

Overview available course modules

Module	After completing this module, students will be able to ...
Module 1: <i>The Basic Principles</i>	Summarize the basic principles of evidence-based management; Explain why we need evidence-based management; Explain what counts as evidence; Determine which sources of evidence were consulted; Assess (coarsely and in general terms) the quality of evidence; Determine whether the 'best available' evidence was used in a decision-making process; Correct common misconceptions about evidence-based management.
Module 2: <i>Ask</i>	Identify (hidden) claims/assumptions regarding a practical issue; Determine whether an (assumed) problem is sufficiently clear; Determining whether there is sufficient evidence to support the (assumed) problem; Determine whether the preferred solution is sufficiently clear; Determine whether there is sufficient evidence (from multiple sources) to support the preferred solution.
Module 3: <i>ACQUIRE - evidence from practitioners</i>	Determine what evidence to acquire from practitioners; Determine how to prevent selection bias when acquiring evidence from practitioners; Determine the best method(s) to acquire evidence from practitioners; Determine whether bias could have affected evidence from practitioners; Formulate clear, unambiguous, and unbiased questions.
Module 4: <i>APPRAISE - evidence from practitioners</i>	Assess whether professional experience is valid and reliable; Grade the trustworthiness of professional experience; Recognize how system 1 thinking influences valid and reliable professional expertise; Determine whether a decision is based on system 1 or system 2 thinking; Recognise common cognitive biases; Identify ways cognitive biases can be overcome; Critically appraise evidence from practitioners.
Module 5: <i>ACQUIRE - scientific evidence</i>	Determine the most relevant online research database(s) given the question; Determine whether a journal is peer reviewed; Determine the most important PICOC terms; Search the Internet for relevant alternative and/or related terms; Search Google Scholar for related or broader academic terms; Test search terms to identify terms that yield the most relevant results; Apply Boolean operators to specify a search query; Use the history function to combine search queries; Apply methodological filters to identify meta-analyses and/or longitudinal/controlled studies; Narrowing search results by adding additional PICOC terms; Limit a search result by limiting the date range.
Module 6: <i>A short introduction to science</i>	Assess whether a study was conducted according to the scientific method; Recognize pseudo-science; Assess whether a statistically significant finding is of practical relevance; Assess whether methodological bias may have affected the results; Determine whether confounders may have affected the results; Assess whether a placebo effect may have affected the results; Identify moderators or mediators that may have affected the results; Distinguish quantitative research methods from qualitative research methods; Determine a study's research design; Efficiently read a research paper.

<p>Module 7: <i>APPRAISE - scientific evidence</i></p>	<p>Assess the impact of an effect size; Assess whether a statistically significant finding is of practical relevance; Assess whether a confidence interval is sufficiently narrow; Assess whether an outcome was measured in a reliable way; Distinguish cause-and-effect questions from non-effect questions; Determine a study's research design; Assessing whether a study's research design is appropriate given the research question (methodological appropriateness); Assessing a study's methodological quality; Grading a study's trustworthiness on the basis of its methodological appropriateness and quality; Summarising a study's main findings, weaknesses, and overall trustworthiness.</p>
<p>Module 8: <i>ACQUIRE - organizational evidence</i></p>	<p>Not yet available</p>
<p>Module 9: <i>APPRAISE - organizational evidence</i></p>	<p>Determine whether a logic model was used to collect and analyze evidence from the organization; Assess whether organizational data are relevant; Identify steps in the collection and processing of data that could introduce risk of inaccurate data; Determine whether contextual information is missing; Determine whether there could be measurement error; Assess whether there could be a small number problem; Determine whether a metric is a good representation of the data; Interpret a metric's standard deviation; Assess whether a graph represents the data in a valid and reliable way; Interpret a correlation or regression coefficient; Determine whether a correlation- or regression coefficient is practically relevant; Assess whether there are outliers that may distort the evidence; Assessing whether range restriction may have affected the evidence; Assess whether a confidence interval is sufficiently narrow.</p>
<p>Module 10 & 11: <i>ACQUIRE/ APPRAISE - stakeholder evidence</i></p>	<p>Not yet available</p>
<p>Module 12: <i>AGGREGATE</i></p>	<p>Explaining what proof, evidence, chance, and 'conditional' probability means; Assessing the impact of a prior probability; Estimating the likelihood of the evidence: $P(E H_{\text{true}})$ and $P(E H_{\text{false}})$; Updating the probability of a claim/assumption/hypothesis when new evidence comes available; Aggregating evidence from multiple sources by applying Bayes Rule.</p>
<p>Module 13: <i>APPLY</i></p>	<p>Use the PICOC method to determine whether the evidence applies to the organizational context; Determine whether a decision/intervention gives you the biggest bang for your buck; Assess the level of risk inherent in a decision/intervention; Identify ethical issues that need to be considered; Determine whether (and if so, how) the evidence is actionable; Determine whether there are moderators that need to be taken into account; Determine, given the type of decision at hand, how and in what form the evidence can be applied.</p>
<p>Module 14: <i>ASSESS</i></p>	<p>Identify the type of decision (to be) made (routine, non-routine, or novel/hyper complex); Determine whether a decision was executed as planned; Assess an outcome using the gold standard method; Assessing an outcome using quasi- or non-experimental methods; Suggest ways to improve the validity and reliability of an outcome assessment; Assess whether an outcome was measured in a reliable way; Assess whether indirect and intangible costs were taken into account; Assess the (unintended) consequences of a decision on stakeholders.</p>