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</tbody>
</table>

- ✨: Certification adequately tested
- ✨: Certification not adequately tested
- ✨: Certification not offered
NCTQ's framework for evaluation of high school licensure in Alabama

**Certification**
- Requires

**Licensure test(s)**
- Determines

**NCTQ evaluation procedure**

---

**Mathematics**

- **Mathematics**
  - **Mathematics: Content Knowledge**
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

---

**English**

- **English**
  - **English Language, Literature, and Composition: Content Knowledge**
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

---

**The Sciences**

- **General Science**
  - **General Science: Content Knowledge**
  - Majors leading to this certification require coursework evaluation

- **Chemistry, Physics and General Science**
  - **Physics: Content Knowledge**
  - Majors leading to this certification require coursework evaluation
  - **Chemistry: Content Knowledge**
  - **Biology: Content Knowledge**
  - **Earth and Space Sciences: Content Knowledge**
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ's framework for evaluation of high school licensure in Alabama

Certification → Licensure test(s) → NCTQ evaluation procedure

The Social Sciences

- General Social Science → Social Studies: Content Knowledge
- Sociology
- Geography
- Psychology
- Economics
- Political Science
- History

Majors leading to this certification require coursework evaluation

Accept licensure test as adequate measure of content knowledge for corresponding majors

State Context

Content knowledge for all single-subject certifications in Alabama is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (General Science, Physical Science, and General Social Science) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Alaska

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

Mathematics

No test for initial certification

Majors leading to this certification require coursework evaluation

English

No test for initial certification

Majors leading to this certification require coursework evaluation

Language Arts

No test for initial certification

Majors leading to this certification require coursework evaluation

The Sciences

General Science No test for initial certification

Majors leading to this certification require coursework evaluation

Physical Science No test for initial certification

Majors leading to this certification require coursework evaluation

Physics No test for initial certification

Majors leading to this certification require coursework evaluation

Chemistry No test for initial certification

Majors leading to this certification require coursework evaluation

Biology No test for initial certification

Majors leading to this certification require coursework evaluation

Earth Science No test for initial certification

Majors leading to this certification require coursework evaluation
NCTQ’s framework for evaluation of high school licensure in Alaska

The Social Sciences

<table>
<thead>
<tr>
<th>Certification</th>
<th>Requires</th>
<th>Licensure test(s)</th>
<th>Determines</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Science</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political Science</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
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<td>Economics</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
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<tr>
<td>Anthropology</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
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</tbody>
</table>

State Context

While Alaska specifies licensure tests for each certification, the state does not require that tests be passed until professional licensure is sought, which typically occurs after three years in the classroom. Due to this inadequacy in testing, all majors leading to certification require an evaluation of coursework. For the single-subject certifications, we look for a major in the content area. For the three multiple-subject certifications (General Science, Physical Science, and Social Science), we look for the requirement of two minors in subjects that can be taught under the certification. We note that Alaska has numerous certifications that are not identified above and do not exist as options at IHEs in the state, some of which include: Communication, English Literature, Journalism, Speech, Environmental Science, Geology, Life Science, Government, Russian History, Social Studies, United States History, and World History.
NCTQ's framework for evaluation of high school licensure in Arizona

**Certification**
- Requires Licensure test(s)
- Determines NCTQ evaluation procedure

### Mathematics
- Mathematics
- Mathematics
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

### English
- English
- English
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

### The Sciences
- General Science
- No test for initial certification
- Majors leading to this certification require coursework evaluation

- Physical Science
- No test for initial certification
- Majors leading to this certification require coursework evaluation

- Chemistry
- Chemistry

- Biology
- Biology

- Physics
- Physics

- Earth Science
- Earth Science
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ’s framework for evaluation of high school licensure in Arizona

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

Social Studies
History
Political Science/ Government
Economics
Geography

Social Studies
History
Political Science/ American Government
Economics
Geography

Majors leading to this certification require coursework evaluation
Accept licensure test as adequate measure of content knowledge for corresponding majors

State Context

Content knowledge for all single-subject certifications in Arizona is ensured through licensure testing. However, content knowledge is not ensured for the multiple-subject Social Studies certification because the licensure test does not provide independent cut-scores for each subject covered under the certification. Additionally, the two multiple-subject science certifications (General Science and Physical Science) do not require any tests for certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
The required licensure test for Arkansas’ multiple-subject Physical/Earth Science certification is inadequate because the physical science portion of the certification allows for teaching assignments in chemistry and physics, for which the test does not provide independent cut-scores that ensure proficiency in both sciences. Similarly, the required licensure test for the multiple-subject Social Studies certification is also inadequate. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in California

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**
- No test for initial certification → Majors leading to this certification require coursework evaluation

**English**
- No test for initial certification → Majors leading to this certification require coursework evaluation

**The Sciences**
- Science: Physics: No test for initial certification → Majors leading to this certification require coursework evaluation
- Science: Chemistry: No test for initial certification → Majors leading to this certification require coursework evaluation
- Science: Biological Sciences: No test for initial certification → Majors leading to this certification require coursework evaluation
- Science: Geosciences: No test for initial certification → Majors leading to this certification require coursework evaluation
NCTQ’s framework for evaluation of high school licensure in California

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

Social Science No test for initial certification Majors leading to this certification require coursework evaluation

State Context

While California specifies licensure tests for each certification, teacher candidates who complete state-approved programs are not required to pass content knowledge tests. Due to this inadequacy in testing, all majors leading to certification require an evaluation of coursework. For the single-subject certifications, we look for a major in the content area. For the multiple-subject Social Science certification, we look for the requirement of two minors in subjects that can be taught under the certification.
While Colorado specifies licensure tests for each certification, the state also allows teacher candidates to earn certification by completing 24 semester credit hours in a subject area (demonstrated through a transcript evaluation). Due to this inadequacy in testing, all majors leading to certification require an evaluation of coursework. For the single-subject certifications, we look for a major in the content area. For the two multiple-subject certifications (Science and Social Science), we look for the requirement of two minors in subjects that can be taught under the certification.
NCTQ's framework for evaluation of high school licensure in Connecticut

Certification requires Licensure test(s) to determine NCTQ evaluation procedure.

**Mathematics**
- Mathematics, 7-12
  - Mathematics: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**
- English, 7-12
  - English Language, Literature, and Composition: Content and Analysis
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- General Science, 7-12
  - General Science: Content Knowledge – and – General Science: Content Essays
  - Majors leading to this certification require coursework evaluation
- Biology, 7-12
  - Biology: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
- Chemistry, 7-12
  - Chemistry: Content Knowledge – and – Chemistry: Content Essays
- Physics, 7-12
  - Physics: Content Knowledge – and – Physics: Content Essays
- Earth Science, 7-12
  - Earth and Space Sciences: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

Mathematics, English, and The Sciences all require coursework evaluation for their respective majors.
Content knowledge for all single-subject certifications in Connecticut is ensured through licensure testing. However, content knowledge is not ensured for the two multiple-subject certifications (General Science, 7-12 and History and Social Studies, 7-12) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Delaware

**Certification**

- **Requires**
- **Licensure test(s)**
- **Determines**
  - **NCTQ evaluation procedure**

### Mathematics
- **Secondary Mathematics**
- **Mathematics: Content Knowledge**
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

### English
- **Secondary English Language Arts**
- **English Language, Literature, and Composition: Content Knowledge**
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

### The Sciences
- **Secondary Science-Integrated Science**
- **General Science: Content Knowledge**
  - Majors leading to this certification require coursework evaluation
- **Secondary Science-Physical Science**
- **Physical Science: Content Knowledge**
  - Majors leading to this certification require coursework evaluation
- **Secondary Science-Biology**
- **Biology: Content Knowledge**
- **Secondary Science-Chemistry**
- **Chemistry: Content Knowledge**
- **Secondary Science-Physics**
- **Physics: Content Knowledge**
- **Secondary Science-Earth Science**
- **Earth and Space Sciences: Content Knowledge**
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
Content knowledge for all single-subject certifications in Delaware is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (Secondary Science - Integrated Science, Secondary Science - Physical Science, and Secondary Social Studies) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ’s framework for evaluation of high school licensure in District of Columbia

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

Mathematics

Mathematics

Mathematics: Content Knowledge*

Accept licensure test as adequate measure of content knowledge for corresponding majors

English

English

English Language, Literature, and Composition: Content Knowledge*

Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

General Science

General Science: Content Knowledge*

Majors leading to this certification require coursework evaluation

Biology

Biology: Content Knowledge*

Accept licensure test as adequate measure of content knowledge for corresponding majors

Chemistry

Chemistry: Content Knowledge*

Physics

Physics: Content Knowledge*

* Required Principles of Learning and Teaching licensure test is excluded because it does not focus on content knowledge
NCTQ's framework for evaluation of high school licensure in District of Columbia

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

Social Studies

Social Studies: Content Knowledge*

Majors leading to this certification require coursework evaluation

State Context

Content knowledge for all single-subject certifications in the District of Columbia is ensured through licensure testing. However, content knowledge is not ensured for the two multiple-subject certifications (General Science and Social Studies) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.

* Required Principles of Learning and Teaching licensure test is excluded because it does not focus on content knowledge
NCTQ's framework for evaluation of high school licensure in Florida

Certification \(\rightarrow\) Licensure test(s) \(\rightarrow\) NCTQ evaluation procedure

**Mathematics**

Mathematics \(\rightarrow\) Mathematics 6-12
Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**

English \(\rightarrow\) English 6-12
Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**

- Biology \(\rightarrow\) Biology 6-12
- Chemistry \(\rightarrow\) Chemistry 6-12
- Physics \(\rightarrow\) Physics 6-12
- Earth-Space Science \(\rightarrow\) Earth-Space Science 6-12
Accept licensure test as adequate measure of content knowledge for corresponding majors
Content knowledge for all single-subject certifications in Florida is ensured through licensure testing. However, content knowledge is not ensured for the multiple-subject Social Science (Broad Field) certification because the licensure test does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for this certification is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Georgia

Certification requires the completion of a minimum of 2.5 units

Licensure test(s) determines the adequacy of content knowledge

NCTQ evaluation procedure

Mathematics

Mathematics requires coursework evaluation

Accept licensure test as adequate measure of content knowledge for corresponding majors

English

English requires coursework evaluation

Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

Science requires coursework evaluation

Majors leading to this certification require coursework evaluation

No test for initial certification

Majors leading to this certification require coursework evaluation

Physics

Accept licensure test as adequate measure of content knowledge for corresponding majors

Chemistry

Biology
With the exception of the untested Earth/Space Science certification, content knowledge for all single-subject certifications in Georgia is ensured through licensure testing. However, content knowledge is not ensured for the multiple-subject Science certification because the licensure test does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
Hawaii offers only general certification in the sciences and social sciences. For the Science certification, the state allows candidates to pick from a menu of licensure tests, none of which ensures content knowledge for all possible teaching assignments covered under the certification. Similarly, the required licensure test for the multiple-subject Social Studies certification is also inadequate because it does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Idaho

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

Mathematics

- Mathematics
  - Mathematics: Content Knowledge
    - Accept licensure test as adequate measure of content knowledge for corresponding majors

English

- English
  - English Language, Literature, and Composition: Content Knowledge
    - Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

- Physical Science
  - Physical Science: Content Knowledge
- Natural Science
  - General Science: Content Knowledge
- Biological Science
  - Biology: Content Knowledge
- Chemistry
  - Chemistry: Content Knowledge
- Physics
  - Physics: Content Knowledge
- Geology
  - Earth and Space Sciences: Content Knowledge
- Earth Science
  - Earth and Space Sciences: Content Knowledge

Majors leading to this certification require coursework evaluation

Accept licensure test as adequate measure of content knowledge for corresponding majors
Content knowledge for all single-subject certifications in Idaho is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (Physical Science, Natural Science, and Social Studies) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Additionally, the Sociology/Anthropology certification requires a test that covers only sociology. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
# NCTQ's framework for evaluation of high school licensure in Illinois

<table>
<thead>
<tr>
<th>Certification</th>
<th>Requires</th>
<th>Licensure test(s)</th>
<th>Determines</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td></td>
<td>Mathematics</td>
<td>Accept licensure test as adequate measure of content knowledge for corresponding majors</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td></td>
<td>English Language Arts</td>
<td>Accept licensure test as adequate measure of content knowledge for corresponding majors</td>
<td></td>
</tr>
<tr>
<td>The Sciences</td>
<td></td>
<td>Science: Environmental Science</td>
<td>Majors leading to this certification require coursework evaluation</td>
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<tr>
<td>Science - Environmental Science</td>
<td></td>
<td>Science: Physics</td>
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<td></td>
</tr>
<tr>
<td>Science - Physics</td>
<td></td>
<td>Science: Chemistry</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>Science - Chemistry</td>
<td></td>
<td>Science: Biology</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>Science - Biology</td>
<td></td>
<td>Science: Earth and Space Science</td>
<td>Majors leading to this certification require coursework evaluation</td>
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<tr>
<td>Science - Earth and Space Science</td>
<td></td>
<td></td>
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</tbody>
</table>
NCTQ's framework for evaluation of high school licensure in Illinois

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

Social Science - Geography
Social Science: Geography
Majors leading to this certification require coursework evaluation

Social Science - Sociology and Anthropology
Social Science: Sociology and Anthropology
Majors leading to this certification require coursework evaluation

Social Science - Psychology
Social Science: Psychology
Majors leading to this certification require coursework evaluation

Social Science - Economics
Social Science: Economics
Majors leading to this certification require coursework evaluation

Social Science - Political Science
Social Science: Political Science
Majors leading to this certification require coursework evaluation

Social Science - History
Social Science: History
Majors leading to this certification require coursework evaluation

State Context

While Illinois appears to adequately test single-subject certifications in the sciences and social sciences, each certification permits teaching assignment in any science or social science classroom, respectively, and each functions as multiple-subject certification – in other words, the possible teaching assignments are the same for the Social Science - Geography and the Social Science - History certifications. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in

Indiana

Certification \(\rightarrow\) Licensure test(s) \(\rightarrow\) NCTQ evaluation procedure

**Mathematics**

| Mathematics | Mathematics: Content Knowledge | Accept licensure test as adequate measure of content knowledge for corresponding majors |

**Language Arts**

| Language Arts | English Language, Literature and Composition: Content Knowledge | Accept licensure test as adequate measure of content knowledge for corresponding majors |

**The Sciences**

| Physical Science | Chemistry: Content Knowledge – and – Physics: Content Knowledge |
| Life Science | Biology: Content Knowledge |
| Chemistry | Chemistry: Content Knowledge |
| Physics | Physics: Content Knowledge |
| Earth/Space Science | Earth and Space Sciences: Content Knowledge |
| | |

Accept licensure test as adequate measure of content knowledge for corresponding majors
Recent changes in Indiana's certification policy now pair appropriate licensure tests with each certification. However, the licensure test cut-scores for three certifications in the social sciences (Government and Citizenship, Psychology, and Sociology) are set too low. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. Because the change in state policy is recent, many programs still offer a single major designed for general social science certification, for which we evaluated the coursework requirements for the inadequately tested certifications.
NCTQ's framework for evaluation of high school licensure in Iowa

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

Mathematics

Mathematics

Mathematics: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

Language Arts

English/Language Arts

English Language Literature and Composition: Content and Analysis

Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

All Science

General Science: Content Knowledge

Majors leading to this certification require coursework evaluation

Physical Science

Physical Science: Content Knowledge

Majors leading to this certification require coursework evaluation

Biological Science

Biology: Content Knowledge

Chemistry

Chemistry: Content Knowledge

Physics

Physics: Content Knowledge

Earth Science

Earth and Space Science: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ's framework for evaluation of high school licensure in Iowa

Certification → Requires → Licensure test(s) → Determines → NCTQ evaluation procedure

The Social Sciences

- All Social Sciences
- Anthropology
- American History
- World History
- American Government
- Economics
- Psychology
- Geography
- Sociology

Social Studies: Content Knowledge

- World and United States History: Content Knowledge
- Government/Political Science

Majors leading to this certification require coursework evaluation

Accept licensure test as adequate measure of content knowledge for corresponding majors

State Context

With the exception of Anthropology, content knowledge for all single-subject certifications in Iowa is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (All Science, Physical Science, and All Social Sciences) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Kansas

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

Mathematics

Mathematics: Content Knowledge
Accept licensure test as adequate measure of content knowledge for corresponding majors

English

English Language Arts: Content Knowledge
Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

Biology
Biology: Content Knowledge
Chemistry
Chemistry: Content Knowledge
Physics
Physics: Content Knowledge
Earth and Space Science
Earth and Space Sciences: Content Knowledge
Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ's framework for evaluation of high school licensure in Kansas

Certification → Licensure test(s) → NCTQ evaluation procedure

The Social Sciences

- History and Government
- Psychology

Social Studies: Content Knowledge

Majors leading to this certification require coursework evaluation
Accept licensure test as adequate measure of content knowledge for corresponding majors

State Context

Content knowledge for all single-subject certifications in Kansas is ensured through licensure testing. However, content knowledge is not ensured for the multiple-subject History and Government certification because the licensure test does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for this certification is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Kentucky

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**

Mathematics → Mathematics: Content Knowledge → Accept licensure test as adequate measure of content knowledge for corresponding majors

Mathematics → Mathematics: Proofs, Models and Problems, Part 1* → Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**

English → English Language, Literature and Composition: Content and Analysis* → Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**

Biology → Biology: Content Knowledge* → Accept licensure test as adequate measure of content knowledge for corresponding majors

Chemistry → Chemistry: Content Knowledge* → Accept licensure test as adequate measure of content knowledge for corresponding majors

Physics → Physics: Content Knowledge* → Accept licensure test as adequate measure of content knowledge for corresponding majors

Earth Science → Earth and Space Sciences: Content Knowledge* → Accept licensure test as adequate measure of content knowledge for corresponding majors

* Required Principles of Learning and Teaching licensure test is excluded because it does not focus on content knowledge
NCTQ's framework for evaluation of high school licensure in Kentucky

Certification 

Requires 

Licensure test(s) 

Determines 

NCTQ evaluation procedure 

The Social Sciences

Social Studies 

Social Studies: Content and Interpretation* 

Majors leading to this certification require coursework evaluation

* Required Principles of Learning and Teaching licensure test is excluded because it does not focus on content knowledge

State Context

Content knowledge for all single-subject certifications in Kentucky is ensured through licensure testing. However, content knowledge is not ensured for the multiple-subject Social Studies certification because the licensure test does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for this certification is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Louisiana

Certification ➔ Licensure test(s) ➔ NCTQ evaluation procedure

**Mathematics**
- Mathematics ➔ Mathematics: Content Knowledge ➔ Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**
- English ➔ English Language, Literature, and Composition: Content Knowledge ➔ Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- General Science ➔ General Science: Content Knowledge ➔ Majors leading to this certification require coursework evaluation
- Earth Science ➔ No test for initial certification ➔ Majors leading to this certification require coursework evaluation
- Biology ➔ Biology: Content Knowledge ➔ Accept licensure test as adequate measure of content knowledge for corresponding majors
- Physics ➔ Physics: Content Knowledge ➔ Accept licensure test as adequate measure of content knowledge for corresponding majors
- Chemistry ➔ Chemistry: Content Knowledge ➔ Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ's framework for evaluation of high school licensure in Louisiana

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

Social Studies Social Studies: Content and Interpretation Majors leading to this certification require coursework evaluation

State Context

With the exception of the untested Earth Science certification, content knowledge for all single-subject certifications in Louisiana is ensured through licensure testing. However, content knowledge is not ensured for the two multiple-subject certifications (General Science and Social Studies) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
The required licensure test for Maine's multiple-subject Physical Science certification is inadequate because the certification allows for teaching assignments in chemistry and physics, for which the test does not provide independent cut-scores that ensure proficiency in both sciences. Similarly, the required licensure test for the multiple-subject Social Studies certification is also inadequate. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Maryland

Certification **Requires** Licensure test(s) **Determines** NCTQ evaluation procedure

**Mathematics**
- Mathematics **→** Mathematics: Content Knowledge **→** Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**
- English **→** English Language, Literature and Composition: Content and Analysis **→** Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- Physical Science **→** Chemistry, Physics, and General Science
  - Physics: Content Knowledge
  - Chemistry: Content Knowledge
  - Biology: Content Knowledge
  - Earth and Space Sciences: Content Knowledge
  - Majors leading to this certification require coursework evaluation
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ’s framework for evaluation of high school licensure in Maryland

Certification

<table>
<thead>
<tr>
<th>Requires</th>
<th>Licensure test(s)</th>
<th>Determines</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
</table>

The Social Sciences

<table>
<thead>
<tr>
<th>Social Studies</th>
<th>Social Studies: Content and Interpretation</th>
<th>Majors leading to this certification require coursework evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>Social Studies: Content and Interpretation</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Geography</td>
<td>Social Studies: Content and Interpretation</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
</tbody>
</table>

State Context

With the exception of the social sciences, content knowledge for single-subject certifications in Maryland is ensured through licensure testing. However, content knowledge is not ensured for the two multiple-subject certifications (Physical Science and Social Studies) or the two single-subject certifications in the social sciences (History and Geography) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Massachusetts

Certification → Licensure test(s) → NCTQ evaluation procedure

Mathematics

Mathematics → Mathematics → Accept licensure test as adequate measure of content knowledge for corresponding majors

English

English → English → Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

Biology → Biology
Chemistry → Chemistry
Physics → Physics
Earth Science → Earth Science → Accept licensure test as adequate measure of content knowledge for corresponding majors
With the exception of the certifications in the social sciences, Massachusetts ensures content knowledge through licensure testing. Content knowledge is not ensured for the two social science certifications (Political Science/Political Philosophy and History) because the licensure tests do not provide independent cut-scores for the subjects covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. In our evaluation of coursework, we treat Political Science/Political Philosophy as a multiple-subject certification because of possible teaching assignments in any non-history course (economics, geography, etc.) within the social sciences.
NCTQ's framework for evaluation of high school licensure in Michigan

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**
- Mathematics
- Mathematics (Secondary)
- Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**
- English
- Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- Integrated Science
- Integrated Science (Secondary)
- Majors leading to this certification require coursework evaluation
- Physical Science
- Physical Science
- Majors leading to this certification require coursework evaluation
- Biology
- Biology
- Accept licensure test as adequate measure of content knowledge for corresponding majors
- Chemistry
- Chemistry
- Earth/Space Science
- Earth/Space Science
Content knowledge for all single-subject certifications in Michigan is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (Integrated Science, Physical Science, and Social Studies) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. We note that Michigan requires teacher candidates to complete a content-area major and minor or a single “comprehensive” major in Integrated Science or Social Studies. When completing evaluations of non-comprehensive majors, we consider the potential minors within the same subject field.
NCTQ's framework for evaluation of high school licensure in Minnesota

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**
- Mathematics (Grades 5-12) → Accept licensure test as adequate measure of content knowledge for corresponding majors

**Communication Arts/Literature**
- Communication Arts/Literature (Grades 5-12) → Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- Life Science → Biology (Grades 9-12) → Accept licensure test as adequate measure of content knowledge for corresponding majors
- Chemistry → Chemistry (Grades 9-12) → Accept licensure test as adequate measure of content knowledge for corresponding majors
- Physics → Physics (Grades 9-12) → Accept licensure test as adequate measure of content knowledge for corresponding majors
- Earth and Space Science → Earth and Space Science (Grades 9-12) → Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ's framework for evaluation of high school licensure in Minnesota

Certification → Requires → Licensure test(s) → Determines → NCTQ evaluation procedure

The Social Sciences

Social Studies → Social Studies (Grades 5-12) → Accept licensure test as adequate measure of content knowledge for corresponding majors

State Context

Content knowledge for all single-subject certifications in Minnesota is ensured through licensure testing. The multiple-subject Social Studies certification requires candidates to pass two independently scored licensure tests. Because of adequate testing, no majors require an evaluation of coursework.
NCTQ's framework for evaluation of high school licensure in Mississippi

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

Mathematics

Mathematics: Content Knowledge
Accept licensure test as adequate measure of content knowledge for corresponding majors

English

English Language, Literature, and Composition: Content Knowledge
Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

General Science No test for initial certification Majors leading to this certification require coursework evaluation

Physical Science: Content Knowledge Majors leading to this certification require coursework evaluation

Physics: Content Knowledge

Chemistry: Content Knowledge

Biology: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors
With the exception of the untested Psychology certification, content knowledge for single-subject certifications in Mississippi is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (General Science, Physical Science, and Social Studies) because the licensure tests are either not required or do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
While Missouri appears to adequately test all certifications in the sciences, the “Unified Science” certifications permit teaching assignments across multiple science content areas – for example, a certification in Unified Science: Physics allows for teaching assignments in biology and chemistry. As such, we treated them as multiple-subject certifications without adequate licensure tests. Additionally, content knowledge is not ensured for the two multiple-subject certifications (General Science and Social Science) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Montana

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

Mathematics

Mathematics No test for initial certification Majors leading to this certification require coursework evaluation

English

English No test for initial certification Majors leading to this certification require coursework evaluation

The Sciences

Science Broadfield No test for initial certification Majors leading to this certification require coursework evaluation
Physical Science No test for initial certification Majors leading to this certification require coursework evaluation
Chemistry No test for initial certification Majors leading to this certification require coursework evaluation
Biology No test for initial certification Majors leading to this certification require coursework evaluation
Earth Science No test for initial certification Majors leading to this certification require coursework evaluation
Montana does not require licensure tests. Since content knowledge is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. For the single-subject certifications, we look for a major in the content area. For the three multiple-subject certifications (Science Broadfield, Physical Science, and Social Science Broadfield), we look for the requirement of two minors in subjects that can be taught under the certification.
NCTQ's framework for evaluation of high school licensure in Nebraska

<table>
<thead>
<tr>
<th>Certification</th>
<th>Requires</th>
<th>Licensure test(s)</th>
<th>Determines</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td></td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td></td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>Language Arts</td>
<td></td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>The Sciences</td>
<td></td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>Natural Science</td>
<td></td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>Physical Science</td>
<td></td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td></td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td></td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td></td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
<tr>
<td>Earth Science</td>
<td></td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
</tr>
</tbody>
</table>
NCTQ's framework for evaluation of high school licensure in Nebraska

<table>
<thead>
<tr>
<th>Certification</th>
<th>Requires</th>
<th>Licensure test(s)</th>
<th>Determines</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Science</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political Science</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anthropology</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**State Context**

Nebraska does not require licensure tests. Since content knowledge is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. For the single-subject certifications, we look for a major in the content area. For the four multiple-subject certifications (Natural Science, Physical Science, Social Science, and History), we look for the requirement of two minors in subjects that can be taught under the certification. While history is usually single-subject certification, it is treated as a multiple-subject certification in Nebraska because the possible teaching assignments include political science, geography, and anthropology.
**NCTQ's framework for evaluation of high school licensure in Nevada**

<table>
<thead>
<tr>
<th>Certification</th>
<th>Requires</th>
<th>Licensure test(s)</th>
<th>Determines</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td></td>
<td>Mathematics: Content Knowledge*</td>
<td></td>
<td>Accept licensure test as adequate measure of content knowledge for corresponding majors</td>
</tr>
<tr>
<td>English</td>
<td></td>
<td>English Language, Literature, and Composition: Content Knowledge*</td>
<td></td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>The Sciences</td>
<td></td>
<td>General Science: Content Knowledge*</td>
<td></td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Physical Science</td>
<td></td>
<td>General Science: Content Knowledge*</td>
<td></td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Biological Science</td>
<td></td>
<td>Biology: Content Knowledge*</td>
<td></td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Physics</td>
<td></td>
<td>No test for initial certification</td>
<td></td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Biology</td>
<td></td>
<td>No test for initial certification</td>
<td></td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Earth Science</td>
<td></td>
<td>No test for initial certification</td>
<td></td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Chemistry</td>
<td></td>
<td>Chemistry: Content Knowledge – and – Chemistry: Content Essays*</td>
<td></td>
<td>Accept licensure test as adequate measure of content knowledge for corresponding majors</td>
</tr>
</tbody>
</table>

* Required Principles of Learning and Teaching licensure test is excluded because it does not focus on content knowledge
NCTQ's framework for evaluation of high school licensure in Nevada

<table>
<thead>
<tr>
<th>Certification</th>
<th>Licensure test(s)</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Studies</td>
<td>Social Studies: Content Knowledge*</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Political Science</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Economics</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Geography</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Sociology</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Anthropology</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>History of the United States and the World</td>
<td>World and U.S. History: Content Knowledge*</td>
<td>Accept licensure test as adequate measure of content knowledge for corresponding majors</td>
</tr>
<tr>
<td>Psychology</td>
<td>Psychology*</td>
<td>* Required Principles of Learning and Teaching licensure test is excluded because it does not focus on content knowledge</td>
</tr>
</tbody>
</table>

In Nevada, numerous single-subject certifications require an evaluation of coursework because a licensure test is not required or, in the case of the state's English certification, the cut-score is set too low to ensure content knowledge. Additionally, content knowledge is not ensured for the four multiple-subject certifications (General Science, Physical Science, Biological Science, and Social Studies) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. Biological Science is treated as a multiple-subject certification in Nevada because of a possible teaching assignment in chemistry.
NCTQ's framework for evaluation of high school licensure in New Hampshire

Certification  Requires  Licensure test(s)  Determines  NCTQ evaluation procedure

Mathematics

Mathematics for Grades 7-12  Requires  Mathematics: Content Knowledge  Determines  Accept licensure test as adequate measure of content knowledge for corresponding majors

English

English Language Arts for Grades 5-12  Requires  English Language, Literature, and Composition: Content and Analysis  Determines  Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

Life Sciences for Grades 7-12  Requires  Biology: Content Knowledge  Accept licensure test as adequate measure of content knowledge for corresponding majors

Chemistry for Grades 7-12  Requires  Chemistry: Content Knowledge

Physics for Grades 7-12  Requires  Physics: Content Knowledge

Earth Space Science for Grades 7-12  Requires  Earth and Space Sciences: Content Knowledge
NCTQ's framework for evaluation of high school licensure in New Hampshire

Certification → Licensure test(s) → NCTQ evaluation procedure

The Social Sciences

Social Studies for Grades 5-12 → Social Studies: Content and Interpretation → Majors leading to this certification require coursework evaluation

State Context

Content knowledge for all single-subject certifications in New Hampshire is ensured through licensure testing. However, content knowledge is not ensured for the multiple-subject Social Studies for Grades 5-12 certification because the licensure test does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for this certification is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in New Jersey

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**
- Mathematics
  - Mathematics: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**
- English
  - English Language, Literature, and Composition: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- Physical Science
- Biological Science
- Chemistry
- Physics
- Earth Science
  - Chemistry: Content Knowledge
  - Physics: Content Knowledge*
  - Biology: Content Knowledge*
  - Chemistry: Content Knowledge*
  - Physics: Content Knowledge*
  - Earth and Space Sciences: Content Knowledge*
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

* General Science: Content Knowledge is also required for each certification in the sciences
NCTQ's framework for evaluation of high school licensure in New Jersey

Certification → Licensure test(s) → NCTQ evaluation procedure

The Social Sciences

Social Studies
Social Studies: Content Knowledge
Majors leading to this certification require coursework evaluation

Psychology
No test for initial certification
Majors leading to this certification require coursework evaluation

State Context

With the exception of the untested Psychology certification, content knowledge for all single-subject certifications and the multiple-subject Physical Science certification in New Jersey is ensured through licensure testing. However, content knowledge is not ensured for the multiple-subject Social Studies certification because the licensure test does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in New Mexico

Certification → Licensure test(s) → NCTQ evaluation procedure

Mathematics

<table>
<thead>
<tr>
<th>Certification</th>
<th>Licensure test(s)</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>Mathematics</td>
<td>Accept licensure test as adequate measure of content knowledge for corresponding majors</td>
</tr>
</tbody>
</table>

English

<table>
<thead>
<tr>
<th>Certification</th>
<th>Licensure test(s)</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts</td>
<td>Language Arts</td>
<td>Accept licensure test as adequate measure of content knowledge for corresponding majors</td>
</tr>
</tbody>
</table>

The Sciences

<table>
<thead>
<tr>
<th>Certification</th>
<th>Licensure test(s)</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>Science</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
</tbody>
</table>

The Social Sciences

<table>
<thead>
<tr>
<th>Certification</th>
<th>Licensure test(s)</th>
<th>NCTQ evaluation procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>History, Geography, Economics, Civics and Government</td>
<td>History, Geography, Economics, Civics and Government</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Psychology</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
</tbody>
</table>

State Context

With the exception of the untested Psychology certification, New Mexico offers only general certification in the sciences and social sciences. Content knowledge is not ensured for the two multiple-subject certifications (Science and History, Geography, Economics, Civics and Government) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in New York

**Certification** 
Requires **Licensure test(s)** 
Determines **NCTQ evaluation procedure**

### Mathematics

- **Mathematics 7-12** 
  - Mathematics
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

### English

- **English 7-12** 
  - English Language Arts
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
- **English Language Arts 7-12** 
  - English Language Arts
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

### The Sciences

- **Biology 7-12** 
  - Biology
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
- **Chemistry 7-12** 
  - Chemistry
- **Physics 7-12** 
  - Physics
- **Earth Science 7-12** 
  - Earth Science
NCTQ’s framework for evaluation of high school licensure in New York

Content knowledge for all single-subject certifications in New York is ensured through licensure testing. However, content knowledge is not ensured for the multiple-subject Social Studies 7-12 certification because the licensure test does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for this certification is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in North Carolina

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**
- No test for initial certification
- Majors leading to this certification require coursework evaluation

**English**
- No test for initial certification
- Majors leading to this certification require coursework evaluation

**The Sciences**
- Science
  - No test for initial certification
  - Majors leading to this certification require coursework evaluation
- Physics
  - No test for initial certification
  - Majors leading to this certification require coursework evaluation
- Chemistry
  - No test for initial certification
  - Majors leading to this certification require coursework evaluation
- Biology
  - No test for initial certification
  - Majors leading to this certification require coursework evaluation
- Earth Science
  - No test for initial certification
  - Majors leading to this certification require coursework evaluation
NCTQ's framework for evaluation of high school licensure in North Carolina

Certification → Requires → Licensure test(s) → Determines → NCTQ evaluation procedure

The Social Sciences

<table>
<thead>
<tr>
<th>Social Studies</th>
<th>No test for initial certification</th>
<th>Majors leading to this certification require coursework evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
</tr>
<tr>
<td>Political Science</td>
<td>No test for initial certification</td>
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<tr>
<td>Economics</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
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<tr>
<td>Geography</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
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<tr>
<td>Sociology</td>
<td>No test for initial certification</td>
<td>Majors leading to this certification require coursework evaluation</td>
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<tr>
<td>Anthropology</td>
<td>No test for initial certification</td>
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</tr>
</tbody>
</table>

State Context

While North Carolina specifies licensure tests for each certification, the state does not require that tests be passed until professional licensure is sought, which typically occurs after three years in the classroom. Due to this inadequacy in testing, all majors leading to certification require an evaluation of coursework. For the single-subject certifications, we look for a major in the content area. For the two multiple-subject certifications (Science and Social Studies), we look for the requirement of two minors in subjects that can be taught under the certification.
NCTQ's framework for evaluation of high school licensure in North Dakota

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**
- Mathematics
  - Mathematics: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**
- English
  - English Language, Literature, and Composition: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- General Science/Composite Science
  - General Science: Content Knowledge*
  - Majors leading to this certification require coursework evaluation
- Physical Science
  - No test for initial certification
  - Majors leading to this certification require coursework evaluation
- Biology
  - Biology: Content Knowledge*
- Chemistry
  - Chemistry: Content Knowledge*
- Physics
  - Physics: Content Knowledge*
- Earth Science
  - Earth and Space Sciences: Content Knowledge*
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

* Required Principles of Learning and Teaching licensure test is excluded because it does not focus on content knowledge
NCTQ's framework for evaluation of high school licensure in North Dakota

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

Social Studies/Social Science
- Social Studies: Content Knowledge*
- Majors leading to this certification require coursework evaluation

Psychology
- No test for initial certification
- Majors leading to this certification require coursework evaluation

Sociology
- No test for initial certification
- Majors leading to this certification require coursework evaluation

History
- World and U.S. History: Content Knowledge*
- Accept licensure test as adequate measure of content knowledge for corresponding majors

Government
- Government/Political Science*

Economics
- Economics*

Geography
- Geography*

* Required Principles of Learning and Teaching licensure test is excluded because it does not focus on content knowledge

State Context

With the exception of the untested Psychology and Sociology certifications, content knowledge for single-subject certifications in North Carolina is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (General Science/Composite Science, Physical Science, and Social Studies/Social Science) because the licensure tests are either not required or do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Ohio

Certification

Requires

Licensure test(s)

Determines

NCTQ evaluation procedure

Mathematics

Integrated Mathematics

Mathematics: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

English

Integrated English

English Language, Literature, and Composition: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

General Science

(two testing options)

Chemistry, Physics and General Science – and – Biology: Content Knowledge

Biology and General Science – and – One of: Chemistry, Physics, or Earth Science: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

Physical Science: Physics & Chemistry

Chemistry: Content Knowledge – and – Physics: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

Physical Science: Chemistry

Chemistry: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

Physical Science: Physics

Physics: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

Earth Sciences

Earth and Space Sciences: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

Earth Sciences/Chemistry

Earth and Space Sciences: Content Knowledge – and – Chemistry: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

Earth Sciences/Physics

Earth and Space Sciences: Content Knowledge – and – Physics: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

Continued on the next page
NCTQ's framework for evaluation of high school licensure in Ohio

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Sciences

Life Sciences
- Biology: Content Knowledge
- Biology: Content Knowledge – and – Earth and Space Sciences: Content Knowledge

Biology: Content Knowledge
- and – Physics: Content Knowledge
- Chemistry: Content Knowledge

Accept licensure test as adequate measure of content knowledge for corresponding majors

Life Sciences/Earth Science

Life Sciences/Physics

Life Sciences/Chemistry

The Social Sciences

Integrated Social Studies
- Social Studies: Content Knowledge

Majors leading to this certification require coursework evaluation

State Context

Content knowledge for all single-subject and most multiple-subject certifications in Ohio is ensured through licensure testing. However, content knowledge is not ensured for two multiple-subject certifications (General Science and Integrated Social Studies) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Oklahoma

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**
- Intermediate Mathematics
  - Middle Level/Intermediate Mathematics
  - Advanced Mathematics
    - Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**
- English
  - English
    - Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- Biological Sciences
  - Biological Sciences
- Chemistry
  - Chemistry
- Physics
  - Physics
- Earth Science
  - Earth Science
- Physical Science
  - Physical Science
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ’s framework for evaluation of high school licensure in Oklahoma

The Social Sciences

- United States History/Oklahoma History/Government/Economics
- World History/Geography
- Psychology/Sociology

NCTQ’s evaluation procedure

Certification Requires Licensure test(s) Determines

State Context

Content knowledge for all single-subject certifications in Oklahoma is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (United States History/Oklahoma History/Government/Economics, World History/Geography, and Psychology/Sociology) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. We note that the Physical Science certification is adequately tested in Oklahoma because the state limits teaching assignments to physical science and other non-core science courses.
NCTQ's framework for evaluation of high school licensure in Oregon

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**
- Basic Mathematics
- Advanced Mathematics

Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**
- Language Arts
- English Language Arts

Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- Integrated Science
- Physics
- Chemistry
- Biology

Majors leading to this certification require coursework evaluation
NCTQ's framework for evaluation of high school licensure in Oregon

The Social Sciences

Social Studies

Social Studies

Majors leading to this certification require coursework evaluation

State Context

While Oregon appears to adequately test single-subject certifications in the sciences, each certification permits teaching assignment in multiple science classrooms – for example, a certification in Biology allows for teaching assignments in chemistry and physics. For that reason, Biology, Chemistry, and Physics are treated as multiple-subject certifications. Additionally, content knowledge is not ensured for the two multiple-subject certifications (Integrated Science and Social Studies) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Pennsylvania

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**
- Mathematics: Content Knowledge
- Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**
- English Language, Literature, and Composition: Content Knowledge
- Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- General Science: Content Knowledge
- Biology: Content Knowledge
- Chemistry: Content Knowledge
- Physics: Content Knowledge
- Earth and Space Sciences: Content Knowledge
- Majors leading to this certification require coursework evaluation
- Accept licensure test as adequate measure of content knowledge for corresponding majors
Content knowledge for all single-subject certifications in Pennsylvania is ensured through licensure testing. However, content knowledge is not ensured for the four multiple-subject certifications (General Science, Social Studies, Citizenship Education, and Social Sciences) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Rhode Island

- Mathematics
  - Secondary Grades
    - General Science
      - No test for initial certification
      - Majors leading to this certification require coursework evaluation
  - Biology
    - No test for initial certification
    - Majors leading to this certification require coursework evaluation
  - Chemistry
    - No test for initial certification
    - Majors leading to this certification require coursework evaluation
  - Physics
    - No test for initial certification
    - Majors leading to this certification require coursework evaluation

- English
  - Secondary Grades
    - No test for initial certification
    - Majors leading to this certification require coursework evaluation

- The Sciences
  - Secondary Grades
    - General Science
    - No test for initial certification
    - Majors leading to this certification require coursework evaluation
Rhode Island does not require licensure tests. Since content knowledge is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. For the single-subject certifications, we look for a major in the content area. For the two multiple-subject certifications (Secondary Grades General Science and Secondary Grades Social Studies), we look for the requirement of two minors in subjects that can be taught under the certification. We note that beginning September 2013, Rhode Island will require licensure tests that will ensure content knowledge for all single-subject certifications. Since the two multiple-subject certifications will require licensure tests that do not provide independent cut-scores for each subject covered under the certification, evaluation of coursework for corresponding majors will still be required for those certifications.
NCTQ’s framework for evaluation of high school licensure in South Carolina

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

Mathematics

Mathematics


Accept licensure test as adequate measure of content knowledge for corresponding majors

English

English

English Language, Literature, and Composition: Content and Analysis

Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

Science

Biology and General Science – or – Chemistry, Physics and General Science

Majors leading to this certification require coursework evaluation

Physics

Chemistry, Physics and General Science

Majors leading to this certification require coursework evaluation

Chemistry

Chemistry, Physics and General Science

Majors leading to this certification require coursework evaluation

Biology

Biology and General Science

Majors leading to this certification require coursework evaluation
NCTQ’s framework for evaluation of high school licensure in South Carolina

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

Social Studies

Social Studies: Content and Interpretation

Majors leading to this certification require coursework evaluation

Economics

Social Studies: Content and Interpretation

Majors leading to this certification require coursework evaluation

Government

Social Studies: Content and Interpretation

Majors leading to this certification require coursework evaluation

History

Social Studies: Content and Interpretation

Majors leading to this certification require coursework evaluation

Geography

Social Studies: Content and Interpretation

Majors leading to this certification require coursework evaluation

Sociology

Social Studies: Content and Interpretation

Majors leading to this certification require coursework evaluation

Psychology

Psychology

Accept licensure test as adequate measure of content knowledge for corresponding majors

State Context

With the exception of Psychology, all South Carolina certifications in the sciences and social sciences require general licensure tests that do not provide independent cut-scores. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. For the single-subject certifications, we look for a major in the content area. For the two multiple-subject certifications (Science and Social Studies), we look for the requirement of two minors in subjects that can be taught under the certification.
NCTQ's framework for evaluation of high school licensure in South Dakota

**Certification**

- 7-12 Mathematics Education
- 7-12 Language Arts: English Education
- The Sciences
  - 7-12 Science Education - Composite
  - 7-12 Science Education - Physical Science
  - 7-12 Science Education - Biology
  - 7-12 Science Education - Chemistry
  - 7-12 Science Education - Physics
  - 7-12 Science Education - Earth Science

**Licensure test(s)**

- Mathematics: Content Knowledge
- English Language, Literature, and Composition: Content Knowledge
- No test for initial certification
- Physical Science: Content Knowledge
- Biology: Content Knowledge
- Chemistry: Content Knowledge
- Physics: Content Knowledge
- Earth and Space Sciences: Content Knowledge

**NCTQ evaluation procedure**

- Accept licensure test as adequate measure of content knowledge for corresponding majors
- Majors leading to this certification require coursework evaluation
- Accept licensure test as adequate measure of content knowledge for corresponding majors

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Mathematics

- 7-12 Mathematics Education
  - Mathematics: Content Knowledge
    - Accept licensure test as adequate measure of content knowledge for corresponding majors

English

- 7-12 Language Arts: English Education
  - English Language, Literature, and Composition: Content Knowledge
    - Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

- 7-12 Science Education - Composite
  - No test for initial certification
  - Majors leading to this certification require coursework evaluation
- 7-12 Science Education - Physical Science
  - Physical Science: Content Knowledge
  - Majors leading to this certification require coursework evaluation
- 7-12 Science Education - Biology
  - Biology: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
- 7-12 Science Education - Chemistry
  - Chemistry: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
- 7-12 Science Education - Physics
  - Physics: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
- 7-12 Science Education - Earth Science
  - Earth and Space Sciences: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ's framework for evaluation of high school licensure in South Dakota

The Social Sciences

- 7-12 Social Science Education - Composite
- 7-12 Social Science Education - History
- 7-12 Social Science Education - Political Science
- 7-12 Social Science Education - Economics
- 7-12 Social Science Education - Psychology
- 7-12 Social Science Education - Geography
- 7-12 Social Science Education - Sociology

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

No test for initial certification

Majors leading to this certification require coursework evaluation

Accept licensure test as adequate measure of content knowledge for corresponding majors

State Context

Content knowledge for all single-subject certifications in South Dakota is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (7-12 Science Education - Composite, 7-12 Science Education - Physical Science, and 7-12 Social Science Education - Composite) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Tennessee

Certification → Licensure test(s) → NCTQ evaluation procedure

Mathematics
- Mathematics 7-12 → Mathematics: Content Knowledge → Accept licensure test as adequate measure of content knowledge for corresponding majors

English
- English 7-12 → English Language, Literature, and Composition: Content Knowledge → Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences
- Biology 7-12 → Biology: Content Knowledge
- Chemistry 7-12 → Chemistry: Content Knowledge
- Physics 7-12 → Physics: Content Knowledge
- Earth Science 7-12 → Earth Science: Content Knowledge → Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ’s framework for evaluation of high school licensure in Tennessee

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

History 7-12 → World and U.S. History: Content Knowledge
Government 7-12 → Government/Political Science
Economics 7-12 → Economics
Psychology 9-12 → Psychology
Geography 7-12 → Geography
Sociology 9-12 → Sociology

Accept licensure test as adequate measure of content knowledge for corresponding majors

State Context

Tennessee offers only single-subject certifications. Content knowledge for each certification is ensured through licensure tests. Because of adequate testing, no majors require an evaluation of coursework.
NCTQ's framework for evaluation of high school licensure in Texas

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

Mathematics

Mathematics: Grades 8-12

Accept licensure test as adequate measure of content knowledge for corresponding majors

English

English Language Arts and Reading: Grades 8-12

Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

Science: Grades 8-12

Majors leading to this certification require coursework evaluation

Mathematics/Physical Science/Engineering: Grades 8-12

Majors leading to this certification require coursework evaluation

Physical Science: Grades 8-12

Majors leading to this certification require coursework evaluation

Physics/Mathematics: Grades 8-12

Majors leading to this certification require coursework evaluation

Chemistry: Grades 8-12

Accept licensure test as adequate measure of content knowledge for corresponding majors

Life Science: Grades 8-12
NCTQ's framework for evaluation of high school licensure in Texas

The Social Sciences

<table>
<thead>
<tr>
<th>Social Studies: Grades 8-12</th>
<th>Social Studies: Grades 8-12</th>
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<tbody>
<tr>
<td>Majors leading to this certification require coursework evaluation</td>
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<table>
<thead>
<tr>
<th>History: Grades 8-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept licensure test as adequate measure of content knowledge for corresponding majors</td>
</tr>
</tbody>
</table>

State Context

Content knowledge for all single-subject certifications in Texas is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (Science: Grades 8-12, Physical Science: Grades 8-12, and Social Studies: Grades 8-12) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. Additionally, Texas offers two certifications that include both mathematics and the sciences: Mathematics/Physical Science/Engineering: Grades 8-12 and Physics/Mathematics: Grades 8-12. The former allows for teaching assignments in any mathematics, chemistry, and physics course (leading us to evaluate for minors in chemistry and physics), and the latter in both physics and mathematics (where we look for minors in physics and mathematics).
NCTQ's framework for evaluation of high school licensure in Utah

Certification → Licensure test(s) → NCTQ evaluation procedure

Mathematics
- Mathematics Level 3
  - Mathematics: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
- Mathematics Level 4
  - Mathematics: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

English
- English Language, Literature and Composition: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences
- Physical Science
  - Physical Science: Content Knowledge
  - Majors leading to this certification require coursework evaluation
- Biological Science
  - Biology: Content Knowledge
- Chemistry
  - Chemistry: Content Knowledge
- Physics
  - Physics: Content Knowledge
- Earth Science
  - Earth and Space Sciences: Content Knowledge
- Environmental Science
  - Biology: Content Knowledge
  - Accept licensure test as adequate measure of content knowledge for corresponding majors
Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

Social Studies Composite
- Social Studies: Content Knowledge
  - World and U.S. History: Content Knowledge – or – Social Studies: Content Knowledge
  - Government/Political Science – or – Social Studies: Content Knowledge
  - Majors leading to this certification require coursework evaluation

History
- History
  - Majors leading to this certification require coursework evaluation

Political Science
- Political Science
  - Government/Political Science – or – Social Studies: Content Knowledge
  - Majors leading to this certification require coursework evaluation

Economics
- Economics
  - Economics – or – Social Studies: Content Knowledge
  - Majors leading to this certification require coursework evaluation

Psychology
- Psychology
  - Psychology – or – Social Studies: Content Knowledge
  - Majors leading to this certification require coursework evaluation

Geography
- Geography
  - Geography – or – Social Studies: Content Knowledge
  - Majors leading to this certification require coursework evaluation

Sociology
- Sociology
  - Sociology – or – Social Studies: Content Knowledge
  - Majors leading to this certification require coursework evaluation

Anthropology
- Anthropology
  - No test for initial certification
  - Majors leading to this certification require coursework evaluation

State Context

With the exception of the social sciences, content knowledge for single-subject certifications in Utah is ensured through licensure testing. Except for Anthropology, which is not tested, candidates select between a subject-specific or general licensure test for each of the single-subject certifications in the social sciences, the latter of which does not ensure adequate content knowledge. Additionally, content knowledge is not ensured for the two multiple-subject certifications (Physical Science and Social Studies Composite) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
Vermont offers only general certification in the sciences and social sciences. For the Science certification, the state allows candidates to pick from a menu of licensure tests, none of which ensures content knowledge for all possible teaching assignments covered under the certification. Similarly, the required licensure test for the multiple-subject Social Studies certification is also inadequate because it does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.

In addition to one of the General Science tests, candidates must also select a single test from: Biology: Content Knowledge, Biology: Content Essays, Chemistry: Content Knowledge, Chemistry: Content Essays, Earth and Space Sciences: Content Knowledge, Physics: Content Knowledge, or Physics: Content Essays.
NCTQ's framework for evaluation of high school licensure in Virginia

Certification → Licensure test(s) → NCTQ evaluation procedure

**Mathematics**
- Mathematics: Content Knowledge
- Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**
- English Language, Literature, and Composition: Content Knowledge
- Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**
- Biology: Content Knowledge
- Chemistry: Content Knowledge
- Physics: Content Knowledge
- Earth and Space Sciences: Content Knowledge
- Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ's framework for evaluation of high school licensure in Virginia

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

History and Social Sciences -> Social Studies: Content Knowledge -> Majors leading to this certification require coursework evaluation

State Context

Content knowledge for all single-subject certifications in Virginia is ensured through licensure testing. However, content knowledge is not ensured for the multiple-subject History and the Social Sciences certification because the licensure test does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for this certification is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in Washington

Certification → Requires → Licensure test(s) → Determines → NCTQ evaluation procedure

### Mathematics
- Mathematics → Mathematics
- Accept licensure test as adequate measure of content knowledge for corresponding majors

### English
- English/Language Arts → English/Language Arts
- Accept licensure test as adequate measure of content knowledge for corresponding majors

### The Sciences
- Science
- Physics
- Chemistry
- Biology
- Earth/Space Science
- Science
- Physics
- Chemistry
- Biology
- Earth/Space Science
- Majors leading to this certification require coursework evaluation
- Accept licensure test as adequate measure of content knowledge for corresponding majors
NCTQ's framework for evaluation of high school licensure in Washington

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

Social Studies Social Studies Majors leading to this certification require coursework evaluation

History History Majors leading to this certification require coursework evaluation

State Context

Content knowledge for single-subject certifications in Washington is ensured through licensure testing. However, content knowledge is not ensured for the three multiple-subject certifications (Science, Social Studies, and History) because the licensure tests do not provide independent cut-scores for each subject covered under the certification. History is treated as a multiple-subject certification in Washington because of the possible teaching assignments in political science and geography. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary.
NCTQ's framework for evaluation of high school licensure in West Virginia

Certification

Requires

Licensure test(s)

Determines

NCTQ evaluation procedure

Mathematics

Accept licensure test as adequate measure of content knowledge for corresponding majors

English

Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

Accept licensure test as adequate measure of content knowledge for corresponding majors
Content knowledge for all single-subject certifications in West Virginia is ensured through licensure testing. However, content knowledge is not ensured for the multiple-subject Social Studies certification because the licensure test does not provide independent cut-scores for each subject covered under the certification. Since content knowledge for this certification is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. We note that the General Science certification is adequately tested in West Virginia because the state limits teaching assignments to non-core science courses.
NCTQ's framework for evaluation of high school licensure in Wisconsin

**Certification** 
Requires 
**Licensure test(s)** 
Determines 
**NCTQ evaluation procedure**

**Mathematics**

**Mathematics** → **Mathematics: Content Knowledge** → Accept licensure test as adequate measure of content knowledge for corresponding majors

**English**

**English** → **English Language, Literature, and Composition: Content Knowledge** → Accept licensure test as adequate measure of content knowledge for corresponding majors

**The Sciences**

**Broad Field Science** → **General Science: Content Knowledge** → Majors leading to this certification require coursework evaluation

**Physical Science** → **General Science: Content Knowledge** → Majors leading to this certification require coursework evaluation

**Life and Environmental Science** → **General Science: Content Knowledge** → Majors leading to this certification require coursework evaluation

**Physics** → **General Science: Content Knowledge** → Majors leading to this certification require coursework evaluation

**Chemistry** → **General Science: Content Knowledge** → Majors leading to this certification require coursework evaluation

**Biology** → **General Science: Content Knowledge** → Majors leading to this certification require coursework evaluation

**Earth and Space Science** → **General Science: Content Knowledge** → Majors leading to this certification require coursework evaluation
While Wisconsin offers numerous single-subject certifications in the sciences and social sciences, the state requires only general licensure tests that do not provide independent cut-scores. Since content knowledge for these certifications is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. For the single-subject certifications, we look for a major in the content area. For the three multiple-subject certifications (Broad Field Science, Physical Science, and Broad Field Social Studies), we look for the requirement of two minors in subjects that can be taught under the certification.
NCTQ's framework for evaluation of high school licensure in Wyoming

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

Mathematics

Math
- No test for initial certification
- Accept licensure test as adequate measure of content knowledge for corresponding majors

English

English
- No test for initial certification
- Accept licensure test as adequate measure of content knowledge for corresponding majors

The Sciences

Physical Science
- No test for initial certification
- Majors leading to this certification require coursework evaluation

Physics
- No test for initial certification
- Majors leading to this certification require coursework evaluation

Chemistry
- No test for initial certification
- Majors leading to this certification require coursework evaluation

Biology
- No test for initial certification
- Majors leading to this certification require coursework evaluation

Earth Science
- No test for initial certification
- Majors leading to this certification require coursework evaluation
NCTQ's framework for evaluation of high school licensure in Wyoming

Certification Requires Licensure test(s) Determines NCTQ evaluation procedure

The Social Sciences

Social Studies Comprehensive No test for initial certification Majors leading to this certification require coursework evaluation

History No test for initial certification Majors leading to this certification require coursework evaluation

Political Science No test for initial certification Majors leading to this certification require coursework evaluation

Economics No test for initial certification Majors leading to this certification require coursework evaluation

Psychology No test for initial certification Majors leading to this certification require coursework evaluation

Sociology No test for initial certification Majors leading to this certification require coursework evaluation

Geography No test for initial certification Majors leading to this certification require coursework evaluation

Anthropology No test for initial certification Majors leading to this certification require coursework evaluation

State Context

Wyoming does not require licensure tests. Since content knowledge is not ensured with adequate testing, an evaluation of coursework for corresponding majors is necessary. For the single-subject certifications, we look for a major in the content area. For the two multiple-subject certifications (Physical Science and Social Studies Comprehensive), we look for the requirement of two minors in subjects that can be taught under the certification.