# LON-CAPA Course Coordinator Training: Basics and Advanced

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Part I

# Basic Course Set-up

## 1 History

LON-CAPA originally began at MSU as CAPA in 1992 before the world wide web was widely used. Students used Telnet to enter their answers. When CAPA development ended with the beginning of LON-CAPA development, the software was web accessible, had the ability to create randomized Scantron based exams, and had many statistical features so the instructor could easily analyze the class data. In 1997, MSU also had Lecture *Online* which was completely web based for both students and instructor. It also had the capability to easily include online texts along with the homework. LON-CAPA is the combination of both softwares with an additional content sharing functionability. Institutions in the LON-CAPA network can easily share resources because all resources get published to an access controlled resource pool. The access controls allow a resource author to share a resource on many different levels. Furthermore, LON-CAPA is open-source and constantly growing as new features and enhancements get submitted from users. Starting in 2000, LON-CAPA received support from a five year NSF-ITR grant and Michigan State University.

## 2 Help

### 2.1 Where to find additional help

You can find additional help about LON-CAPA at http://www.lon-capa.msu.edu. On this page you can download copies of this training guide and the manual. You can also access our FAQ-o-matic page and submit a ticket for additional help to a member of LON-CAPA's tech support staff. Links to help your students are also available on this page.

### 2.2 Requesting New Features and Submitting Suggestions

LON-CAPA's open source development encourages you to submit enhancement requests. The LON-CAPA development team always works to release the highest quality product possible. However, because no software is perfect no matter how hard programmers try, you may encounter a bug. Therefore, we encourage you to submit bug reports as well. You need an account in bugzilla in order to give the programmers feedback. You can create an account at http://bugs.lon-capa.org.

## 3 Logging In

### 3.1 Roles Screen

After logging into LON-CAPA with your username and password, you will see a screen where you can select your role. LON-CAPA is a roles based system. You can always use the same login even though your roles may change. You can be an instructor in one class, a TA for another class, and an author of resources all with the same username. Selecting ROLES on your Remote Control or on the Main Menu will bring you back to the Roles Screen. For students, the word ROLES is replaced by the word COURSES.

### 3.2 Remote Control and Menu Mode

LON-CAPA can be controlled by either the Remote Control or the combination of the Inline Menu and the Main Menu. In Menu Mode, the Inline Menu will appear at the top of every page in LON-CAPA. Click on the Main Menu link in the Inline Menu to access the Main Menu. To switch from the Remote Control to the Main Menu, close the remote window by clicking the 'x' in the upper right-hand corner. To use the Remote Control instead of the menus, click the link Launch Remote Control on the Inline Menu. Please note that you will not be able to use the Remote Control if your browser is not configured properly. You must have pop-ups, javascript, and cookies enabled for the Remote Control to work. If your browser is not configured properly for the Remote Control, then LON-CAPA will automatically go into Menu Mode.

# 4 Setting Preferences and Editing the 'About Me' Page

Click PREF on the Remote Control or the Preferences link on the LON-CAPA Main Menu to access the Preferences Screen. Click one of the buttons to edit your selected preference. The following subsections describe in detail what each button does.

## 4.1 Change password

Click this button to change your password. You will not be able to change your password if your login and password is authenticated externally to LON-CAPA. For example, if you use the same login and password as your university email account, you will need to use your email account to change your password.

## 4.2 Change nickname or anonymous discussion screen name

Click this button to change your nickname or screen name. For example, if your name is Elizabeth but you always go by Liz, you can assign yourself the nickname Liz and that name will be used with the LON-CAPA communication tools. Some of the LON-CAPA communication tools, such as the bulletin boards and chat, allow you to post anonymously. You can give yourself a screen name that will be used instead of the word "anonymous." For example, Liz might want her anonymous screen name to be "Athena" because she likes helping others on the bulletin boards with intelligent responses. Using a screen name is highly recommended because some conversations will look like "anonymous" is chatting by himself.

## 4.3 Change message forwarding and notification addresses

Click this button to specify a LON-CAPA username to forward all messages to or an email address to send new message notification to. When you send messages in LON-CAPA, you need to use the internal LON-CAPA communication tools to read the messages. When internal LON-CAPA messages are not used very often, you may forget to check them. You can choose to have the system send you an email notification when you get a new interal LON-CAPA message. One the other hand, message forwarding allows you to forward messages to another LON-CAPA user. For example, you create resources with the co-author role "teamphysics." You can choose to have all of the messages that are sent to "teamphysics" forwarded to your normal LON-CAPA username of kjohnson25@msu.

## 4.4 Edit the 'About Me' personal information screen

Click this button to to edit your internal LON-CAPA homepage. When you communicate with other users in the system, your name appears as a link to your About Me page. You can add one image to your About Me page by clicking the Browse button in the editor and grabbing an image off your computer. When you have made your selection, click the Upload button to save the image for your About Me page. Please note that if you communicate anonymously, students will not be able to view your About Me page through the normal link. However, instructors and course coordinators will be able to view the page.

## 4.5 Change color scheme

You can change the color scheme of LON-CAPA by clicking on this button.

## 4.6 Change Language Preferences

You can change your language preferences by clicking on this button. The default language is English. You can change the language of the LON-CAPA system language, but homework problems will remain in the language they were coded in. Changing languages is a new tool and is not fully functional. This tool was put in place for testing purposes. If you would like to help with a language that is not available from the language list, please submit your suggestion through bugzilla.

# 5 Exploring Your Course

By default, your new LON-CAPA class will be empty except for the syllabus. Select the course coordinator role for your new class to enter the course by clicking the Select appropriate Select button on the Roles Screen.

## 5.1 Course Initialization Helper

The first time you enter your course, you will be presented with the Course Initialization Helper. Click the Next button on each screen to keep the LON-CAPA default settings. When you are done going through the Helper click the Finish button. Afterwards, you will be shown the Main Menu page (even if you are using the Remote Control).

## 5.2 Help

On many LON-CAPA pages, you will see small blue boxes with white question marks inside. These are links to relevant help documentation.

## 5.3 NAV - Navigation Screen

Click the NAV button on the Remote Control or on the Inline Menu to explore your course. The Navigation Screen is a table of contents for your course that also displays due dates, status (i.e. solved versus unsolved problems), new discussion notification, and new message notification. Resources with new discussion associated with them will have a little bubble like the ones used in comic strips next to the resource name. Resources that have a message from an individual student about them will have a little envelope next to the resource name. Clicking on this icon will display the message. Clicking on any resource on the Navigation Screen will immediately jump you ahead to that resource. Clicking on a folder icon in the Navigation Screen will open up the folder and show a list of all the resources inside that folder.

## 5.4 Edit Syllabus

By default, the syllabus is placed in your course documents and you can access it from the Navigation Screen or the Course Documents screen. On the Roles Screen there is also a link to your syllabus. As a Course Coordinator, you see the syllabus in Edit Mode. Fill in one or more of the text boxes and click any of the store buttons to save changes to your syllabus. Clicking the Show Public View link will show you what the syllabus looks like to your class. You can copy the URL of your syllabus and distribute it to anyone. The syllabus is publicly viewable and anyone can see it without the need of logging into LON-CAPA.

# 6 DOCS - Course Documents (Course Management Manual, Sec. 2)

To access your course documents, select your course from the Roles Screen and then select DOCS from the Remote Control or Main Menu. Whenever you make changes in the DOCS Screen, your changes are automatically saved. However, for your changes to be active you will need to click the re-initializing course button that appears after making any changes. You can make a number of changes at once and do not need to re-initialize unless you want the changes in effect or you want to edit your new resources. Selecting the role from the Roles Screen has the same effect as clicking the re-initializing course button on your DOCS Screen. To the left of each resource in your DOCS screen are links to Remove and Rename each resource.

The arrows next to the resources allow you to bubble up a resource or sink it lower in the DOCS Screen list of resources.

## 6.1 Special Documents: Folders

Clicking on the Folder button allows you to add a folder to your course. It is popular to use a folder for each homework set. Other uses of folders are sequences or resources, chapters, or modules. For example, you can name your folder "Set 1", click on the folder new "Set 1" folder icon in the DOCS Screen list and edit the contents of this folder by working in the new window that appears. Inside the folder, you could add 15 homework problems for "Set 1." You could have also named your folder "Unit 1" and inside the "Unit 1" folder, added additional folders named "Chapter 1", "Chapter 2", and "Chapter 3." *Make sure to click the* re-initializing course *button or close this window when you are done.*

## 6.2 Imported Documents: Import

Clicking on the Import button on the DOCS Screen will allow you to browse the LON-CAPA resource pool and select published documents, such as homework problems, and import them into your folder.

## 6.3 Imported Documents: Search

Clicking on the Search button on the DOCS Screen will allow you to search the LON-CAPA resource pool and select published documents to add to your course.

## 6.4 Imported Documents: Load Map

A map is identical to published folder and is saved as either a sequence or a page file. If you like all of the resources in a map, you can add it directly to your class or appropriate folder using either the import or search tools described above. However, if you would like to copy everything over from a sequence into your own folder so you can make a few changes then you should choose to load the sequence. Most likely you will want to start off loading a map by entering the appropriate folder. Then you will need to select the map you want to load by clicking the Select button. After making your selection, click the Load button and all of the resources in the map will be dumped onto your course documents screen. You are now free to add and remove additional resources and change the order.

## 6.5 Special Documents: External Resource

Clicking on the External Resource button allows you to add an external resource to your course. External Resources are links to pages on the internet that automatically open up in your course. *You need to re-initialize your course before editing your new external resource.*

## 6.6 Special Documents: Syllabus

By default, the syllabus is placed in your course documents. If you happen to delete the syllabus or if your domain coordinator changed the defaults when creating your course, you can add a syllabus by using the Syllabus button. *You need to re-initialize your course before editing your new external resource.*

## 6.7 Special Documents: Navigate Content

Instead of having your students click the NAV button on the Remote Control or Inline Menu, you can have the Navigation Screen be a resource in your class. For example, many instructors like to have the Navigation Screen be the first screen in their course so their students can quickly jump ahead to which problem they need to solve next.

## 6.8 Special Documents: Simple Page

Clicking on the Simple Page button adds a simple web page to your course. After adding the Simple Page, re-initialize your course and then click on the page on your DOCS Screen list to edit it. The editor is almost identical to the About Me page.

## 6.9 Special Documents: Simple Problem

To add a Simple Problem to your course documents, click on the Simple Problem button and then re-initialize your course. Click on the problem on your DOCS Screen list to open the problem. Click the Simple Problem Editor link to edit your problem. Choose one of the question types from the drop-down menu and then click the Store Changes button. Edit the problem and click Store Changes to view your changes. The following four subsections describe each question type.

### 6.9.1 1 out of N multiple choice

This is a question where students can choose only one correct answer out of a selection. Each selection choice is called a foil because the majority of the selection choices try to foil the student. Only one foil is correct. LON-CAPA will randomly display the foils to your students. If you choose to set the max number of displayed foils to 4 but only have 6 foils then LON-CAPA will choose one of the True foils and fill in the rest of the foils with false foils up to a maximum of four foils. To edit the 1 out of N multiple choice problem, enter your question text into the appropriate box. Then enter one foil statement in each foil box that you would like to use. You do not have to use all 10 of the foil boxes. For each foil that you do use, you will need to assign it a value of True or False. You can assign a foil a location if you choose. For example, the foils will apear in random order for your students. If you have a foil statement of "None of the above" then you will want this statement to always appear at the bottom. After entering all of the correct foil text, you can add an optional hint. The hint text will appear under your student's view of the problem after getting one incorrect submission. The hint text will remain displayed on your students view of the problem after it is correct for study purposes. At any point in the editing process, you can choose to store your changes. Each time you click Store Changes , the current view of your problem will appear in box at the top of the edit screen. When you are done editing, click the Store Changes button and close the window by selecting the "x" in the upper right-hand corner of the window.

### 6.9.2 Option Response

The Option Response question type is a matching question. Instead of students selecting one true foil from a list, each foil has a drop-down box in front of it where students have to select the correct option for each statement. The editing of this problem type is very similar to editing the 1 out of N multiple choice problem. Enter your question text into the appropriate location. In the add a new option text, add one of the drop-down box options and then click the Store Changes button. Repeat adding options until you have added all that you want to use. If you make a mistake, you can select an option that you want to delete and then click Store Changes to save your changes. After adding all of your options, type in the text for each foil and assign each option the correct value and location. You can add an optional hint if you want. When you are done editing, click the Store Changes Store Changes button and close the window by selecting the "x" in the upper right-hand corner of the window.

### 6.9.3 Essay, open end

Enter your question text into the appropriate location and click the Store Changes button when you are done. Students will see your question text and be given a text block to enter in their short answer essay. Using the parameters, you can allow students to submit their essays in groups and allow your students to upload a file to give to you, such as a Word document.

#### 6.9.4 Short string response

This question type gives your students a small text box where they can enter in their answer in the form of any string, most appropriately a word, but a number or short phrase will work as well. You can choose to have your string response be case senstive or case insensitive.

### 6.10 Special Documents: Score Upload Form

To add external scores to your course, such as scores from a term paper or external exam, you will need to add a score upload form by clicking the Score Upload Form button on the DOCS Screen and then assign the appropriate scores to this problem. In the course parameters, assign the weight of the exam or project to the Score Upload Form like a problem and then upload your student's scores for this resource.

### 6.11 Special Documents: Bulletin Board

Every problem and webpage in your course can operate as a bulletin board. However, if you want to create a resource with the sole purpose being an easy-to-use bulletin board, you can add a bulletin board to your course documents by clicking on the Bulletin Board button on your DOCS Screen. Re-initialize your course and then click on your bulletin board to edit the bulletin board template.

### 6.12 Special Documents: My Personal Info

Clicking on the Personal Info button adds your About Me page to your course.

### 6.13 Uploading a New Main Course Document

If you already have a file on your computer that you want in your course, you can upload it by clicking Browse, select the file from your computer, and then click Upload. If you are going to upload a webpage that includes graphics, you should get authoring privileges and add the webpage and all necessary graphics to the LON-CAPA pool and import the page instead.

### 6.14 Verify Content

Click the Verify Content button at the top of the DOCS Screen to view warnings and errors in resource code. Warnings in html pages will not affect your student scores.

### 6.15 Check/Set Resource Versions

Click the Check/Set Resource Versions button at the top of the DOCS Screen to see which resources have been updated over a specific time frame. By default, when you import a resource, you always get the latest resource and that resource will update to the latest if the author publishes changes. Using the Check/Resource Version tool, you can lock all of your resources in their current version. You can also view which changes have occured in a particular time frame by choosing a particular time frame from the drop-down box and hitting the Display button. From here, you can choose to lock one or more individual resources in place. It is recommended to leave the default setting to keep all resources up-to-date because most resource changes happen to be improvements by the author.

### 6.16 Dump Course Docs to Construction Space

If you have authoring privileges in LON-CAPA you will get a button to Dump Course Docs to Construction Space. This feature will let you copy the material you created with the tools in the DOCS Screen to your construction space. You can then add this material to the LON-CAPA resource pool by publishing it. *Dumping problems created with the Simple Problem Editor currently is not supported. The feature will be supported in the future and you will eventually be able to copy these problems to constructions space.*

### 6.17 Supplemental DOCS

The interface for the Supplemental DOCS at the bottom of the DOCS Screen operates similar to the Main Course Documents interface at the top. Supplemental Documents differ in how the material is presented to the student. The student will not see the supplemental documents unless the student clicks on the DOCS button on his Remote Control or Main Menu.

## 7 Prepare a printable PDF file

From any resource in your course, click PRT on the Remote Control or on the Inline Menu to open the print helper. The helper will guide you into a preparing a PDF document with options such as printing all the problems from a particular folder/sequence. If you see error message when trying to prepare a PDF file, then you will need to contact the author of the problem which has the printing error.

## 8 Course Parameters (Couse Management Manual, Sec. 4)

To access the Course Parameters Screen, click the PARM button on the Remote Control or on the Main Menu. The parameters screen has options such that you can set parameters for the entire course or for a particular section or user.

### 8.1 Parameter Helper

The easiest way to set parameters is to use the Helper. The Helper will give you step-by-step instructions for setting the open date, due date, answer display date, tries, or problem weight. With the helper, you can choose to set parameters for the course default, for a particular folder, or for a particular problem. Please note that a parameter set for a folder overrides the default and a parameter set for a problem overrides the folder settings and the default settings. You can set the following parameters with the Helper.

#### 8.1.1 Open Date

The open date is the date and time when to first allow the students to view and work on the problems. By default, all problems are viewable immediately after being added with the DOCS Screen. You can change this default setting by deleting the course level open date. Note that parameters only control access to problems. Webpages are always viewable.

#### 8.1.2 Due Date

The due date is when the problems are due. The student will not be able to view the problems again until the answer date.

#### 8.1.3 Answer Date

The answer date is when the problem and answers are viewable to the student after the due date. If the answer date is mistakenly set for a time before the due date, the answer date defaults to the due date. If the answer date is not set, then students will not be able to see the problems after they are due.

#### 8.1.4 Tries

Tries can be set to any integer value. The default value is 99 tries. If you set the course level tries to 10, then every student gets 10 tries for every problem in the course.

#### 8.1.5 Weight

By default, the problem weight is equal to how many points the problem is worth. If you want to edit the default, you will need to edit the LON-CAPA Spreadsheet and the change the Course Environment Parameters. If the problem is made up of multiple parts each with their own submit button, then those parts behave as if they were separate problems and each have their own weight.

### 8.2 Parameter Overview

After using the helper, you can see an overview of all the parameters you have set with the overview mode.

### 8.3 Table Mode

You can set parameters with the table mode if you wish. Enter the appropriate data into the text boxes. Next, choose the level you want to set the parameters for. Parameters can be set on three levels. Course level will apply the parameter to every resource in the course. Map/Folder level will apply the parameter to all resources in a particular folder or map and will override the course defaults. Resource level parameters apply only to one particular problem and it overrides the map/folder level and course level parameters. If you choose the map/folder level or resource level, you be given options to choose which folder/map you want to display. Click on the underscore link in the appropriate location to add your parameter. *Note, when setting resource level parameters, you must make changes under the "for Resource" column only.*

### 8.4 Course Environment

The Course Environment button on the Parameters Screen will take you to your course settings that you originally set with the Course Initialization Helper that you saw when you first viewed your course. If you are a novice user, it is recommended that you don't change the settings in the Course Environment. You can change the name of your course here as well edit more advanced settings such as specifying a style file for your course.

## 9 Chart

Click CHRT on the Remote Control or Main Menu to access the Course Chart Screen. Click the Generate Chart button to see the default chart for your class. The default chart displays a line for each student's username with the scores for each problem grouped by folder and the total scores for each folder. Read below for more information about the settings you can change from the chart default.

### 9.1 Sections

You can limit your chart display to one or more sections. Click on a section and drag your mouse down to select multiple sections in a row. To select multiple sections that are not in a row, hold down the Ctrl key on your keyboard while selecting the sections with your mouse.

### 9.2 Student Data

By default, only the student's username appears on each line. You can choose to see additional information about each student per line by selecting from this menu.

### 9.3 Enrollment Status

The default is to see students who are currently enrolled in your class. You can choose to view dropped students by selecting previous enrolled. You can also choose to view all students (currently enrolled, dropped students, and students who are in the course but have not reached their enrollment date).

## 9.4 Sequences and Folders

The default is to view all folders. You can choose to view one or more specific folders if you wish.

## 9.5 Output Format

### 9.5.1 HTML, with links

You can choose to view the chart with links which will allow you to click on a problem score for any student and see the students view of the problem and their submissions.

### 9.5.2 HTML, with all links

If you choose to view the chart with all links, you can also see the students view of a problem that has not yet been attempted.

### 9.5.3 HTML, without links

This is the default view displayed on the webpage.

### 9.5.4 Excel

Gives the chart data in an Excel file.

### 9.5.5 CSV

Get the chart data in CSV (comma separated value) format.

## 9.6 Output Data

### 9.6.1 Scores Summary

The Scores Summary option only generates the totals for each folder and the grand total score.

### 9.6.2 Scores Per Problem

The default view.

### 9.6.3 Tries

The number of tries a student used to complete each problem successfully is displayed. '*' means more than 10 tries and a '.' means that the student has not gotten the problem correct yet.

### 9.6.4 Parts Correct

The total number of correct problem parts in each sequence will be displayed.

# Part II

# Advanced Course Coordination Tools

## 10 Enrollment Functions (Course Management Manual, Sec. 1)

When you request your LON-CAPA course, you have the option to have automatic enrollment from the MSU registrar. However, there may be times you want to edit your class list. To use the enrollment functionality, click ENRL on the remote control or Main Menu.

### 10.1 Upload a Class List

To upload a class list, you will need to have your class list in CSV format, space separated format, or tabulator separated format. Browse for your class list on your own machine and then click the Upload class list button. For the next screen, you will assign the appropriate values to each column. At MSU, you will need to choose kerberos version 4 for your login type. By default, the ending date will be six months from when you enroll. After this ending date, your course will no longer show up on the students' Course Screens anymore and they will not be able to access the class. Note that this is different than the due date. Checking the option Full Update presents you with a list of students not enrolled anymore that you can choose to drop. After filling out the form, click the Update Courselist button.

### 10.2 Enroll a Single Student

To enroll a single student in your course, put in the user's MSU net ID into the username text box and then click on the Begin Enrollment button. If the user is already in the system, optionally assign the student to the appropriate section, adjust the beginning and end date if necessary, and then click the Enroll as Student button. If the user is not in the system, you will additionally need to supply the name, kerberos version 4 for the password, and student number. If you want to give access to a non-MSU user or create your own student for testing purposes, make sure to create a username greater than eight characters long and assign a password using the internally authenticated option.

### 10.3 Modify Student Data

This option allows you to edit the student name, ID number, section, and start and end dates.

### 10.4 View Class List

By default, the class list will display on a web page. You can select the CSV or Excel options to download the class list in these formats.

### 10.5 Drop Students

This option gives you a list of all your students with check boxes to the left of their names. Check the boxes next to the students you wish to drop and then click the Drop Students button after you have made your selection.

### 10.6 Automated Enrollment Manager

You can use this option to enable or disable automatic class list updates from the registrar and change other options for your automatic updates. Information about the settings and how to edit them is available on the page.

## 11 Adding Instructors and Teaching Assistants to Your Course

Click CUSR on the Remote Control or Main Menu to add users other than students to your course. The interface is almost identical to that of enrolling a single student. Type the username in the text box. The system will automatically recognize the user if the user already has a LON-CAPA account. Otherwise, you will have to fill out the necessary data such as name and password. At the bottom of the screen you can choose to add the user an instructor, TA, or student. You can also specify a start and end date.

## 12 Communication (Course Management Manual, Sec. 3)

Select COM on the Remote Control or Main Menu to be brought to the Communication Screen. Currently, there is no way to view your sent messages. If you use the remote control interface, you will know when you have a message waiting for you because the LED light on the upper right-hand corner will continuously blink. All new unread messages will be displayed at the bottom of the main Communication Screen. The subsections below describe the options available to you on the Communication Screen.

### 12.1 View All Messages

This option brings you to a screen to view all messages in your inbox. Check the boxes next to the message you want to delete and click the Delete Checked button to proceed.

### 12.2 View Critical Messages

Similar to viewing all message but only your critical message are displayed.

### 12.3 Send Message to User(s)

Sending message to users is similar to sending and email. Instead of using an email address however, you use the username@domain. For example to email the user kjohnson123 at domain msu, you would send the message to kjohnson123@msu. If you are a Course Coordinator, you can choose a student in your course by clicking the Select User link. You can send the same message to multiple users by separating username@domain with a comma in the additional user text box. When you send the message, you can choose to have the message be a critical message or a critical message with a return receipt by checking the appropriate boxes. Critical messages display to the student immediately upon login or navigating to a new page within any course. The student will need to click a confirmation button that she has read the message in order to continue working with LON-CAPA. If you choose to receive return receipts, then a message will be sent to you immediately after the student confirms she recieved her critical message.

### 12.4 Broadcast Message to Course

This is similar to sending a plain message except that you can easily choose multiple students in your course to send your message to.

### 12.5 Distribute Messages from Uploaded File to Course

Create a file with the specified format and send it to students in your class:
username1@domain1: text
username2@domain2: text
username3@domain1: text
For example:
kjohnson123@msu:You received B- on your midterm
gsmith98765@msu:Please stop by office hours so we can discuss your grade on your midterm
cblack567891@msu:Congratulations, you received an A on your midterm
You can choose to send this message as critical.

### 12.6 User Notes, Records of Face-to-Face Discussions, and Critical Messages

This feature allows you to view and create notes about a student that are only visible to other Course Coordinators and Instructors in your course.

## 13 Feedback

On a resource in your course, click FDBK on the Remote Control or Inline Menu to open the feedback window. Choose one or more of the options that directs where the feedback or discussion comments gets posted to. Then scroll down to the text box and enter you message and optionally add an attachment. When you are done, click the Send Feedback button. Detailed discussion of each posting option is below.

### 13.1 Feedback to resource author

Only the author of the resource can view this feedback. The author receives the feedback as a message on their Communication Screen. The feedback automatically becomes part of the problems metadata. Feedback understands smilies, LaTeX, and HTML. Instructors can change feedback and discussion options in the course environment.

### 13.2 Question about resource content

The feedback sent with this option is posted privately to the instructor specified in the Course Environment as the person to receive resource content questions. If no instructor is defined in the Course Environment, this option does not appear in the feedback window. The instructor is notified that a question is waiting for her with a little envelope link near the problem on the Navigation Screen. The instructor can also see the message from her Communication Screen. The student's version of the problem along with previous submissions is attached to the message. When the instructor replies to the message, the student is notified that a reply is waiting for him with the same envelope link next to the problem name on the Navigation Screen.

### 13.3 Question/Comment/Feedback about course policy

Similar to the option above except the message does not include the student's view of the problem. This option is also dependent on whether the correct field is defined in the Course Environment.

### 13.4 Contribution to course discussion of resource

Instead of the text sent as a message to an instructor, the text is displayed publicly at the bottom of the resource. Course Coordinators and Instructors can hide or delete discussion postings. The student's name in the posting is a link to his About Me page. Everyone in the class is notified of new discussion with a little bubble icon next to the problem name on the Navigation Screen.

### 13.5 Anonymous contribution to course discussion of resource (name only visible to course faculty)

Same as above except that the student's real name is not visible to other students and is replaced by the word "anonymous" or the student's screen name. Instructors and Course Coordinators can see the student's name.

## 14 Evaluating a Resource

On any resource, click EVAL on the Remote Control or on the Inline Menu to be brought to an Evaluation Screen. You can then rate and review the resource. The data that is provided through these LON-CAPA internal evaluations becomes part of the problem's catalog information. Students, TAs, Instructors, and Course Coordinators can all evaluate a resource.

# 15 Chat Room

Click CHAT on the Remote Control or Main Menu. A small chat room window will open up for chatting with other students, TAs, Instructors, and Course Coordinators who happen to have their chat window open while inside their LON-CAPA course. Certain smilies and frownies are supported along with LaTeX. Anonymous chat is supported. Course Coordinators and Instructors can view the real names of the anonymous posters.

# 16 Calendar

Click CAL on the Remote Control or Main Menu to edit the Course Calendar. Notes added to the Calendar will appear on all of your students' calendars. Students only have one calendar, so all data from all of their LON-CAPA classes will be viewable to them from one location. Information for today's date on the calendar will also appear under the remarks column on the Roles Screen (Courses Screen for students).

# 17 Statistics

Course Coordinators and Instructors can view the statistics associated with each problem by clicking STAT on the Remote Control or on the Main Menu. The Statistics Screen gives you three different statistical methods to choose from.

## 17.1 Overall Problem Statistics Student

You can view performance statistics on all problems. Choose which folder or sequence you want to view statistics for and click the Generate Statistics button. You will see a data table that gives student performance statistics which includes the number of students who have attempted the resource, the total tries from all students, the maximum number of tries per student, the mean number of tries each student used, the standard deviation of tries, the skewness of tries, the degree of difficulty for each problem, the number of correct submissions, the number of instructor hand-graded correct submissions, and the percent of students who got the question wrong. Clicking on the problem name will open a view of the problem in a separate window. You have the option to have this statistical data output to an Excel file.

## 17.2 Detailed Problem Analysis

This option gives you detailed statistics and graphs of student performance on option response problems. For example, you can learn that many of your students set a particular foil to true when it is really false. With this information you can give your students feedback in order to help them better learn the concept the problem assesses. You are given the option to choose to analyze your data over tries or time, analyze your data as concepts or foils, and select how many plots of the data you wish to view. Help links are provided on the the Detailed Problem Analysis screen which explain these options.

## 17.3 Submission Time Analysis

This option gives a display and analysis of submission times on assessments. You can see how the number of submissions varies while the problem is open. You can also see how the number of students with the problem correct increases over time.

# 18 Problem Parameters

Go to a problem resource and click on PPRM on the Remote Control or on the Inline Menu to set parameters for the current problem. The screen is similar to the resource level parameter setting in table format except information only shows up for the one particular problem you are currently at. *Make sure to only make changes in the "for Resource" column.* If the interface seems confusing, then it is suggested that you use PARM and click Set/Modify Course Assessment Parameter button located under the heading **Course Assessment Parameter - Helper Mode** near the top of the PARM screen. See Section 8.1 in this Training Guide for additional information.

# 19 Grades

As Course Coordinator or Instructor, go to a problem in your course and click PGRD on the Remote Control or Inline Menu. LON-CAPA automatically grades all online homework problems by default except for essay problems. However, the Instructor or Course Coordinator have permission to override the computer scores and submit their own grades. Instructors or Course Coordinators will also need to use PGRD to grade essay questions and upload scores to a problem such as a paper-based quiz.

## 19.1 Hand-grading with built-in LON-CAPA grading tools

On the left-hand side of the grading table, you can select options and click Next to use LON-CAPA's built-in grading tools. On the first line, choose which section(s) you want to grade and the enrollment status of your students. The default preselected options are set for all students regardless of section who are currently enrolled. Next, you can choose one of three different grading tools available.

### 19.1.1 Current Resource: For one or more students *(use this for essay questions)*

Select this option and then use the drop-down box to narrow down your student selection list based on their status. You can choose to see students with any status, students with submission, students with ungraded submissions (i.e. students who submitted an essay that you need to grade), or students with incorrect submissions. After making your selection, click Next. At the top of the next screen choose how you want to view the problem text, the computer generated answer, and the student submissions. Scroll down to the list of students and check one or more students you wish to grade and click Next. Grade each student and then click Save & Next. You will then be brought to the next student in your list. If you are done grading, just exit the screen by clicking the dot on the remote control or the option to Return to Previous Location from the Inline Menu.

If you happen to be grading an essay question, it will make sense for you to want to grade just the students with ungraded submissions and then select the first student on your list. Grade this student's essay and then select Save & Next to cycle through all of your students. If you leave, all you need to do is return to the grading screen and again choose only students with ungraded submissions. When grading essay questions, LON-CAPA will give you essay grading keyword tools at the top of each grading page. For example, if you want the keyword "velocity" to be highlighted in every essay submission, just click List and type the word velocity. After grading a few essays in this example, you may realize that you want the keyword "vector" to be highlighted, this time you highlight the word on your screen with your mouse and then click the link Paste Selection to List. The keyword "vector" is now added. The Highlight Attribute choice gives you options to change the default highlighting scheme. For each student, you can also click on the option Compose message to student and leave a message for your student to read next time he or she visits the problem. Note that at the bottom of the student grading screen next to Save & Next you can choose how many students show up on the next screen.

### 19.1.2 Current Resource: For all students in selected section or course

Selecting this option and clicking Next brings you to a screen with a table of student grade data that you edit. At the top of this screen before the student grade table is a row which allows you to assign all students in the table the same score or excuse the problem. If you need to set different scores for different students, then just edit the scores individually for each student in the table. Click Save when you are done.

### 19.1.3 The complete set/page/sequence: For one student

Selecting this option brings you to a page with a list of students after clicking Next. Choose a sequence/folder from the drop-down box, select if you want to view the problem text, choose the submission details you want to view, select a student on the screen, and then click Next. You can now grade all the problems for a particular sequence for your chosen student on one screen. Click Save when you are finished.

## 19.2 Upload scores from file

Browse your machine to find a CSV file and then click Upload. On the next screen, specify which data is in which column. Your csv file needs the username, partial credit factor, domain name of msu, and the problem status for each student. If you set a weight of 10 for your problem and the student gets all 10 points then you assign the student a partial credit of 1. A student who gets 8/10 has 0.8 for her partial credit factor. For example:

thoma5678,0.6,msu,correct_by_override
smith1234,0.8,msu,correct_by_override

## 19.3 Grade Scantron forms

Use this option to grade a LON-CAPA Scantron exam.

## 19.4 Verify a submission receipt number

When a student receives notification that they submitted a correct answer for a problem, they are given a receipt of their submission. If a student claims that her data has somehow been lost, then you can easily recover this data with the receipt number. This option is mainly reassurance for the student because they can keep track of their receipts. It is also reassurance for the instructor because he can request that students keep track of receipts before contacting him with information about possible data loss.

# 20 Submissions

Go to the problem and then click SUBM on the Remote Control or Inline Menu. The interface for viewing submissions is similar to the interface for grading using the option Current Resource for all students in selected section or course. At the top of the Submissions Screen, choose the amount of detail that you would like to view. Then further down the page select which student(s) you want to see submissions for by checking the box to the left of the names. After making your selection, click the Next button.

# 21 Spreadsheet (Course Management Manual, Sec. 6 and 7)

Information about the spreadsheet can be found in Sections 6 and 7 of the Course Management Manual. To access the spreadsheet, click SPRS on the Remote Control or the Main Menu. Please note that the spreadsheet takes about 20 seconds per student to load. Therefore, if your class is 100 students, it will take approximately one half hour to load. If you use your spreadsheet to change the default grading screen, then you will need to change the default grading value in the Course Environment from "standard" to "spreadsheet" so students see their correct scores based upon your spreadsheet instead of the system defaults. By default, the problem weight you assign to each resource is the problem score.

# 22 Student Grades

Students have a button labeled GRDS instead of the SPRS button on the Remote Control or Main Menu. Students can click on this button and see a summary of all of their scores. By default, the problem weight you assign to each resource is the problem score. However, if you changed your Course Environment's grading specification to "spreadsheet" your students will have access to a detailed score sheet with their scores based upon your spreadsheet. The use of the term "score" is also changed to the phrase "parts done" on the student Grade Screen. There are three different ways the Student Grades Screen can appear based upon the course environment.

## 22.1 Standard

The detailed scores (student spreadsheet) link is not provided to the students on the Student Grades Screen. The Student Grade Screen uses the word "points" and shows weight*correctness.

## 22.2 External

The detailed scores (student spreadsheet) link is not provided to student on the Student Grades Screen. The Student Grade Screen does not use the word "points," but rather shows the number of completed parts.

## 22.3 Spreadsheet

The detailed scores (student spreadsheet) link is provided on the Student Grades Screen. The Student Grade Screen does not use the word "points," but rather shows the number of completed parts.

# Part III
# Other Tools

## 23 Browsing Resources

Click RES on the Remote Control or the Main Menu to browse the LON-CAPA resource pool. This is the same interface used when importing a document into your course documents except that you only have permissions to view the resources, not select them for importing. Note that at the top of the Resource Space Screen there are some options you can select. For example, selecting "Title" will show you the titles from the metadata from each problem. Selecting "All versions" will show you all the versions of the resource which are saved whenever the resource was republished.

## 24 Searching

Click SRC on the Remote Control or Main Menu to either search within the published LON-CAPA resources or within your course. Clicking on the Advanced Search link brings you to a new screen with added functionality, such as to search by resource author or in a particular domain. The LON-CAPA search tools use a resource's metadata for searching.

## 25 Catalog Information

Go to any resource in your course, then click CAT on the Remote Control or on the Inline Menu to view the resource's catalog information. The catalog information is made up of metadata, such as title and keywords. Other catalog information include statistics of the resource's use and user evaluation.

## 26 Setting Bookmarks

Clicking SBKM on the Remote Control allows you to set a particular resource as a bookmark.

## 27 Viewing Bookmarks

Clicking VBKM on the Remote Control or Main Menu allows you to view all the bookmarks that you have set as well as add additional web pages outside of LON-CAPA as a bookmark.

## 28 Notes

Click ANOT on the Remote Control to write notes about a resource. When you return to the resource at a later time and click ANOT on the Remote Control, you will see your previous notes.