers on the relational model will be given at the beginning of the semester. The students should pick a paper from this list, and present: (i) a comprehensive summary of the paper, (ii) analysis and critical thoughts; e.g., a criticism of the paper, or analysis of follow-up papers that show how the ideas of the paper under review have influenced the field. • **Project.** Projects follow the same path as the essays by choosing a paper from a broader list, but, in addition, ideas that can lead to a new contribution should be thoroughly discussed. These ideas could be, for example, about: (i) an implementation of a theoretical algorithm with performance analysis, (ii) an extension of some of the results to cover new cases, (iii) an improvement for an existing solution, perhaps under some restrictions. It is up to the student to decide what could be a new contribution, which is an important criterion that will be used during the marking.
Any other relevant materials *Include anything else that is relevant, possibly in the form of links. If you do not want to specify a set of concrete readings for the official course descriptor, please list examples here.*	List of recent research papers for the essay and the project that will be made available to the students at the beginning of the course.

4. Additional Course Details for DRPS

Except where otherwise noted, these fields are required for entry into EUCLID and will be visible to students in the DRPS entry.

Planned Academic Year of Delivery *(The first year you anticipate the course running, e.g. AY 2019-20)*	AY 2020-21
Course Organiser *(By default, the course proposer)*	Andreas Pieris
Intended Delivery Period	__Semester1 _X Semester 2 __Full Year __Summer __Other (please specify):
Timetable considerations/conflicts *For School use. Please specify any constraints to be considered (e.g. overlap of popular combinations, other specialism courses, external courses etc). Include whether the semester delivery is constrained or could be flexible.*	
Is this course available to visiting students?	_X Yes (default) __No **If no, please provide a justification here:**
Required pre-requisite courses *Use sparingly: these are enforced in PATH and can only be waived by approval from the School's Curriculum Approval Officer. Note that cross-year required pre-requisites may prevent MSc students from registering; consider using recommended pre-requisites or "other requirements" instead.*	_X No __Yes (please specify full course name(s) and code(s)):
Recommended pre-requisite courses	__No _X_ Yes (please specify full course name(s) and code(s)): Database Systems (INFR10070)
Required co-requisite courses *Specify any courses that must be taken in parallel with the existing course. Note that this leads to a timetabling constraint that should be mentioned elsewhere in the proposal.*	_X No __Yes (please specify full course name(s) and code(s)):

Prohibited Combinations *Specify any courses that may not be taken in combination with the proposed course].*	_X No __Yes (please specify full course name(s) and code(s)):
Other Requirements/Additional Information *This information is often used by MSc students and students from other Schools to see if they have appropriate background without having done our School's courses. So please avoid course titles, instead list specific knowledge and skills (such as mathematical concepts, programming ability or specific languages, etc).* *Also list any other constraints on registration, for example: "Only available to 4th Year Informatics students including those on joint degrees." or "This course is open to all Informatics students including those on joint degrees, and to students in the School of Mathematics. Other external students whose DPT does not list this course should seek permission from the course organiser."*	__No _X Yes (please specify): While there are no formal prerequisites, it is recommended that students have passed an introductory course in Databases such as the undergraduate course Database Systems (INFR10070); in particular, some familiarity with the relational model, the main relational query languages (calculus and algebra), and integrity constraints is welcome. It is also recommended that students have some basic familiarity with complexity theory (standard complexity classes such as PTIME and NP, and the notion of completeness). In any case, this course is self-contained, and all the necessary tools will be properly introduced and explained during the lectures.
Visiting Student Pre-requisites	_X Same as "other requirements" __Different than "other requirements" (please specify):

5. Placement in degree programme tables: for level 9-11 courses only

This section is for consideration by the Board of Studies and will be used later by ITO to determine where the course will be added to existing degree programme tables.

Is this course restricted to students on a specific degree? *E.g., some courses are only available to students on a specific CDT or MSc.*	_X No ___Yes (please specify and provide justification):
Is this course compulsory for students on any degree(s)?	_X No ___Yes (please specify and provide justification):
Any issues for part-time students? *Normally, part-time students have access to the same courses as full-time students on the equivalent degree. If you anticipate any problems with this, please specify here.*	

For optional courses:

If this course is available but non-compulsory for students on various degrees (most courses), please fill in this section. The choices here determine where the course appears in degree programme tables (DPTs) and the 2-3 character tags are displayed in the Informatics sortable course list.

Should this course be tagged as 'ML' (machine learning foundations and methods)? *Courses with the ML tag are typically very high-demand and most degrees limit the number of ML credits. If your course might appeal to a similar audience but draw off students from these large courses, please select 'no' and choose one of the tags below.*	_X No __Yes
If you chose 'no', please choose at least one of the following tags… *Ideally, select exactly one, unless there is a good argument for more than one. These three are used in various combinations for many of our degrees.*	_X **FSS** (CS foundations, systems, and software) __**AIA** (artificial intelligence applications and paradigms) __**COG** (cognitive science: including HCI and NLP courses, but not most other AI courses. Please restrict to courses most relevant to natural cognition.)
…and also tick if any of the following tags or categories apply. *Do not tick any of these if you selected 'ML' already.*	__**NS** (natural systems: e.g., computation by or about biological or social systems. Many COG courses are also NS. This tag is mainly relevant for MSc in Informatics.) __**SE** (software engineering: including courses that are highly relevant to SE degrees. All SE courses should also be FSS. This tag is mainly relevant for UG SE degrees.) _X Databases and data management systems (used for Data Science MSc and MSc(R))

	__Unstructured data and applications (used for Data Science MSc and MSc(R)) __Level 11 Security courses (used for Security MSc)
If you are not sure which tags are most appropriate or have other questions about this section, please note any comments/issues here.	

6. Comments from colleagues

All course proposal should be sent to relevant colleagues in the area as well as to the appropriate year organizer and BoS Academic Secretary for comment in good time before the BoS meeting. Please indicate here what feedback has been solicited and received.

Additional Comments *Summarise any comments received from relevant individuals prior to proposing the course. If you have not discussed this proposal with others please note this.*	I have received several comments from Sharon Goldwater, mainly about the learning outcomes and the assessment. Moreover, Sharon suggested to somehow simplify the technical content, and convert the course into a 10 credit course – originally, my intention was to cover more material beyond the relational model and have a 20 credit course.
Year Organiser Comments *Year Organisers are responsible for maintaining the official Year Guides for every year of study, which, among other things, provide guidance on available course choices and specialist areas. The Year Organisers of all years for which the course will be offered should be consulted on the appropriateness and relevance on the course. Issues to consider here include balance of course offerings across semesters, subject areas, and credit levels, timetabling implications, fit into the administrative structures used in delivering that year.]*	
BoS Academic Secretary Comments *Proposals must be checked by the Secretary of the Board of Studies prior to discussion at the actual Board meeting. This is a placeholder for their comments, mainly on the formal quality of the content provided above.*	