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Department of Statistics and Data Science Promotion and Tenure Guidelines

The purpose of these guidelines is to give explicit definitions of what constitutes excellence in teaching, research and service for tenure-earning and tenured faculty.

Research:

The most common outlet for scholarly research in statistics is in journal articles appearing in refereed publications. Based on the five-year Impact Factor (IF) from the ISI Web of Knowledge Journal Citation Reports, the top 50 journals in Probability and Statistics are:

1. <i>Journal of Statistical Software</i>	26. <i>Journal of Computational Biology</i>
2. <i>Econometrica</i>	27. <i>Annals of Probability</i>
3. <i>Journal of the Royal Statistical Society Series B – Statistical Methodology</i>	28. <i>Statistical Applications in Genetics and Molecular Biology</i>
4. <i>Annals of Statistics</i>	29. <i>Biometrical Journal</i>
5. <i>Statistical Science</i>	30. <i>Journal of Computational and Graphical Statistics</i>
6. <i>Stata Journal</i>	31. <i>Journal of Quality Technology</i>
7. <i>Biostatistics</i>	32. <i>Finance and Stochastics</i>
8. <i>Multivariate Behavioral Research</i>	33. <i>Probability Theory and Related Fields</i>
9. <i>Statistical Methods in Medical Research</i>	34. <i>British Journal of Mathematical & Statistical Psychology</i>
10. <i>Journal of the American Statistical Association</i>	35. <i>Econometric Theory</i>
11. <i>Annals of Applied Statistics</i>	36. <i>Environmental and Ecological Statistics</i>
12. <i>Statistics in Medicine</i>	37. <i>Journal of the Royal Statistical Society Series C – Applied Statistics</i>
13. <i>Statistics and Computing</i>	38. <i>Annals of Applied Probability</i>
14. <i>Biometrika</i>	39. <i>Computational Statistics & Data Analysis</i>
15. <i>Chemometrics and Intelligent Laboratory Systems</i>	40. <i>Probabilistic Engineering Mechanics</i>
16. <i>Journal of Business & Economic Statistics</i>	41. <i>Statistica Sinica</i>
17. <i>Journal of the Royal Statistical Society Series A – Statistics in Society</i>	42. <i>Stochastic Processes and Their Applications</i>
18. <i>Fuzzy Sets and Systems</i>	43. <i>Scandinavian Journal of Statistics</i>

19. <i>Bayesian Analysis</i>	44. <i>Insurance Mathematics & Economics</i>
20. <i>Technometrics</i>	45. <i>TEST</i>
21. <i>Biometrics</i>	46. <i>Pharmaceutical Statistics</i>
22. <i>Journal of Chemometrics</i>	47. <i>Econometric Reviews</i>
23. <i>Stochastic Environmental Research and Risk Assessment</i>	48. <i>Electronic Journal of Statistics</i>
24. <i>Oxford Bulletin of Economics and Statistics</i>	49. <i>Econometrics Journal</i>
25. <i>IEEE-ACM Transactions on Computational Biology and Bioinformatics</i>	50. <i>Journal of Multivariate Analysis</i>

Many of these are also the topped ranked journals among North American statisticians (see *The American Statistician*, 57:115-124, 2003). In general, articles in these journals can be considered to be first-class publications.

Based on the five-year IF from the ISI Web of Knowledge Journal Citation Reports, the second 50 top journals which are viable alternatives to those listed above include:

51. <i>Quality & Quantity</i>	76. <i>Applied Stochastic Models in Business and Industry</i>
52. <i>American Statistician</i>	77. <i>Journal of Statistical Planning and Inference</i>
53. <i>Journal of Biopharmaceutical Statistics</i>	78. <i>Journal of Applied Probability</i>
54. <i>Advances in Data Analysis and Classification</i>	79. <i>Computational Statistics</i>
55. <i>Journal of Agricultural, Biological and Environmental Statistics</i>	80. <i>Methodology and Computing in Applied Probability</i>
56. <i>Environmetrics</i>	81. <i>Metrika</i>
57. <i>Bernoulli</i>	82. <i>Combinatorics Probability & Computing</i>
58. <i>Survey Methodology</i>	83. <i>Journal of Nonparametric Statistics</i>
59. <i>Statistics</i>	84. <i>Probability in the Engineering and Informational Sciences</i>
60. <i>Lifetime Data Analysis</i>	85. <i>Electronic Communications in Probability</i>
61. <i>Annales de l Institut Henri Poincare – Probabilites et Statistiques</i>	86. <i>Statistica Neerlandica</i>
62. <i>Journal of Time Series Analysis</i>	87. <i>Statistics & Probability Letters</i>
63. <i>Electronic Journal of Probability</i>	88. <i>International Journal of Game Theory</i>
64. <i>International Statistical Review</i>	89. <i>Journal of Theoretical Probability</i>
65. <i>R Journal</i>	90. <i>Statistical Methods and Applications</i>
66. <i>Astin Bulletin</i>	91. <i>Stochastics and Dynamics</i>
67. <i>AStA – Advances in Statistical Analysis</i>	92. <i>Journal of Statistical Computation and Simulation</i>
68. <i>Canadian Journal of Statistics</i>	93. <i>Stochastic Analysis and Applications</i>
69. <i>Open Systems & Information Dynamics</i>	94. <i>Stochastic Models</i>
70. <i>Statistical Modelling</i>	95. <i>Journal of Applied Statistics</i>
71. <i>Advances in Applied Probability</i>	96. <i>Statistics in Biopharmaceutical Research</i>

72. <i>Annals of the Institute of Statistical Mathematics</i>	97. <i>Communication in Statistics – Simulation and Computation</i>
73. <i>Australian & New Zealand Journal of Statistics</i>	98. <i>Theory of Probability and Its Applications</i>
74. <i>Statistical Papers</i>	99. <i>Infinite Dimensional Analysis Quantum Probability and Related Topics</i>
75. <i>Mathematical Population Studies</i>	100. <i>SORT – Statistics and Operations Research Transactions</i>

These journals are respectable outlets for publications and by no means should they be considered second-rate.

Other journals that did not make the top 100 but were included in the category of Probability and Statistics were as follows: *Journal of the Korean Statistical Society*, *Communication in Statistics – Theory and Methods*, *Hacettepe Journal of Mathematics and Statistics*, *Utilitas Mathematica*, *ALEA – Latin American Journal of Probability and Mathematical Statistics*, *Brazilian Journal of Probability and Statistics*, *ESAIM – Probability and Statistics*, *Extremes*, *Journal of Official Statistics*, *Pakistan Journal of Statistics*, *Probability and Mathematical Statistics – Poland*, *Quality Engineering*, *Quality Technology and Quantitative Management*, *REVSTAT – Statistical Journal*, *Scandinavian Actuarial Journal*, and *Stochastics – An International Journal of Probability and Stochastic Processes*.

Several other journals have substantial statistical research content but have not been categorized within the Probability and Statistics area. Examples include but are not limited to the following: *American Journal of Epidemiology*, *Journal of Econometrics*, *Psychometrika*, *Quality and Reliability Engineering International*, *Risk Analysis*, *Sankhya (Series A)*, *The Statistician*, *Journal of Statistical Theory and Practice*, and *Statistical Analysis and Data Mining*. Publications in these journals are deemed on par with those in the ISI list. Other statistics journals not mentioned above have emerged recently and it is probably best to consider the contributions to these outlets on an individual basis since important results can be found in these publications.

Articles in conference proceedings that are peer reviewed are considered equivalent to refereed journal articles. Articles in conference proceedings that are reviewed by the editor or an editorial panel are typically of lesser value and need scrutiny by the Chair.

It is common and indeed desirable for statistics faculty to collaborate with researchers in other disciplines and generate articles which naturally appear outside the usual set of statistical journals. Such contributions represent a viable addition to the faculty member's research record provided the statistical content is of high quality, pushing the state of the art of the discipline or in some cases, developing new statistical methodology as an outgrowth to the solution of a real problem. Publications in journals such as *Nature*, *Science*, or the *Proceedings of the National Academy of Sciences* are deemed as outstanding outlets of research. Publications in flagship journals in other disciplines are also recognized as significant (e.g., *Bulletin of the American Meteorology Society*, *Ecology*, etc.).

Case-by-case assessment is required to differentiate between true research publications and accounts of statistical consulting of a routine nature. Occasionally, statisticians are asked to provide a “seal-of-approval” to a procedure extracted from a statistics textbook by someone in another discipline. Activities along these lines are best associated with service activity.

Other contributors to a research program include the production of graduate level textbooks or influential upper division statistics texts. Evaluation of these contributions can be assessed through their adoption at other universities and their influence as measured by citation indexes.

External funding is desirable for all faculty members. Sources for research funding in statistics are limited. More commonly, funding may be secured in the context of an interdisciplinary project. It is rare to get funding from the National Science Foundation, for example, to pursue pure research endeavors in statistics.

Promotion from Associate to Full Professor based on research productivity will typically necessitate that all of the following be satisfied:

- at least 3 publications in the top 50 journals listed above over the past 5 years or production of 1 graduate level textbook or influential upper division statistics textbook adopted at a university other than UCF over the past 5 years or since last promotion, whichever is less
- at least 5 publications in the top 100 journals listed above or in those listed above that did not get categorized into Probability and Statistics, over the past 5 years or since last promotion, whichever is less
- at least 10 publications in the top 100 journals listed above, in those in Probability and Statistics that did not make the top 100 list, in those listed above that did not get categorized into Probability and Statistics or in flagship journals in other disciplines in which the statistical content is of high quality, over the past 5 years or since last promotion, whichever is less
- external funding through ORC or the Research Foundation for a total amount of funds that is equivalent to at least 4 months salary over the past 5 years or since last promotion, whichever is less

Promotion from Assistant to Associate Professor based on research productivity will typically necessitate that all of the following be satisfied:

- at least 2 publications in the top 50 journals listed above over the past 5 years or since appointment
- at least 4 publications in the top 100 journals listed above or in those listed above that did not get categorized into Probability and Statistics, over the past 5 years or since appointment
- at least 7 publications in the top 100 journals listed above, in those listed in Probability and Statistics that did not make the top 100 list, in those listed above that did not get categorized into Probability and Statistics or in flagship journals in other disciplines in which the statistical content is of high quality, over the past 5 years or since appointment
- external funding through ORC or the Research Foundation for a total amount of funds that is equivalent to at least 2 months salary over the past 5 years or since appointment

Teaching:

Excellence in teaching involves maintaining currency in the subject matter and excellence in delivery as revealed (at least partially) through student evaluations. Currency includes both the content of courses (as commonly reported in the teaching oriented journals such as *The American Statistician*) and the computer support activities in conjunction with certain courses. A faculty member is expected to be proficient in the statistical packages or languages used within the courses that they are teaching. The Department is responsible for providing equipment and software for use by the faculty in conducting the courses. Currency can also be demonstrated through regular course revisions, new course development, innovations in the delivery of courses (e.g., incorporating critical thinking or writing into the course or developing an online version of an existing course), attendance of teaching workshops (e.g., workshops sponsored by the FCTL) or professional development (e.g., completion of IDL6543 offered by the Center for Distributed Learning). For delivery of courses taught previously by a colleague who through professional courtesy provides course lecture notes, it is expected that the delivery represent a complete mastery of the inherited material with corrections made as necessary.

Graduate faculty are expected to be capable of contributing to the teaching mission of the Department at all levels, including undergraduate service courses, undergraduate courses in the major and graduate level courses in their subject area. Participating on thesis committees (M.S. or Ph.D.) or directing theses is considered a plus for faculty.

Promotion from Associate to Full Professor based on teaching will typically necessitate that all of the following be satisfied:

- satisfactory or better chair's evaluations of teaching for each year over the past 5 years or since last promotion, whichever is less
- at least two of the following where selection can be done with replacement: course revision, new course developed or significant innovation of delivery
- attendance of at least 1 FCTL workshop over the past 5 years or since last promotion, whichever is less
- completion of IDL6543
- participation on at least 5 thesis committees over the past 5 years or since last promotion, whichever is less

Promotion from Assistant to Associate Professor based on teaching will typically necessitate that all of the following be satisfied:

- satisfactory or better chair's evaluations of teaching for each year over the past 5 years or since appointment
- at least one of the following: course revision, new course developed or significant innovation of delivery
- attendance of at least 1 FCTL workshop over the past 5 years or since appointment
- completion of IDL6543

Service:

Excellence in service includes editorial activities, committees of professional societies, university service and consulting activities. Editorial activities are demonstrated through refereeing for the journals mentioned in Research or through work as associate editor or editor of journals. The same hierarchy of the journals applies here to review work. Service can also be demonstrated through contributions on statewide, national and international committees and boards (e.g., ASA, IMS, USA TAG or ISO delegations). Review of proposals for NSF, NIH, and so forth also constitute viable service activity. Consulting activities are demonstrated through joint publications with clients and funding from contracts and grants.

Promotion from Associate to Full Professor based on service will typically necessitate that all of the following be satisfied:

- refereed at least 5 papers from the top 100 journals listed above, in those in Probability and Statistics that did not make the top 100 list, in those listed above that did not get categorized into Probability and Statistics or in flagship journals in other disciplines in which the statistical content is of high quality, over the past 5 years or since last promotion, whichever is less, or served as editor or associate editor each year over the past 5 years or since last promotion, whichever is less, or some combination of refereed papers and annual editorial service totaling 5 or the number of years since last promotion, whichever is less
- service on at least 1 department, college or university committee each year for the past 5 years or since last promotion, whichever is less
- service on at least 1 committee of a professional society or a review board at the state, national or international level during the past 5 years or since last promotion, whichever is less

Promotion from Assistant to Associate Professor based on service will typically necessitate that all of the following be satisfied:

- refereed at least 3 papers from the top 100 journals listed above, in those in Probability and Statistics that did not make the top 100 list, in those listed above that did not get categorized into Probability and Statistics or in flagship journals in other disciplines in which the statistical content is of high quality, over the past 5 years or since appointment
- service on at least 1 department, college or university committee each year for the past 5 years or since appointment