IT Consultancy Practice 1 and 2
IT Consultancy Project
Extended IT Consultancy Project
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Kent IT Clinic

Where does the course fit in your curriculum?

There are currently four IT Consultancy Practical Modules
- *Stage 2, 15 credits, taken in the spring term.*
- *Stage 3, 15 credits, taken in either the autumn or spring terms. Summer for non-IT Consultancy postgraduate students*
- *Stage 3, 30 credits, taken in the autumn and spring terms*
- *Taught IT Consultancy postgraduate, 60 credits, taken in the spring term and Summer.*
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The students taking each of these practical modules work together in the Kent IT Clinic for the session their modules run (KITC, see other comments below). Hence stage 2, stage 3 and postgraduate student consultants work together.

Admission to these modules is limited and subject to a selection interview.

What is covered in the course?

Students taking these modules will undertake two or (typically) more assignments for the Kent IT Clinic (KITC). Each assignment will be of one of three types:

- *Work on one of KITC's contracts with an external client. To the extent that client-funded work allows, every student will be given at least one assignment of this type. Wherever practical, a student will be encouraged to participate in the negotiation and pricing of contracts, under the ultimate supervision of KITC management. For each assignment, the student may work on the assignment individually or as part of a group, as directed by KITC.*
- *A contribution to the infrastructure of KITC itself. These assignments work in a similar way to external assignments, but with KITC as the client.*
- *Formulating a costed proposal for the future development of KITC, and presenting reasoned argument in support of the proposal to KITC management, as a candidate for inclusion in KITC's strategic plan for the following academic year. Every student will have at least one assignment of this type.*

Each assignment will be carried out under the ultimate supervision of KITC management and in accordance with client requirements, with deliverables defined by negotiation with the client. Alongside the client deliverables, each student will also be required to produce a report on each assignment undertaken; these reports are described below under Assessment Methods. KITC

management will also produce a brief evaluation report on the student's contribution which will be made available to the student concerned and his/her academic supervisor.

The assignments to be undertaken by a student will be chosen by KITC. This choice will be driven primarily by commercial considerations, taking into account the individual student's aptitudes and experience. However, so far as possible, students of this module will be given technically more advanced assignments, drawing upon knowledge gained at Stage 2 as well as Stage 1 of a computing degree programme. Students will be expected to complete every assignment—no matter how undemanding it may be technically—with a high degree of professionalism and craftsmanship.

So far as commercial considerations allow, each student will be given a portfolio of assignments that exposes the student to a wide variety of stages in the software lifecycle. Also, KITC will aim to provide each student with a mix of short-timescale and longer-timescale assignments to allow students to smooth their workload over time.

What is the format of the course?

The project (30 credit version) constitutes one quarter of the year's work and a student is expected to expend an average of 10 hours each week working in the KITC. However, students undertaking the module must understand that commercial pressures may mean that the load may vary considerably from week to week. Each student will have an academic supervisor, who has three primary roles:

- *To help ensure that, in pursuit of his/her current assignment, the student draws as widely as possible on relevant knowledge and expertise within the Computer Science department.*
- *To advise the student on the preparation of the per-assignment reports and final report.*
- *To liaise with KITC management, particularly so as to ensure that the mix of assignments given to a particular student is consistent with the academic objectives of the module.*

How are students assessed?

Each student will also be required to produce a report, with a defined structure, on each assignment undertaken (in addition to the client deliverables). In these per-assignment reports students will be required critically to evaluate technical, commercial and quality aspects of their work on the assignment, and the contribution of the assignment to the development of the student's skills. In addition each student will produce a short final report, in which the student will be invited to reflect on how, and to what extent, their total portfolio of assignments contributed to the course's learning outcomes, and to contribute to the future development of the module by identifying opportunities and/or weaknesses.

All students will be expected to carry out their assignments according to the procedures and processes of KITC.

The module is assessed on the basis of the portfolio of per-assignment reports written by the students, the corresponding evaluation report by KITC management, the final report, and by a viva voce examination. This assessment is carried out by the supervisor in conjunction with a second examiner drawn from the Department's academic staff, by reference to the learning outcomes specified above. It is intended that examiners will use the final report to obtain an overview of whether and to what extent the learning outcomes have been realised, and use the other documents and the viva to corroborate their findings.

The module will be assessed as 100% project.

Course textbooks and materials

Course texts and materials are selected, as required, depending on the types of projects or infrastructure work being undertaken. These may range from programming texts (Java, PHP, JQuery, etc.) to open source applications and/or components such as Joomla, Druplal, etc. and texts or other sources addressing development and management processes such as Agile Development, e.g. SCRUM. Students are expected to reference materials relevant to their work for other modules they have taken.

Why do you teach the course this way?

An overview of the learning outcomes of these modules (which varies slightly from module to module) includes:

The ability to:

- *formulate and evaluate technical alternatives to meet IT requirements arising from small businesses.*
- *estimate proposed solutions to IT-based problems in small business situations, in respect of both time and cost.*
- *present technical and commercial aspects of proposed solutions to IT-based problems to clients, using reasoned argument attuned to the client's level of technical understanding.*
- *demonstrate working to tightly-defined cost and timescale budgets, and have gained an understanding of how to respond in a professional manner to changes in client requirements, and other eventualities that raise the prospect of budget overruns.*

Students will have:

- *gained detailed practical experience in applying selected areas of computing technology to meet the requirements of small enterprises.*
- *experience of carrying out IT project work in a framework of defined procedures and processes, be able to evaluate that framework critically, and formulate practical proposals to develop that framework so as to achieve a dependably high-quality service in a cost-effective way.*

Students will also be able to formulate costed plans for the strategic development of an IT consultancy business, and to canvass support for such plans by reasoned argument.

More generally, students will

- *be able to explore diverse sources of information to formulate and present technical alternatives to solve a given problem.*
- *have an understanding of project management in a commercial context.*
- *appreciate how to deal with customers in a consulting role.*
- *will be able to interact effectively within a team.*
- *be able to take responsibility for their own work.*
- *be confident in the application of their own judgement.*

Integration

These modules may draw on any of the learning the students have gained prior to joining the KITC and on new experiences, not all of which can be anticipated, while they are working in the KITC..

Other comments

The Kent IT Clinic, is a consultancy within the School of Computing that provides IT services to small to medium sized organisations, for which it charges fees. It is staffed and managed by students with the guidance of a coordinator.

The work undertaken by KITC students (known as consultants) varies from laptop repairs and technical aspects of internal and external projects through operational and management roles to business development and marketing. Consultants work with each other, with members of School staff, legal and innovation and enterprise staff within the University and with external clients.