A MEMORANDUM

DATE: February 4, 2022

TO: Academic Deans Council

FROM: Dr. Andy Perkins
UCCC Chair

RE: Change Notice 7

Listed below are curriculum change proposals which have been recommended by the University Committee Courses and Curricula. Under current procedure, members of the Academic Deans Council may question the approval of these proposals at any time prior to 5:00 p.m. on February 17, 2022 by contacting Dr. Andy Perkins (5-0004) or the office of the Vice President for Academic Affairs (5-3742). If no questions have been raised, the proposals will be considered approved automatically.

1. Course Proposals by college/school

ARTS AND SCIENCES

Technical Change	GG 8123	**Approved**	**FROM: GG 8123 Geology II: Earth, Time and Life.** (3). (Prerequisite: GG 6103 or consent of instructor). Three hours lecture, video and online. Principles of historical geology with emphasis on geological time, earth history, fossils, evolution, and extinction. Primarily for K-12 science teachers. **TO: GG 8123 Geology II: Earth, Time and Life.** (3). (Prerequisite: GG 6103). Three hours lecture, video and online. Principles of historical geology with emphasis on geological time, earth history, fossils, evolution, and extinction. Primarily for K-12 science teachers. Effective: Fall 2022
Technical Change	GG 8203	**Approved**	**FROM: GG 8203 Ocean Science.** (3). (Prerequisite: GG 6103 or consent of instructor). Three hours video and online. Comprehensive examination of the ocean world, focusing on the topography, physics, chemistry, and circulation of the oceans. Primarily for K-12 science teachers. **TO: GG 8203 Ocean Science.** (3). Three hours video and online. Comprehensive examination of the ocean world, focusing on the topography, physics, chemistry, and circulation of the oceans. Primarily for K-12 science teachers. Effective: Fall 2022
Technical Change	GG 8233	**Approved**	**FROM: GG 8233 Environmental Geoscience.** (3). (Prerequisite: GG 6103 or consent of instructor). Three hours video and online. Study of current environmental problems associated with the earth science realms; atmosphere, bioshpere [sic], hydroshpere [sic], and lithosphere. Primarily for K-12 science teachers. **TO: GG 8233 Environmental Geoscience.** (3). Three hours video and online. Study of current environmental problems associated with the earth science realms; atmosphere, biosphere, hydrosphere, and lithosphere. Primarily for K-12 science teachers. Effective: Fall 2022

Technical Change	GG 8313	**Approved**	**FROM: GG 8313 History of Life.** (3). (Prerequisite: Consent of instructor). Three hours video and online. Paleontological principles with an emphasis on history of life through geological time. **TO: GG 8313 History of Life.** (3). Three hours video and online. Paleontological principles with an emphasis on history of life through geological time. Effective: Fall 2022
Technical Change	GG 8503	**Approved**	**FROM: GG 8503 Landforms.** (3). (Prerequisite: Consent of instructor). Three hours video and online. Geomorphological principles with an emphasis on landforms of North America and their formation. **TO: GG 8503 Landforms.** (3). Three hours video and online. Geomorphological principles with an emphasis on landforms of North America and their formation. Effective: Fall 2022
Technical Change	GG 8613	**Approved**	**FROM: GG 8613 Hydrology.** (3). (Prerequisite: GG 6103 or consent of instructor). Three hours lecture, video and online. Investigation of the occurrence, distribution, movement, and chemistry of earth's waters. Emphasis on geological controls of surface and groundwater. Primarily for K-12 science teachers. **TO: GG 8613 Hydrology.** (3). Three hours lecture, video and online. Investigation of the occurrence, distribution, movement, and chemistry of earth's waters. Emphasis on geological controls of surface and groundwater. Primarily for K-12 science teachers. Effective: Fall 2022

Technical Change	GG 8633	**Approved**	**FROM: GG 8633 Water Biogeochemistry.** (3). (Prerequisite: GG 4633/6633 Geochemistry or Consent of Instructors). Two hours lecture. Two hours laboratory. Inter-disciplinary study of the factors that characterizes oceans, wetlands and inland aquatic systems; global water and nutrient cycling; human effects on biogeochemical cycles. **TO: GG 8633 Water Biogeochemistry.** (3). (Prerequisite: GG 4633/6633). Two hours lecture. Two hours laboratory. Inter-disciplinary study of the factors that characterizes oceans, wetlands and inland aquatic systems; global water and nutrient cycling; human effects on biogeochemical cycles. Effective: Fall 2022
Technical Change	GG 8733	**Approved**	**FROM: GG 8733 Geology of North America.** (3).-(Prerequisite: Consent of instructor). Three hours video and online. Plate tectonic evolution of the North American continent with emphasis on both process and stratigraphic development. **TO: GG 8733 Geology of North America.** (3). Three hours video and online. Plate tectonic evolution of the North American continent with emphasis on both process and stratigraphic development. Effective: Fall 2022
Technical Change	GR 3303	**Approved**	**FROM: GR 3303 Survey of Geospatial Technologies.** (3). (Prerequisite GR 2313 or Consent of Instructor). Three hours lecture. Geographic Information Systems, Remote Sensing and Global Positioning Systems applied to earth systems and science. Include field excursions for hands on experience with currrent [sic] technologies. **TO: GR 3303 Survey of Geospatial Technologies.** (3). (Prerequisite: GR 2313). Three hours lecture. Geographic Information Systems, Remote Sensing and Global Positioning Systems applied to earth systems and science. Includes field excursions for hands on experience with current technologies. Effective: Fall 2022

Technical Change GR 4303/6303	**Approved**	**FROM: GR 4303/6303 Principles of GIS.** (3). (Prerequisite: Junior or graduate standing or consent of instructor) Two hours lecture and two hours laboratory. Spatial analysis and topological relationships of geographic data using Geographic Information Systems, with emphasis on GIS theory. **TO: GR 43036303 Principles of GIS.** (3). Two hours lecture and two hours laboratory. Spatial analysis and topological relationships of geographic data using Geographic Information Systems, with emphasis on GIS theory. Effective: Fall 2022
Technical Change GR 4333/6333	**Approved**	**FROM: GR 4333/6333 Remote Sensing of the Physical Environment.** (3). (Prerequisite: GR 3303, GR 3311 or consent of instructor). Two hours lecture. Two hours laboratory. Examines remote sensing methods applicable to large-area analyses of watershed-level drainage systems, urban landscape, landscape vegetation metrics, physical landscape structural components and atmospheric features. **TO: GR 4333/6333 Remote Sensing of the Physical Environment.** (3). Two hours lecture. Two hours laboratory. Examines remote sensing methods applicable to large-area analyses of watershed-level drainage systems, urban landscape, landscape vegetation metrics, physical landscape structural components and atmospheric features. Effective: Fall 2022
Technical Change GR 4343/6343	**Approved**	**FROM: GR 4343/6343 Advanced Remote Sensing in Geosciences.** (3). (Prerequisite: Either GR 4333/6333, ECE 4423/6423, or FO 4452/6452 or consent of instructor). Two hours lecture. Two hours laboratory. Geospatial image analysis; Theoretical basis of radiative transfer in atmosphere and water column; Quantitative remote sensing techniques and geospatial product development. **TO: GR 4343/6343 Advanced Remote Sensing in Geosciences.** (3). (Prerequisite: Either GR 4333/6333, ECE 4423/6423, or FO 4452/6452). Two hours lecture. Two hours laboratory. Geospatial image analysis; Theoretical basis of radiative transfer in atmosphere and water column; Quantitative remote sensing techniques and geospatial product development. Effective: Fall 2022

Technical Change GR 4353/6353	**Approved**	**FROM: GR 4353/6353 Geodatabase Design.** (3). (Prerequisite: GR 4303/6303 or consent of instructor). Three hours lecture. Examination of Geodatabase structures. Integration of relational databases with Geographic Information Systems. Management of spatial data using geodatabases. Implementation of Geodatabase processes through spatial programming. **TO: GR 4353/6353 Geodatabase Design.** (3). (Prerequisite: GR 4303/6303). Three hours lecture. Examination of Geodatabase structures. Integration of relational databases with Geographic Information Systems. Management of spatial data using geodatabases. Implementation of Geodatabase processes through spatial programming. Effective: Fall 2022
Technical Change GR 4443/6443	**Approved**	**FROM: GR 4443/6443 Weather Prediction I.** (3). (Prerequisite: GR 1604 or consent of instructor). Three hours lecture. Weather analysis and forecasting. Emphasis on local, short-term forecasting techniques, including temperature forecasting, precipitation forecasting, and convective forecasting. **TO: GR 4443/6443 Weather Prediction I.** (3). (Prerequisite: GR 4713). Three hours lecture. Weather analysis and forecasting. Emphasis on local, short-term forecasting techniques, including temperature forecasting, precipitation forecasting, and convective forecasting. Effective: Fall 2022
Technical Change GR 4473/6473	**Approved**	**FROM: GR 4473/6473 Numerical Weather Prediction.** (3). (Prerequisite: Consent of Instructor). This course provides students with an overview of the theory, processes, developments and applications of existing numerical weather prediction platforms. **TO: GR 4473/6473 Numerical Weather Prediction.** (3). This course provides students with an overview of the theory, processes, developments and applications of existing numerical weather prediction platforms. Effective: Fall 2022

Technical Change GR 4502/6502	**Approved**	**FROM: GR 4502/6502 Practicum in Broadcasting Meteorology I.** (2). (Prerequisite: GR 1603 or equivalent). One hour lecture. Two [sic] laboratory. Introduction to developing a weather story with emphasis on producing weather graphics for television, chroma key mechanics, and weathercast communication. **TO: GR 4502/6502 Practicum in Broadcasting Meteorology I.** (2). (Prerequisite: GR 1603). One hour lecture. Two hours laboratory. Introduction to developing a weather story with emphasis on producing weather graphics for television, chroma key mechanics, and weathercast communication. Effective: Fall 2022
Technical Change GR 4553/6553	**Approved**	**FROM: GR 4553/6553 Computer Methods in Meteorology.** (3). (Prerequisite: GR 1603 or graduate status). Two hours lecture, two hours lab. Overview of computational methods and techniques commonly used in operational meteorology, focusing on scientific visualization and analysis, and numerical weather prediction. **TO: GR 4553/6553 Computer Methods in Meteorology.** (3). (Prerequisite: GR 1603). Two hours lecture, two hours lab. Overview of computational methods and techniques commonly used in operational meteorology, focusing on scientific visualization and analysis, and numerical weather prediction. Effective: Fall 2022
Technical Change GR 4603/6603	**Approved**	**FROM: GR 4603/6603 Climatology.** (3). (Prerequisite: GR 1114 or GR 1123, or equivalent). Three hours lecture. Study of the elements and controls of weather and climate, distribution and characteristics of climatic regions. **TO: GR 4603/6603 Climatology.** (3). (Prerequisite: GR 1114 or GR 1123). Three hours lecture. Study of the elements and controls of weather and climate, distribution and characteristics of climatic regions. Effective: Fall 2022

Technical Change GR 4613/6613	**Approved**	**FROM: GR 4613/6613 Applied Climatology.** (3). (Prerequisites: GR 1603 or equivalent.) Two hours lecture. Two hours laboratory. Problem solving in today's world in topics such as bioclimatology, agricultural climatology and land use climatology. **TO: GR 4613/6613 Applied Climatology.** (3). (Prerequisites: GR 1603) Two hours lecture. Two hours laboratory. Problem solving in today's world in topics such as bioclimatology, agricultural climatology and land use climatology. Effective: Fall 2022
Technical Change GR 4633/6633	**Approved**	**FROM: GR 4633/6633 Statistical Climatology.** (3). (Prerequisites: GR 1603 or GG 1113 or equivalent and MA 1313 or MA 1713). Two hours lecture. Two hours laboratory. A survey of the types of statistical weather data available. Manipulation of the data on various temporal and spatial scales. **TO: GR 4633/6633 Statistical Climatology.** (3). (Prerequisites: GR 1603 or GG 1113 and MA 1313 or MA 1713). Two hours lecture. Two hours laboratory. A survey of the types of statistical weather data available. Manipulation of the data on various temporal and spatial scales. Effective: Fall 2022
Technical Change GR 4640/6640	**Approved**	**FROM: GR 4640/6640 Meteorology Internship.** (1-6). (Prerequisite: Consent of Instructor). Hours and credits to be arranged. Internship with television station, private company or government agency under supervision of instructor. **TO: GR 4640/6640 Meteorology Internship.** (1-6). Hours and credits to be arranged. Internship with television station, private company or government agency under supervision of instructor. Effective: Fall 2022

Technical Change GR 4643/6643	**Approved**	**FROM: GR 4643/6643 Physical Meteorology and Climatology I.** (3). (Prerequisite: GR 1604 or consent of instructor). Three hours lecture. An investigation of the physical aspects of Earth's climate, including interactions between the atmosphere, hydrosphere, and land surface, and how they are affected by climate variability and change. **TO: GR 4643/6643 Physical Meteorology and Climatology I.** (3). (Prerequisite: GR 1604 and MA 1323). Three hours lecture. An investigation of the physical aspects of Earth's climate, including interactions between the atmosphere, hydrosphere, and land surface, and how they are affected by climate variability and change. Effective: Fall 2022
Technical Change GR 4693/6693	**Approved**	**FROM: GR 4693/6693 Physical Meteorology and Climatology II.** (3). (Prerequisite: MA 1713, GR 4643 or consent of instructor). Three hours lecture. An investigation into important physical meteorology concepts, including introductory atmospheric thermodynamics, the planetary boundary layer, and cloud and moisture physics with an emphasis on meteorological theory and applications. **TO: GR 4693/6693 Physical Meteorology and Climatology II.** (3). (Prerequisite: MA 1713 and GR 4643). Three hours lecture. An investigation into important physical meteorology concepts, including introductory atmospheric thermodynamics, the planetary boundary layer, and cloud and moisture physics with an emphasis on meteorological theory and applications. Effective: Fall 2022

Technical Change GR 4813/6813	**Approved**	**FROM: GR 4813/6813 Natural Hazards and Processes.** (3). (Prerequisites: GR 1114 or equivalent.) Three hours lecture. A survey of natural phenomena in geology, oceanography and astronomy as applied to meteorology. Detailed study of earthquakes, volcanoes, ocean movements, and solar activity. **TO: GR 4813/6813 Natural Hazards and Processes.** (3). (Prerequisites: GR 1114). Three hours lecture. A survey of natural phenomena in geology, oceanography and astronomy as applied to meteorology. Detailed study of earthquakes, volcanoes, ocean movements, and solar activity. Effective: Fall 2022
Technical Change GR 4823/6823	**Approved**	**FROM: GR 4823/6823 Dynamic Meteorology I.** (3). (Prerequisite: GR 4733/6733). Three hours lecture. In-depth examination of theoretical methods for determining atmospheric stability and the tools necessary to interrogate the vertical profile of the atmosphere. **TO: GR 4823/6823 Dynamic Meteorology I.** (3). (Prerequisite: GR 4733/6733 and MA 1723). Three hours lecture. In-depth examination of theoretical methods for determining atmospheric stability and the tools necessary to interrogate the vertical profile of the atmosphere. Effective: Fall 2022
Technical Change GR 4841/6841	**Approved**	**FROM: GR 4841/6841 Observations of Severe Local Storms.** (1). (Prerequisite: Consent of instructor). One hour field experience. Real-world practice in forecasting,nowcasting [sic]observation, and reporting of severe storms in U.S. Great Plains. **TO: GR 4841/6841 Observations of Severe Local Storms.** (1). One hour field experience. Real-world practice in forecasting, nowcasting observation, and reporting of severe storms in U.S. Great Plains. Effective: Fall 2022

Technical Change GR 4842/6842	**Approved**	**FROM: GR 4842/6842 Forecasting Severe Local Storms.** (2). (Prerequisite: Consent of Instructor.) One hour lecture and two hour [sic] lab. This course provides a theoretical overview and practical application of the severe local storms forecasting process. **TO: GR 4842/6842 Forecasting Severe Local Storms.** (2). One hour lecture and two hours lab. This course provides a theoretical overview and practical application of the severe local storms forecasting process. Effective: Fall 2022
Technical Change GR 4843/6843	**Approved**	**FROM: GR 4843/6843 Field Methods of Severe Local Storms.** (3). (Prerequisite: consent of instructor). Two hours lecture. One hour field experience. Application of the latest synoptic and mesoscale severe weather forecasting methods concluding with field operations in the U.S. Great Plains. **TO: GR 4843/6843 Field Methods of Severe Local Storms.** (3). Two hours lecture. One hour field experience. Application of the latest synoptic and mesoscale severe weather forecasting methods concluding with field operations in the U.S. Great Plains. Effective: Fall 2022
Technical Change GR 4863/6863	**Approved**	**FROM: GR 4863/6863 Forensic Geoscience.** (3). (Prerequisite: GG 1113, GR 1114 or GR 1604 or consent of instructor). Three hours lecture. Multidisciplinary study using all branches of geoscience in investigating criminal offenses, reconstructing accidents and as evidence in civil and criminal court cases. **TO: GR 4863/6863 Forensic Geoscience.** (3). (Prerequisite: GG 1113, GR 1114 or GR 1604). Three hours lecture. Multidisciplinary study using all branches of geoscience in investigating criminal offenses, reconstructing accidents and as evidence in civil and criminal court cases. Effective: Fall 2022

Technical Change GR 4913/6913	**Approved**	**FROM: GR 4913/6913 Thermodynamic Meteorology.** (3). (Prerequisite: GR 4723/6723 or equivalent). Three hours lecture. Examination of the meteorological stability within the earth's atmosphere. Focus on analysis of the various stability indices related to predicting severe weather. **TO: GR 4913/6913 Thermodynamic Meteorology.** (3). (Prerequisite: GR 4733/6733 or GR 4713/6713). Three hours lecture. Examination of the meteorological stability within the earth's atmosphere. Focus on analysis of the various stability indices related to predicting severe weather. Effective: Fall 2022
Technical Change GR 4923/6923	**Approved**	**FROM: GR 4923/6923 Severe Weather.** (3). (Prerequisities [sic]: GR 4913/6913 or equivalent). Three hours lecture. Descriptive study of severe and unusual weather across the earth. Explanation of variations in severe weather in both spatial and temporal scales. **TO: GR 4923/6923 Severe Weather.** (3). (Prerequisites: GR 4913/6913). Three hours lecture. Descriptive study of severe and unusual weather across the earth. Explanation of variations in severe weather in both spatial and temporal scales. Effective: Fall 2022
Technical Change GR 4943/6943	**Approved**	**FROM: GR 4943/6943 Tropical Meteorology.** (3). (Prerequisite: Consent of Instructor). Three hours lecture. Topics include the dynamics and circulation of the tropical atmosphere, characteristics of tropical cyclones, and forecasting methodologies for tropical weather. **TO: GR 4943/6943 Tropical Meteorology.** (3). (Prerequisite: GR 4733). Three hours lecture. Topics include the dynamics and circulation of the tropical atmosphere, characteristics of tropical cyclones, and forecasting methodologies for tropical weather. Effective: Fall 2022

Technical Change GR 4963/6963	**Approved**	**FROM: GR 4963/6963 Mesoscale Meteorology.** (3). (Prerequisite: GR 4913/6913). Three hours lecture. Descriptive and physical understanding of Mesoscale processes and their relevance to the synoptic environment. A strong focus will be placed upon Severe Local Storms. **TO: GR 4963/6963 Mesoscale Meteorology.** (3). (Prerequisite: GR 4733 or GR 4713). Three hours lecture. Descriptive and physical understanding of Mesoscale processes and their relevance to the synoptic environment. A strong focus will be placed upon Severe Local Storms. Effective: Fall 2022

All of the proposals were approved with the exception of the following:

Proposals**

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Peter L. Ryan
Dr. Peter L. Ryan
Executive Vice Provost for Academic Affairs

17th February 2022
Date