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What Characteristics Are Found Among Institutions Still Offering and No Longer Offering Reformed Undergraduate Science Courses?

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The National Study of Education in Undergraduate Science (NSEUS), funded by the National Science Foundation, investigated characteristics of reformed and non-reformed undergraduate science courses in a population of 103 higher education institutions. These institutions, and one or more of their courses were involved in the NASA/NOVA Program. The NOVA courses were developed and offered at various times beginning in 1996 in a large professional development effort to create reforms in higher education undergraduate, and mostly entry-level, science courses.

At many institutions, the reformed courses influenced other courses at the institution, as instructional practices were changed. An initial survey in 2006-2007 determined the status of the courses originally funded by a sub-grant. A total of 185 reform courses continue to be offered at 72 institutions (70%) in the population (see Table 1). The NOVA reform course is no longer offered at 31 (30%) of the institutions after the 11 year
time period during which the NOVA program has been in existence with 39 such courses or 21% of the total originally funded having lapsed.

Table 1
Institutions Offering Reform Courses Created under the NASA/NOVA Program

<table>
<thead>
<tr>
<th>Institutions Offering NOVA-Like Courses not Developed Under NOVA Program but Influenced by NOVA Campus Activity (Number of Courses)</th>
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</thead>
<tbody>
<tr>
<td>Institutions</td>
</tr>
<tr>
<td>Reform courses still offered</td>
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<tr>
<td>Reform courses no longer offered</td>
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<td>Total</td>
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In addition to the reform courses created as a result of the NOVA professional development program, additional courses (n = 118) were created at institutions as a direct result of the impact made by the original reform process on campus. Such courses had not received NASA/NOVA sub-grants. These have been referred to as NOVA-like courses (or NOVA course clones) with some developed in the same science department and others in other science departments (see Figure 1). NOVA-like courses represent an impact 64% greater than the original 185 courses developed in the professional development program over an 11 year time period. Forty nine institutions developed at least one NOVA-like course. Many developed more than one of these courses (see Table 1).

Further discussion of NSEUS findings is available in:


Figure 1: Reform courses at study population of higher education institutions

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