PROCESS for SPSS and SAS
Version history and bug fixes

The most current release is v3.4. Always use the most current version.

January 2012-April 2013	Various beta releases with six digit release numbers in DDMMYY format. Users of these releases should discard and update to the most current version.
6 May 2013	PROCESS v2.03 released with the publication of Hayes (2013) *Introduction to Mediation, Moderation, and Conditional Process Analysis*
6 June 2013	PROCESS v2.04 released; fixes bug in SAS version affecting computation of conditional indirect effects in models 72 and 73 in all prior releases.
15 July 2013	PROCESS v2.05 limited private release with features to appear in v2.10
27 September 2013	PROCESS v2.10 released. Adds models 75 and 76, produces new Johnson-Neyman output, an option for changing the number of decimal places in output, and implements the index and test of moderated mediation described in "*An index and simple test of moderated mediation*" and in sections 12.2 and 12.3 of *Introduction to Mediation, Moderation, and Conditional Process Analysis*. This version also fixes a bug generating some unnecessary warnings in the conditional effects section of the output for some models. It also eliminates the printing of two conditional indirect effects in model 74 when X is dichotomous.
15 February 2014	PROCESS v2.11 released. Corrects a few typos in output and adds new option to generate the variance-covariance matrix of the regression coefficients in the output.
14 June 2014	PROCESS v2.12 released. Adds the mean squared error to the summary statistics for a regression model and implements a procedure for comparing conditional effects in moderation analysis in models 2 and 3. This version also generates SPSS syntax for production of a plot of moderation in models 1, 2, and 3.
26 June 2014	V2.12.1 update released that fixes a bug that generates estimates of certain effect sizes for indirect effects in model 5 that should not be generated.
13 August 2014	V2.12.2 update released that fixes a bug in the SAS version that produced small inaccuracies in bootstrap standard errors and upper bounds on bootstrap confidence intervals in model 6.

26 September 2014   PROCESS v2.13 released. This release adds the production of effect size measures in mediation-only models (models 4, 5, and 6) with covariates. In addition, PROCESS for SPSS will no longer accept variable names with more than eight characters to avoid some computational problems produced by variable names in a model that are not distinct in the first eight characters.

21 July 2015   Limited private release of PROCESS v2.14 with features to appear in public release as v2.15

10 January 2016   PROCESS v2.15 released. This release adds a new feature to model 1 for estimating moderation and probing interactions when X or M is multicategorical (three or more levels). Multicategorical X variables are also now available as an option in model 4. In addition, PROCESS will now generate incremental R-square for interactions and corresponding hypothesis tests in models 1, 2, and 3 when using the HC3 option for heteroscedasticity-robust inference. A new option is also included for overriding the eight character limitation on variable names.

1 July 2016   PROCESS v2.16 released. This releases adds the indices of partial, conditional, and moderated moderated mediation. It also disables Preacher and Kelley's kappa-squared, and also sets the default number of bootstrap samples to 5000 for the construction of bootstrap confidence intervals.

1 December 2016   PROCESS v2.16.3 released. This fixes a few cosmetic bugs that don't affect computations in prior releases and that clean up some of the output.

2 December 2017   PROCESS v3.0 released with the second edition of *Introduction to Mediation, Moderation, and Conditional Process Analysis.* This is a complete rewrite of PROCESS to allow for multicategorical X, W, and Z in all models, new programmed models that combine moderation and serial mediation, the ability to construct custom models, and many other features. This release is documented in the 2nd edition of the book. With the release of PROCESS v3.0, version 2 is discontinued and no longer available, distributed, or supported.

30 July 2018   PROCESS v3.1 released. This version ads the ability to use dichotomous Ys in any model (a feature disabled in version 3.0). It also fixes a bug in all releases of v2 that produced small inaccuracies in p-values for conditional direct effects in models with a dichotomous Y and small samples. This version also disables the computation of the indices of moderated moderated mediation and conditional moderated mediation when W or Z is specified as multicategorical (v3.0 had a bug in the computation of these indices in some of these scenarios). Also changed are some new error messages displayed when v2 syntax is used in v3.

19 November 2018   PROCESS v3.2 released. This release adds the production of standardized regression coefficients as an option through syntax in models that do not include a moderation component. It is also now possible to assign a variable functioning as a moderator in one equation the role of covariate in another equation, thereby eliminating the need for the trick described on pages 630-632 of Appendix B of the documentation.

27 December 2018   PROCESS v3.2.01 released. This is a just a cosmetic release that eliminates a nuisance EXP overflow error that can sometimes occur for models with a dichotomous Y. In addition, the **stand** option will now also automatically toggle on the **effsize** option, so that when standardized regression coefficients are generated, so too are standardized direct, indirect, and total effects of X in mediation-only models. The standardized option is now also available in the SPSS custom dialog.

25 January 2019   PROCESS v3.2.02 released. This release adds standardized regression coefficients to the section of output that generates the total effect model when that model is required using the **total** option in a mediation analysis.

3 February 2019   PROCESS v3.3 released. This release disables the implementation of the multicategorical options for X, W, and Z (i.e., mcx, mcw, mcz) when these variables are dichotomous in the data. In earlier releases of version 3, the use of the multicategorical option with a *dichotomous* X, W, or Z could in some circumstances produce incorrect output when probing or plotting interactions.

12 August 2019   PROCESS v3.4 released. This release adds a new centering option for models with a moderation component, adds multivariate tests of interaction in models with two moderators, and provides an option for testing whether X interacts with any mediator in a model.