

Nebraska Information Technology Commission

Project Proposal Form

Funding Requests for Information Technology Projects

FY2009-2011 Biennial Budget

IMPORTANT NOTE: Starting with FY2009-2011 Biennial Budget requests, project proposals should only be submitted by entering the information into the Nebraska Budget Request and Reporting System (NBRRS). The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS.

ALSO NOTE that for each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.

Project Title	NROC Agency License
Agency/Entity	Distance Education Council

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Notes about this form:

1. **USE.** The Nebraska Information Technology Commission (“NITC”) is required by statute to “make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel...” Neb. Rev. Stat. §86-516(8) (as amended by Laws 2008, LB 823). “Governmental entities, state agencies, and political subdivisions shall submit all projects which use any combination of general funds, federal funds, or cash funds for information technology purposes to the process established by sections 86-512 to 86-524. The commission may adopt policies that establish the format and minimum requirements for project submissions.” Neb. Rev. Stat. §86-516(5) (as amended by Laws 2008, LB 823). In order to perform this review, the NITC and DAS Budget Division require agencies/entities to complete this form when requesting funding for technology projects.
2. **WHICH TECHNOLOGY BUDGET REQUESTS REQUIRE A PROJECT PROPOSAL FORM?** See the document entitled NITC 1-202 “Process for Reviewing Requests for Funding from Legislature” available at <http://nitc.ne.gov/standards/>. Attachment A to that document establishes the minimum requirements for project submission.
3. **COMPLETING THE FORM IN THE NEBRASKA BUDGET REQUEST AND REPORTING SYSTEM (NBRRS).** Starting with FY2009-2011 Biennial Budget requests, project proposals should only be submitted by entering the information into the NBRRS. The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the “IT Project Proposal” section. The tabs in the “IT Project Proposal” section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. **ALSO NOTE** that for each “IT Project Proposal” created in the NBRRS, the submitting agency must prepare an “IT Issue” in the NBRRS to request funding for the project.
4. **QUESTIONS.** Contact the Office of the CIO/NITC at (402) 471-7984 or rick.becker@nitc.ne.gov

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Section 1: General Information

Project Title	National Repository of Online Courses (NROC) Agency License - Purchase	
Agency (or entity)	Distance Education Council	

Contact Information for this Project:

Name	Gordon Roethemeyer	
Address	Educational Service Unit #10	
City, State, Zip	Kearney, NE 68845	
Telephone	308-237-5927 ext.294	
E-mail Address	groethem@nebdec.org	

Section 2: Executive Summary

Provide a one or two paragraph summary of the proposed project. This summary will be used in other externally distributed documents and should therefore clearly and succinctly describe the project and the information technology required.

This project will procure statewide K-12 licensing of the Monterey’s Institute for Technology and Education’s- National Repository of Online Courses (NROC) for 2 years. The license, costing \$50,000, will include full use of the NROC Course Library and the content repository known as Flora (unlicensed version is known as Hippocampus). The repository will be used by K-12 educational entities to offer Advanced Placement and other courses provided in the NROC Course Library and build new online courses that incorporate interactive Flash content and other content from Flora, the content library. With the purchase of an NROC license Nebraska will get its own branded Hippocampus containing the Flora content repository for exclusive use by all K-12 Nebraska schools. The Agency licensing agreement that we will hold with the Monterey Institute for Technology and Education will allow us to distribute the NROC content on up to 5 servers statewide.

Section 3: Goals, Objectives, and Projected Outcomes (15 Points)

1. Describe the project, including:
 - Specific goals and objectives;
 - Expected beneficiaries of the project; and
 - Expected outcomes.

The goals and objectives of this project are:

- GOAL: To license the National Repository of Online Content (NROC) for K-12 use statewide.
 - OBJECTIVE: Users will be able to use interactive content from Nebraska’s branded Hippocampus in courses they create.
 - OBJECTIVE: Users will be able to link students to interactive content in Nebraska’s branded Hippocampus to supplement and enhance instruction in synchronous or face-to-face courses.

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- Users will be able to use pre-created online courses found in the NROC Course Library, alter them as they wish and deploy them through the Learning Management System of their choice.
-
- GOAL: To offer Advanced Placement (AP) courses to K-12 students across the state.
 - OBJECTIVE: The Nebraska Distance Education Executive Director and Advisory Committee will work with the Nebraska Independent Study High School and other entities to see that more AP level courses are available to Nebraska students.

This project is designed to provide more equitability of educational opportunities for all Nebraska school children. For example, students in rural districts will be able to take classes that were once only available in urban school districts. All students will see increased opportunities to take advanced placement courses.

2. Describe the measurement and assessment methods that will verify that the project outcomes have been achieved.

The outcomes of this project will be assessed by determining if the following measurable outcomes occur-

- A greater number of online courses having NROC content embedded are offered to students across the state.
- NROC content is installed and deployed on servers located in various locations throughout the state providing regional access to Nebraska's own Hippocampus.
- More AP level courses are offered online to students statewide.

3. Describe the project's relationship to your agency comprehensive information technology plan.

The Distance Education Council has following duties and responsibilities--

- To provide access to a lists of qualified distance education classes.
- Facilitate scheduling of distance education courses.
- Brokering of qualified distance education courses for purchase by educational entities.
- The assessment of distance education needs and evaluation of services.
- Compliance with technical standards set by the NITC.
- Establish a system for prioritizing courses.
- Schedule and prioritize access to Network Nebraska.
- Administration of Learning Management Systems.
- Coordinate with educational service units and postsecondary institutions to provide assistance for instructional design.

In assessing the needs of distance education in Nebraska the Distance Education Council determined that all efforts to increase the opportunities for more students to take high quality distance education classes that can be made, should be made. NROC's Course Library currently has 30 completely developed high quality courses that member organizations can deploy as is or modify to suit the needs of individual schools. Seventeen of those courses are AP courses. Additionally, the content repository known as Hippocampus provides a wealth of instructional materials that include interactive and self-paced lessons that can help students grasp difficult concepts.

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Section 4: Project Justification / Business Case (25 Points)

4. Provide the project justification in terms of tangible benefits (i.e. economic return on investment) and/or intangible benefits (e.g. additional services for customers).

Studies have shown that it takes over 800 hours to develop a course for online delivery and perhaps as much as 1000 hours if the developer needs training in the use of a Learning Management System, Online Design and if securing copyright permissions is necessary. Although it is difficult to establish what the exact cost that creating or adapting a course for online delivery will be, it is obvious that course templates and/or pre-designed courses that can be redesigned will reduce the cost significantly. NROC content are Open Education Resources that the Monterey Institute for Technology and Education (MITE) makes available at no cost via public websites like Hippocampus.org. "The content at these sites is provided for individuals only. Institutions (e.g., schools, agencies) can gain access to NROC content by becoming members of the NROC Network, a community of leading academic organizations. Membership fees from the NROC Network are used to support OER websites and provide access to quality educational content for everyone."

For a cost of less than 8¢ per year per student for all K-12 students in Nebraska this project will make all of the NROC content available to ALL K-12 students in Nebraska school whether or not the attend public, private or parochial, schools.

5. Describe other solutions that were evaluated, including their strengths and weaknesses, and why they were rejected. Explain the implications of doing nothing and why this option is not acceptable.

Interest in NROC grew after Omaha Public Schools representatives shared information on their efforts to use NROC content to help them design credit recovery courses. Many Nebraska schools have used systems such as NovaNet, Plato, or other online course providers for alternative education and/or credit recovery. Omaha Public Schools became interested in NROC as a possible alternative approach to creating their own courses and reducing cost. Other online course repositories such as Merlot were discuss but were rejected for various reasons including: costs, level of focus, or because they were proprietary solutions. After OPS did a pilot project during the 07-08 school year with several Nebraska schools, the Distance Education Council was convinced that NROC was the right solution for fostering the growth of online courses and supplementing face-to-face instruction. A strength of NROC is that it is an Open Education Resource that can be unpacked and deployed through any Learning/Content Management System.

6. If the project is the result of a state or federal mandate, please specify the mandate being addressed.

The Distance Education Council received a mandate through LB 1208 legislation to assess "distance education needs", and oversee the "administration of Learning Management Systems." This project will respond to both of those directives.

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Section 5: Technical Impact (20 Points)

7. Describe how the project enhances, changes or replaces present technology systems, or implements a new technology system. Describe the technical elements of the project, including hardware, software, and communications requirements. Describe the strengths and weaknesses of the proposed solution.

This project will enhance and increase the use of Learning Management Systems by schools statewide as a method for delivering online courses and supplementing synchronous distance learning instruction and traditional face-to-face instruction. Involvement by the Nebraska Independent Study High School will lead to an increased in the number AP courses available to high school students. There are primarily three LMS/CMS solutions in use by Nebraska K-12 Schools, they include: Angel, Blackboard and Moodle. NROC content and courses can be imported and deployed by each of these systems.

Here are technical specifications as provided by the Monterey Institute for Technology and Education-

"Deploying the NROC Library on your Institution's servers requires a Course Management System and a Web Server OR a Course Management System that contains a Content Management System. Course Multimedia content is installed on your Web Server or Content Management System. Course instructions, assignments, activities and assessments are installed to your Course Management System.

Installing the entire NROC Library requires up to 8 gigabytes of storage space for multimedia content on your Web Server or Content Management System and at least 250 megabytes of storage space for course content on your Course Management System. Actual requirements are based on number of courses installed.

The Organization does not endorse any specific CMS but does support the NROC library in Blackboard version 6.3, eCollege and WebCT version 4.1.

** Using the NROC library in a CMS environment other than Blackboard, eCollege, or WebCT requires that courses be reassembled for the individual course assignments, activities, and assessments. If Member chooses to assemble the courses themselves in their own CMS, all necessary files will be provided.*

EXHIBIT D - INSTALLATION AND TECHNICAL SUPPORT

Each Member may specify two individuals who shall be the point of contact for all technical issues.

Installation and technical support is available via email (techsupport@montereyinstitute.org) or through our Network community website (www.nrocnetwork.org) to each Member within the first 120 days of the term of the Agreement. Any Technical support e-mail that Member sends to the above email address will be responded to by the Organization within 24 hours. If deemed necessary, three hours of free telephone support will be available between the hours of 9:00 a.m. and 5:00 p.m. Central Time Monday through Friday (excluding legal holidays). Additional hours of support are available at our standard technical support rate; provided, however, neither the Organization will be required to provide nor will Member be obligated to pay for any such additional hours of support unless such support and all of Organization's fees for such support are documented in a written amendment to this Agreement that has been executed by authorized officials of both parties.

For System or Consortium agreements, installation and customer support is provided for each institution within the system or consortium hosting NROC on their servers and CMS applications.

In order to provide installation and technical support, each Member may be required to provide a login to their CMS environment that will allow the Organization's staff to access any technical issues they may encounter.

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For this project OPS will continue to host NROC on a server in their district. Others that have expressed an interest in being host sites include ESU #3, ESU #10 and ESU #13. The plan presented to the Distance Education Council provided that the 5 ESUs serving the largest number of 9-12 students would have the first opportunity to host NROC this would include the 4 already mentioned plus ESU #18. Myelearning.org of Nebraska has offered to host, unpack and deploy content for the approximately 150 schools and ESUs that it serves. The University of Nebraska Independent Study High School wishes to partner with the Distance Education Council and Nebraska ESUs by sharing in the cost of an Agency license for the right to place NROC content on its servers. The Monterey Institute for Technology and Education has approved ISHS's participation but suggested that a separate licensing arrangement would be better so that the 5 licenses provided through the Agency membership could be used regionally by ESUs serving K-12 districts. This arrangement would also allow ISHS to have their own branded Hippocampus.

8. Address the following issues with respect to the proposed technology:
- Describe the reliability, security and scalability (future needs for growth or adaptation) of the technology.
 - Address conformity with applicable NITC technical standards and guidelines (available at <http://nitc.ne.gov/standards/>) and generally accepted industry standards.
 - Address the compatibility with existing institutional and/or statewide infrastructure.

The following are the specifications supplied by the Monterey Institute for Technology and Education related to reliability and security issues-

NROC Course Library Server Requirements

Web Server

The NROC Library courses can be delivered using a standard HTTP web server like Internet Information Server with no special port or firewall requirements. Additional hosting requirements will be driven by the selection of a course management system and its particular deployment requirements. As a practical matter, because of the security models used within browsers and issues involved in cross-domain communication, it is generally helpful for the learning management system and the courseware to be hosted on the same machine, or at least from within the same domain.

Storage Requirements

Course storage requirements are approximately 8 Gigabytes for all the courses in the NROC library. Stage requirements for individual courses are shown in the table below.

Requirements per course

US History Semester 1	655
US History Semester 2	640
American Government	375
Introductory Physics I	245
Introductory Physics II	150
General Physics I	150
General Physics II	85
Environmental Science	675
Introductory Calculus I	220
Introductory Calculus II	110

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General Calculus I	265
General Calculus II	210
AP History Semester 1	655
AP History Semester 2	640
AP Government	370
AP Physics B Semester 1	250
AP Physics B Semester 2	150
AP Physics C Semester 1	140
AP Physics C Semester 2	85
AP Environmental Science	670
AP Calculus AB Semester 1	220
AP Calculus AB Semester 2	110
AP Calculus BC Semester 1	260
AP Calculus BC Semester 2	200
College Prep Physics Semester 1	160
College Prep Physics Semester 2	225
Algebra 1A	200
Algebra 1B	165
	8280

Section 6: Preliminary Plan for Implementation (10 Points)

- Describe the preliminary plans for implementing the project. Identify project sponsor(s) and examine stakeholder acceptance. Describe the project team, including their roles, responsibilities, and experience.

A pilot project led by Omaha Public Schools provided the perfect segue into the pursuit of statewide licensing and use of NROC. OPS's position as a charter member of the NROC Community has provided the impetus that generated statewide interest and resulted a majority of the ESU administrators voting in favor of the DEC committing \$30,000 toward the purchase of an NROC Agency license with the remaining \$20,000 being split between the ESUs that wish to participate. The cost to each ESU will be based on the number of 9-12 public school students they serve. Additionally, the UNL Independent Study High School, while being a partner in the Agency membership, will enter into a separate contract arrangement with NROC for the right to host content on their own servers.

In addition to OPS's leadership, ESU #13 has championed the deployment of NROC content through Moodle. Craig Hicks, Eric Kemsley and B.J. Peters have had their own conversation with Terri Rowenhorst of NROC to learn all they could about unpacking NROC content in Moodle. Terri put them in contact with users in the postsecondary community in Oregon. Presently, ESU #13 is awaiting a set of NROC Installation CDs so that they can install the content and begin to plan training session for teachers in their areas.

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The Distance Education Council Advisory Committee will have a joint meeting and sharing session with TAG on September 8, 2008 to demonstrate the use of NROC and discuss its use as a tool to support instruction. Other dates in October and March have been reserved for possible social authoring/NROC workshops with TAG. In January 2009 the Advisory Committee will have joint meeting and sharing session with the I-MAT group.

10. List the major milestones and/or deliverables and provide a timeline for completing each.

Summer 2008

- Purchase NROC Agency license, provide logo and tagline for Nebraska's branded Hippocampus.
- NROC Installation CDs provided to sites hosting server. Begin testing and debugging in consultation with NROC Technical Support.
- Conduct awareness sessions finalize professional development plans for the fall.

Fall 2008

- Conduct awareness/sharing session the TAG.
- Provide support to ESUs wishing to provide NROC workshops.
- Meet with UNL ISHS to discuss the deployment of AP courses.
- Meet with UNL Extended Education and Outreach Program team about adding an NROC training module to the "Instructional Design for Teaching via eLearning" course.

Winter 2008-2009

- Conduct awareness/sharing session the I-MAT.
- Share news of NROC use and new course development efforts.
- Plan spring and summer workshops.

11. Describe the training and staff development requirements.

In addition to staff development training that will be coordinated by the Distance Education Council Advisory Committee the NROC Community website includes free access to monthly webinars and a forum for collaborative discussions, problem solving, resource sharing, content development and more. NROC also hosts an annual conference on social authoring and content swapping.

12. Describe the ongoing support requirements.

NROC makes content updates available on a semi-annual basis through downloads from Organization's website, via CD-ROM, or through the NROC Network. Technical support is available from NROC at a cost of \$150.00 per hour. For year one of this project \$1500.00 has been reserved for technical support as needed.

Section 7: Risk Assessment (10 Points)

13. Describe possible barriers and risks related to the project and the relative importance of each.

The challenges involved in deploying NROC lay mostly in the proper unpacking and management of the content and courses in various LMS applications. The groups that have been gearing up to host NROC have been given information on the server requirements and will have access to NROC technical support during the setup stages. Following an effective strategy for unpacking NROC Course Library must be given carefully consideration so that updating can be done quickly and efficiently. The NROC Community discussion forums will be a valuable knowledge base from which to draw as host sites install the NROC content.

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14. Identify strategies which have been developed to minimize risks.

Risks will be minimized by drawing on the expertise of those that have gone before, i.e. OPS and members of the NROC Community. For this project \$1500.00 of the DEC budget is being ear tagged for up to 10 hours of NROC Technical Support during year one of this project.

Section 8: Financial Analysis and Budget (20 Points)

15. Financial Information

	Request for FY2007- 08(Ramp Up)	Request for FY2008- 09 (Year 1)	Request for FY2009- 10 (Year 1)	FY2011- 12 (Year3)	Future	Total
1. Personnel Costs						\$-
2.1 Membership Licence for 2 years	\$50,000					\$-
2.2 Programming						\$-
2.3 Project Management						\$-
2.4 Other (Tech. Support)	\$1500.00	\$				\$-
3. Supplies and Materials						\$-
4. Telecommunications						\$-
5. Training	\$	\$5,000	\$5,000	\$		\$
6. Travel						\$-
7. Other Operating Costs (maintenance)	\$	\$	\$	\$		\$
8.1 Hardware	\$	\$				\$-
8.2 Software	\$	\$	\$-	\$-		\$-
8.3 Network						\$-
8.4 Other						\$-
TOTAL COSTS	\$51,500.00	\$5,000	\$5,000	\$-	\$-	\$61,500.00
General Funds	\$31,500	\$5,000	\$5,000	\$-	\$-	\$41,500.00
Cash Funds						\$-
Federal Funds						\$-
Revolving Funds						\$-
Other Funds	\$20,000					\$20,000
TOTAL FUNDS	\$51,500.00	\$5,000	\$8,000	\$-	\$-	\$61,500.00