Tools for Online Color Science Education: Color Order, Color Vision, & Color Measurement

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Summary

Our objective was to create a hands-on, laboratory-like learning experience for a graduate-level online Color Science course.

Components explored over the past two years include:
- Online modules (video & HTML5) for demos and activities created by RIT’s Teaching & Learning Services.
- Low-cost instruments evaluated, but search continues for usable, textbook-priced solution.

CLRS-600 Fundamentals of Color Science online course was developed and has been offered Summer 2016, 2017, and 2018.

WANTED: Low-Cost Instruments

We evaluated color measurement instruments similar in price to a textbook. However, none provided comprehensive data export.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Type</th>
<th>Price</th>
<th>Light Sensor</th>
<th>Data Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-Rite i1 Display Pro</td>
<td>Colorimeter</td>
<td>$139</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>DataColor Spyder S</td>
<td>Colorimeter</td>
<td>$100</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>X-Rite Colormunki Photo</td>
<td>Spectro-photometer</td>
<td>$459</td>
<td>Yes</td>
<td>CIELAB only</td>
</tr>
</tbody>
</table>

Color Vision: FM-100

An online Farnsworth-Munsell 100-Hue Test was identified and used for a student assignment to test their own color vision.

http://www.color-blindness.com/farnsworth-munsell-100-hue-color-vision-test/

Thanks To

Graham Anthony & Hayden Wagner, RIT Teaching and Learning Services, for implementing the Spectrophotometer Simulator.

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