

REDCap Features & Capabilities

The REDCap Health System Instance at UVA is currently on Version 10.6.7. REDCap offers a vast list of features and capabilities such as the user-friendly interface, surveys, calendars for scheduling, longitudinal events, user access flexibility, and more. Please see the extensive list with descriptions below.

Current UVA REDCap Features & Capabilities

Below is a list of key features offered in REDCap

Features & Capabilities	Description
Action Tags	They are special terms that begin with the '@' sign that can be placed inside a field's Field Annotation when adding or editing a field. Each action tag has a corresponding action that is performed for the field when displayed on data entry forms and survey pages. For Example: @HIDDEN = hides field on survey page or data entry form.
Ad Hoc Reporting	Create custom queries for generating reports to view or download.
Auto-Validation	Date, Time, Email, Integer or Number, MRN (10 digits), Zip Code, Ontology; with Max & Min setting
Biomedical Ontologies	A special feature that provides auto-suggest functionality for real-time searching within biomedical ontologies such as: CPT, ICD 9 CM, ICD 10 CM & PCS, LOINC, NCFRT, RxNORM, SNOWMED CT, and more
Branching/Skip Logic	Branching Logic may be employed when fields/questions need to be hidden under certain conditions. If branching logic is defined, the field will only be visible if the conditions provided are true.
Build surveys & databases quickly/securely	Build online surveys and databases quickly and securely - Create and design your project rapidly; institute's networks access & authentication required.
Calculated Fields	The ability to make real-time calculations on data entry forms and surveys.
Data collection instruments as PDF	Generate a PDF version of your forms and surveys for printing to collect data offline or for sharing with collaborators
Data Entry Field Types	Radio buttons, free text, drop downs, Slider / visual analog scale, yes/no, true, false, signature, file upload, check boxes
Data Export	Export data to common data analysis packages - Export your data to Microsoft Excel, PDF, SAS, Stata, R, or SPSS for analysis.
Data Import	Import data into projects; data import template used. Great for retrospective studies.
Data Quality	Grants user access to find data discrepancies or errors in project data by allowing user to create & edit rules; and execute data quality rules.
Data Queries	Document the process of resolving data issues using the Data Resolution Workflow module.
Double Data Entry Module	Allows two project users to be set as Data Entry Person #1 and Data Entry Person #2 (using User Rights page), and allows them to create records with the same name and enter data for the same record without seeing one another's data. Only one person at a time can be set as person #1 or #2. All other users are considered Reviewers. Reviewers have the ability to merge a record created by person #1 and #2 after viewing differences and adjudicating those differences using the Data Comparison Tool, thus creating a third record in the set.
e-Consent framework	Electronic-Consent (e-Consent) is a platform for consenting patients or research subjects either on site or at home using a computer-based consent form rather than traditional paper documentation. Consent forms can be implemented in a REDCap survey via computer, mobile phone, or tablet. Once the consent form is submitted, the participant will receive an email that includes a PDF attachment with a copy of their signed consent form. Most importantly, it is highly recommended that you have a discussion with your local Institutional Review Board (IRB) if you wish to do e-Consent in REDCap. Not available publically yet.
Email & Messaging system	Email and Instance Messaging capabilities is available to all users. To use select the Send-It tab

	or the Messenger tab in the top menu.
Fast and flexible	Conception to production-level survey/database in less than one day (depending on the size and complexity of your project)
Field Embedding	The best way to improve the layout of your form or survey is with field embedding. Field embedding is a way to customize data entry forms and surveys to make them look exactly how you want. It allows you to reposition field elements on a survey page or data entry form so that they get embedded in a new location on that same page.
File Repository	Used for storing and retrieving files and documents used for a given project; upload files to save for retrieval later, or download previously uploaded files in the file list. Whenever a data export is performed, the resulting data and syntax files are stored here also.
Longitudinal	If some instruments need to be utilized repeatedly a specific *finite* number of times (e.g., using an instrument named 'Visit Data' over ten visits for the same subject), then 'longitudinal' data collection will likely be best. Additionally, the longitudinal format also allows one to utilize the scheduling module, if needed (see more info below on the scheduling module).
Multiple Languages	The label text displayed for individual fields on a survey or data entry form can be in any language. Setting the text label for non-English languages is the same with English text, in which you will set the text for that field in either the Data Dictionary or Online Designer. Chinese, French, German, Portuguese, others coming
PDF Auto-Archive	Upon survey completion, a compact PDF copy of the survey response can be automatically stored in the project's File Repository, from which the archived PDFs can be downloaded at any time. This setting is located on the Survey Settings page in the Online Designer, thus it can be enabled for any given survey in a project.
Piping	Inject previously collected data values into question labels, survey invitation emails, etc. to provide a more customized experience.
Public Surveys	Participants will be able to access surveys emailed to them when they are not on the UVA grounds.
Randomization Module	Randomization is a process that assigns participants/subjects by chance (rather than by choice) into specific groups, typically for clinical research and clinical trials. The randomization module in REDCap will help you implement a defined randomization model within your project, allowing you to randomize your subjects.
REDCap Mobile App	Collect data offline using an app on a mobile device when there is no WiFi or cellular connection, and then later sync data back to the server. Recommended for Collect data offline for remote rural locations.
Repeating Forms & Events	The ability to repeat a data collection instrument or an entire event of instruments an unlimited number of times without having to specify the amount needed. This is sometimes called one-to-many data collection, in which a project can have one or more repeating parts.
Scheduling	Built-in project calendar and scheduling module for organizing your events and appointments.
Send files to others securely	Using 'Send-It', upload and send files to multiple recipients, including existing project documents, that are too large for email attachments or that contain sensitive data.
Shared Instrument Library	A global repository of data collection instruments that can be downloaded and used in your REDCap projects. In the Shared Library, you may view any of the library's instruments on the library web page or as a PDF. It will allow you to import any instrument from the library into your REDCap project. Many instruments have Computer Adaptive Tests (CATs) & Auto-scoring.
Smart Variables	Smart Variables are dynamic variables that can be used in calculated fields, conditional/branching logic, and piping. Similar to using project variable names inside square brackets -e.g., [heart_rate], Smart Variables are also represented inside brackets -e.g., [user-name], [survey-link], [previous-event-name][weight], or [heart_rate][previous-instance]. But instead of pointing to data fields, Smart Variables are context-aware and thus adapt to the current situation. 35 Smart Variables are available. They can reference things with regard to users, records, forms, surveys, events/arms, or repeating instances.
Surveys	Easily manage a contact list of survey respondents or create a simple survey link - Build a list of email contacts, create custom email invitations, and track who responds, or you may also create a single survey link to email out or post on a website. Many survey setting options including survey stop actions.
Survey-specific email invitation fields	This is a new option on the Survey Settings page that can be enabled for any given survey, in which a user may designate an email field for sending survey invitations for that survey only. The email field being utilized for the survey can exist on any instrument in the project, and you may

	use a different email field on each survey. You may also use the same email field for multiple surveys. This feature is similar to the project-level email invitation field except that it is employed only for the survey where it has been enabled. This allows users to have data entry workflows that require multiple surveys where the participant is different for each survey. Using this feature, multiple people can be emailed a survey invitation, after which all the survey data they enter goes into the same record in the project.
Tablet, Smartphone ready	Save REDCap icon for survey or project page on tablet, smartphone, or computer desktop.
User Security	You may set the rights for the user by checking the boxes next to the application tools to which you wish to grant them access. You may also grant them or deny them access to individual data collection instruments.

REDCap Advanced Features

Advanced REDCap features that are offered by the REDCap team are listed below. This functionality requires programming by the REDCap team.

Advanced Features & Capabilities	Description
Application Programming Interface (API)	Have external applications connect to REDCap remotely in a programmatic or automated fashion.
External Modules	External Modules are individual packages of software that can be downloaded and installed by a REDCap administrator. Modules can extend REDCap's current functionality, and can also provide customizations and enhancements for REDCap's existing behavior and appearance at the system level or project level. Please visit this site for a current list: Repository of External Modules