## Course Requirement Information Side-by-Side with Regular NSE SM

<table>
<thead>
<tr>
<th>LGO-NSE Program SM</th>
<th>Regular NSE SM</th>
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<tbody>
<tr>
<td>66 units of graduate subjects</td>
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**36 units approved by the NSE Department (see breakdown below).** Undergraduate subjects, English proficiency subjects, and Research subjects (thesis and 22.94) may not be counted.

**No special problems (22.901-22.904) may be counted.**

**Two modules are required; 12 units**
(selected from 22.11, 22.12, 22.13, 22.14, 22.15, 22.16)

**Two specialization courses in NSE are required; 24 units.**
Recommended Fields of Specializations and subjects to choose from:
- Nuclear Reactor Engineering: 22.211, 22.312, 22.39, 22.313, 22.251
- Nuclear Reactor Physics: 22.211, 22.312, 22.212, 22.213, 22.251
- Nuclear Materials: 22.73, 3.20, 22.72, 22.74, 3.21
- Fusion: 22.611, 22.62, 22.67, 22.615, 22.616
- Nuclear Science and Technology: 22.51, 8.511, 22.90, 8.333, 8.421, 8.422
- Nuclear Security and Policy: 6.431, 22.312, 22.90, or other related subjects by petition.

**One additional engineering course of at least 6 units** as approved by the NSE Department.

**24 units in the required courses in the LGO summer core.** The [LGO summer courses](#) include focuses on Organizational Leadership and Change, Lean Tools and Applications, Programming in Python, Operations Management, Building and

**48 of the 66 units must be taken within the NSE Department (see breakdown below)**
Undergraduate subjects, English proficiency subjects, and Research subjects (thesis and 22.94) may not be counted.

**No more than 12 units of special problems (22.901-22.904) may be counted.**

**Two modules are required; 12 units**
(selected from 22.11, 22.12, 22.13, 22.14, 22.15, 22.16)

**Other subjects may be selected in accordance with the student’s particular field of interest.** Most Master’s candidates specialize in one of four alternative fields: fission nuclear technology, applied plasma physics, nuclear security, or nuclear science and technology.

Recommended Subjects for the S.M. Degree (specializations); Nuclear Reactor Engineering: 22.211, 22.312, and one of: (22.39, 22.313, 22.315, or 22.251); Nuclear Reactor Physics: 22.211, 22.312, and one of: (22.212, 22.213, or 22.251); Nuclear Materials: 22.73, 3.20 (Thermodynamics), and one of (22.72, 22.74, or 3.21 (Kinetics)); Fusion: 22.611, 22.62, and one of (22.67, or 22.615); Nuclear Science and Technology: 22.51, 8.511, and one of (22.90, or 8.333); Nuclear Security and Policy: 6.431, 22.814 and one of (22.312, or 22.90)
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<td>Students apply through the Sloan application system. There are two rounds of applications. <a href="https://lgo.mit.edu/admissions/application-directions/">https://lgo.mit.edu/admissions/application-directions/</a></td>
<td>Students apply through the regular MIT grad apply application system. There is one round of applications. <a href="https://web.mit.edu/nse/education/grad/admissions.html">https://web.mit.edu/nse/education/grad/admissions.html</a></td>
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