

Statistical Consulting Program Overview

I. Definition of Participants

Who can participate in College of Forestry Statistical Consulting Program:

1. All faculty and staff in the College of Forestry, including professional faculty, FRAs, Research Associates, Research Scholars, Visiting Scholars and instructors. This includes all T/TT and research professors whose home department is in the College of Forestry. It also includes all T/TT professors who are the major professor of a student in a College of Forestry graduate program. It does not apply to courtesy faculty.

2. All graduate students enrolled in a College of Forestry degree program. Any graduate student whose major professor is covered in the previous paragraph. Any undergraduate student who is working on research or a special project under the direct supervision of any faculty or staff who is able to participate in the College of Forestry Statistical Consulting Program.

Students are expected to consult with statisticians prior to designing their study and prior to data collection, and throughout their educational program. Involving the statistician early on in research typically increases the efficiency of the research and helps avoid potentially damaging pitfalls.

Who can participate in the QSG Service Center Statistical Consulting Program

Statistical consulting, for an annual fee, is also offered through the College of Forestry's Quantitative Sciences Group (QSG) to research scientists from collaborating agencies (USDA PNW, USGS FRESC, ODFW) and their graduate students.

II. Priorities for access and service levels

Appointments are provided on a first-come, first-served basis. The statistician will prioritize their work load to the extent possible as follows:

1. Graduate students and their research (for M.S. and Ph.D. programs) in the College of Forestry. Priority is given to graduate students who start working with the statistician at the beginning of their graduate program.
2. Overhead-bearing research for graduate students and faculty.
3. Other faculty research.
4. Independent research for statistician.

Services provided by statistician:

- Collaborate with students and researchers to translate research questions into statistical or probabilistic hypotheses and models.
- Provide advice on appropriate and efficient study designs before data are collected
- Provide guidance and advice on:
 - The use of quantitative methods, statistical models and analytical methods
 - The use of computer programming to answer research questions
 - The interpretation of statistical results.
- Provide review of written drafts of study design, analysis, statistical models, results and interpretations.
- Investigate issues arising from the use of statistical models in non-standard or unpublished applications.
- Provide guidance and advice from issues arising from peer-review of original research.

III. Guidelines for clients

Clients are expected to take full responsibility for understanding the statistical methods employed. If the most appropriate methods are outside of a client's expertise, the client will obtain the background to develop adequate understanding. Non-students are expected to have a basic working knowledge of algebra, probability and statistics, including multiple regression and experimental design. Students are expected to obtain such knowledge over their course of study but it is not a prerequisite for initial meetings. Statistical consulting, especially advice on analysis strategies is provided for projects in which the statistician has been involved from the beginning. Statisticians are not able to 'salvage' studies or analyses when they have not been part of the design process.

It is important to note that statistical consulting is different from collaborative statistical involvement. Statistical consulting moves from the level described above to a collaborative level when the contribution of the statistician is significant. At this level the statistician is involved in the conceptual models leading to the study design or integrally involved in the analysis and interpretation of the research and writing of the resulting manuscript. This contribution from the statistician to the research is considered scholarly activity for statisticians. This level of involvement qualifies the consulting statistician for co-authorship on manuscripts. The decision to move to this level of involvement is arrived at by consensus among everyone involved in the research. If a project moves from a consulting to a collaborative level, any party, including the statistician, can bring up the topic of co-authorship. At this time the client is free to decline, and everyone involved will agree to limits on the contribution made by the statistician to the research.

IV. Guidelines for consultants

Consultants are expected to treat clients, their research ideas, their data and their questions in a respectful and confidential manner. Consultants will communicate clearly with clients about expectations for 'who will do what' and 'by when' with clients. Statistical consultants are expected to perform their work in an ethical manner as described by the American Statistical Association.