




NOMINATION COVER SHEET

2011 Virginia Outstanding Faculty Awards

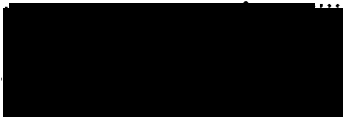
1. NAME	
Full (Legal): Kenneth Andrew Rasmussen	Preferred First Name: Ken
2. INSTITUTIONAL INFORMATION	3. PROFESSIONAL INFORMATION
Institution: Northern Virginia Community College	Academic Discipline: Geology
Rank/Position Title: Professor of Geology	Specialization/Field: Sedimentology
Year Rank/Title Attained: 1999	Type of Terminal Degree: Ph.D.
Years at Institution: 18	Year Awarded: 1989
Campus Email Address: krasmussen@nvcc.edu	Awarding Institution: Univ. of North Carolina at Chapel Hill
Campus Phone: 703-323-2139	
Campus Mailing Address: Mathematics, Science, and Engineering 8333 Little River Turnpike Annandale, VA 22003	
Campus Communications Contact: -Name: Jessica Baxter -E-mail: jbaxter@nvcc.edu	

Please check only one box:

- RESEARCH/DOCTORAL INSTITUTION NOMINEE:
- MASTERS/COMPREHENSIVE INSTITUTION NOMINEE:
- BACCALAUREATE INSTITUTION NOMINEE:
- TWO-YEAR INSTITUTION NOMINEE:
- TEACHING WITH TECHNOLOGY NOMINEE:
- RISING STAR NOMINEE:

Table of Contents

Cover Sheet	1
Mission Statement	2
Summary of Accomplishments.....	3
Personal Statement	9
Abbreviated Curriculum Vitae	11
Letters of Support (Excerpted).....	13
Additional Documentation	16

Signature (President or Chief Academic Officer): 

Printed Name: John T. Dever

E-mail address: jdever@nvcc.edu Telephone: (703) 323-3195

MISSION STATEMENT

NORTHERN VIRGINIA COMMUNITY COLLEGE

The mission of Northern Virginia Community College is to respond to the educational needs of its dynamic and diverse constituencies through an array of comprehensive programs and services that facilitate learning and workforce development in an environment of open access and through lifelong educational opportunities.

SUMMARY OF ACCOMPLISHMENTS

TEACHING

Dr. Rasmussen began teaching at Northern Virginia Community College (NOVA) in the spring of 1992, when he was finishing a post-doctoral research fellowship at the Smithsonian Institution's Natural History Museum (Department of Paleobiology). Thoroughly experienced in geological and oceanographic fieldwork – having led several international research teams on shipboard expeditions to the Caribbean basin – Dr. Rasmussen promptly began taking students outdoors in a variety of interdisciplinary field courses. Since 1994, he has created and taught eight new field courses at NOVA. In each of these, his students have become immersed (in some cases, literally) in the study of nature *in situ*. Dr. Rasmussen's guiding philosophy is that in addition to studying their textbooks, students must study nature itself, out "in the field." In his unprecedented Hawaiian geology and oceanography course, students and instructor capped the classroom segment with a ten-day field excursion to the volcanoes, shorelines, and reefs of Hawaii. In his course "Natural History and Environmental Processes of the Chesapeake Bay," students spend a day with their instructor on a Chesapeake Bay crabbing vessel, collecting and analyzing original and important field data. State-of-the-art oceanographic equipment, purchased with a VCCS grant that Dr. Rasmussen obtained, enables students to gain experience as actual researchers. His field courses have revolutionized NOVA's expanding Department of Geology, in which he serves as Senior Geologist and mentor to other faculty and students. As a teacher, he is known for his breadth of knowledge, which is enriched by his experience as a researcher in the field. Beyond NOVA, his teaching and mentoring has in recent years extended to George Washington University's Department of Geology, where he is also a valued teacher.

Because his research at the Smithsonian Institution continued after he joined the faculty at NOVA, Dr. Rasmussen has involved several undergraduates in his field and laboratory work. He supervised four NOVA students as interns in paleoclimate research at the Smithsonian Institution via his "Research Experiences for Undergraduates" grants from the National Science Foundation (NSF), and mentored two high school seniors from the Thomas Jefferson High School for Science and Technology at these labs, teaching them not only what scientists do, but how they do it, and how they (as future scientists) may decide to do it in their future. Several newspaper articles¹ have given coverage to Dr. Rasmussen's students conducting actual scientific investigations.

Dr. Rasmussen's personal experiences in his own field and lab work have enabled him to stimulate the interest of both young and old. He has given a kindergarten-level presentation called "Rocks and Fossils" and a presentation to 4th-graders called "Earth and Deep Time" at Alexandria's MacArthur Elementary School (2007). He has conducted a "Rocks, Fossils, and Earth Stewardship" class at Alexandria Country Day School (2006) and an "Oceanographic Research Techniques: Underwater Habitats and Submersibles" class for James Madison High School in Vienna (2001). In February 2008, he taught a geology short-course entitled "Geology: The Long and the Short of It" to mostly senior citizen students at the Lifetime Learning Institute of Northern Virginia. Dr. Rasmussen believes that enthusiastic teaching, grounded in clear and accurate delivery, can hold the attention of young and old alike, and he has demonstrated this repeatedly.

¹ "Two NOVA Geology Students Get Smithsonian Internships," *The Centreville Times*, July 16, 1998; "NOVA Teacher Heads to Asia for Summer Break," *The Springfield Times Community Newspaper*, February 27, 1997; and "NOVA Professor Conducts Research on Kyrgyzstan Lake," *The Community College Times*, October 21, 1997.

Dr. Rasmussen's dual goals at NOVA have been to deliver a first-class geoscience education to *all* community college students and conduct his own international research. He has discovered that his teaching is always enlivened by experiences and anecdotes of personal research. In his attempt to reach the most promising science students, Dr. Rasmussen became a longtime member of NOVA's Honors Core Committee and helped formulate the interdisciplinary Honors "Capstone" course. He himself developed four new Honors Option courses in the core sciences of Physical Geology, Historical Geology, and Oceanography I and II. In these courses, advanced students are taught how to discern the difference between scientific fact and theory, to consider the relative validity of different information sources, to conduct and organize their own scholarly research, and to report on that research in a forum similar to that of a professional scientific conference. Several former students have reported that their Honors research presentation was a great preparation for the rigors of graduate school.

Dr. Rasmussen has been honored many times for the skill with which he finds ways to teach the broad range of students at an institution like NOVA. Students consider him "tough but fair" and "willing to go any length to help us understand the material." His examinations always include essay-writing designed to challenge even the most gifted NOVA students. In his opinion, this mode of expression better prepares all students for the realities of professional and personal life beyond the lecture hall. He is a winner of the NVCC Educational Foundation "Faculty of the Year Award" for excellence in teaching, and recently won the "John H. Moss Award for Excellence in College Teaching" from the National Association of Geoscience Teachers. Former students and faculty peers stated in their nomination of Dr. Rasmussen that his enthusiasm and knowledge were primary reasons for their support. He has the ability, patience, and professionalism necessary to reach all students at NOVA and to inspire them to succeed in challenging science classes. This letter from a former student emphasizes Dr. Rasmussen's ability to reach students of all calibers at the community college: *"As a professional archeologist with more than 30 years experience, I wanted to beef up my geological knowledge in advance of expanding my research. I took five courses from Dr. Rasmussen. Without reservation I found his courses to be the best that I have taken throughout my B.A., M.A. and Ph.D. academic work. Thanks to Dr. Rasmussen's courses, geology now plays a particularly central role in the modeling I use in archeological research designs and in the interpretation of all archeological sites I analyze."* Mike F. Johnson, Senior Archaeologist, Fairfax County.

Dr. Rasmussen believes that teaching fellow educators is a way of reaching the greatest number of students with the greatest positive effect on our community. To that end, he has created a summer semester "Topics in Mid-Atlantic Field Geology" hybrid course for 4 credits, specifically tailored to the needs of Virginia elementary, middle, and high school teachers. In a series of integrated day-long field excursions, which are preceded by lecture and lab, geological outcrops across the Mid-Atlantic region (shoreline to mountain ranges) are used as natural laboratories in which to demonstrate earth science concepts through hands-on involvement. The teachers gather first-hand insights and collect rocks, fossils, and geologic structures for their own classrooms. In this unique course, Dr. Rasmussen's pupils enhance their own knowledge and understanding of geology, and can thereby improve the quality with which they instruct students in our public schools.

DISCOVERY

The effectiveness of Dr. Rasmussen's teaching is enhanced by his talent and experience as a researcher in the fields of geology, oceanography, and lake-science (limnology). His having actually "been there" – whether it be on an ex-Soviet vessel in Lake Issyk-Kul, working underwater out of an undersea habitat in St. Croix, or conducting analyses in the laboratories of the Smithsonian Institution – improves his students' understanding of the entire research process. Some students report that Dr.

Rasmussen's first-hand scientific knowledge and research experience is what sets him apart as a teacher, and what inspired them to enter geosciences graduate programs themselves.

For over fifteen years while at NOVA, Dr. Rasmussen was also a visiting researcher at the Smithsonian Institution's Department of Paleobiology. His field areas and expertise span the Bahamas, Belize, Hungary, Italy, and the former Soviet Central Asian Republic of Kyrgyzstan. His investigations and publications have involved tropical reefs and lagoons in the Caribbean, unusual reefs structures built by bacterial communities along the coast of Belize, and geologic records of ancient climate and sea-level change across the globe. In 1993, Dr. Rasmussen initiated an international program of research on Lake Issyk-Kul, Kyrgyzstan, beginning with a NSF-NATO Post-Doctoral Fellowship to teach and gather scientific contacts there. His nine-month stay, living and lecturing at the geological institute in the capital city Bishkek, represents one of the very first American scientific forays into this remote part of the former Soviet Union. Since then, Dr. Rasmussen has developed a well-funded multi-institution program of climate research on Lake Issyk-Kul (nearly \$200,000 in combined NSF and VCCS grants). His laboratory analyses at the Smithsonian Institution, and with colleagues at the University of Minnesota, sought to unravel the record of climate-history coded in the geologic features found in and around the lake. Dr. Rasmussen has served as chief or co-chief scientist on four separate NSF-sponsored research expeditions to Lake Issyk-Kul, some of which involved the first deep SCUBA investigations of this, the world's sixth deepest lake. Shipboard sediment coring, seismic profiling of the deep bottom features, and coastal mapping of exposed shoreline formations are serving to better define the ancient record of climate change across this little-known portion of Asia. While at NOVA, Dr. Rasmussen has authored or co-authored eight scientific articles, chapters, and reports (including a cover article in the journal *Geology*), and has also presented twenty published scientific abstracts at national and international research conferences. In connection with his research activities and travels, Dr. Rasmussen has given many scientific lectures while visiting various research institutions and universities in Hungary, Kyrgyzstan, and the U.S., including one at the Smithsonian Institution called "Geological and Paleoclimatic Studies of Lake Issyk-Kul, Kyrgyzstan," which the Kyrgyz ambassador to the United States attended. Rasmussen presently has one article in revision for *Geology*, which considers the unique coastal features called "microbialites" that he has mapped underwater, and around the emergent shores of Lake Issyk-Kul. His work has been cited in many books and journals on the topics of carbonate sedimentology, paleobiology and paleoecology, lake studies, and climate change.

The colleague most involved in the research on Lake Issyk-Kul states the following about Dr. Rasmussen: *"I have known Ken Rasmussen for about 26 years, since I was director of the Duke – University of North Carolina Oceanographic Consortium in the early 1990s. Over this period I have known many professors and students at several flagship academic and research institutions, and Ken stands out for his initiative and accomplishment. In 1995, I joined his Smithsonian/NOVA research team in a joint geological and paleoclimatic research project about Lake Issyk-Kul and its long historical record of Central Asian climate. Several scientific papers, reports, abstracts, undergraduate and graduate projects, and conference contributions have resulted to date. The lab methods Ken devised for study of bottom sediments and microbialites were productive and novel, and brought national and international research attention to NOVA. This is rare acclaim indeed for a college whose primary mission is teaching. What has impressed me most about Ken during our collaboration over the years has been his vision to conduct an ambitious field program of research on a remote lake in Central Asia, his ability to interact with ease, congeniality, and professionalism with members of a culture that is far removed from ours, and his demonstration that he can get the job done in the face of considerable challenge. I have personally and professionally benefitted substantially from this most enjoyable collaboration."* Dr. Thomas C. Johnson, Regents Professor of Geological Sciences, University of Minnesota

KNOWLEDGE INTEGRATION

Underpinning Dr. Rasmussen's research interests is the valuable geological "archive" that marine and lake sediments represent, and with which climate scientists may unravel ancient records of Earth's earlier climate – climate states that existed long before any potential human impact. Against that prehistoric record, Dr. Rasmussen's classroom lectures include description of 21st century global patterns of ocean-atmosphere climate imbalance – commonly known as "climate change." This is a subject matter that impacts the world which future generations will inherit. For Dr. Rasmussen, it is a compelling research interest as well, which deeply informs the discussions he can have with his students, regardless of their intended professional future. Present-day climate change provides an interdisciplinary opportunity to teach students of the global "commons" that our oceans and atmosphere represent, and the important intersection of science with our daily lives. Dr. Rasmussen regards a firm grounding in the geoscience perspective essential to any community member of the future. Such studies also enabled him to speak from first-hand knowledge as a guest panelist in the NOVA "Climate Change Symposium" in 2008.

Following his period of overseas research in the early 1990s, Dr. Rasmussen expanded his historical geology and oceanography courses to include lake studies, paleoclimate, and paleoceanography. He also taught two advanced NOVA students in a new supervised-study course entitled "Lacustrine Depositional Systems" in preparation for the students' work at the Smithsonian Institution and at Lake Issyk-Kul. With funding from NSF, the Virginia Community College System, and a Presidential Sabbatical, Dr. Rasmussen was able to supervise and mentor NOVA student interns at the Smithsonian Institution through the NSF "Research Experiences for Undergraduates" program.

Dr. Rasmussen believes that the best way to create scientifically learned citizens is to involve them in field excursions and with hands-on laboratory experiences. Integrating his scientific explorations on climate change into his class lectures and labs is a fundamental part of his teaching philosophy and activity. For the past six years, Dr. Rasmussen has run a two-day field course (GOL 299) to the Chesapeake Bay, integrating his knowledge of oceanography with his personal concern for our nation's largest estuary. In this course, students directly assess bay anatomy and health, both on the water and along the shore, collecting field data themselves under Dr. Rasmussen's guidance. Student observations made during the Chesapeake Bay field trips have enabled Dr. Rasmussen to create locally-relevant lab exercises in his Oceanography (GOL 111) course, which itself features a shipboard excursion. Dr. Rasmussen's affiliation with the Smithsonian's Natural History Museum has allowed him to enliven his laboratory courses with several new student-guided lab exercises that he has created for the display halls there. These integrate the Natural History Museum displays into the students' NOVA campus lab experiences.

It is satisfying to Dr. Rasmussen to know that several of his students have gone on to excel at various four-year undergraduate and graduate institutions. Former students have entered M.S. and Ph.D. programs in earth science-related fields; many are now public school science teachers themselves; and one lectures at the U.S. Military Academy at West Point. These former students report that by getting them out into the field, and so to extend their learning beyond the classroom, Dr. Rasmussen motivated them to follow his example as a scientist and inquisitive scholar. The following letter illustrates the effect that "field geology" experiences, which integrate and expand upon classroom lessons, have had on several of Dr. Rasmussen's students: *"Dr. Rasmussen's teaching is a significant part of why I chose to major in the geosciences, and why I now intend to pursue an academic career in the geosciences. His excellent job both confirmed my burgeoning interest in geology, and showed me the joy that can*

come from learning in the field. Dr. Rasmussen's enthusiasm for exploring field locations is contagious! He presents the material both thoroughly, and thoughtfully. The in-depth and interesting manner in which he does so is an excellent example of how to teach a college class. Overall, Dr. Rasmussen is one of the best professors I have ever taken a class with – not only in the geosciences – but in any subject.” Jay De Lanoy, former NOVA student, then George Mason University, and Columbia University Graduate Student.

SERVICE

Over the years, Dr. Rasmussen has been an active member of many committees in his division, to include:

- Division Advisory Committee (founding member) – 1997-present
- Honors Committee Member – 1993-1998
- Science Seminar Committee – 1993-2004
- Chair or member of several screening committees to hire new faculty/staff
- Human Resource Development Funds Committee – 1999.

In addition, his dedication to his discipline has prompted him to act as an advisor to geology majors, to consult with librarians over purchases of current publications in geology, to chair annual meetings of geology teachers at NOVA, and to participate in assessment of the effectiveness of geology courses. He has been intimately involved with the building of the geology department from two to three fulltime faculty members. Honors Option courses in the geosciences at NOVA were first offered by Dr. Rasmussen, and he has dramatically expanded the diversity of field courses offered at his home campus.

He has used his position on the faculty to give lectures to newly hired professors on writing grant proposals, to the campus community on his own geological research in the “Friday Science Seminar” series, and to the Lifetime Learning Institute of Northern Virginia on the basics of geoscience. The following is a letter from the organizer of the event, a former student of Dr. Rasmussen's: *“I consider Dr. Rasmussen as one of the most outstanding university lecturers I have ever met. I have listened to many, both as a student, and as a colleague at the universities where I have been employed (Iowa State University, Columbia University, London University). His standards are high, well beyond what I expected of a first year undergraduate community college level. I first encountered him when I took a couple of his field trips in 2007. I was immediately struck by his vast knowledge and enthusiasm. I wished to share my excitement with my friends at the Lifetime Learning Institute – a volunteer organization that organizes classes for seniors. Despite his busy schedule, Ken agreed to give two classes to us. He prepared an outstanding presentation, the course was enthusiastically received, and I append some of the subsequent comments made by our members: ‘Excellent visuals and lab; Handouts were perfect; Everything was interesting, the lectures and handouts – excellent; Best was the enthusiasm and knowledge of the instructor.’ Dr. Rasmussen made a special effort to come in on two Friday afternoons to present this course, and spent a great deal of time preparing the materials ahead of time. His knowledge, enthusiasm and willingness to teach as a volunteer, in addition to his college duties, are especially laudable.” Dr. Doris Balinsky, Ph.D., Lifetime Learning Institute of Northern Virginia*

Dr. Rasmussen is frequently asked to give lectures to public schools in Northern Virginia. Teachers there report that their students have rarely been as attentive or inquisitive as during Dr. Rasmussen's visits. He also created and twice ran a three-day workshop in the geosciences for the teachers themselves in the Alexandria Public School System, integrating a lecture

component with three field excursions designed to help the teachers invigorate their own lesson plans. Dr. Rasmussen has twice given lectures about Asian environment and science to diplomats at the U.S. Foreign Service Institute, where they prepare to serve the U.S. State Department at posts throughout Central Asia. Dr. Rasmussen is also an environmental contributor to the *Chesapeake Beach Newsletter*, published quarterly in the town where he resides. Twice-annual cruises on the Chesapeake Bay with NOVA students allow Dr. Rasmussen to explain real-time patterns in the health of the Chesapeake with his own classes' field observations.

Dr. Rasmussen's membership in professional societies has included the Geological Society of America (GSA), American Geophysical Union, Society for Sedimentary Geology, and International Society for Reef Studies. He serves as an ad hoc peer-reviewer for NSF's Paleoclimate Program, the National Geographic Society, and the American Petroleum Institute. He is an ad hoc research manuscript reviewer for the journals *Science*, *Sedimentary Research*, *GSA Bulletin*, *Geology*, and *Coral Reefs*. He has also aided publishers by reviewing geology textbooks, including the latest revision of the Historical Geology textbook used at the Annandale campus for many years.

PERSONAL STATEMENT

I love to teach earth science, which I've done at NOVA for the past eighteen years. Though I've been told by some students that "not all community college students want to grow up to become geologists," I do believe that all 21st century citizens need to appreciate how the Earth works, and their role in its future. Geoscience is a global subject full of unparalleled grandeur, endless cross-disciplinary linkages, and a depth of history spanning roughly 4.5 billion years – so, there's a lot to teach, and I enjoy the challenge. I've also had the great fortune to continue with my own geologic and oceanographic research interests while a professor at NOVA, largely through collaborations afforded through the Smithsonian Institution in Washington, DC. For me, there is no better way to nurture the fires of enthusiastic science teaching than to also nurture one's own science interests. Getting "into the field", as well into the lab with students, has always been energizing to me – it keeps the science fresh, and the teaching inspired, and it pays dividends in student development.

While a young kid in New Jersey, I always yearned for the two weeks each summer my family would spend along the Atlantic seashore (to us, simply "the shore"). I also grew up with an influential father who longed to be a high school educator, but who instead became a businessman, remaining somewhat the frustrated teacher for as long as I knew him. I suspect that those two formative conditions in my young life – the love of the shore, and the influence of Dad – had a significant impact on my decision to study the ocean, and ultimately to teach about it.

I've been involved in geological and oceanographic research of various sorts for nearly thirty years, but it was only upon becoming a college professor in 1992 that I truly understood the passion for teaching that I apparently share with my late father. Like many of us who teach college, I never received specific instruction in the various "arts" of teaching – of classroom management, of lecture preparation, or speaking style. I simply drew my instructions from watching my own best teachers, which include some outstanding role models, spanning all the way from 6th grade through dissertation advisors. These mentors demonstrated to me not only how to teach, but how to *inspire* – through their *passion* for the subject. When as a post-doctoral researcher I arrived at NOVA's door, I began to experience first-hand this "sharing with students" – and I found that I loved it. Despite years of wonderful experiences in research that I would not trade, I discovered that there is no greater thrill than to communicate with students about your science – to awaken an interest in discovery in someone who was previously uninterested. And *that* is what I strive to do at NOVA, across what is perhaps the most diverse community of students anywhere. Passion in the classroom – enthusiasm for the subject we are teaching – is *key* to motivating students. Getting them "into the field" is also critical, so I have designed a series of courses that do just that. I routinely incorporate first-hand research experiences and data I've collected – perspectives gleaned from around the world and in the oceans. To a great degree, my own recollection of research heightens my students' interests in earth science. The students report this consistently in their anonymous evaluations of my teaching. I am not surprised, because I believe that an informed and energized scientist, speaking from personal experience of discovery, makes the classroom come alive.

I benefitted from hands-on research opportunities early in my career, during summers as a lab assistant at the Woods Hole Oceanographic Institution. This was a critical part of my career development, and I try to extend the same exposure and mentoring I enjoyed to my own students. This has led to several NOVA students working with me at the Smithsonian Institution, and even one accompanying me to Lake Issyk-Kul. Student involvement in laboratory analyses

and field studies produces results. Many of my former students have moved on to fine undergraduate and graduate institutions, majoring in geosciences.

I believe that teaching earth science – what the Earth is made of and how it all works – has never been more important than today. I teach with vigor, because I believe that unless we learn our lessons well, we are in danger of making the Earth uninhabitable for future generations. What we do today in the classroom can go well beyond those walls – and our lifetime. As Henry B. Adams aptly put it, “teachers affect eternity – they can never tell where their influence stops.” So I focus on reaching the community at large about how the Earth works – including those who desire to be future science teachers themselves. What better way and place to affect eternity than by educating future public school teachers at a community college like NOVA? Several of my former students are now public school and college science teachers themselves. I am so gratified that they are, in turn, having a positive effect on the next generation. Through our teaching, they, and I, can indeed continue to “affect eternity.”

ABBREVIATED CURRICULUM VITAE

KENNETH ANDREW RASMUSSEN

EDUCATION

Ph.D.	1989	Marine Science	University of North Carolina at Chapel Hill
M.S.	1983	Geology	University of Rochester
B.S.	1981	Biology-Geology	University of Rochester

PROFESSIONAL POSITIONS

2006-	George Washington University – Professorial Lecturer in Geology
1992-	Northern Virginia Community College – Assistant to Professor of Geology
1992-06	Research Collaborator – Smithsonian Institution (NMNH)
1989-91	Post-Doctoral Fellow – Smithsonian Institution (NMNH)
1989	Research Associate and Lecturer – University of North Carolina (CH)
1983-89	Teaching / Research Assistant – University of North Carolina (CH)
1981, 82	Summer Research Assistant – Woods Hole Oceanographic Institution

SELECTED AWARDS AND HONORS

2009	John H. Moss Award for Excellence in College Teaching, National Association of Geoscience Teachers – Eastern Section
2007, 10	Nominee – NVCC Educational Foundation “Faculty of the Year” Award
2001-02	NOVA Presidential Sabbatical Award (Lake Issyk-Kul research)
1994-95	NVCC Educational Foundation “Faculty of the Year” Award
1994	NSF/NATO Post-Doctoral Fellowship, Kyrgyzstan (Lake Issyk-Kul research)
1992	Cecil Shuler Open Moment Scholarship

MAJOR COURSES TAUGHT

Physical Geology and Historical Geology (GOL 105 & 106, plus Honors Option sections)
Oceanography I and II (GOL 111 & 112, plus Honors Option sections)
Field Studies in Geology (GOL 135, sections 62N, 63N, 65N, 66N, & 68N)
Mid-Atlantic Field Geology (GOL 295; Hawaiian Geology and Oceanography GOL 295)
Topics in Chesapeake Bay Environmental Processes (GOL 299)

SELECTED PUBLICATIONS – Journals, Books, Reports

- Ferronsky, V.I., *et al.*, 2003, “Variations in the Hydrological Regime of Kara-Bogaz-Gol Gulf, Lake Issyk-Kul, and the Aral Sea.” *Water Resources* 30: 252-259.
- Rasmussen, K.A., *et al.*, 2001, “A 8,000 Year Multi-proxy Record from Lake Issyk-Kul, Kyrgyzstan,” *PAGES* 9(2): 5-6.
- Ricketts, R.D., *et al.*, 2001, “The Holocene Paleolimnology of Lake Issyk-Kul, Kyrgyzstan: Trace Element and Stable Isotope Composition of Ostracodes,” *Palaeo*³ 176: 207-227.
- Johnson, T.J., *et al.*, 1999, “Research of Natural Processes Taking Place in Issyk-Kul Lake and Issyk-Kul Hollow by Means of Isotopic Methods,” *Science and New Technologies*, Special issue No. 1, Bishkek, p. 86-91.
- Boss, S.K. and Rasmussen, K.A., 1995, “Misuse of Fischer Plots as Sea-Level Curves,” *Geology* 23: 221-224; and Reply, *Geology* 23: 1049-1050.
- Rasmussen, K.A., *et al.*, 1993, “Modern Stromatolite Reefs Fringing a Brackish Coastline, Chetumal Bay, Belize,” *Geology* 21(5): 199-202. (Cover article.)
- Rasmussen, K.A., and Frankenberg, E.W., 1991, “Intertidal Bioerosion by the Chiton *Acanthopleura Granulata*; San Salvador, Bahamas,” *Bulletin of Marine Science* 47: 680-695.

- Rasmussen, K.A., *et al.*, 1990, "Stable Isotope Record of Organic Carbon from an Evolving Carbonate Banktop, Bight of Abaco, Bahamas," *Geology* 18: 790-794.
- Rasmussen, K.A., and Neumann, A.C., 1988, "Holocene Overprints of Pleistocene Paleokarst: Bight of Abaco, Bahamas," James, N.P., and Choquette, P.W., eds., *Paleokarst*, Springer-Verlag, New York, p. 132-148.
- Rasmussen, K.A. and Brett, C.E. 1985, "Taphonomy of Holocene Cryptic Biotas from St. Croix, Virgin Islands: Information Loss and Preservation Biases," *Geology* 13(7): 551-553. (Cover article.)

SELECTED PUBLICATIONS – Abstracts

- Rasmussen, K.A., *et al.*, 2003, "A 13,500 yr Multi-Proxy Sedimentary Record from Lake Issyk-Kul, Kyrgyzstan." *3rd Internat. Limnogeol. Congress*, 2003, Tucson, AZ, p. 225.
- Ricketts, R.D. & Rasmussen, K.A., 2003, "Evidence for the Little Ice Age and Medieval Warm Period in the Issyk-Kul basin." *3rd Int. Limnogeol. Congr.*, 2003, Tucson, AZ, p. 229.
- Ricketts, R.D. & Rasmussen, K.A., 2001, Millennial Record of Climate Change from Lake Issyk-Kul, Kyrgyzstan." *Amer. Geophys. Union Mtg*, San Francisco, CA, Dec., Vol. 82.
- Rasmussen, K.A., *et al.*, 2000, "An 11,000-year History of Central Asian Paleoclimate Change Recorded in Deep Sediments of Lake Issyk-Kul, Kyrgyzstan," *American Geophysical Union Fall Meeting*, San Francisco, CA, Vol. 81, p. F657.

SELECTED GRANTS

- 2005 VCCS Professional Development Grant for "Development of a Hybrid Field Course: The Natural History and Environmental Processes of Chesapeake Bay."
- 2004 VCCS Professional Development Grant for "Development of a Hybrid Field Course for High School Geoscience Educators: The Geology of the Mid-Atlantic."
- 2003 NVCC Educational Foundation Grant for "Acquisition of a Hydrolab Multi-Parameter Water Quality Instrument for Oceanography/Limnology Field Use."
- 2000 VCCS Professional Development Grant for "The History of Central Asian Paleoclimate Change Recorded in Deep Sediments of Lake Issyk-Kul."
- 1999 National Science Foundation Earth Systems History Grant for "The Late Quaternary Paleoclimatic Archives of Lake Issyk-Kul, Kyrgyzstan."
- 1996 National Science Foundation Earth Systems History Grant for "The Quaternary Record of Lake-level Oscillation and Climate Change: Issyk-Kul, Kyrgyzstan."

SELECTED SERVICE

- Division Advisory Committee (founding member) – 1997-present.
- Honors Committee Member – 1993-1998; Science Seminar Committee – 1993-2004.
- NOVA geology major advisor – 1993-present.
- Library liaison for geology – 1996-present.
- Geology Assessment Committee (include. Chair) – 1997-2005.
- Geology Cluster Chair – 2006-present.
- Chair or member of screening committees to hire new faculty/staff.
- 3-day workshop in geoscience for Alexandria Public School teachers – 2007, 08.
- New faculty orientation series lecturer: "Achieving Success in Grant-Writing" – 2006, 07.
- 3-time "Friday Science Seminar" lecturer on geological/paleoclimate research.
- Lifetime Learning Institute (LLI) geology lecture series – 2008.
- Frequent guest lecturer at local elementary, middle, and high schools.
- Panelist NOVA "Climate Change Symposium" – 2008.
- Ad-hoc grant-reviewer for NSF Paleoclimate Program.
- Ad-hoc manuscript reviewer of five science journals and several geoscience texts.

LETTERS OF SUPPORT (EXCERPTED)

Ken has been my peer and mentor at NOVA since I arrived here five years ago. During that time, he has performed in an exemplary role as educator, contributing faculty member, and innovator. Consistently lauded by his students for his patience, organization, enthusiasm, dedication, and commitment to high standards, Ken has a reputation for quality geology and oceanography education. On ratemyprofessors.com, students have written comments like: "This amazing professor could be at any Ivy League but because he loves to teach, he's stayed at NOVA for 16 years... He'll support you like no other." Out of the classroom, Ken has advanced oceanographic and limnological understanding through his research and mentoring with Honors students. Ken is continually innovating in his teaching, both in improving his standards and in developing new courses. I've been delighted at how inclusive he has been, and I have benefitted many times from his wisdom and experience. It is a gift to have a colleague who has such ability and a willingness to share it.

Callan Bentley, Assistant Professor of Geology, NOVA

Dr. Rasmussen has developed a model geology program at NOVA, is very personable and well liked by colleagues and students, and has received nothing less than "excellent" ratings since I have been his supervisor. He is outstanding in the classroom, chosen or nominated for the NVCC "Faculty of the Year Award" several times, and known for his ability to attract students.

Dr. Craig M. Jensen, Assistant Dean for Physical Sciences, NOVA

Dr. Rasmussen has delivered a first-class geoscience education to our students. He is well known for making the subject interesting and understandable for students of all levels, and he has produced groups of followers who continue their education and profession in geoscience. The Greater Northern Virginia community has also discovered Dr. Rasmussen's classes. His students include senior citizens, retirees, or career-changing professionals. Ken possesses a rare combination of high intellectual capacity, incomparable work ethic, vast knowledge and experience, personal humility, and hands-on attitude. Students report that they deeply feel his commitment to them. He is equally admired and appreciated by his colleagues.

Dr. Abe Eftekhari, Dean, Division of Mathematics, Sciences and Engineering, NOVA

Dr. Rasmussen has a reputation for high quality instruction. In addition, he has been an active scientist. This combination of research and instruction is especially rare at a community college. It is not surprising that Dr. Rasmussen has been a three-time nominee and one-time winner of the NOVA Educational Foundation "Faculty of the Year Award." Dr. Rasmussen's list of accomplishments is impressive and accentuates his dedication to his profession, and his dedication to transferring his knowledge to others.

Dr. Barbara Saperstone, Provost, Annandale Campus, NOVA

Dr. Kenneth Rasmussen has been part of teaching staff for over four years, and has played a major role in establishing a high level of student learning at George Washington University. He is an articulate and dedicated teacher whose sincere concern for his students' welfare results in his having a positive effect on learners of all ability levels. Evaluations from students consistently reflect the exemplary nature of his teaching and almost unanimously underscore the high degree of esteem they hold for him. Students consistently remark that they appreciate the considerable effort he invests to prepare each class for learning and how he continually fosters a learning environment that is both demanding and enjoyable. Perhaps more importantly, however, students consistently remark about the respect they hold for Ken and how they appreciate the obvious respect he maintains for them as individuals.

Dr. Richard Tollo, Chairman, Department of Geology, The George Washington University

Dr. Ken Rasmussen profoundly impacted my professional life. In 1996, after completing active duty military service, I returned to NVCC to resume an academic endeavor from which I had departed three years prior. This time, however, I was far better equipped with experience, discipline, and motivation. Yet, I was still short one key ingredient: direction. Dr. Rasmussen provided the missing ingredient. It was in his Geology 105 course that I transformed into a legitimate student. I enrolled in each of Ken's courses and field seminars. Ken also arranged a stipend internship for me and another NOVA student at the Smithsonian Institution, where we assisted his paleoclimatic research. It was an extraordinarily enriching academic experience, commensurate of graduate student level. Before leaving NVCC, I received an award for academic achievement in the geosciences, recommended by Ken. It was especially significant to me for it was the first time I'd been formally recognized for academic achievement. I later achieved an M.S. at Oregon State University. I now instruct geology classes in the Department of Geography and Environmental Engineering at West Point. I am able to combine military service and earth science at this historic institution and impart my knowledge – much of which is founded in Ken's teaching – on the next generation of military officers. I aspire to reach my students and connect with them with that same kind of profound and lasting impression.

Thomas Hanlon, former NVCC student; Major, US Army Instructor of Geology, US Military Academy, West Point, NY

I am visually impaired and suffer from a severe deficit in spatial relationships from a childhood brain injury. My disabilities are complex, and difficult to comprehend by most people. Geology presented an enormous challenge for me. After two weeks I seriously considered dropping the class because of my frustration. Dr. Rasmussen offered to accommodate my needs as required, especially for exams and laboratory sessions. He recognized that while I knew the material, it was difficult for me to complete questions in reasonable time. Dr. Rasmussen's dedication, perceptiveness, and patience made the difference in my course completion. I will always appreciate his concern for me as a student and person. He has instilled a new confidence in me that will help me in my future studies and challenges I will face. Not only did Dr. Rasmussen go out of his way to help me, he did the same for everyone else in his class. He has an inspirational influence on every student, and is truly a remarkable teacher and person.

Blythe Champion, NOVA student

I directly attribute my undergraduate and graduate school success to the knowledge base I attained at NOVA under the instruction of Dr. Kenneth Rasmussen. I transferred to the Annandale campus, and over two years took all but one of his courses. At George Mason University, where I then transferred, it has become common knowledge over the years that students with a geology background provided by Dr. Rasmussen are at an extreme advantage compared to those who completed introductory courses elsewhere; many credit Dr. Rasmussen with their initial interest and subsequent success in the field. I have repeatedly referenced my notes from his lectures as well as the information provided for background on the locations visited during his field study courses. I consider myself incredibly fortunate to have studied under such a devoted instructor. As I move forward, I aspire to follow the example that he has set for so many of us by encouraging those around me to continually challenge themselves and appreciate science as ardently as he does.

Sarah Hendrickson, former NVCC student, now graduate student at New Mexico Tech

I transitioned from a career in environmental consulting to teaching high school earth and environmental science. I hold a B.S. in environmental science and a MBA in finance. Because of my limited interest and exposure to geology as an undergrad, I decided to enroll in physical geology at NOVA to brush up on the course material. I thought, rather cavalierly, that this would be an efficient and frankly easy way to get college credit and to review a few basics in geology.

I was stunned when I began Dr. Rasmussen's course. It was comprehensive, difficult, and equal to any science course I had taken in terms of its time demands. Ken went bell to bell with his lectures and his labs. He NEVER fell back on the excuse that the institution, as a community college, should expect less of its students. Perhaps it's an unfair comparison, but during the following summer I assisted a George Mason professor with an introductory geology lab, and it was less organized, less comprehensive, and certainly less demanding in terms of what the students were expected to achieve for a given grade level. I enrolled in two more of Dr. Rasmussen's courses. He is energized by the ever-changing science, by an opportunity to ignite a student's hidden interest, and by extending his reach beyond NOVA. He demonstrates passion that is an inspiration to those of us who know him.

Dick Gongaware, Science Teacher, James Madison High School, Vienna, Virginia

Ken's vast knowledge and enthusiasm for teaching were apparent within the first five minutes of class. His talent for synthesis and ability to connect with each teacher made this class especially stimulating and thought provoking. I have never been so intellectually challenged, or learned so much, in such a short period of time. At the end of the week, each teacher-student possessed not only a foundation in geology, but valuable content to take back and apply in our classrooms. Ken extends his devotion to education by frequently volunteering his time to teach children at my school. Upon discovering this, I asked Ken if he would share his expertise with my 4th grade class – he readily agreed to do so. Ken's talent to impart complicated material in a language that even very young students can understand is an amazing thing to behold – he is a masterful teacher. His encyclopedic knowledge, depth of understanding, spontaneous wit, and generosity of spirit make him an outstanding role model.

Jeff A. Goodwin, 4th grade teacher, Douglas MacArthur Elementary School, Alexandria, Virginia

I have had many professors during my studies for a B.S. in geology, an M.S. in political science, and completion of the graduate-level curriculum at the National War College. Dr. Rasmussen is without a doubt among the very best educators I have experienced. As a former practicing exploration geologist, I found his approach to teaching dead-on in imparting to his students the proper approaches and techniques of field sampling as well as the interpretation of results. He encourages student participation with challenging questions and requirements for student-developed presentations. During the period of reacquainting myself with my former profession, I can testify that the classes I have taken from Dr. Rasmussen have been the best.

Andrew L. Austin, NOVA student

I wanted to let you know what an inspirational and diligent teacher Dr. Rasmussen is – his courses were truly exceptional. Our two field trips made things that were only pictures in a textbook come alive by seeing them in their natural context. Dr. Rasmussen's classes have accomplished what is the primary mission of an educator – stimulating the student to want to learn and see more. He certainly represents among the best NOVA has to offer.

Jeff Grayson, former NOVA student

I would like to recognize Dr. Rasmussen for his contributions to the Town of Chesapeake Beach, Maryland. He is an active member of our Bayfront Park Committee, and regular environmental contributor to the town's quarterly: the "Chesapeake Beach Newsletter". Chesapeake Bay health is his priority, and his scientific perspective helps our committee make recommendations to the Town Council regarding which direction our town and its beach will go. Ken writes to 3,000 citizens about the Bay and provides simple ways for citizens to help preserve and protect the quality of the Bay. He is quite effective. I truly wish that every citizen would be as active in our community as Ken is.

Patrick J Mahoney; Vice President, Chesapeake Beach Town Council

ADDITIONAL DOCUMENTATION

Tabulated responses to questions about Dr. Rasmussen answered anonymously by NOVA students on the Fall 2008 evaluation form:

An analysis of the student evaluation forms was performed by the Division Dean; these data represent approximately 70 responses combined from one Physical Geology (GOL105), and one Oceanography (GOL111) class. Items #4 – #7 were directed towards the instructor's performance, not the course itself, and are therefore reported here.

Response scores: 5 = excellent, 4 = very good, 3 = good, 2 = fair, and 1 = unsatisfactory.

- Item 4 - Instructor presents material in a well-organized manner and uses examples in class. Mean score was **4.24**
- Item 5 – The instructor conveys his or her knowledge of the material with enthusiasm. Mean score was **4.45**
- Item 6 - The instructor creates and maintains a classroom atmosphere that encourages learning. Mean score was **4.02**
- Item 7 - The instructor is interested in my personal learning and progress. Mean score was **4.04**

Representative comments from recent anonymous student evaluations:

Fall 2006

- “Absolutely great! Great experience unavailable outside of this class.”
- “This instructor was the most informative, clear and interesting that I've experienced at NOVA thus far... He sets the bar for [how] all instructors at NOVA should conduct their classes. He is passionate about what he does, and tremendous resource. He is a feather in NOVA's cap!”

Fall 2005:

- “His enthusiasm for his work was inspiring... motivated the students to be more enthusiastic about their work.”
- “Dr. Rasmussen's enthusiasm for his subject permeates his lectures and inspires us to do further reading and exploration”
- “Humorous and has fun with the subject. Interacts well with students. And the hands-on field trips!”
- “Dr. Rasmussen is a very enthusiastic instructor who has great patience, willingness to help students any way possible, and is very cooperative with accommodations (which is very rare to find in professors).
- “As a newcomer to the subject, he made us/me feel comfortable with the material, and I'm sure the advanced student was also challenged. Off-campus was fabulous. Each (field trip/lab) was very relevant to the study course.”
- “Uniquely informed and enthusiastic about the course material in an engaging manner.”

Selected recent comments posted on RateMyProfessors.com

<http://www.ratemyprofessors.com/>

2010 - 2009

- Best Professor ever, very passionate about the subject, cares greatly about all his students... but do NOT expect to skate through this class.

- Prof R is so awesome! I took in for GOL 105 & 106. He's a hard professor but if you show interest and show you're trying then he will help you! Prof R will always be one of my favorite professors!
- Outstanding professor... he is passionate about the subject and devotes great energy to explaining the big concepts behind geology. He does care about students and offers numerous extra credit opportunities.
- Awesome teacher, I was really freaked out when i heard that his exams were impossible but not really, I thought geology was only about rocks but with him I really gained interest and enjoyed the class a lot... I totally recommend him

Selected additional letters from Students

Prior to Professor Rasmussen's classes, I had little interest in science as a serious focus. I have now graduated magna cum laude with a degree in biology from William and Mary, and plan to pursue graduate school towards a doctoral degree in biology. Professor Rasmussen's classes were key to preparing me for the rigor of science education at a research university. In many ways, his classes were superior to many of the science classes I attended at William and Mary due to his extraordinary pedagogical talent and thorough mastery of his field. The most important lessons I took away from him pertained to how one learns complicated and interconnected concepts, such as by visually diagramming them. Also, as a student in the Honor's section of the class, I had the opportunity to undertake an independent, primary literature-based review project, which gave me an early start on acquiring the skill of interpreting scientific papers. I strongly recommend Professor Rasmussen for the Outstanding Faculty Award, based on his deep mastery of the material, broad contextual knowledge, understanding of how different people learn, and ability to inspire students like me to pursue science.
Jeff Holloman, former NOVA student, and then College of William and Mary student

Life in Williamsburg is good. Honestly though, while my Zoology teacher almost matches your enthusiasm, his class is much less interesting to be in than yours. After being at W&M, I must commend you for being at NOVA and all that it entails, considering the quality of your classes would make you one of our best.
Chris Crippen, former NOVA student, and then College of William and Mary student

Dr. Rasmussen's enthusiasm for his subject permeates his lectures and inspires us to do further reading and exploration. Imaginative lab exercises at the Smithsonian, the Calvert Marine Museum, and field trips to significant geological areas add an extra dimension and truly enhance our learning. His willingness to give extra time after class to increase our understanding of complicated concepts shows his commitment to student development. I have noticed that after classes in Geology and Oceanography, students often seek his advice concerning school and career choices. One measure of Dr. Rasmussen's success in capturing students' interest can be seen in the many students who alter the direction of their study to include more science, or who change their major to the field of science. I am one of those students.
Charlotte R. McCown, former NOVA student

I have to say that you've been the most engaging and passionate teacher that I've had at NOVA, and I've recommended you to anyone who was interested in geology. I'll always appreciate your lessons when I go hiking, and suddenly try to classify every rock I see.
Luis Sullivan, former NOVA student, and then George Mason University student

Geology is my lifelong love, its geography and history, with physics and chemistry, along with many other subjects wrapped into one. As a student in California I've participated in over 8 trips throughout the Southwest, and was given a field internship with the USGS. Your trip was captivating and informative – well organized and orchestrated. The field trip on the 26th was in one word, exceptional. Your professionalism and dedication to the students was evident. I heard many of my van-mates say that the school was lucky to have you... thanks for the great trip.

Fernando H. Keller, former NOVA student

Selected additional letters from Colleagues

I have known Dr. Ken Rasmussen since he began teaching at NOVA. He has long impressed me as a teacher, mentor, researcher, and colleague. Ken has been instrumental in revamping the geology course content and in building the teaching collection so that geology has become a more popular, vibrant, and thriving program at the college. Ken has also generated huge amounts of research funding to support his research projects – I know of no one at our college who has been more successful at this than he. However, it is in the area of spreading his knowledge and love of geology to others that Dr. Rasmussen excels. NOVA is fortunate to have exceptional teacher-scholar

Dr. Ralph P. Eckerlin, Professor of Biology, NOVA

I teach mathematics at NOVA. I am also an avid student of Ken's, and occasionally serve as his volunteer lab assistant (for the fun of it). I have taken 4 regular semester courses in geology and oceanography, as well as many field trip courses from Ken – enjoying them so well that I have taken many of them several times. Ken's prime quality is that he makes every course interesting – interesting for the casual student that simply needs science credits, and also fulfilling for students with a burning interest in the deeper issues within geology or oceanography. Dr. Rasmussen is also a scholar with personal experience and familiarity beyond the textbooks, and this makes the science come alive. Dr. Rasmussen teaches to *all* his students – at *all* levels, and is patient with all. He encourages less-capable or less-prepared students, but never drops his high standards.

Dr. John Weidner, Assistant Professor of Mathematics, NOVA

I know you will celebrate with me the achievements of Annandale Campus Professor Kenneth Rasmussen and his outstanding students Allen Crider and Thomas Hanlon recognized in the accompanying story. Not too many NVCC professors and even fewer students, I imagine, have the opportunity to work in the Smithsonian. Dr. Rasmussen's research brought him that appointment during his NVCC sabbatical. He was successful in obtaining the rare internships for three students, who complete their NVCC studies this month, and then transfer. Please share this good news as appropriate.

Former NVCC – Annandale Provost Dr. Jeanne Guthrie-Morse (in letter to Former NVCC President Dr. Belle Wheelan)