UNIVERSITY OF KENT

MODULE SPECIFICATION TEMPLATE

SECTION 1: MODULE SPECIFICATIONS

1 Title of the module: CO532 Database Systems

2 School which will be responsible for management of the module: Computer Science

3 Start date of the module: 2005/2006 (*revised version start date September 2012)*

4 The number of students expected to take the module: 100

5 Modules to be withdrawn on the introduction of this proposed module and consultation with other relevant Schools and Faculties regarding the withdrawal: None

6 Level of the module: I

7 The number of credits which the module represents: 15 (7.5 ECTS credits)

8 Which term(s) the module is to be taught in (or other teaching pattern): Spring

9 Prerequisite and co-requisite modules: CO323 or CO523 are pre-requisites.

10 The programme(s) of study to which the module contributes

Computer Science: all single and joint honours programmes
Applied Computing: all joint honours programmes,
Computing and Business Administration,
Business Information Technology,
Information Technology

11 The intended subject specific learning outcomes and, as appropriate, their relationship to programme learning outcomes

The module will contribute to the subject-specific learning outcomes detailed under the following headings in the appropriate programme specifications:

11.1 Knowledge and understanding

On completing the module, students should be familiar with and understand:

- the characteristics, strengths and limitations of current database systems [A2, A4],
- relational and object-relational data models [A4, A5],

11.2 Intellectual Skills

On completing the module, students should be able to:

- undertake self-directed background research in the module topics [B9].
- synthesise information collected from a variety of sources, including other modules [B1, B3],
- discuss database and data management issues with their peers and with non-specialists [B2, D2],

11.3 Subject-specific skills

On completing the module, students should be able to

- specify, design, implement and evaluate simple database solutions [C1, C2, C3].

- perform basic data manipulation and information retrieval operations using SQL [A2, C2].

These will be achieved by building upon core elements of the programme. The module will extend students' skills, knowledge and understanding of languages, distributed systems and applications, and design, implementation and evaluation issues that are specific to modern database systems, and are not addressed in other parts of their programme.

12 The intended generic learning outcomes and, as appropriate, their relationship to programme learning outcomes

The module will contribute to the generic learning outcomes detailed under the following headings in the appropriate programme specifications:

12.1 Transferable skills

The module will extend IT skills to cover a key area that is not addressed in other parts of their programme. In particular, students will extend their ability to make effective use of IT facilities that underpin modern information systems environments. The module will also contribute to development of:

- self-management, adjust the pace and goals of their work to meet deadlines [D5].
- oral and written communication [D2],
- Internet-based information retrieval [D3].

13 A synopsis of the curriculum

The Relational Model

- Theoretical background
- The Relational Algebra

Database design

- Entity-Relationship and Object Oriented modelling

SQL

- Main features of the current ISO standard language.
- Query processing
- Object-relational features

Connecting to databases from computer programs.

Special topics e.g. temporal databases, spatial databases, distribution, replication.

14 Indicative Reading List

The following volumes, or later editions of the same, should be regarded as alternatives. Each covers the majority of the course material:

- C.J. Date *An Introduction to Database Systems*, 8th Edition, Addison Wesley, 2004.
- T M Connolly & C E Begg, *Database systems : a practical approach to design, implementation and management*, 4th edition, Addison Wesley, 2003

- R Elmasri, M Shamkant & B Navathe, *Fundamentals of database systems*, 4th edition, 2003
- N S Ryan & D J Smith, *Database Systems Engineering, Thompson*, 1995.

15 Learning and Teaching Methods, including the nature and number of contact hours and the total study hours which will be expected of students, and how these relate to achievement of the intended learning outcomes

150 study hours:

28 contact hours

22 lectures covering the above synopsis of the curriculum

6 classes primarily used for introducing, discussing and developing experience with modelling techniques and SQL

45 hours private study in parallel with taught material

32 hours spent on exercises and assessments

45 hours pre-exam revision

16 Assessment methods and how these relate to testing achievement of the intended learning outcomes

40% coursework: assessments will address understanding and practical skills in data modelling, database design and implementation, and SQL (11.1, 11.3).

60% examination: examinations will address knowledge and understanding of database systems, languages and operations and skills in the evaluation of database designs (11.1)

Other learning outcomes (11.2, 12.1) are achieved through attendance at compulsory classes.

17 Implications for learning resources, including staff, library, IT and space

None as this module is an update to a current module.

18 The School recognises and has embedded the expectations of current disability equality legislation, and supports students with a declared disability or special educational need in its teaching. Within this module we will make reasonable adjustments wherever necessary, including additional or substitute materials, teaching modes or assessment methods for students who have declared and discussed their learning support needs. Arrangements for students with declared disabilities will be made on an individual basis, in consultation with the University's disability/dyslexia support service, and specialist support will be provided where needed.

19 Campus(es) where module will be delivered[1]

Canterbury and Medway

If the module is part of a programme in a Partner College or Validated Institution, please complete the following:

20 Partner College/Validated Institution

21 University School (for cognate programmes) or Faculty (for non-cognate programmes) responsible for the programme

[1] Required for information purposes only. Changes of campus will not require re-approval of the module specification.

SECTION 2: MODULE IS PART OF A PROGRAMME OF STUDY IN A UNIVERSITY SCHOOL
Statement by the School Director of Learning and Teaching/School Director of Graduate Studies (as appropriate): "I confirm I have been consulted on the above module proposal and have given advice on the correct procedures and required content of module proposals"

.....	.....
Director of Learning and Teaching/Director of Graduate Studies (delete as applicable)	Date

……

Print Name

Statement by the Head of School: "I confirm that the School has approved the introduction of the module and, where the module is proposed by School staff, will be responsible for its resourcing"

.....	.....
Head of School	Date

…….

Print Name

SECTION 3: MODULE IS PART OF A PROGRAMME IN A PARTNER COLLEGE OR VALIDATED INSTITUTION

(Where the module is proposed by a Partner College/Validated Institution)

Statement by the Nominated Officer of the College/Validated Institution *(delete as applicable)***:** "I confirm that the College/Validated Institution *(delete as applicable)* has approved the introduction of the module and will be responsible for its resourcing"

.....	.....
Nominated Responsible Officer of Partner College/Validated Institution	Date

……

Print Name

……..

Post

……

Partner College/Validated Institution