PE / SE LICENSING

SENH
YOUNGER MEMBERS GROUP

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Topics

- Engineering Licensure in NH
- PE v. SE – which is best for you?
- Application Process
- Exam Preparation
- Exam Tips and Tricks
- After the Exam
Engineering Licensure in NH

- NH Board of Professional Engineers
  - SENH Member – Alex Azodi, PE, SECB

- Recognizes generic PE license w/ roster designations

- Duty to perform within area of expertise
  - Structural, Civil, Mechanical, etc.
# Engineering Licensure in NH

<table>
<thead>
<tr>
<th>Board</th>
<th>Licensee Name</th>
<th>License Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG</td>
<td>CHRISTOPHER R Fournier</td>
<td>12851</td>
</tr>
<tr>
<td>ENG</td>
<td>REMI N Fournier</td>
<td>09054</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exp Date</th>
<th>Date of Licensure</th>
<th>Roster Listing</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-31-16</td>
<td>06-18-09</td>
<td>CE STR CE</td>
</tr>
<tr>
<td>10-31-17</td>
<td>07-26-95</td>
<td></td>
</tr>
</tbody>
</table>
PE v. SE

- NCEES administers two separate exams
  - 8-hour Principles and Practice of Engineering (PE)
  - 16-hour Structural Engineering (SE)

- Both offered each year in NH in April and October
PE v. SE

- **PE Exam**
  - Pen and Paper
  - Friday: 8am-12 noon and 1pm-5pm
  - Morning session
    - 40 multiple choice questions on all topics
  - Afternoon session
    - 40 multiple choice questions on one selected topic
      - 5 civil engineering topics
      - Construction, Geotechnical, Structural, Transportation, Water Resources/Environmental
PE v. SE

- **SE Exam**
  - Pen and Paper
  - Friday (vertical) and Saturday (lateral)
    - Does not need to be the same weekend!
  - Morning Session
    - 40 multiple choice questions on both topics
  - Afternoon Session
    - 3 or 4 “essay” questions on one selected topic
      - Buildings or Bridges
## PE v. SE

### Passing Rates

<table>
<thead>
<tr>
<th>Exam</th>
<th>First-time takers</th>
<th>Repeat takers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Volume</td>
<td>Pass Rate</td>
</tr>
<tr>
<td>SE Lateral Forces Bridges</td>
<td>53</td>
<td>23%</td>
</tr>
<tr>
<td>SE Lateral Forces Buildings</td>
<td>251</td>
<td>43%</td>
</tr>
<tr>
<td>SE Vertical Forces Bridges</td>
<td>72</td>
<td>60%</td>
</tr>
<tr>
<td>SE Vertical Forces Buildings</td>
<td>304</td>
<td>53%</td>
</tr>
<tr>
<td>PE Civil Construction</td>
<td>869</td>
<td>57%</td>
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<tr>
<td>PE Civil Geotechnical</td>
<td>460</td>
<td>63%</td>
</tr>
<tr>
<td>PE Civil Structural</td>
<td>1163</td>
<td>67%</td>
</tr>
<tr>
<td>PE Civil Transportation</td>
<td>1112</td>
<td>66%</td>
</tr>
<tr>
<td>PE Civil Water Resources and Environmental</td>
<td>1073</td>
<td>71%</td>
</tr>
<tr>
<td>PE Central Systems (October 1985)</td>
<td>56</td>
<td>80%</td>
</tr>
</tbody>
</table>
Application Process

- Applications are due early:
  - For April: due January 1st
  - For October: due July 1st
- $150 fee to NH (ask your employer!)
- Passed FE Exam
- Choose a roster listing
- Official transcript sent from University
- Professional references
- Experience summaries
Application Process

- **Roster Listings**

```markdown
**ROSTER LISTING REQUESTED:**

I feel I am qualified to practice in the following branch/es of Professional Engineering checked below and would like to be so designated in the Roster *(maximum three)*. If applying for exam which discipline do you want to take?

<table>
<thead>
<tr>
<th>Agriculture</th>
<th>Electrical &amp; Computer</th>
<th>Heating &amp; Vent.</th>
<th>Mining/Mineral</th>
<th>Naval Arch/Marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>Electrical</td>
<td>Industrial</td>
<td>Nuclear</td>
<td>Architectural</td>
</tr>
<tr>
<td>Civil</td>
<td>Environmental</td>
<td>Manufacturing</td>
<td>Petroleum</td>
<td>Mining/Mineral</td>
</tr>
<tr>
<td>Civil Highway</td>
<td>Fire Protection</td>
<td>Mechanical</td>
<td>Sanitary</td>
<td>Metallurgical</td>
</tr>
<tr>
<td>Control Systems</td>
<td>Geo Technical</td>
<td>Software</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Structural – 16 hour structural exam required for new licensees by exam to receive a structural designation.*

I understand that the Board will make determination of my qualifications for such designations after review of the data submitted with this application.
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Experience Summaries

PE Board considers this the most important part of the application

- How many are needed?
  - 15-20 works

- What info is included?
  - Detail what you did
  - Cost of your time vs. total engineering cost
  - Demonstrate increasing levels of responsibility
Application Process

- Register w/ NCEES
  - Online
  - Another fee
    - PE Exam is $350
    - SE Exam is $500 for each day!
Exam Preparation

- Calculator (inclusive list, no graphing calculators)
  - [link](http://ncees.org/exams/calculator-policy/)
- Be ready to buy & borrow lots of books
  - Beyond the NCEES recommendations (sample exam)
  - Get the exact codes & references (editions, dates, etc)
  - Professional Publications, Inc.
    - Reference manuals & practice problems
- SE: SEAOC Seismic Design Manuals
Exam Preparation

- If PE, take NH-ASCE refresher course
- If SE, consider online course
  - ASCE-SEI, Kaplan, School of PE, PPI
  - Expensive: $1000-$2000
- Study
  - Know your references, tab pages, where to find info
  - Back reference examples
  - Perform practice problems to completion
  - Schedule a time to study a little bit every day
  - Start using that unfamiliar calculator
Exam Tips and Tricks

- Prepare for worst (late, bad weather, poor exam conditions)
- Be rested
- Stay in a hotel?
- Bring hearing protection
- Pack a lunch
- Take off work ahead of exam date to relax
After the Exam

- Test results are transmitted to PE Boards after 6-8 weeks
- SE Exam diagnostic report
After the Exam

- Test results are transmitted to PE Boards after 6-8 weeks
- Application is valid for 4 consecutive attempts, just pay the NCEES fee with a short letter to NH.
- Passing one part of SE lasts for 5 years
- Promotion
  - New responsibilities
  - Pay increase