

CLINICAL INFORMATICS

**BJC Center for LifeLong Learning
Southern Illinois University – Edwardsville
February 2010**

The third BJC Clinical Informatics certificate cohort will start on March 29, 2010. The outline below offers a detailed listing of the content that will be covered.

The clinical informatics program will be a non-credit program offered through Southern Illinois University - Edwardsville exclusively to BJC employees. Credit in the BJC Online Learning Center will be for 45 hours.

Employees can enroll for these information sessions through the BJC Online Learning Center.

For more information, contact Gary Stocker at 314-362-0975

Week	Topic *
1	Systems Planning for Information Systems <ul style="list-style-type: none">- What is a health care information system?- Strategic planning for health care information systems- The users, managers, and systems in health care.- Types of applications in health care.<ul style="list-style-type: none">o Operational information systemso Tactical information systemso Decision support systems
2	Information Systems Development <ul style="list-style-type: none">- System life cycle and the phases of the life cycle methodology- Systems Analysis<ul style="list-style-type: none">o Needs assessment.o Conducting a feasibility study.o Tools for data modeling and process modeling.o Process modeling—identifying a process and evaluating process performance.Defining functional requirements.
3	Systems Design <ul style="list-style-type: none">- Process re-engineering- Design: Human computer interaction- Design: Inputs and outputs- Design: Files and databases-
4	System implementation <ul style="list-style-type: none">- System and functional testing -- Documentation- Training –- Quality assurance- Conversion and “go live”

	<ul style="list-style-type: none"> - Backup, recovery and system monitoring
5	<p>"Package" implementation vs. "Custom Development" – project and solution selection.</p> <ul style="list-style-type: none"> - Conducting a feasibility study - System selection task force - RFP Development
6	<p>System Evaluation and Maintenance</p> <ul style="list-style-type: none"> - Evaluating alternative systems - Systems procurement and follow-up - Enhancements and upgrades
7	<p>Information Technology Infrastructure</p> <ul style="list-style-type: none"> - Hardware and Software <p>Distributed Systems.</p> <ul style="list-style-type: none"> - Distributed system architectures. - Providing 24x7 high availability. - Key industry providers of distributed systems hardware and software. <p>Data Communication Systems.</p> <ul style="list-style-type: none"> - Computer-based data communications including communications hardware. - Communications software. - Basic network approaches to processing data. - Common communication system carriers. - Local networks and intranets. - Network management. - Key industry providers of data communication systems hardware and software. <p>High Availability (Business Continuity) and Disaster Recovery Planning</p> <ul style="list-style-type: none"> - How high availability is achieved. - Disaster recovery issues and responsibilities, including an example disaster recovery plan.
8, 9	<p>Database Systems.</p> <ul style="list-style-type: none"> - Data, information, and knowledge. - Understanding data models. - Understanding relational databases. - Database management system software and the firms providing the software. - An overview of management of a firm's database systems.
10	<p>Decision Support Systems</p> <ul style="list-style-type: none"> - Data warehouses: the software and databases that support data warehousing operations. - Decision support systems (DSS) concepts and objectives. - Unique information requirements for health care professionals.
11	<p>Business Intelligence and Management Dashboards</p> <ul style="list-style-type: none"> - Key performance indicators (e.g. cost/service) - Clinical Decision Support Systems. - Administrative Decision Support Systems.
12	<p>Information Systems Security.</p>

	<ul style="list-style-type: none"> - Threats of accidents and malfunctions. - Threats of computer crime. - External threats. - Methods for minimizing risk. - Privacy and confidentiality requirements.
13	<p>IT Trends in Health Care</p> <ul style="list-style-type: none"> - Electronic Health Records—factors, forces, and issues. - eHealth: the Internet and health care information systems - An eHealth case study - Virtual teams in health care service delivery
14	<p>Project Management</p> <ul style="list-style-type: none"> - Concepts of project scope, work breakdown structure, and deliverables - Project management techniques - Tracking project progress
15	<p>Information needs and challenges in today's health care environment</p> <ul style="list-style-type: none"> - Integration of information systems in virtual organizations. - Telecommunications applications in clinical practice. - Future directions in health care informatics. - Project presentations.

* Subject to minor modifications.