

School of Community and Regional Planning University of British Columbia

Quantitative and Analytical Courses Review

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Revised Version

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I. Background

The Accreditation Review of SCARP, which occurs every five years, is scheduled for 2003-4.

In the last review, one of the concerns raised by Accreditation Review Committee was the lack of a course focused on economic analysis for planning. This perceived deficiency led to the school receiving a conditional pass from the Committee. The deficiency was overcome by reinstatement for two years of Plan 513, which had been taught for a number of years by Craig Davis prior to his retirement.

SCARP wants to be better prepared for the Accreditation Review this time around by reviewing all the areas covered by the review. One of the areas that the school wants in particular to address is its course offerings in the more quantitative and analytical areas of planning.

It is not just the Accreditation Review that has prompted this examination. There has been feedback from a number of students, both current and former, suggesting that the school consider broadening its offerings to include more content that has a quantitative and analytical focus to include, for example, urban economics, evaluation methods, GIS, statistical analysis and quantitative research methods. Similar feedback has been received from time to time from some of the employers of SCARP graduates.

In response, Tony Dorsey formed a small committee (the "Review Committee") composed of Tim McDaniels (professor), Eric Vance (adjunct professor), Martin Bazylewich (PhD program) and Robin Kelley (MA program) in the fall 2002 to conduct a review of Quantitative and Analytical Courses.

II. Review Process

There were three major steps in the review process.

Review of Courses Offered in Other Planning Schools

A report was prepared by Martin Bazylewich that reviewed the kinds of analytical and quantitative-based classes offered by graduate planning programs in other universities. A copy of that report is included as Appendix A. It showed that there were a diversity of approaches in these schools, with no obvious model that we could consider to be the mainstream approach. However, that review focused on required courses. It did not consider the array of non-required courses that may be offered in those programs.

Discussions with and a Survey of Current and Former Students

Several discussions were held with current and former SCARP students, in individual and group meetings. In addition, a small survey was conducted of former students to get their views on the adequacy of the course offerings in the quantitative and analytical areas. These results were not compiled in a report, but were summarized for the committee in emails and conversations.

Survey of Employers

A survey of employers of SCARP students was conducted to clarify their views on the kinds of and adequacy of training SCARP students receive now in quantitative and analytical areas. The survey was designed and implemented by the committee. A copy of the results is summarized in Appendix B. The survey showed employers have some confusion over what SCARP students are taught now. The comment was made that it is assumed they are taught statistics and economics. In addition, topics most often mentioned as needed in the curriculum included GIS, and problem solving

III. Conclusion

SCARP's main focus as a professional school is to ensure that its students are entering the planning profession equipped with a solid grasp of a broad range of planning concepts and tools along with the ability to apply them in a variety of settings. The school cannot begin to teach everything that could be taught, nor is that expected among either its students nor those who hire or work with SCARP graduates. A balance is needed.

The Review Committee has concluded that while SCARP offers very high quality course offerings in many of the essential areas of planning education, our view is that the school needs to provide more course content with a quantitative and analytical focus. The specific topics that should be covered include:

- GIS.
- Planning economics.
- Public finance and budgeting.
- Demographic analysis and forecasting, as a basis for understanding computers in planning.
- Survey techniques and statistical concepts
- Evaluation approaches and quantitative research methods

The Review Committee has concluded that these subject areas should, in our view, be a core part of SCARP's program and that all students should have an introduction to these topics, regardless of their specific area of interest. They would therefore be taught as part of required rather than optional courses.

IV. Options for Delivery

Four fundamentally different approaches were considered by the Review Committee as ways to ensure that students have more exposure to quantitative and analytical methods and can apply the knowledge in a planning context:

1. Prerequisite courses that all students must have as part of admission to SCARP.
2. Directing students to courses in other departments that cover the subject matter.
3. A series of one-credit courses, each focused on a specific topic and taught by one person.
4. Course packages, each of which would cover inter-related topics where there is the ability to logically link concepts and build from one topic to the next. This

might include more than one person being involved in teaching the course, depending on knowledge and experience.

It is the Review Committee's opinion that some of these options are more viable than others.

1. Prerequisite Courses

This option would require students to have an introductory course or courses in specific subject areas prior to admission to the school. The two subjects that appear most appropriate are economics and statistical analysis.

The notion of establishing prerequisites is not an unreasonable one and many graduate programs have this requirement. The review committee does not think that adding prerequisites alone will address the gaps in our curriculum. However, prerequisites have the huge benefit of helping to raise the basic level of competence in these areas, so that the classes taught in our program have more content and a greater level of success, given everyone has taken some basic courses before entering the program.

Without prerequisites, classes taught in SCARP would have to start at the most basic level given the wide range of majors from which people can be admitted. Hence, more time would have to be spent in our program on such classes. We return to this topic later.

It has been suggested by some that computer literacy should be considered as a prerequisite to admission. The Review Committee believes that while there is a need to ensure that students are computer literate, it would not be appropriate for some type of formal training in computer use to be a prerequisite. Many students who are highly proficient in computer use have no formal training. Rather, they have learned in a variety of settings and circumstances (on the job training, for example).

2. Directing Students to Outside Courses

SCARP has come to rely on other departments (Commerce and Economics, for example) as a way of exposing those students who are interested in quantitative and analytical methods for much of the subject matter.

The Review Committee's opinion is that exposure to programs outside the school can be a positive experience for students in broadening their education, but that it is not an appropriate option when dealing with topics that the Review Committee views as being a core part of the education that all SCARP students should be receiving.

Furthermore, there has been mixed feedback from students on what they have learned from outside courses in terms of both relevance to planning and depth. Many do not want to take a 1.5 or 3.0 unit outside course when all they are really seeking is exposure to a few basic concepts in a subject area that they can then apply to planning. Also, a

number of the outside courses have prerequisites that most SCARP students do not possess.

3. Series of One-Credit Courses

The third option for SCARP to consider would be to offer a series of one-credit courses, each of which would focus on one quantitative or analytical topic. While this is not a bad approach, it may become problematic with SCARP changing its credit system. The result would be a high number of required courses and less opportunity for students to select courses that suit their particular interests.

4. Course packages

This option would entail packaging quantitative and analytical topics into two courses, each of which combines a number of topics that are inter-related.

The Review Committee envisions these as 1.5 to 3 credit courses each, with both required to be taken in first year by all SCARP students. With rare exception, it is not expected that either course would be open to students from outside of SCARP since the classes would be relatively large with SCARP students alone.

There are a variety of ways in which the topics could be packaged in the two courses. One way would be to divide the subject matter into data research and analysis, which would make particularly strong use of computer based programs, and economics and financial analysis, which would be more concept-oriented.

V. Recommendations

The Review Committee believes that the fourth option seems to have merit. The committee recommends that SCARP consider creating two course packages, each of which would be 1.5 credits (or more) and would be part of the school's core requirements. In combination with this change, we recommend adopting a micro-economics class and a beginning statistics class as prerequisites for admission. These prerequisites are the means by which we may be able to cover these extensive areas in short, concentrated classes.

The details of how each course would be structured are best left to those who will be teaching the subject matter. However, the Review Committee does have some thoughts to offer that serve as at least a starting point in the discussion.

Course 1 - Data Research and Analysis (1.5 credits or more)

This course would focus on how to collect and analyze data. Examples of topics that could be covered include:

- GIS.
- Quantitative survey methods.
- Statistical analysis.
- Data sources.
- Demographic analysis and forecasting.

Computer training per se is not an explicit objective of this package, although it is one of the outcomes. The school's mandate is not to teach students to become computer literate any more than it is to teach them how to write. However, by teaching topics where analysis using computer programs is part of the process, all students will become comfortable in at least the basics of computer use, which is all that most employers expect in hiring recent graduates

The Review Committee understands that some exposure to GIS will be offered beginning this Fall through one or more transportation and urban design courses. However, since these courses will be optional, many students will not gain any exposure to GIS and it should therefore be part of the Course 1 package.

Depending on the level of student interest, one of the school's longer-term objectives might be to offer a course exclusively focused on GIS.

Course 2 – Economic and Financial Analysis (1.5 credits or more)

This course would focus on introducing students to basic economic and financial concepts of relevance to planning. Examples of topics that could be covered include:

- Urban land economics.
- Regional economics.
- Public sector finance.
- Budgeting.

In addition, the committee suggests these courses be combined with a prerequisite for admission of a course in micro economics or public sector economics, and a statistics class. These could be met through courses taken before coming to UBC, in a degree program or a community college. Or they could be taken while in the program as additional requirements. Combining the two recommended classes with the prerequisite is why we think it is possible to address all these content requirements in one three credit class. If there is no prerequisite requirements, we would suggest the two classes each be a three credit class.

Final comments

We recognize that requirements such as these come at substantial cost. The courses have to be taught every year, they make scheduling of all classes harder, and they reduce the flexibility of the students. On the other hand, they also have benefits in “raising the floor” in terms of the materials we know that each student has been taught in classes. The faculty needs to consider these pros and cons. However, the committee believes the benefits will exceed the costs.

We also feel it is important that Stephanie Chang have the opportunity to comment on these suggestions and think through what they mean for implementation.