

224 Technology Competencies

Recommended for Embry-Riddle Faculty

Introduction:

Faculty technology skills can be categorized into three main competency areas including: (1) basic core competencies, (2) instructional and administrative competencies, and (3) web-enhanced instruction competencies. *Core technology competencies* include basic productivity skills needed by every faculty member. *Instructional and administrative technology competencies* are those that enable faculty to enhance classroom presentations and course administration. *Web-enhanced instruction competencies* enable faculty to utilize the Internet and the World Wide Web to enhance instruction. The following is a listing of 224 competencies that comprise the three categories.

Place a check mark in the box next to each competency that you feel comfortable that you already have mastered. At the end of the list all the unchecked boxes should give you an idea of where you need additional training.

Category 1 - Core Technology Competencies

Operating System:



1.0	Perform file management tasks.		
1.1	Open files.	1	
1.2	Save files using both the Save and Save As commands.	2	
1.3	Copy and backup files.	3	
1.4	Delete files.	4	
1.5	Create folders.	5	
1.6	Move files and folders using drag and drop.	6	
1.7	Organize files into an efficient pattern for workflow and backup purposes.	7	
1.8	Rename files and folders.	8	
1.9	Find Files scattered in various locations.	9	

2.0	Manipulate the operating system interface.		
2.1	Open multiple windows.	10	
2.2	Minimize and maximize windows.	11	
2.3	Organize the content of a window.	12	
2.4	Organize the content of the desktop.	13	
2.5	Change the display resolution and color depth to correspond to connected monitors or data projectors.	14	
2.6	Utilize built-in Help system of operating system and appropriate applications.	15	

3.0	Utilize appropriate peripheral devices to support class material.		
3.1	Print a document.	16	
3.2	Cancel the printing of a document.	17	
3.3	Change current printer from one to another.	18	
3.4	Proper care and handling of disks and removable media.	19	

Word Processing:

4.0	Manipulate word processing file formats.		
4.1	Import and export to various word processing file types.	20	
4.2	Understand advantages of saving files in PDF format	21	

5.0	Manipulate text in a word processing document.		
5.1	Enter and edit text.	22	
5.2	Delete text	23	
5.3	Copy and paste text.	24	
5.4	Move text.	25	
5.5	Apply and remove text styles such as bold, italic, and underline.	26	
5.6	Apply appropriate fonts and font sizes to text.	27	
5.7	Utilize spelling and grammar checking tools.	28	
5.8	Insert special characters (math equations and physics symbols).	29	
5.9	Enter comments to students to aid in assessment and feedback	30	
5.10	Create new page using page break tool	31	
5.11	Add tables in a document	32	

6.0	Utilize appropriate page layout commands.		
6.1	Change the margin of the document.	33	
6.2	Change the indentation of selected text.	34	
6.3	Create automatic lists utilizing bullets and numbers.	35	
6.4	Change the spacing of a document (i.e. single space, double space, etc).	36	
6.5	Add headers and footers to a document.	37	
6.6	Add page numbers to a document.	38	
6.7	Add footnotes to a document.	39	

E-mail:

7.0	Utilize the e-mail program to communicate effectively with the university community.		
7.1	Access the e-mail program and download messages.	40	
7.2	Open and read messages received in the Inbox.	41	
7.3	Reply and forward messages.	42	
7.4	Create new e-mail messages and address them appropriately.	43	
7.5	Edit the text of a new e-mail message.	44	

7.6	Send a newly created e-mail message.	45	
7.7	Add a file attachment to an e-mail message.	46	
7.8	Open attachments received in e-mail.	47	
7.9	Create and organize an e-mail address book.	48	
7.10	Create an address list utilizing the entries of the address book.	49	
7.11	File e-mail using rules and folders.	50	

Internet Browsing:

8.0	Manipulate an internet browser program.		
8.1	Set the homepage that is automatically downloaded when the program is opened.	51	
8.2	Enter the address of an internet site and connect to that site.	52	
8.3	Create a favorites/bookmark to a site for quick return to that site.	53	
8.4	Change the name of a favorites/bookmark.	54	
8.5	Delete a favorite/bookmark.	55	
8.6	Organize multiple favorites/bookmarks using folders.	56	
8.7	Set the program preferences to adjust how a web page is rendered to the screen. (i.e. fonts, colors, etc)	57	
8.8	Print web pages.	58	
8.9	Save web pages to a local drive for later review.	59	
8.10	Mail links to web pages.	60	

Internet Searching:

9.0	Search for and evaluate web sites that would be applicable to course objectives.		
9.1	Utilize a search engine to find a list of sites matching a set of key words.	61	
9.2	Utilize Boolean operators to narrow the results of a search.	62	
9.3	Use the help pages of a site to learn how to utilize advanced search techniques.	63	
9.4	Apply criteria to a web site to determine whether the content is valid and useful in meeting course objectives.	64	

Category 2 - Instructional and Administrative Technology Competencies

Faculty wishing to utilize technology to enhance instructional presentation and course administration should have mastered all basic core competencies as well as the ones listed below.

Spreadsheets:

10.0	Manipulate spreadsheet file formats.			
	10.1	Import and export to various spreadsheet file types.	65	
11.0	Manipulate information in spreadsheet cells.			
	11.1	Enter numbers, dates, and labels (text) into cells.	66	
	11.2	Copy and paste information into cells.	67	
	11.3	Delete information from cells, rows, and columns.	68	
	11.4	Move information from one area to another.	69	
	11.5	Create basic formulas using functions (sum, average, count, etc.)	70	
	11.6	Create charts and graphs based on information entered into cells.	71	
	11.7	Utilize spelling and grammar tools.	72	
	11.8	Print selected cells, charts, and graphs.	73	

Graphics:

12.0	Manipulate graphics file formats.			
	12.1	Import and export to various graphic file types.	74	
	12.2	Utilize a scanner to digitize a photograph or image.	75	
	12.3	Save and Open graphic files downloaded from the internet.	76	
	12.4	Utilize various levels of compression with associated file formats.	77	
13.0	Manipulate graphic elements in a paint/photographic program.			
	13.1	Scale a graphic image to change its size.	78	
	13.2	Crop a graphic image to cut out unwanted parts of the image.	79	
	13.3	Rotate a graphic image.	80	
	13.4	Utilize the basic paint and color tools to draw basic shapes.	81	
	13.5	Apply filters to graphic images.	82	
	13.6	Change the color depth of an image.	83	
14.0	Manipulate graphic elements in a draw program.			
	14.1	Utilize the line and shape tools to create basic shapes.	84	
	14.2	Utilize color, pattern, and line width tools to modify how the shape tools work.	85	

Presentation Tools:

15.0	Utilize presentation tools to create slide show document.			
15.1	Manipulate built-in templates by selecting and modifying slide styles.	86		
15.2	Add slides to a presentation.	87		
15.3	Enter, modify, and format text.	88		
15.4	Add table, charts, and graphs.	89		
15.5	Add graphic images and clipart.	90		
15.6	Use the outliner function.	91		
15.7	Insert and modify transitions between slides.	92		
15.8	Re-arrange the order of slides in the presentation.	93		
15.9	Utilize the drawing tools to create basic shapes.	94		
15.10	Add an audio file to a presentation.	95		
15.11	Package the presentation to be a self-contained slide show.	96		
15.12	Design slides using appropriate page layout and presentation design techniques, i.e. 6 X 6 rule, white space, color usage, etc.	97		
15.13	Use animation features to control information display.	98		
15.14	Use appropriate methods to reduce file sizes	99		

Category 3 - Web-Enhanced Instruction Competencies

Faculty wishing to design web pages to enhance their instructional methods should have mastered all the Core Technology competencies, the Graphics competencies, and the web page creation and facilitation competencies listed below.

Web Page Creation:

16.0	Use a web-authoring program to create basic pages of course material.			
16.1	Understand basic page layout and design principles for effective pages with minimal scrolling.	100		
16.2	Understand the difference between relative and absolute links, and how they affect the location of files for a web site.	101		
16.3	Enter, edit and format text in a web document.	102		
16.4	Add graphics to a web document.	103		
16.5	Create hyperlinks to external web pages.	104		
16.6	Create both textual hyperlinks and linked images (e.g.,	105		

	buttons)		
16.7	Edit links, and understand that any text can be linked to any file, URL, or e-mail address.	106	
16.8	Create anchors/targets to create internal links in a document	107	
16.9	Use tables to organize information	108	
16.10	Use tables as a design tool to control the layout of a page.	109	
16.11	Provide user-friendly navigation for all site contents.	110	
16.12	Create bulleted and numbered lists.	111	
16.13	Enter page title.	112	
16.14	Insert background color and/or image.	113	

Graphics Usage:

17.0	Use graphics effectively.		
17.1	Understand how HTML pages handle different window sizes in terms of graphics and text behavior.	114	
17.2	Understand GIF and JPEG pros and cons, as well as compression adjustment.	115	
17.3	Understand the tradeoff between graphic size/quality and download time.	116	
17.4	Use a graphics program to create, edit, and resize images.	117	
17.5	Use a scanner and related software	118	
17.6	Use a digital camera and related software	119	
17.7	Use screen captures and right-mouse clicks to save still images	120	
17.8	Understand copyright issues as they pertain to using the works of others.	121	

File Management:

18.0	Understand the file structure of a web site.		
18.1	Know how the components of a web page (i.e. graphics and audio files) are displayed and the implications these components present to the organization of files on the server.	122	
18.2	Understand how internal links operate; this includes knowing the implications for organization of files on the server and how to troubleshoot when links do not function properly.	123	
18.3	Understand the importance of maintaining an identical file structure on the computer hard drive and on the web server.	124	
18.4	Upload new files to the server.	125	
18.5	Download files for editing.	126	
18.6	Upload edited files to overwrite outdated ones.	127	
18.7	Zip and unzip files for efficient file transfer.	128	

Blackboard Competencies

19.0	Log in to personal Blackboard site			
	19.1	Know username.	129	
	19.2	Know colleague number.	130	
	19.3	Know password.	131	
	19.4	Access and review system announcements and policies.	132	

20.0	Understand opening portal screen			
	20.1	Locate announcements.	133	
	20.2	Locate and access courses currently taught.	134	
	20.3	Locate and access organizations.	135	
	20.4	Locate various services such as course rosters.	136	
	20.5	Find calendar.	137	
	20.6	Ability to change password.	138	
	20.7	Utilize the content and color options to personalize the portal screen and add portal modules.	139	

21.0	Utilize the Educational Technology department			
	21.1	Know location of various online tutorials offered by Ed Tech.	140	
	21.2	Know whom to contact for support regarding Blackboard.	141	

22.0	Manage a course			
	22.1	Organize course in a user-friendly format.	142	
	22.2	Access the course to manage it.	143	
	22.3	Set course availability.	144	
	22.5	Post an announcement.	145	
	22.6	Post Staff Information		
	22.8	Add or remove content items such as documents, spreadsheets, or a slide presentation to a course.	146	
	22.15	Add, modify, or remove users from the course.	147	
	22.11	Set tracking and monitor student views of items.	148	
	22.9	Upload a zipped course items.	149	
	22.12	Set an availability time limit on a posted item.	150	
	22.7	Create folders and organize items within the folders.	151	
	22.13	Add links in the External Links area	152	
	22.14	Add, modify, and remove student groups.	153	
	22.10	Upload course items without granting student availability.	154	
	22.4	Set course items to be available for specified time periods.	155	
	22.16	Understand the view that students in the course see.	156	
	22.17	Understand file size restrictions.	157	

23.0	Utilizing Course Grade book		
23.1	Add assignments/tests.	158	
23.2	Input grades.	159	
23.3	Set the weighting percentage to grade columns.	160	
23.4	Understand the limitations of the grade book.	161	
23.5	Back-up the grade book to an Excel file using the Export tool.	162	

24.0	Utilizing Assessments		
24.3	Create an assessment in Blackboard	163	
24.5	Administer a test in Blackboard i.e., Set timelimits, Set attempts.,Set feedback options.,Check student responses, Clear attempts for retakes.	164	
24.1	Create a question pool in Blackboard	165	
24.4	Design a test to generate random questions from a pool in Blackboard.	166	
24.2	Utilize various question types (True/False, MC) in a Blackboard assessment.	167	
24.6	Post an assessment to a content area and enable tracking of that item.	168	
24.7	Know the grading limitations of online assessments.	169	
24.8	Understand the importance of creating questions in a pool vs. in the assessment.	170	

25.0	Utilizing Course Communication and Utility Tools		
25.1	Create a discussion board forum.	171	
25.2	Ability to choose to allow/disallow anonymous discussion board postings.	172	
25.3	Utilize digital drop box	173	
25.4	Send an entire class e-mail utilizing Blackboard e-mail system.	174	
25.5	Utilize the instant messenger and presence roster to communicate with students.	175	
25.6	Utilize course statistics to determine what areas of the course are being utilized by which students.	176	
25.7	Utilize calendar and have ability to separate public and private dates.	177	
25.8	Utilize the Task tool to assign the students course or assignment related tasks.	178	
25.9	Use the virtual classroom.	179	

26.0	Utilizing Course Options			
	26.1	Make the course available to students.	180	
	26.2	Change button styles.	181	
	26.3	Enable/disable area availability, communication areas, and tools.	182	
	26.4	Change button titles.	183	
	26.5	Set course entry point.	184	
	26.6	Add or remove a course banner.	185	
	26.7	Allow/disallow guest access to the course.	186	

Instructional Effectiveness

27.0	Effectively Plan Course Implementation			
	27.1	Select materials and learning activities that are appropriate for the course site technology and aligned with learning outcomes.	187	
	27.2	Organize materials and structure activities for optimum access by students.	188	
	27.3	Provide clear communication of expectations and support for achieving them.	189	
	27.4	Determine logistics for developing the course site.	190	
	27.5	Determine logistics for conducting activities within the course site.	191	
	27.6	Plan ways to encourage and assess student participation in course site activities.	192	
	27.7	Determine how course components will be assessed.	193	

28.0	Effectively Distribute Course Information and Content			
	28.1	Select appropriate content and format it for effective delivery via a course site, i.e chunking, bullets, color, white space, etc.	194	
	28.2	Post up-to-date course materials such as the syllabus, course documents, and course presentations.	195	
	28.3	Utilize simulations, interactive manipulatives, and other programmed interactions to provide students with interactivity with course content.	196	
	28.4	Utilize the course site to distribute multimedia content such as images, audio, and video..	197	

29.0	Effectively use Communication and Collaboration Tools			
	29.1	Use Announcements to notify students of course events.	198	
	29.2	Create open-ended discussion board questions to foster critical thinking.	199	
	29.3	Moderate and manage discussion board threads to encourage	200	

	optimum participation..		
29.4	Moderate synchronous chat/collaboration sessions for online office hours, discussions, or presentations..	201	
29.5	Organize students into groups/teams and setup and online groups for them to work in.	202	
29.6	Utilize collaboration software to facilitate student participation in webinars or other online seminars.	203	
29.7	Design collaborative elearning activities such as case-studies, role-plays, debates, peer tutoring, team projects and other interactivities for students.	204	
29.8	Use e-mail to communicate with groups and individual students.	205	

30.0	Effectively use Web-based Resources		
30.1	Design web-research activities that will build a list of web resources relevant to course objectives.	206	
30.2	Design web-research application oriented learning activities that are relevant to course objectives.	207	
30.3	Assess online learning-objects from repositories such as MERLOT and incorporate them into the course.	208	

31.0	Effectively use Online Assessments		
31.1	Create self-assessments using online testing tools that give students effective feedback to improve their performance.	209	
31.2	Utilize electronic portfolios with online learners to demonstrate their progression in the course.	210	
31.3	Utilize peer review techniques to encourage students to interact and provide feedback with each other.	211	
31.4	Utilize online surveys to gather student feedback.	212	
31.5	Utilize course statistics to gather data to determine item usage and assess effectiveness.	213	

Instructional Structure:

32.0	Utilize Blackboard to effectively structure course materials.		
32.1	Utilize Blackboard components to provide students with an understanding of course expectations.	214	
32.2	Utilize Blackboard components to provide, explain, and manage course activities.	215	
32.3	Utilize Blackboard components to provide access to supplemental materials and websites	216	
32.4	Utilize grade check and communication tools to keep students	217	

	informed of progress		
32.5	Utilize text box annotations to provide context for items.	218	

33.0	Course Management		
33.1	Orient students to the course organization, success strategies, and technical support.	219	
33.2	Know how to access and project a Bb course in the classroom.	220	
33.3	Monitor students' progress using the course statistics tools.	221	
33.4	Post students final grades at the end of course.	222	
33.5	Archive course and grade book information at the end of course.	223	
33.6	Archive discussion board at the end of course.	224	