<table>
<thead>
<tr>
<th>Categories</th>
<th>Check List Items</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Load Specifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All eLearning developed for GE is expected to work well with the Core Load specifications provided below:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Browsers</td>
<td>□ Desktop/Laptop: Internet Explorer 8, and Internet Explorer 11 Enterprise Mode, FireFox (latest) and Chrome (latest), Safari (latest)</td>
<td></td>
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<tr>
<td></td>
<td>□ iPad: Safari</td>
<td></td>
</tr>
<tr>
<td>Operating Systems</td>
<td>□ Desktop/Laptop: Windows 7, MAC OS X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ iPad: iOS 8 and up</td>
<td></td>
</tr>
<tr>
<td>Hardware Model</td>
<td>□ iPad: iPad 3 and above</td>
<td></td>
</tr>
<tr>
<td>Minimum Resolution</td>
<td>□ Desktop/Laptop: 1024 x 768</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ iPad: Fit landscape mode</td>
<td></td>
</tr>
<tr>
<td>Plugin Support</td>
<td>□ iPad: NA</td>
<td></td>
</tr>
<tr>
<td>Learning Standards</td>
<td>□ All eLearning courseware needs to follow AICC HACP, SCORM 1.2, or SCORM 2004 standards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ GE recommends the use of SCORM 1.2 standards</td>
<td></td>
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<tr>
<td>LMS Platform</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>□ GE currently uses SumTotal v. 8.9 (currently known as GE Learning)</td>
<td></td>
</tr>
<tr>
<td>Approx. Timeline for hosting a course in GE Learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Budget for approximately 2 weeks from raising a GCRM ticket to have a course hosted in GE Learning Production</td>
<td></td>
</tr>
<tr>
<td>Generic AICC/SCORM Publish Settings in Rapid Authoring tools</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Standard - AICC/ SCORM 1.2 / SCORM 2004</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Set Pass Percentage – 80% (Recommended)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Completion Criteria – Completion of Course &amp; Quiz (or) Completion of only Course (or) Completion of only Quiz</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Status Representation – Incomplete/Complete (or) Passed/Failed</td>
<td></td>
</tr>
<tr>
<td>Authoring / Development Tools</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GE recommends the use of tools/templates that publish an HTML5 output, which is mobile/device compatible.</td>
<td></td>
</tr>
<tr>
<td>Rapid Authoring Tools</td>
<td>□ Recommended but not restricted to: Articulate Storyline, Articulate Presenter, Captivate, Ancile uPerform, Trivantis Lectora, Techsmith Camtasia</td>
<td></td>
</tr>
<tr>
<td>Custom Development</td>
<td>□ Recommended: HTML5 template created using HTML, JavaScript, CSS 2, and XML</td>
<td></td>
</tr>
</tbody>
</table>

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For exams developed using Rapid Authoring tools, use these publish settings:

- **AICC packages**
  - Exam embedded within the course: Pass back the actual score and status of "Complete/Incomplete"
  - No exam embedded within the course: Pass back the status of "Complete/Incomplete"

- **SCORM packages**
  - Exam embedded within the course: Pass back the actual score and status of "Passed/Failed"
  - No exam embedded within the course: Pass back the status of "Complete/Incomplete"

### Usage of Plugins

- Use of Flash or plug-ins are not allowed as Mobile devices will block Flash and Java content by default and there are no provisions to enable them.
- New content should not rely on plugins including Flash and other third party proprietary plugins, especially if you foresee a shelf-life of more than two years for the content.

### Usage of Media

#### Video

- Videos should not be longer than three minutes
- Video player must have "progressive download" capability
- All video files need to be optimized
- Video files should include a transcript and CC text
- Maximum video file size should not exceed 5 MB

Encoding setting needs to strictly follow the guidelines:

- Video Container: MP4
- Video Codec: H264
- Bitrates: 768kbs VBR / 30fps (key frames per second)
- Size: 480p (720x480, 704x480, 640x480, 480x480)
- Filtering: Deinterlace
- Audio Codec: AAC
- Bitrates: 64kbs VBR mono

#### Audio

- Audio Format: MP3, MP4 (recommended)
- Codec: MP3, AAC (recommended)
- Use the same settings provided for Video, without the video channel

#### Images

- For photographic type images, JPG is best
- For logos or images with blocks of flat color and no gradients, GIF or PNG8
- For images using effects such as drop shadows or glows, which also require transparency, choose PNG24

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### Visual Design

**Branding**

**Text and Fonts**
- Recommended: GE Inspira font for development
- Use consistent color for text and graphics throughout a course
- Use Sans Serif fonts and avoid decorative font families
- Break up blocks of text to make it easier for the learner to scan the content

### Standards for Mobile Devices

- All UI design is to be touch optimized
- There should be no important messages in tooltips or right-click
- Images need to be large in order to be navigated by touch
- If using Quick Response (QR) Codes, make sure images to be scanned are large enough and in good focus
- Keep in mind of the following screen sizes: 960x540 | iPhones, 2560x1440 | tablet
- Use of flash is not supported on all mobile devices. Refrain from using flash
- Limit scrolling to one direction
- Keep mobile screen simple and uncomplicated
- Extensive Mobile Web Best Practices are available at [https://www.w3.org/TR/mobile-bp/](https://www.w3.org/TR/mobile-bp/)

### Web Content Accessibility/ 508 Compliance

- Comply with current industry standards concerning training and website accessibility to individuals with vision and hearing impairments and/or other disabilities.
- Keep navigation simple and the style consistent
- Include closed captioning text with videos and animations
- Screen readers are used to read the alternative text (alt tags) in a web browser. Use alt tags when possible
- When displaying graphics and data, provide a meaningful description for the learner beneath the chart
- Minimize the use of complex navigation, like drop down lists and excessive clicking
- Do not render text into picture formats. Screen readers cannot read static images

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## Development and Coding Guidelines

- All resources have to be externalized
- All text resources have to be stored in flat files and editable via any text editor. XML and JSON formats are recommended.
- All URL have to be relative and it is strictly forbidden to have hard coded links to the LMS in the module.
- Vendors and/or course owners shall provide all course (final output) and source files (assets) when sending a GCRM request to host the course files in Production.
- Externalize hyperlinks within the courses going to documents.
- Do not include links to content/sites that require SSO access and/or require a separate set of credentials.
- Do not include native media elements in the training (for example, do not include Web-Ex format of videos in training. Always convert the videos into a MP4 format and ensure that they are included as part of a SCORM/AICC package.)
- Read and Acknowledgements: Files such as Documents, mp4, video files etc. should have a SCORM/AICC wrapper and/or be developed in a Rapid Authoring tool and submitted as a package for hosting on the LMS.

## Testing of Courses

- Prior to providing to LMS solutions team, eLearning developer needs to test and verify that course is working based on GE Core Load Specs
- All eLearning courses need to be tested based on GE Core Load Specs on F5 VPN or myApps
- All courses must be confirmed in Production that they behave as tested in Dev/Staging area
- Each course shall be tested for mobile compatibility.

LMS solutions team shall test each course on the LMS Dev environment to check:

- Whether the content launches fine from the LMS
- Whether course launches on the last exited page
- Whether on completion of the course, the course is marked complete in the LMS and given credit
- Whether all functionality built into the course works the way it was set out to do
- Whether the Bookmark functionality works fine
- Whether all the course content is in place without any broken links

## Additional Resources

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• Link to Branding Guidelines: http://www.gebrandcentral.com/
• Link to Web Content Accessibility: https://www.w3.org/WAI/intro/wcag
• Link to section 508: http://www.section508.gov/
• Link to Mobile Development Standards: https://www.w3.org/TR/mobile-bp/