Corporations worldwide have focused on improving business processes for the past two decades. In fact, while most Fortune 500 companies have already adopted Enterprise Resource Planning (ERP) systems, now many midsize companies are also planning ERP implementations.

With a commitment to keep pace with these changes in business processes and technology, the University of Missouri system joined SAP’s University alliance and Microsoft’s University Alliance programs in order to continue and expand classroom capabilities for integrating ERP software into the curriculum. ERP systems can be used to reinforce many of the concepts covered in the business discipline. ERP systems incorporate state-of-the-art technology, providing a comprehensive teaching tool for business and information systems. Universities that have successfully incorporated an ERP system into their curriculum have seen unprecedented student demand for those subjects.

ERP can be viewed as a combination of business management practice and technology, where Information Technology integrates with a company’s core business processes to enable the achievement of specific business objectives. This Graduate Certificate in Enterprise Resource Planning prepares students for positions as both technical and business consultants in the ERP field.

Admission requirements

The graduate certificate program is open to all individuals holding a bachelor’s, master’s or Ph.D. degree in areas such as business, social sciences, technology, engineering, or related disciplines.

In order to receive a Graduate Certificate, the student must have an average graduate cumulative grade point of 3.0 or better on a 4.0 scale in the certificate courses taken. Students admitted only to the certificate program will have non-degree graduate status but will earn graduate credit for the courses they complete.

If the four-course sequence approved by the graduate advisor is completed with a grade of B or better in each of the courses taken, the student will, upon application, be admitted to the Master of Business Administration or to the Master of Science in Information Science and Technology. The certificate courses taken by students admitted to the program will count towards the MBA program or the M.S. in Information Science and Technology degree program.

Once admitted to the Certificate program, a student will be given three years to complete the program as long as a B or better average is maintained in the courses taken.
COURSE DESCRIPTIONS

REQUIRED CORE COURSES

ERP 5110 ERP Systems Design and Implementation
This course provides a technical overview of Enterprise Resource Planning Systems and their impact on organizations. SAP’s ERP system is introduced to illustrate the concepts, fundamentals, framework, general information technology context, the technological infrastructure, and integration of business enterprise-wide applications.
Prerequisites: Preceded or accompanied by ERP 2110 or graduate standing and computer programming knowledge

ERP 5120 Enterprise Resource Planning (ERP) Systems Configuration and Integration
Implementation and design practices for business processes in Enterprise Resource Planning (ERP) systems. The course will examine and apply techniques used in SAP ERP system for system configuration and integration, with a focus on Financial Accounting, logistics, Controlling, and production.
Prerequisite: ERP 5110

ERP 5210 Performance, Dashboard, Scorecard and Data Visualization
This course will study different performance management systems including dashboards, management cockpit, scorecards, and strategy maps in an organization. SAP's BW, Business Objects Xcelsius, Crystal Reports, Sybase Unwired Platform will be used to develop the applications.
Prerequisite: ERP 2110 or preceded or accompanied by ERP 5110

ERP 5240 Enterprise Application Development and Software Security
This course provides a conceptual foundation and hands on experience in web and mobile based (HTML5) applications development deployed through an enterprise platform. Enterprise development tools, such as SAP HANA Cloud Platform, will be used to build these apps. The course also covers software cybersecurity from a web and mobile perspective.
Prerequisites: Programming knowledge and either ERP 2110 or accompanied by ERP 5110

ERP 5310 Supply Chain Management Systems in an ERP Environment
The course studies the need for supply chain integration and the challenges of managing complex interfaces using the systems approach for the planning, analysis, design, development, and evaluation of supply chain. SAP’s ERP ECC, SCM, BW, and Sybase Unwired Platform are used to deploy SCM apps.
Prerequisite: ERP 2110 or preceded or accompanied by ERP 5110

ERP 5410 Use of Business Intelligence
This course introduces data-oriented techniques for business intelligence. Topics include Business Intelligence architecture, Business Analytics, and Enterprise Reporting. SAP Business Information Warehouse, BusinessObjects, or similar tools will be used to access and present data, generate reports, and perform analysis.
Prerequisites: IS&T 1750 or equivalent; ERP 2110 or preceded or accompanied by ERP 5110

ERP 5510 ERP System Administrations
System administration and performance monitoring practices for an Enterprise Resource Planning (ERP) system will be studied. Students will install an instance of an ERP system and establish user management attributes and system security.
Prerequisite: ERP 5110

ERP 6220 Data Modeling & Visualization Prototyping for Enterprise Decision Dashboards
Study how to integrate data modeling and visualization prototyping in design and implementation of enterprise decision dashboards for descriptive, predictive, and prescriptive analytics. Assignments and project implementations use SAP HANA & BW, Design Studio, IBM Watson, and SAS Visual Analytics. Semester project prepared.
Prerequisite: ERP 5110 and one of ERP 5410, ERP 6444, or IST 6444

ERP/IST 6444 Essentials of Data Warehouses
This course presents the topic of data warehouses and the value to the organization. It takes the student from the database platform to structuring a data warehouse environment. Focus is placed on simplicity and addressing the user community needs.
Prerequisite: IST 3423 or equivalent relational database experience

ERP 6610 Advanced Customer Relationship Management in ERP Environment
Identification (targeting), acquisition, retention, and development (expansion) of (profitable) customers. Effective and efficient mgmt of customers, using IT. SAP CRM, SAS BI tools, and Sybase mobile application development are used. Research paper and presentation required.
Prerequisite: ERP2110 or preceded or accompanied by ERP 5110

Most courses are offered both on campus and via distance education